

KERALA STATE ELECTRICITY BOARD LTD



Tender No.KSEBL/PMKUSUMC/Feeder/10/21-22

CERTIFICATE

Certified that this tender document is for 5995 kWp grid tied solar plants with Tender No.KSEBL/PMKUSUMC/Feeder/10/21-22 for the **Appointment of Engineering Procurement and Construction Contractor (herein after called EPC contractor)** for the design as per site conditions, erection, testing & commissioning of **Grid tied Solar Photo Voltaic (SPV) Projects on buildings and land owned by KSEBL all over Kerala with a total installed capacity of 5995 kWp in total 63 locations** including Operation & Maintenance of the plant for the first 5 years from the date of commissioning as part of the feeder level solarisation of PMKUSUM scheme. This document which contains the NIT, Volume I, Volume II, Volume III & BoQ is prepared, verified and approved for tendering.

Sd/-

**CHIEF ENGINEER
(RENEWABLE ENERGY & ENERGY SAVINGS)&
CHIEF SAFETY COMMISSIONER**

O/o The Chief Engineer
(Renewable Energy & Energy Savings) &
Chief Safety Commissioner,
Kerala State Electricity Board Limited, Vidyuthi Bhavanam,
Pattom, Thiruvananthapuram- 695004.
Phone : 0471 – 2447404, 2514562
E-mail : cerees@kseb.in

KERALA STATE ELECTRICITY BOARD LTD**E-Tender - Notice Inviting Tender**

No.KSEBL/PMKUSUMC/Feeder/10/21-22

KERALA STATE ELECTRICITY BOARD LIMITED, invites competitive bids from domestic bidders for Appointment of EPC contractor for the design as per site conditions, erection, testing & commissioning of Grid tied Solar Photo Voltaic (SPV) Projects on buildings and land owned by KSEBL all over Kerala with a total installed capacity of 5995 kWp in total 63 locations including Operation & Maintenance of the plant for the first 5 years from the date of commissioning as part of the feeder level solarisation of PMKUSUM scheme.

Name of Work	Appointment of EPC Contractor for the design as per site conditions, erection, testing & commissioning of Grid tied Solar Photo Voltaic (SPV) Projects on buildings and land owned by KSEBL in Kerala with a total installed capacity of 5995 kWp in total 63 locations including Operation & Maintenance of the plant for the first 5 years from the date of commissioning.
Date of publishing bid documents	29.11.2021;19:00 hrs
Last date of receiving queries	14.12.2021;10:30 hrs
Pre-bid meeting	14.12.2021;14:30 hrs (via Video Conference) Interested participants may intimate through email to cerees@kseb.in to get the link
Date of publication of clarifications on queries	20.12.2021;17:00 hrs
Last Date & Time of online Submission of Bid document	27.12.2021;17:00 hrs
Deadline for submission of Hardcopies of Attachments to the Office of the tendering authority	30.12.2021;11:00 hrs
Opening of PQ Bids	31.12.2021;11:30 hrs
Nature of Contract	EPC (Engineering, Procurement and Construction) on turnkey basis
Probable Amount of Contract	Rs. 242051820 /- Rupees Twenty four Crore Twenty lakh Fifty one thousand Eight hundred and Twenty only) excluding GST
Earnest Money Deposit	Rs 500000/- (Indian Rupees Five lakhs Only)
Bid processing fee	Rs. 17700/- (Rs 15000/- + GST Rs. 2700)
Time of Completion	8 months (maximum) from the date of handing over of Site.

The tender document can be downloaded from the website www.etenders.kerala.gov.in on 29.11.2021 from 19:00 hrs.

An Earnest Money Deposit (EMD) of Rs 500000/- (Indian Rupees Five lakhs Only) and the non-refundable bid processing fee of Rs. 17700/- (Rs 15000/- + GST Rs. 2700) a total of Rs.517,700/-(Indian Rupees Five Lakhs Seventeen Thousand and Seven Hundred Only)- shall be remitted to the account number given in the remittance form provided by the e-procurement system for this particular tender. Only INTERNET BANKING remittance is allowed through e-payment facility provided by the e-procurement system. No other mode of payment is allowed. (Bidder should ensure that tender cost including GST and EMD are remitted as one single transaction and not separate. Separate or split remittance will be treated as invalid transactions).

Bidders are advised to visit the “Downloads” section of the website www.etenders.kerala.gov.in also. The NEFT facility for online payment may be exercised at least 48 hours before the closing date of the bid to ensure that payment towards tender document fee and EMD are credited and a confirmation is reflected in the e-procurement system.

All the Tender documents are to be submitted online only and in the designated covers on the above website and no manual submission will be entertained. The pre-qualification/technical bid shall be opened online at the office of the Chief Engineer (Renewable Energy & Energy Savings) & Chief Safety Commissioner, 9th Floor, Vidyuthi Bhavanam, Pattom, Thiruvananthapuram on the date and time mentioned above in the presence of the bidders/ their representatives who wish to attend. All other existing conditions related to the tenders of KSEBL will be applicable to this tender also. The tender details will also be available in the KSEBL website 'www.kseb.in'.

The bid shall be valid for 180 days reckoned from the date of opening of bid. No queries will be entertained after the pre bid meeting. There will be no negotiation of price once the bid is submitted and the price shall be firm. No correspondence would be made with the bidders once the bid is submitted. The bidder shall visit the site before submitting the bid preferably before the pre bid meeting. The decision taken in the PQ Committee will be final.

The bidding authority reserves the right to modify/cancel any or all bids without assigning any reasons. KSEBL will not be responsible for any errors like missing of schedule data while downloading by the bidder/non receipt of document/delay if any.

All bidders participating in the tender should have a valid Digital Signature Certificate from an approved Certifying Authority. More details about the e-tendering procedure are available from National Informatics Centre, Thiruvananthapuram on all working days from 10:00 am to 5:00 pm (Phone: 0471-2577088, 2577188, +91-9995745177) or e-mail "etendershelp@kerala.gov.in".

Further details can be had from the office of the Chief Engineer (Renewable Energy & Energy Savings) & Chief Safety Commissioner, 9th Floor, Vidyuthi Bhavanam, Pattom, Thiruvananthapuram, Kerala-695004. Phone : 0471 – 2447404, 2514562 ;

E mail: cerees@kseb.in

Sd/-

**CHIEF ENGINEER
(RENEWABLE ENERGY & ENERGY SAVINGS) &
CHIEF SAFETY COMMISSIONER**

KERALA STATE ELECTRICITY BOARD LTD



VOLUME I

Tender No.KSEBL/PMKUSUMC/Feeder/10/21-22

CONDITIONS OF BID AND CONTRACT

FOR

Appointment of EPC contractor for the design as per site conditions, erection, testing & commissioning of Grid tied Solar Photo Voltaic (SPV) Projects on buildings and land owned by KSEBL in Kerala with a total installed capacity of 5995 kWp in total 63 locations including Operation & Maintenance of the plant for the first 5 years from the date of commissioning as part of the feeder level solarisation of PMKUSUM scheme.

Sd/-

**CHIEF ENGINEER
(RENEWABLE ENERGY & ENERGY SAVINGS)&
CHIEF SAFETY COMMISSIONER**

O/o The Chief Engineer (Renewable Energy & Energy Savings)&
Chief Safety Commissioner,
Kerala State Electricity Board Limited, 9th Floor,
Vydyuthi Bhavanam, Pattom, Thiruvananthapuram- 695004.
Phone : 0471 – 2447404, 2514336, E-mail : cerees@kseb.in

CONDITIONS OF BID AND CONTRACT

Contents

- PART 1 DEFINITIONS AND INTERPRETATIONS
- PART 2 INFORMATION TO BIDDERS
- PART 3 INSTRUCTIONS TO BIDDERS
- PART 4 GENERAL BID CONDITIONS
- PART 5 GENERAL CONDITIONS OF CONTRACT
- PART 6 SPECIAL CONDITIONS OF CONTRACT FOR SUPPLY, ERECTION
& COMMISSIONING AND OPERATION & MAINTENANCE
- PART 7 **LIST OF LOCATIONS IN WHICH SOLAR PLANTS TO BE INSTALLED**
- PART 8 ANNEXURE
- Annexure 1. Form of agreement to accompany the Bid**
 - Annexure 2. Letter Of Application**
 - Annexure 3. Declaration by Bidder**
 - Annexure 4. Form of Contract agreement**
 - Annexure 5. Form of Bank Guarantee for Performance Security deposit**
 - Annexure 6. Payment Details Application**
 - Annexure 7. No Deviation Certificate**
 - Annexure 8. Site inspection certificate**
 - Annexure 9. Check List**

Part 1

DEFINITIONS AND INTERPRETATIONS

1. '*Accepted schedule*' is the schedule of items of work containing the agreed rates on the basis of which the agreement is drawn for execution of the work.
2. '*Agreed rates*' shall mean the rates accepted and agreed by the KSEBL and the Contractor and which shall be given in the schedule forming part of the contract agreement and valid during the period of contract.
3. '*Agreement Authority*' shall mean the Officers authorized by KSEBL to execute the agreement with the Contractor for executing the work/project.
4. '*Bank*' means State Bank of India and its subsidiaries /associates, Nationalised Banks, Kerala State Co-operative Bank and, also includes Scheduled Banks and District Co-operative Banks, if approved by the KSEBL.
5. The words '*Bid*' and '*Tender*' shall have the same meaning anywhere in these documents.
6. '*Bid Amount/ Bid Price*' means the total bid amount indicated by the bidder in schedule (Schedule of quantities or Bill of Quantities) of the bid documents.
7. '*Bid Security*' or '*Earnest Money Deposit*' shall have the same meaning.
8. '*Bidder*' shall mean the Person, Company, Corporate body, Association, body of individuals, group of persons, Limited Company, Firm, Organization, either single or Joint Venture from India or abroad bidding for the works and his/its executors or administrators or successors or assignees.
9. The '*KSEBL*' shall mean 'The Kerala State Electricity Board Limited'.
10. The '*PM KUSUM*' shall mean all Pradhan Mantri Kisan Urja Suraksha evem Utthan Mahabhiyan Scheme.
11. '*Chairman& Managing Director*' shall mean the administrative head of Kerala State Electricity Board Ltd appointed by the Government from time to time.
12. '*Chief Engineer*' shall mean the Chief Engineer (Renewable Energy & Energy Savings) or its successor Office of the Kerala State Electricity Board Ltd in charge of the project or work concerned. The Chief Engineer may delegate powers to subordinate officers in respect of execution of work.
13. '*Commissioning and completion*' of the project shall mean the solar plant is connected to the interconnection point of Utility grid after obtaining Energisation Sanction from Electrical

Inspectorate and after proving the desired Performance Ratio as per Clause 2.2.3 of this document.

14. '*Construction Plant*' means all equipments, appliances or things of whatever nature required for the execution, completion and maintenance of the works or temporary works but do not include materials or other things intended to form or forming part of the permanent work.

15. '*Contract*' shall mean and include the conditions of bid and contract agreed to, specifications, schedules, drawings, annexure, letter of application, accepted schedule of prices and the agreement to be entered into.

16. '*Contract agreement*' shall mean the agreement entered into between the Contractor and the KSEBL.

17. '*Contractor*' shall mean the Bidder whose Bid has been accepted by KSEBL and shall include the Contractor, legal personnel, representatives, successors and assignees.

18. '*Contractor's Representative*' means the person authorised by the Contractor in writing and approved by the Chief Engineer (REES) to act on behalf of the Contractor for the purpose specified in the letter of authorisation.

19. '*Contractor's Personnel*' means the Contractor's representative and all personnel whom the Contractor authorises and utilises at site who may include staff, labourer and all other employees and any personnel assisting the Contractor in the execution of work.

20. '*Defect*' shall mean any part of the work not completed or not performing in accordance with contract or specifications.

21. '*Defects Liability period*' shall mean the maximum period specified by the KSEBL specifically for the project and within this period, the contractor is liable to rectify any defect or damage in the solar plant at his cost, as notified by the Engineer-in-charge. i.e. Five years from the date of commissioning the solar plant after proving the desired performance ratio as per Clause 2.2.3 of this document.

22. '*Drawing*' shall mean collectively all the drawings, revisions and additions/ modifications as per the contract issued from time to time and drawings submitted by the Contractor and accepted by the Engineer-in-charge.

23. '*Elevation/Reduced Level*'- Wherever figures are shown after the word '*Elevation/Reduced Level*' or an abbreviation thereof, they shall mean the height in metres based on bench marks established by the KSEBL at site.

24. 'Engineer in Charge' –Engineer authorized by Chief Engineer (Renewable Energy & Energy Savings).

25. 'EPC Integrator' shall mean the contractor with whom the KSEBL has entered into agreement for Engineering, Procurement and Construction on composite supply basis and Operation of the project as specified for the specified period.

26. 'Financial year' shall mean a year beginning on first April and ending 31st March in the succeeding year.

27. 'Government' shall mean 'The Government of Kerala'.

28. 'Handing over' shall mean handing over of the Solar Plant to the KSEBL (refer Clause.2.2.3).

29. 'I.SS' means the Indian Standard Specifications of the Bureau of Indian Standards.

30. 'Labourer' shall mean all categories of labour engaged by the Contractor, his sub contractors in connection with the execution of the work covered by these specifications. All these labourers shall be deemed to be employed primarily by the Contractor even though the KSEBL may stand as principal employer to these contractors to enable them to get the required licence as per the Contract Labour Regulation & Abolition Act, 1970 and its amendments if any.

30. 'Letter Of Award' shall mean the letter of formal acceptance signed and issued by the tendering/bidding authority intimating the award of work.

32. 'Letter of Application' shall mean the letter of the bid offering to carry out the works, furnished by the bidder and includes the signed bid documents in full.

33. 'Month' or 'Calendar month' shall mean not only the period from the first of a particular month, but also, any period between a date in a particular month and the day previous to the corresponding date in the subsequent month unless specifically stated otherwise.

34. 'Obligations of KSEBL ' are only those obligations, which have been specifically agreed to in the agreement.

35. 'Part Bill' is any bill preferred during the course of work and before the final bill.

36. 'Performance Certificate' shall mean the certificate issued by the Engineer-in-Charge on the performance of the obligations of Contractor under the contract, when completed and this constitutes the acceptance of the work in total. This certificate will be issued by the KSEBL on the basis of the application of the Contractor and only after the successful completion of period of contract.

36. '*Performance security deposit*' shall mean - the Security amount to be remitted as Bank Guarantee by the Contractor for Guaranteed performance of the Contract along with the respective Contract agreement and it shall be an amount equal to 3% of total contract amount. This Bank Guarantee should be valid till the end of Operation and Maintenance period. The Bank Guarantee submitted by the contractor will be rounded off to the higher multiple of Rs 1000.

37. '*Period of contract*' shall mean the period covered from the date of contract agreement to the satisfactory completion of the work, including duly sanctioned extensions and handing over of the plant back after 5 years defect liability period from the date of commissioning.

38. '*Permanent Works*' means the works to be executed and completed by the Contractor under the contract.

39. '*Project*' shall mean the development, design & Engineering, financing, manufacturing, delivery, construction, project management, commissioning, operation and maintenance for five years of the proposed solar plant complete in all respects and all activities incidental thereto.

40. '*Schedules*' mean the documents completed and submitted by the Contractor with the bid and as included in the contract, which include the quantities, rates, general specifications, unit and technical particulars.

41. '*Site*' shall mean and include the lands and buildings in which the works are to be executed in accordance with the contract.

42. '*Specification*' shall mean collectively, all the terms and stipulations contained in the bid, contract agreement and any additions/modifications in accordance with the contract, technical provisions as per relevant BIS Codes and/or National Building Code and those specifically mentioned in construction drawings and its modifications and revisions which specifies the work wherever applicable or written directions of Engineer-in-Charge.

43. '*Sub contractor*' shall mean any person named in the bid and agreement for any part of the work and the legal representatives, successors and assignees of such persons.

44. '*Taking over*' shall mean taking over the work site by the contractor as per Kerala PWD D-Code.

45. '*Temporary works*' are such works of any kind designed, constructed and installed by the Contractor on site which are needed for the execution and completion of the works contemplated in the contract and for the remedy of any defects notified to the Contractor, for which the Contractor is not entitled for any separate payment.

46. *Tender/Bid* shall have the same meaning and includes all the documents which the bidder submitted with the Letter Of Application as stipulated by the KSEBL and will be included in the contract agreement

47. '*Tendering authority/bidding authority*' shall mean the Chief Engineer (REES) who invites the bid and issues the bid documents on behalf of KSEBL.

48. '*Test*' means the tests which are specified in the contract and mandatory tests specified by rules or regulations, to be carried out in accordance with the specifications before the works or on completion of work to the satisfaction of the KSEBL.

49. '*Time of Completion*' shall mean the date within which the work under the contract is required to be completed satisfactorily in accordance with the specifications, drawings etc., including all extra items required to be executed for satisfactory completion of the work and including all extension of time duly granted by the KSEBL.

50. '*The title of clauses*' shall not limit, alter or affect the meaning of the specifications or conditions of bid documents.

51. '*Words*' imparting the singular number shall include the plural number and plural the singular and the words imparting the masculine gender shall include the feminine and the neutral gender where the context so requires. Words have their normal meaning under the language of the contract unless specifically defined.

52. '*Work*' means what the contract requires the Contractor to construct, furnish, supply, provide services for, install, complete, maintain, test and commission on composite supply basis and operation and maintenance including supply of sufficient spares, for the specified period and hand over to *KSEBL*.

53. '*Writing*' shall include any manuscript, type written or printed statement under or over signature or seal as the case may be.

54. *Performance ratio* is a measure for performance of a PV system taken in to account environmental factors (temperature, irradiation, climate change etc). PR will take in to account the availability of grid, minimum level of irradiation needed to generate electrical energy, irradiation levels at a given period of time.

Part 2
INFORMATION TO BIDDERS

2.1. GENERAL INFORMATION

2.1.1 The State - Kerala

The state is located at the southern tip of the Indian peninsula. It has wide variety of lands and this eternal beauty encompasses 1.18 per cent of the India. The land area of Kerala is about 38,743 sq km, with a total population of 33,387,677. It is about 3 per cent of the country's population. The population density of the state is about 740 people per square kilometre, About 16 per cent of the people live in the cities. Most of the others live in large, semi-urban villages.

2.1.2 Geography

The state is wedged between the Lakshadweep Sea and the Western Ghats, lying between north latitudes 8°18' and 12°48' and east longitudes 74°52' and 77°22', Kerala experiences the humid equatorial tropic climate. The state has a coast of 590 km (370 mi) and the width of the state varies between 11 and 121 km (22–74 miles). Geographically, Kerala can be divided into three climatically distinct regions: the eastern highlands; rugged and cool mountainous terrain, the central midlands; rolling hills, and the western lowlands; coastal plains. The state is located at the extreme southern tip of the Indian subcontinent and lies near the centre of the Indian tectonic plate; hence, it is subject to comparatively low seismic and volcanic activity.

2.1.3 Transport

Roads

KSRTC is the major agency providing long-haul public bus service in Kerala. Kerala has 145,704 kilometres (90,536 mi) of roads. Roads in Kerala include 1,524 km of national highway 4341.6 km of state highway and 18900 km of district roads. Most of Kerala's west coast is accessible through two national highways: NH 47 and NH 17, and the eastern side are accessible through various state highways. National Highway 17 with the longest stretch of 421 km connects Edapally to Panvel. Road density is nearly four times the national average, reflecting the state's high population density.

Railways

The Indian Railways' Southern Railway line runs through the state connecting most of the major towns and cities except those in the highland districts of Idukki and Malappuram. The railway network in the state is controlled by two out of six divisions of Southern Railway; Thiruvananthapuram Railway division and Palakkad Railway Division.

Airports

Kerala has four international Airports, Thiruvananthapuram, Cochin and Calicut & Kannur.

2.1.4 Description of Kerala State Electricity Board Limited

The Kerala State Electricity Board Limited , Incorporated under the Companies Act, 1956, constituted by the Government of Kerala, on 14th January 2011, is in the business of Generation, Transmission and Distribution of electricity and striving to provide quality electricity at affordable cost to all classes of consumers in the state of Kerala. The Government of Kerala issued orders on 30.10.2013 vesting the functions and undertakings to Kerala State Electricity Board Limited as a fully owned Government company. The Corporate Office will function to co-ordinate and control the activities of Kerala State Electricity Board Limited. The office of Chief Engineer (Renewable Energy & Energy Savings) will form the part of the corporate office authorized to issue tender for the appointment of EPC contractor for the design as per site conditions, erection, testing & commissioning of Grid tied Solar Photo Voltaic (SPV) Projects on buildings and land owned by KSEBL with a total installed capacity of 5995 kWp in total 63 locations in Kerala.

PROJECT INFORMATION

2.2.1 Name of Work- 5995 kWp solar plant in total 63 locations in Kerala.

This Project is for establishing Grid connected Solar power plant on the roof top of the buildings and land owned by KSEBL under feeder level solarisation under Component-C of PM-KUSUM scheme. As part of the scheme the installation of solar plant and its O&M for 5 years has to be done by the selected EPC contractor.

The project consist of Roof Top and ground mounted Grid connected Solar power plants of total capacity of 5995 kWp in total 63 locations in Kerala (whereas total 5000 kWp ground

mounted has to be installed in 15 locations in the own land of KSEBL & total 995 kWp rooftop projects in 48 locations of KSEBL buildings).

EPC contract for the design as per site conditions, erection, testing & commissioning of Grid tied Solar Photo Voltaic (SPV) Projects on buildings and land owned by KSEBL with a total installed capacity of 5995 kWp in total 63 locations in the Kerala and Operation & Maintenance of the plant for the first 5 years from the date of commissioning. The performance ratio of the plant shall be above 75 % in clause 2.2.3 of Volume-I of tender documents.

2.2.2 Probable Amount of Contract(PAC) - Rs. 242051820/- Rupees Twenty four Crore Twenty lakh Fifty one thousand Eight hundred and Twenty only) excluding GST

PAC is for the EPC contract for the design as per site conditions, erection, testing & commissioning of Grid tied Solar Photo Voltaic (SPV) Projects on buildings and land owned by KSEBL with a total installed capacity of 5995 kWp in total 63 locations in the Kerala and the Operation & Maintenance of the plant for the first 5 years from the date of commissioning and this amount is excluding GST.

2.2.3 Scope of the Work

1. Total Capacity - 5995 kWp
2. Number of locations- 63
3. Operation and Maintenance- Five years from date of commissioning as per Clause 6.9.
4. Performance ratio (AC) – shall be above 75% as detailed below

The bidders should take special care in visiting the locations and should have an idea about the actual site condition for the installation. The scope of the work is detailed in - Technical specifications.

The subject work includes site clearance and leveling, design, planning, investigation, survey, engineering, manufacture/procurement, manufacturer's quality assurance, shop testing (including type testing where specified/required), transportation, handling storage, erection including all civil/structural works, electrical and general works, piping, cabling,

instrumentation, installation, testing and commissioning, training, services, permits and insurance at all stages of 5995 kWp in total 63 locations in the Kerala and the Operation & Maintenance of the plant for the first 5 years from the date of commissioning. Performance ratio (AC) shall be proved within a period of 7 consecutive days of commissioning. Performance ratio (AC) 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 be above 75% for first 5 years. Operation and maintenance charges shall be released at the end of each year. Performance ratio (AC) shall be proved within a period of 7 consecutive days at the end of each year for release of O&M charges. The plant shall be handed over to KSEBL at the end of 5 years after commissioning after proving the performance ratio (AC).

The **performance ratio test** as per IEC 61724 has to be carried out at site by the EPC contractor in presence of authorized officials from KSEBL, deriving samples within a period of 7 consecutive days sufficient to provide operational data representative of insolation and ambient conditions as desired by the agreement authority to prove the Performance ratio achieved shall be above 75% as per obligations under the EPC contract. This is mandatory for commissioning and handing over the plant to the KSEBL after 5 years of O&M. It is also agreed that if the specified performance ratio is not achieved, the same shall be demonstrated within a period of another 7 consecutive days and still if it is not achieved, EPC contractor shall improve the quality of the plant by replacement of any components with all suitable modification requirements on balance of systems at his own cost to achieve the performance ratio.

The performance ratio (AC) can be checked at any time in between if deemed necessary by the Engineer in charge. The contractor shall be liable to pay the penalty to KSEBL due to component/equipment failure which may cause lower generation. if the plant outage is due to component failure or lack of maintenance and unless it is rectified within the reasonable time allowed by the Engineer in charge/Agreement Authority according to the reasons of outage from the date of intimation to the contractor, the contractor is liable for penalty.

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. For the year

2019-20, KSERC has approved the average pooled power purchase cost of KSEBL as Rs. 2.85/unit. Average Pooled Cost of Power Purchase will be revised by KSERC for each year.

The contractor will be responsible for all required activities at his own cost for the demonstration of the specified performance ratio (as per Clause 2.2.3).

If the contractor fails to prove the desired performance ratio(as per Clause 2.2.3) 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. The contractor shall design the solar plant with sufficient number of solar PV panels so as to produce the desired capacity at each locations. The contractor shall be responsible for obtaining consents, clearances, including Electrical Inspectorate sanction, permit and approval from appropriate authorities and KSEBL for grid connection.

The generated output power from the solar panels at low voltage shall be stepped upto 11kV and shall be grid tied to the grid infrastructure nearest to the location/ at LT level depending upon the site feasibility and as directed by the Engineer in charge of the project.

The EPC Integrator shall also be responsible for the operation and maintenance of the plant for the first five years after commissioning. The extension of O&M after the obligatory 5 years to the entire life of the plant shall be arranged by the KSEBL and all the expenditure shall be met by the KSEBL. The plant shall be designed for a project life of 25 years.

2.2.4 Period of Completion and commissioning

The work shall be completed in all respects, tested and commissioned within 8 months reckoned from the date of commencement. The date of commencement shall be from the date of handing over of the site by the Engineer-in-Charge, even if not in full, but in a manner the work can be commenced and proceeded with in accordance with the programme of works and period of completion of work will be worked out accordingly. The work shall be completed in all respects, tested, commissioned and handed over to KSEBL after the 5 years of O&M.

2.2.5. Location

The project sites are located in the state at 63 locations all over Kerala. The List of proposed Buildings and land is given in PART 7 of this document

2.2.6 Brief Description of Work

The power generated from the rooftop projects can be evacuated to the nearest LT grid at various locations. For the installation in land, Soil test should be carried out before carrying out the design and erection activities. All civil constructions and structure designs including cable laying up to the interconnecting points including transformer erection inside the allotted land will have to be designed by the EPC Contractor.

The power generated from the proposed solar PV power plant at LT level shall be stepped up first to 11 kV level through suitably rated transformers between the inverter and the grid connection point for the projects proposed for the ground mounted projects.

The power from the PV project shall be evacuated from the HT side of the transformer. Necessary Cables/line has to be laid down from the transformer near SPV Plant for power evacuation by the contractor to the interconnecting point. The interconnecting points will be in the plant premises itself. Any further line extension required will be in the scope of KSEBL.

2.3 BIDDING DETAILS

2.3.1 Bidding Process

The bidding process consists pre-qualification from all the bidders' participated and final selection among the qualified bidders.

2.3.1.1 Pre-Qualification Process

All the bidders participating in the bid will be evaluated for their financial capability, technical soundness and previous experience in executing works of similar nature. For pre-qualification, the bidders have to submit the Pre-qualification (PQ) bid in the prescribed form.

The bidders shall submit the PQ bid duly filled in as stated in the PQ bid document, along with other bid documents before the due date of submission. The Bidder shall furnish

relevant details as per the formats, documentary evidences, photograph and audited financial statements for the last three years etc. The details of pre-qualification are given in Volume - II of the bid documents. After examination and evaluation, the KSEBL will select the qualified bidders. The result of Pre-qualification will be informed to all the bidders.

2.3.1.2 Final Selection among the Qualified Bidders

The final selection among the qualified bidders will be done as follows.

The price bids containing schedule of technical particulars and schedule of prices of the qualified bidders will be evaluated as per the relevant clauses provided elsewhere in these conditions.

The bidders will be ranked according to the criteria set forth by the KSEBL for the selection of the best bid. The KSEBL will finally select the best bid and the bid of the successful bidder will be accepted for execution of work. The KSEBL reserves the right to reject the bid or disqualify any bidder without assigning any reason.

2.3.1.3 Execution of agreement

The successful bidder shall execute agreement within 15 days from the date of issue of Letter of Award of contract, with the KSEBL as per the terms and conditions set forth in the Bid document. After execution of the agreement the successful bidder shall be known as 'EPC Integrator.'

2.3.2 Bid Documents

The bid documents are those stated below and should be read in conjunction with amendments or additions, if any, issued by the KSEBL on a subsequent date before the last date of submission of bid.

Volume - I Conditions of Bid and Contract

This contains seven parts.

Part 1 'Definitions and interpretations'.

- Part 2 'Information to bidders' giving brief information about the State of Kerala, KSEBL, the project and the bidding process.
- Part 3 'Instructions to bidders' giving general instructions about the preparation of bid, its submission etc.
- Part 4 'General bid conditions' containing terms and conditions of bidding.
- Part 5 'General conditions of contract' containing terms and conditions of contract.
- Part 6 'Special conditions of contract' containing the specific conditions of contract in particular to the project.
- Part 7 List of locations in which solar plants to be installed
- Part 8 'Annexure' containing forms to be submitted by the bidder.

Volume II Prequalification bid

It contains prequalification questionnaire and assessment of financial and technical capability of the bidder.

Volume III Technical Specifications

It contains three parts giving specifications of works, products, equipments, machinery etc. for

- Part I Supply, Erection and Commissioning of Solar Plant
- Part II Operation & Maintenance of the Plant
- Part III Guaranteed technical Particular datasheets

The bidder shall attach along with this volume:

- i) Schedule of Technical particulars to be answered by the bidder.
- ii) Construction programme.
- iii) Sketch/ Schematic diagram of the proposed plant.
- iv) **Unpriced** list of materials/equipment/works required for successful completion, commissioning and operation & maintenance of the plant for 5 years.

Volume IV Price bid (to be filled up and furnished by the Bidder)

It contains:

The bidder should quote the all inclusive Price including taxes, duties, freight & insurance charges for successful completion, commissioning and proving the performance ratio (AC) of the solar plant as detailed in clause 2.2.3 **including** Operation & Maintenance of the plant for the first 5 years from the date of commissioning.

The price should be inclusive of all duties, taxes and other statutory levies excluding GST.

Part 3

INSTRUCTIONS TO BIDDERS

3.1. INTRODUCTION

- 3.1.1 E-tenders are invited as specified in the Schedule given in 3.5 below.
- 3.1.2 The Tender documents and other details may be downloaded from the website www.etenders.kerala.gov.in
- 3.1.3 **An Earnest Money Deposit (EMD) of Rs 500000/- (Indian Rupees Five Lakhs Only) and the non-refundable bid processing fee of Rs. 17700/- (Rs 15000/- + GST Rs. 2700) a total of Rs.517,700/-(Indian Rupees Five Lakhs Seventeen Thousand and Seven Hundred only** shall be paid through online payment system. The tender document fees and EMD can be paid 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 for making tender remittances in e Procurement System.
- 3.1.4 All the Tender documents are to be submitted online and in the designated covers/envelopes on the above website. All the volumes of bid documents shall be submitted in their designated online covers. Tenders/bids shall be accepted only

through online mode in the website and no manual submission shall be entertained. The tender cost once paid is not refundable on any account, nor will the amount be adjusted towards the cost of any other tender.

- 3.1.5 The bidders are advised to carefully examine all instructions, conditions, terms, specifications, drawings etc. in the bid documents and details regarding the facilities at work site, approaches, availability of labour, working seasons, geology, climate etc. The bidders are advised to visit the project site, before preparing the bid documents. In case of any doubt or issue, the bidder may collect whatever information required from the bidding authority. The rates shall be quoted after precisely considering all aspects that may be encountered in the implementation of ground mounted grid tied solar project. The quoted rates shall be on the bidders' risk and remain firm during the period of contract. The Contractor is not entitled for any claim other than that agreed to in the contract.

3.2. PREPARATION OF BID

- 3.2.1 Intending bidders should submit their bids only through on line mode to the website www.etenders.kerala.gov.in on or before the time and date specified in the Notice Inviting Tender.
- 3.2.2 Every bid shall be accompanied by a Bid Security (EMD) vide clause 4.8. Bids not accompanied by sufficient EMD will be rejected. The EMD shall be remitted as specified and in the remittance form provided by the e-Procurement system for this particular bid. The EMD of the unsuccessful bidders will be returned as soon as possible after the execution of the agreement for the said work. EMD shall be non-interest bearing. The EMD of successful bidder will be transferred to KSEBL account from NIC & the same shall be refunded on request from the contractor after successful execution of contract agreement.
- 3.2.3 The Bid shall be accompanied by a Letter of Application, the form of which is given vide Annexure 2.
- 3.2.4 The bidders shall submit the Bid with agreement in the format given in Annexure 1 of this document, duly signed and attested by two witnesses, in Kerala Government

Stamp Paper worth Rs.200/-. The bid agreement in original shall be sent by Registered post or Speed post or by Courier or by messenger in sealed cover so as to reach the following address, before the opening of the bid. The Cover containing the documents shall be superscribed with the words "Bid agreement in Original for "Tender No.KSEBL/PMKUSUMC/Feeder/10/21-22"". The Bid agreement (Bid Integrity Pact) shall be submitted in one sealed super scribed cover. Bids of those bidders who fail to submit the aforesaid originals (hard copies) within the time aforesaid will not be considered. Bids without agreement or in proper form will be rejected.

THE CHIEF ENGINEER (RENEWABLE ENERGY & ENERGY SAVINGS)& CHIEF SAFETY COMMISSIONER, KSEB LTD, 9th FLOOR, VYDYUTHI BHAVANAM, PATTOM, THIRUVANANTHAPURAM – 695 004, KERALA, INDIA

3.2.5 KSEBL reserves the right to reject any tender which does not comply with the above conditions.

3.2.6 Signing of Bid Document

The bid including all uploaded documents shall be digitally signed by the bidder / duly authorized representative of the bidding company. Bidder is responsible for ensuring the validity of digital signature and its proper usage by their employee. The Bidder shall sign the Bids wherever required. If the bidder is a Joint Venture undertaking, all the parties need not sign, provided that a joint venture agreement and power of attorney for the person to sign is submitted along with the Bid. Bid by a Partnership Firm shall contain the full names of all partners. Bid shall be signed in the name of the Partnership Firm by one of the members of the partnership authorized for the purpose or by an authorized representative followed by the name and designation of the person signing. Bids by Corporations shall be signed with the legal name of the Corporation followed by the name, Signature and designation of the President, Secretary or other person authorized to bind it in the matter.

The copy of the constitution of Firm/Partnership with the name of partners duly attested by a registered notary public and the instrument authorizing the persons to sign on behalf of the Firm shall be furnished. The bidder shall prepare and submit, as part of his Bid, a complete construction programme showing in detail his proposed programme of the operation for the orderly performance of the Work within the time specified in the specifications.

The construction programme shall be in such form and with such details as to show properly the sequence of operations, the progress for each item or group of like items in the schedule.

3.3. SUBMISSION OF BID

All the volumes of bid documents shall be submitted in 3 parts, in their designated online covers in electronic format. Bids shall be accepted only through online mode in the website and no manual submission shall be entertained.

Cover No.1 This cover shall contain- The Scanned copy of the Bid agreement as per Annexure 1 uploaded as pdf.

Cover No.2

- Volume I Conditions of Bid and Contract
- Volume II Pre-qualification bid documents
- Volume III Technical Specification
- Pre-qualification bid questionnaire as per Clause 1 of Volume II
- Un priced list of materials/equipment/works required for successful completion, commissioning operation and maintenance for the five years from the date of commissioning
- Scanned copy of certificates in proof of financial and technical capability and any other documents specified in Volume I, II & III can be attached
- The bidder shall submit an attested copy of PAN card of the Authorized Signatory/Firm along with the bid. The bidder should mandatorily submit the GST details such as GST registration status and GST Registration Number along with the copy of GST Registration Certificate.

Bids containing deviations including technical deviations and additional conditions will be summarily rejected, provided:

1. The technical deviations are totally unacceptable to KSEBL;
2. Financial implications of the deviations are not spelt out.

Cover No.3

This cover should contain the **"BOQ" - Price bid**

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.

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.

3.4. OPENING OF BID

The bids will be opened on the date & time stipulated in the bid document (online opening).

The **Cover 1** containing Bid agreement will be opened first and verified. Cash remittance through e-Procurement system will also be verified in the e-tendering portal while opening of bid. It will be the responsibility of the bidder to confirm and ensure that the response made towards bid processing fee and EMD in e-tendering portal are valid and confirmation is reflected in the e-procurement system

The '**Cover 2**' containing the Pre-Qualification Bid documents will be opened as per the bidding schedule by the bidding authority or his authorized representative in the presence of bidders or their authorized representatives who are present. If the bidder fails to remit the Tender cost (as per clause 3.1.3) & EMD (as per clause 4.8) and enclose the Bid agreement (in original) as per annexure1, his Bid will be summarily rejected. After evaluation of the pre-qualification documents, the bidders who are qualified will be intimated the date and time of opening of Price Bid by registered post or by fax or by e-mail.

The '**Cover 3**' containing the Price Bid will be opened by the bidding authority or his authorised representative in the presence of qualified bidders or their authorised representatives who are present.

Any Bid which does not conform to all the terms, conditions or specifications of bid documents or not substantially responsive and genuine will be rejected.

3.5. BIDDING SCHEDULE

The tentative schedule of key activities of the bidding process is same as given in the Notice inviting Tender. If any day specified in the schedule falls on a holiday for the KSEBL, the next working day of the KSEBL shall be considered. Normal working hours of KSEBL is 10.00 am to 5.00 pm. KSEBL reserves the right to make necessary modifications extending the dates in the tentative schedule above, as situations warrant. Refer clause 4.15 also.

Part 4

GENERAL BID CONDITIONS

4.1 BID PRICES

- 4.1.1 The bidder shall quote the total amount for the EPC contract including cost for Operation and Maintenance for five years after successful commissioning. The amount quoted by the bidders shall be firm during the period of contract and shall not be varied or adjusted on whatsoever reason on any account. The payment will be made to the contractor as mentioned in clause 5.2
- 4.1.2 The bidder should quote the price **excluding GST** and including all other duties, taxes and other statutory levies if any applicable. GST will be given extra over and above the quoted amount. All taxes, duties etc as governed by GST and will be reimbursed only on production of documentary evidence. Only GST registered persons should be made eligible to participate in tenders.
- 4.1.3 As regards Income Tax, surcharge on Income Tax & any other Corporate Tax, Kerala Construction Workers Welfare Fund, KSEBL shall not bear any tax liability whatsoever irrespective of the mode of contracting. The bidder shall be liable and responsible for payment of such taxes attracted under the provision of law. Tax will be deducted at source.
- 4.1.4 The clause 5.9.2 Taxes, Duties etc as Governed by GST and Recoveries shall also be referred in this context.
- 4.1.5 The Contractor shall take care of all his men, machinery, finished work and ensure sufficient protection of work site from flood, fire, earthquake, slip and similar other natural calamities. In such an event, the Contractor shall make his own arrangement for the rectification of damage or loss at his own cost and no compensation shall be paid by the KSEBL on whatsoever reasons on any account.

All Duties, Taxes, Octroi, Cess, Seigniorage charges, Royalty etc and other levies payable by the Contractor under the contract unless otherwise specified elsewhere in this document shall be included in the rates and prices and total bid price submitted by the bidder. The prices shall also include customs duties and any other duty applicable in case the contract includes usage of imported items.

Bidders shall quote for the entire facilities on a "single responsibility" basis such that the total bid price covers all the Contractor's obligations mentioned in, or to be reasonably inferred from, the Bidding Documents in respect of the design, manufacture, including

procurement and subcontracting (if any), Tax, Duties etc, licensing, delivery, construction, installation and completion of the facilities.This includes the price for design, engineering, manufacturing, supply, handling storage, civil works, erection, testing & commissioning along with maintenance charges of the project. It shall include taxes, duties, Cess insurance charges etc. The bidder shall submit a split up of the total prices in the price bid "BOQ" in the manner and in the specified format and detailed price details shall be furnished before issuing the work order to the selected bidder.

4.2 CURRENCIES OF BID

The base currency for the bid is Indian Rupee only.

4.3 COST OF BIDDING

All costs involved in the preparation and submission of Bid shall be borne by the Bidder. The KSEBL will in no case be responsible or liable for any loss to the bidders in this regard. This is applicable in the case of extension or annulment of bidding also.

4.4 LANGUAGE OF BID

The Bid submitted by the bidder and all correspondences and documents relating to the Bid shall be in English language.

4.5 LAW OF BID

This Bid will be governed by the laws of India and Kerala. Any dispute raising out of this bid will be subject to the exclusive jurisdiction of Civil Courts at Thiruvananthapuram.

4.6 WHO CAN BID

Any Person, Company, Corporate body, Association, body of individuals, group of persons, Limited Company, Firm, Organization, either single or Joint Venture from India or abroad, who are legally competent and entitled for entering into contract as per the Law of Contract prevailing in India can bid.

For Joint Venture there shall be a lead bidder. A lead bidder shall submit only one bid for the work. He shall not be a member in any other bid for the same work. There shall be a joint venture which shall be legally enforceable by way of attesting by a registered Notary. This agreement shall be submitted along with the Bid. The agency shall be able to provide an output guarantee for 25 years for the panels for manufacturing defects. Manufacturer's warrantee certificate shall be obtained for the module's performance for at least 90% of minimum rated value at the end of 10years and at least 80% of the minimum rated value at the end of 25 years .Refer clause 6.2.1, 6.2.2,6.3.1& 6.3.2

4.7 BID VALIDITY

The bid shall be valid for 180 days reckoned from the last date of opening of bid.

In exceptional circumstances, the KSEBL may require extension of the period of validity. The requirement of KSEBL and bidders' response shall be made in writing. A bidder may refuse the request which shall invariably be communicated in stipulated time. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for the period of the extension.

4.8 BID SECURITY or EARNEST MONEY DEPOSIT (EMD)

EMD or Bid Security forms part of the Bid. Bids without EMD will be rejected. The amount of EMD shall be of Rs 500000/- (Indian Rupees Five lakhs Only) **and the non-refundable bid processing fee of Rs. 17700/- (Rs 15000/- + GST Rs. 2700) a total of Rs.517,700/-(Indian Rupees Five Lakhs Seventeen Thousand and Seven Hundred Only shall be remitted to the account number given in the remittance form provided by the e-procurement system for this particular tender. No other mode of payment is allowed. (Bidder should ensure that bid processing fee/ tender cost including GST and EMD are remitted as single transaction and not separate. Separate or split remittance will be treated as invalid transactions). 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	ShamraoViththal Co-operative Bank
8	Corporation Bank	28	South Indian Bank
9	Cosmos Bank	29	State Bank of India
10	Deutsche Bank	30	Syndicate Bank
11	Development Credit Bank	31	UCO Bank
12	Dhanalaxmi Bank	32	Union Bank of India
13	Federal Bank	33	UPPCL
14	HDFC Bank	34	Vijaya Bank
15	ICICI Bank	35	Axis Bank
16	Indian Overseas Bank		
17	Janta Sahakari Bank		
18	Jammu & Kashmir Bank		
19	Karur Vysya Bank		
20	Kotak Bank		

The EMD will be forfeited:

- (a) If a bidder withdraws his bid during the period of bid validity.
- (b) If a successful bidder fails to
 - (i)Execute the agreement or
 - (ii)Furnish the necessary Performance security deposit within the specified time limit of 15 days from the date of issue of Letter of Award of work.

- (c) If the bidder does not accept the corrected amount of bid as per clause 4.12.

4.9 ALTERNATE OFFERS

Alternate offers mean the offers in which the scope of work and major components are affected. No alternate offers are allowed. The bidders should submit offers which comply with the requirements of the bid documents and as indicated in the drawings and specifications.

4.10 AMENDMENTS, ADDITIONS AND ALTERATIONS

The KSEBL may modify the bid documents at its own initiative by using corrigendum.

The corrigendum will be published in the website **etenders.kerala.gov.in**, not later than 10 days prior to the last date for submission of bid, and shall be binding upon them.

The Bid shall be furnished taking into account the corrigendum, if any, issued as mentioned above and any failure in doing so will lead to consequences including rejection of bid for which KSEBL will not be responsible.

The KSEBL may extend the last date for the submission of bids at its discretion in exceptional cases. The bidders shall not amend/add/alter any of the Bid conditions, conditions of contract, specifications etc.

4.11 DOUBTS, CLARIFICATIONS AND PRE-BID MEETING

If the prospective bidder has any doubt on the meaning, interpretations of any portion of the bid document or on the Project, Work etc, he should submit the same to the bidding authority in writing and the soft copy of the queries should be in MS Office/ excel format. The submission shall reach the bidding authority not later than the Pre-Bid meeting as shown in the tentative schedule vide clause 3.5. The Bidder or his official representative is advised to attend the Pre-Bid meeting. The purpose of the meeting is to clarify the issues and doubts and to answer the queries on any matter that may be raised till that date. The questions raised and responses given by the KSEBL will be published in the website, without revealing the identity of the questioner. Any corrigendum based on the

queries/clarifications will be released on or before the date of publication of clarifications on queries mentioned in Notice Inviting Tender and will form part of the Bid document. No official clarification will be issued based on further queries raised after the pre-bid meeting.

4.12 CORRECTION OF ERRORS

Bids will be checked for arithmetical errors and will be corrected by KSEBL as follows:

“Where there is a discrepancy between amount in figures and in words, the amount in words will govern.”

4.13 MODIFICATION AND WITHDRAWAL OF BID

No modification or withdrawal of any conditions of Bid once submitted will be permitted. Such withdrawal or modification will lead to forfeiture of Bid Security (EMD) and rejection of Bid.

4.14 KSEBL'S RIGHT TO ACCEPT OR REJECT BID

The KSEBL reserves the right to reject any bid or all bids or annul the bidding process at any time prior to the award of contract without assigning any reason thereof. No liability other than giving information regarding the above to the bidders shall rest with KSEBL.

4.15 LAST DATE FOR SUBMISSION OF BIDS

The Bids shall be received by the bidding authority at the address specified on or before the date and time specified in the schedule of bidding process as per clause 3.5 and in the Notice Inviting Tender.

The KSEBL reserves the right at its discretion to extend the last date of submission by using corrigendum in the e-tender site.

Any Bid received by the KSEBL after the prescribed last date of submission of bids will not be considered.

4.16 CRITERIA FOR EXAMINATION, EVALUATION AND COMPARISON OF BIDS

4.16.1 Examination of Genuineness and Responsiveness

Before pre-qualification and selection of the bid for work, the KSEBL will examine all bids for their genuineness and responsiveness.

A genuine Bid shall be one which contains

- (a) Authenticated documents and data.
- (b) Legally enforceable undertaking/ agreements wherever required.

A responsive Bid:

- (a) Shall be properly signed (digital signature) and dated.
- (b) Shall contain required Bid Security (EMD) in the prescribed manner.
- (c) Shall satisfy to the requirements of the terms and conditions as per the Bid documents.
- (d) Shall be provided with all clarifications or substantiation that the KSEBL may require at any time before the award of contract.
- (e) Shall contain precisely the details and data required to be furnished under schedules.
- (f) Shall be furnished with prescribed agreements executed, Proforma filled in and declarations signed.
- (g) Shall conform to all the terms, conditions and specifications of the Bid documents without material deviation or reservation.

A material deviation or reservation is one;

- (a) Which affects in the scope, quality or performance of the works.
- (b) Which is inconsistent with the Bid documents and limits the KSEBL's right or the bidder's obligation under the contract.
- (c) Whose rectification would affect unfairly the competitive position of other bidders submitting substantially responsive bids.

Only the genuine and responsive Bid will be considered for further evaluation for pre-qualification and comparison for selection.

4.16.2 Evaluation of Pre-Qualification Bid

In the first stage, the pre-qualification bids will be thoroughly evaluated for the financial capability and technical soundness of the bidders. For this, the value of work done, audited annual accounts, bankers certificate etc. will be evaluated to assess their financial capability. Nature, volume, type etc of works done, time of completion of works done, type of clients, tools, plants and machinery possessed by the bidder, availability of required managerial and technical persons etc. will be evaluated to assess the technical soundness. The documents accompanied with PQ Bids shall be responsive to the PQ Bid criteria. Only qualified Bids in the pre-qualification shall be considered for further evaluation.

4.16.3 Evaluation of Price Bid

In the second stage, Cover 3 containing the schedule of prices offered by the bidder who are qualified in the first stage will be opened. The Price Bid of the bidders will be evaluated as per relevant clauses provided elsewhere in this document. For selecting the best Bid, the prime criterion is the lowest offer i.e sum of the price quoted for design as per site conditions, installation, supply of materials, testing & commissioning and operation and maintenance excluding applicable GST mentioned in the BOQ.

4.17 ACCEPTANCE OF BID AND AWARD OF CONTRACT

On final selection of Bid for the work, KSEBL will issue Letter of Award to the successful bidder at his address given in the Bid for communication, from the agreement authority. The signed copy of which, in token of acceptance by the bidder will form part of Contract agreement. This letter of Award will contain the sum which KSEBL will pay to the Contractor as per the accepted bid, which is called the Contract price and any other conditions, terms etc, on awarding the work, the amount of performance security, date of commencement and completion of works etc. will also be included.

After awarding the work by the Letter of Award mentioned above, the successful bidder has to furnish the required Performance security deposit as Bank Guarantee as per clause 5.1.7 and execute the Contract agreement in the Form for agreement provided in the Bid document. The same shall be done within 15 days from the date of issue of Letter of Award.

4.18 RELEASE OF BID SECURITIES

The bid securities of the unsuccessful bidders will be released after the award of work and signing of Contract agreement with the successful bidder.

Part 5 GENERAL CONDITIONS OF CONTRACT

5.1 GENERAL

5.1.1. Execution of agreement

Within 15 days from the date of issue of Letter of Award as per clause 4.17, unless the KSEBL has granted extension of time for execution of agreement after judiciously considering the merit of the ground urged for the extension, the successful bidder shall furnish Performance security Deposit as per clause 5.1.7., sign and execute the Contract agreement prescribed in Annexure-4, with the agreement authority. The agreement shall be executed on Kerala Government Stamp Paper worth Rs.1/- for every Rs.1000/- rupees of agreed total contract amount or as desired by the KSEBL.

Failure of the Contractor to comply with the above requirements shall constitute sufficient grounds for cancellation of award of contract and re-arrange the Work including re-bidding at the 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 KSEBL after forfeiting the security deposit of the concerned contractor. If any loss to the KSEBL results due to this, the same will be recovered from the Contractor as if it were arrears of revenue, but should it be a saving to the KSEBL, the original Contractor shall have no claim whatsoever be the difference. 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 the KSEBL may decide.

5.1.2. Parts of Agreement and Priority

All the Bid documents except PQ Bid of the successful bidder in original with modifications, if any, as ordered by KSEBL, the Letter Of Award, correspondence between the selected bidder and the KSEBL deemed necessary by the agreement authority, any other document as called for by KSEBL from the selected bidder and the Contract agreement executed, approved drawings issued from time to time etc. shall form the full Contract agreement. All the documents forming part of contract document are to be taken as mutually explanatory. For the purpose of interpretation, the priority of the document shall be in accordance with the following sequence:

1. Agreement executed in Kerala Government Stamp Paper
2. Letter of Award
3. Correspondences between KSEBL and the selected bidder included in the agreement.
4. Special Conditions of Contract.
5. General Conditions of Contract
6. Technical specifications and relevant data sheets of the component proposed and the approval for installation in the project.
7. Accepted Schedule of Technical Particulars and construction programme/ time schedule and schematic drawing for each location.
8. Accepted Schedule of Prices
9. General Bid conditions
10. Instructions to bidders.
11. Information to bidders.
12. Drawings including approved drawing issued from time to time.

5.1.3. Essence of Contract

Timely completion, quickness and promptness for execution, quality and cost effectiveness for work are considered as the essence of the contract.

5.1.4. Language of Contract

The language of contract shall be 'English'.

5.1.5. Law & Jurisdiction of Contract

This contract will be governed by the laws of India and Kerala. Any dispute arising out of this contract will be subject to the exclusive jurisdiction of Civil Courts at Thiruvananthapuram.

5.1.6. Amount of Contract

The amount of Contract will be the amount accepted by KSEBL for the EPC contract as per the Letter of Award. The contractor is bound to furnish information and data including the data in support of his quoted amount to KSEBL if called upon to do so. The percentage of tax amounts as Governed by GST shall be mentioned.

5.1.7 Performance security deposit

The Contractor shall submit Performance security deposit as Bank Guarantee at the time of execution of agreement in the prescribed format (Annexure 5) for performance security of the Contract and it shall be an amount equal to 3% of the total Contract amount. The Bank Guarantee submitted by the contractor rounded off to the higher multiple of Rs 1000/-. The amount thus worked out will be informed to the successful bidder vide Letter of Award as per clause 4.17.

In order to cover the liabilities under the contract and to ensure sufficient guarantee to cover all possible liabilities pertaining to defects, shortfalls, 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 KSEBL, an amount as prescribed by KSEBL shall be collected and retained from the Contractor towards Performance Security for the Contract.

The Bank Guarantee shall be initially valid from the date of agreement for a period of 2 years and be kept renewed from time to time till the end of contract period of 5 years from the date of commissioning. Performance Security Deposit shall be released to the Contractor after the 5 years from date of commissioning upon fulfilment of contractual obligations as per terms of the contract. The performance security B.G will be released after the contract period which shall be of 5 years from the date of taking over of the plant from KSEBL.

Failure of the successful bidder to submit the required Performance Guarantee shall constitute sufficient grounds for termination of Contract & forfeiting the EMD.

No interest will be paid by KSEBL at any stage of contract on the Performance Security.

The performance ratio (AC)(as per Clause 2.2.3) can be checked at any time in between if deemed necessary by the Engineer in charge (as per clause 2.2.3). 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.

5.1.8 Operations & Responsibilities of Contractor

The Contractor shall proceed with the works with diligence and expedition, supervision and shall be carried out to the entire satisfaction of the Engineer-in-Charge who shall have full power to order the Contractor to alter, enlarge or diminish the form, dimensions, portion or quantities of any of the works or to make use of materials and workmanship of different description and qualities from those herein specified. Works are to be properly carried out to the satisfaction of the Engineer-in -charge.

The whole work entrusted to the Contractor shall be executed in perfect conformity with the contract documents and such explanatory and detailed drawings and directions as may be furnished from time to time by the Engineer-in-Charge for the guidance of the Contractor.

The whole work entrusted to him together with any temporary works associated shall be carried out in the most substantial and proper manner with the best materials and workmanship, and to the entire satisfaction of the Engineer-in-Charge and in such order of time as he may direct. The Contractor shall attend to and execute without delay, all orders and instructions, which may from time to time be issued by the Engineer-in-Charge. When the works or appurtenants there of affects the works or the arrangements of other units of work not covered by this specification, working methods shall be discussed with the Engineer-in-Charge and his prior concurrence shall be obtained.

The Contractor shall submit drawings and specifications for the proposed temporary works for the approval of the Engineer-in-Charge. The Contractor is responsible for design of temporary works. The approval of the Engineer-in- charge does not exempt the Contractor's responsibility for his design for temporary works.

Preliminary, enabling and temporary works shall generally be limited to

- i) Electrification works, communication facilities and water supply works to the Contractor's site office, camp etc.
- ii) Civil Engineering structures connected with the construction of Contractor's office, installation of plants and equipments etc. at site.
- iii) Any other work of temporary nature carried out at site by the Contractor for the execution of the tendered items of the work as decided by the Engineer-in-Charge.

In addition to whatever provisions regarding operations, responsibilities and liabilities of the Contractor stated elsewhere in the contract, the following shall also be included:

The Contract is to include the whole work, whether permanent or temporary which are described in or implied by the contract documents which may be inferred to be obviously necessary for the efficiency, stability and completion of permanent works, the performance of all other operations, supply of all materials labour and chargeable expenses and things described in or implied by the contract documents which may be deemed desirable or required for the completion in all respect of the above works to the satisfaction of the Engineer-in-Charge and all such matters shall be deemed as included in the sum quoted by the Contractor.

Works shown in the drawings and not mentioned in the specifications or described in the specifications without being shown on the drawings shall nevertheless be held to be included in this contract and their execution is to be covered by the quoted sum in the same manner as if they had been expressly shown upon the drawing and described in the specification. If the Contractor has any doubt with regard to any details mentioned in the drawings or in the specifications, he may refer the matter to the Engineer-in-Charge in writing and get the clarifications needed.

The Contractor must take upon himself the entire responsibility for sufficiency of scaffolding, timbering, machinery, tools or implements, and generally of all the resources including labour, materials etc. used for the fulfilment of this Contract. Whether such means may or may not be approved or recommended by the Engineer-in-Charge, the Contractor must accept all risks in the execution of work including risks of accidents, or damages, from whatever cause they arise, until the completion of this Contract.

The Contractor shall carry out all works required as per the specifications in the contract agreement and or as per the latest version of I.S.S or equivalent. He shall furnish all labour, all materials except materials supplied by the KSEBL, machinery, plant, equipment, and shall supply and install all equipments, test and commission and meet the cost of all expendable items and other charges including incidentals and overheads for completing the works and the cost of design and drawings, if any which he may have to make in carrying out the works.

5.2 PAYMENTS

- a) The Contractor has to produce Bank Guarantee for an amount of 3% of the Contract amount as Performance Security Deposit at the time of executing Contract Agreement.

- b) No amount shall be released as mobilisation advance.
- c) 30% of the total contract value, will be released to the contractor as cost of major components of the plant(PV modules, Inverters, transformers and module mounting structures) after delivery of this material at site, inspection and verification by authorized departmental officers, and production of insurance certificates for the materials delivered at site.(Refer clause 5.5.2)
- i) The Engineer-in -charge is to be informed about the delivery of material one week in advance by the contractor.
 - ii) The Engineer in charge shall ensure the site acceptance / rejection of the received material at site within three days of delivery of material along with submitting the SAT procedure of the delivered material from the vendor by the contractor.
 - iii) The invoices shall be submitted by the contractor as per the accepted price schedule which is to be verified and made ready for release of payment within 15 days of receipt of the invoices subject to the satisfaction of the above conditions.
- d) 90% of the total Contract amount will be released after satisfactory completion, testing, commissioning of the solar plant after proving the Performance ratio (AC) as per clause 2.2.3.
- The contractor can submit the final invoice as per the accepted price schedule within 10 days on proving the Performance ratio (AC) (as per Clause 2.2.3) after completing the project within 08 months.
 - The invoices shall be verified and final payment may be released within 3 months of receipt of the invoices subject to the satisfaction of the above conditions.
- e) 10% of the total contract amount will be release in equal instalments in each year after the demonstration of the specified Performance ratio (AC) as per clause 2.2.3 at the end of each year during O&M period (5 years).

The performance security deposit B.G will be released only after the 5 year O&M period from the date of commissioning of the project and after demonstrating the specified Performance ratio (AC) (as per Clause 2.2.3) and handing over.

Further the contractor shall compensate for lower generation vide clause 2.2.3. i.e if the plant outage is due to component failure or lack of maintenance and unless it is rectified within the reasonable time allowed by the Engineer in charge/Agreement Authority according to the reasons of outage from the date of intimation to the contractor, the

contractor is liable for penalty. The proportionate amount for decrease in the production of energy units will be deducted for liquidated damages from the amount to be released and only the remaining will be released after demonstrating the required Performance ratio.

The payment will be made to the contractor for total value of work plus the applicable GST, subject to recovery of TDS, other recoveries, etc.
Payment will be made by the ARU of the Engineer in Charge specified in the work order (LoA) using KSEB Ltd's fund.

5.2.1. Dues from the Contractor

All sums of money found due from the Contractor to the KSEBL under this contract shall be recovered from the Contractor from his security and bills payable to him and from other assets movable or immovable as if the dues are arrears of land revenue under the provisions of Revenue Recovery Act for the time being in force or in any other manner as the KSEBL may deem fit.

5.3 WORK

5.3.1 Taking over the site and commencement of Work

After executing the agreement the contractor or his authorised agent shall take over the site from the Engineer- in -charge immediately and commence the work within 10 days. If the contractor does not turn up, the acknowledgement form for handing over of site duly signed by the Engineer in charge shall be sent to the contractor through registered post and it shall be deemed that the contractor has taken over the site from the date of posting. The contractor shall sign an acknowledgement in the form or his authorised agent while the site is taken over by the contractor. The Engineer-in-charge shall forward copy of acknowledgement directly to the agreement authority under intimation to the other officers. (Ref. PWD D-Code). There after the Contractor shall proceed the work with due expedition and without delay. The contractor shall submit the design brief and quality plan of the SPV to the Engineer -in-charge and get it approved before starting the work .The Contractor shall also submit a general lay out plan to the Engineer-in-Charge before the commencement of work for approval, showing details such as dump yards, camp facility, storage area, construction plant and equipment for execution of the work etc as directed by Engineer-in-Charge.

5.3.2 Commencement and Completion

After executing the agreement the work shall commenced after taking over of the site and completed within 8 months (maximum) from the date of taking over. However, the period of completion of work as stipulated vide clause 2.2.4 will be reckoned from date of handing over the site, even if not in full, but in a manner the work can be commenced and proceeded with in accordance with the programme of works and Time of Completion will be worked out accordingly. All the works stipulated under the scope of the Contract shall be completed in all respects, supplies made, services 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.

5.3.3 Certificate of Completion and Taking Over

The solar PV plant will be taken over by KSEBL after the defect liability period on completion of all works stipulated under the scope of work. After testing and commissioning of the Project the contractor will have to prove performance ratio (AC) mandatorily as per **clause 2.2.3**. If 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, EPC contractor shall improve the quality of the plant by replacement of any components with all suitable modification requirements on balance of systems at his own cost to achieve the performance ratio as per clause 2.2.3. The contractor shall be responsible for all required activities to demonstrate the specified performance ratio till the end of defect liability period.

Thereafter subject to the execution of O&M for 5 years 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 the works are completed satisfactorily and no work remains incomplete as per the terms of the contract. Dues and liabilities if any, outstanding against the Contractor shall also be included in this certificate. The issue of this certificate does not relieve the Contractor from the obligations during the Defects Liability Period defined vide item No. 19 of part I, 'Definitions and Interpretations'. The KSEBL shall finally take over the plant only after due completion of the conditions as specified in Handing over Clause 2.5 in Part II of Vol. III.

No work shall be considered as complete until the Contractor has removed all scaffoldings, surplus materials and rubbish and cleaned off the dirt from all wood work, doors, windows, walls, floors or from other parts of the structure before the work has been measured by

the Engineer-in-Charge. The Contractor shall clear the work within the time limit specified by the Engineer-in-Charge, failing which, the Contractor shall have no claims on the surplus materials and the works shall be cleared at the risk and cost of the Contractor.

The work shall be treated completed only when the Engineer-in-charge issues certificate of completion where the actual date of completion of work will be mentioned. In case of termination or foreclosure the Engineer- in -charge will issue the certificate of completion to that effect. If the contractor fails to complete any part of the work as required for satisfactory completion before taking over and / or the date of completion specified, and fails to remove the surplus materials, the KSEBL will complete the works and remove the surplus materials etc and the amount incurred for the same will be realised from the contractor from any amount due to him from this work or any other work with KSEBL or his assets in appropriate proceedings. The contractor will not have any claim over the surplus materials so removed by the KSEBL.

5.3.4 Defects Liability Period

The Contractor is liable to rectify any defect or damage notified by the Engineer - in – Charge, at Contractor's cost during the Defect Liability Period, which shall be 5 years reckoned from the date of commissioning the project, i.e.; to cover the entire Operation & Maintenance period. The Contractor shall guarantee for the performance of the entire project and its components during this period. If any defect, cracks, shrinkage or other faults in the works appear at any time prior to the end of the Defects Liability Period, the Engineer may instruct the Contractor to rectify the defects immediately. If the Contractor fails to carry out the directions given by the Engineer-in-Charge and does not rectify the defects within a reasonable time, the Engineer-in-Charge shall make alternate arrangements for making good the defects through other agencies and the cost thereof plus 21% shall be recovered from the Contractor from the amounts payable to the Contractor by way of forfeiting Performance Security deposit or any other means.

If the drawings, specifications and contract documents do not contain particulars of materials and work which are obviously necessary for the proper completion of the work and intention to include which is nevertheless to be inferred, all such materials and works shall be supplied and executed by the Contractor without any extra charge.

Any unusual defects like considerable dip in Performance ratio etc; if notified by the Engineer-in-charge shall be attended to within 24 hours or else KSEBL reserves the right to forfeit the performance security.

The Contractor is bound to furnish information and data including the data in support of his quoted amount to the KSEBL if called upon to do so.

If the contractor fails to prove the desired Performance ratio (AC) as per **clause 2.2.3** 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 .

5.3.5 Suspension of Work

The Contractor shall not suspend the work without the written consent of the Engineer - in - charge. In the event of suspension of the work on Contractor's own accord without written permission, the KSEBL shall have the right to recover all losses to KSEBL on account of such suspension as per law and even resorting to Revenue Recovery Act provisions.

The KSEBL shall not be liable to pay any amount to the Contractor towards loss arising from suspension of the works or delay in execution of the Work due to any strike or agitation by the labourers of the Contractor.

The KSEBL shall have for just and sufficient reasons, the right to suspend the works or to delay the works by an order in writing by the Engineer-in-Charge.

If such suspension is necessary for the proper execution of the works or by reason of weather conditions or by some default on the part of the Contractor or necessary for the safety of the works or any part thereof, or necessary for the safety of adjoining property, or safety of the general public, or workmen or those who have to be at the site, or to ensure safety, or to avoid disruption to traffic and utilities, or to permit fast repairs and restoration of any damaged utilities, the Contractor shall not be entitled to any extra cost incurred during the period of any suspension of work.

5.3.6 Suspension of Work on Account of Climatic Conditions

The Engineer-in-Charge may order the Contractor to suspend the Work or part of a work or work in a specified location that may be subjected to damage by climatic or weather conditions. The Contractor shall have no claim for compensation for losses in this account.

The care and safeguarding of works, site, men, machinery, materials, tools and plants are the responsibility of the Contractor without any extra payment from the KSEBL. Losses or damage to KSEBL on account of failure from the Contractor in safeguarding from weather and climatic conditions as mentioned above will be realised from the Contractor. Any event of stoppage on account of climatic conditions shall be brought to the notice of the Engineer-in-Charge immediately with reasons for such stoppage.

No claims for extra work/expenditure necessitated on account of stoppage due to the fault of the Contractor will be entertained. The KSEBL will not be liable for any loss or damages or any other sum of money, if any, sustained by the Contractor on account of climatic and weather conditions. The KSEBL will pay to the Contractor, all reasonable expenses and grant suitable extension of time arising from suspension of works or delay by such order in

writing of the KSEBL unless such suspension be due to some default on the part of the Contractor.

5.3.7 Tools, Plant and Equipment

The Contractor shall provide at his own expense all tools, plant and equipment required for the execution and completion of work in all respects as per the contract. The Contractors are advised to take necessary insurance coverage for the tools, plant and equipment used for the project. The Contractor shall furnish as desired by the Engineer-in-Charge all details of tools, plant and equipment mobilised to the site with date of mobilisation. He shall demobilise no tools, plant and equipment without the written consent from the Engineer-in-Charge.

5.3.8 Force Majeure

Force Majeure is defined as a cause which is beyond the control of the Contractor or the KSEBL which could not be foreseen with a reasonable amount of diligence and which substantially affects the performance of the contract such as,

1. Volcanic eruption, Earthquake, Cyclone, floods or droughts.
2. Civil war or war like operations or Acts classified under invasion of foreign enemies or hostilities, or Rebellion or terrorist action or Riots
3. Epidemics and similar conditions.

No party in the contract shall be liable to the other for any loss and damage occurred due to force majeure condition and shall not apply to the obligations of either party to make payment to the other party under the contract due to occurrence of force majeure conditions.

A notice shall be given to the Engineer-in-Charge within 14 days after the Contractor became aware or should have become aware of the relevant event or circumstances constituting force majeure. Engineer-in-Charge will ascertain the extent of delay due to the event.

The machinery, equipment and other valuable material of the Contractor at work site shall be insured by them 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. The KSEBL will not give any financial assistance on this account.

All equipment, machinery, works etc. which are furnished, installed, constructed and handed over / to be handed over to the KSEBL under the contract for the completion of

the project shall be insured by the Contractor for the period of contract. 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.

5.3.9 Liquidated Damages / Penalty

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 KSEBL due to the failure from the part of the Contractor in completing the Work in all respects within the stipulated period of completion vide clause 5.3.2, the Contractor shall compensate for the same. The Liquidated Damages (not as penalty) is to be realised at the end of the period of completion. The maximum amount of Liquidated Damages shall be limited to 10% of the accepted Contract Amount or Contract Price whichever is higher. The rate of Liquidated Damages shall be 1% of agreed Probable Amount of Contract or Contract Price whichever is higher per week of delay subject to a maximum of 10% of agreed Probable Amount of Contract or Contract Price, whichever is higher. If the work could not be completed and handed over after proving the required PR within 10 weeks from the date of completion of the SPV plant shall be terminated and then balance will be arranged at the risk and cost of the contractor.

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 will be arranged to be completed at the risk and cost of the Contractor

The Contractor shall be required to evaluate the PR for the entire year at the end of every year of operation & Maintenance or maintenance during the entire defect liability period. The acceptable (minimum or above) PR values to be demonstrated by the Contractor at the end of each year after accounting for the degradation are as per clause 2.2.3. If the specified PR % is not achieved PR shall be demonstrated in another consecutive 7 days. If PR is not achieved in the second chance, Contractor shall correct the plant at his own cost to achieve the minimum specified PR for each year. The O & M period will be extended to that time period till the desired PR ratio is attained.

The contractor shall be liable to pay liquidated damages for lower generation vide clause 2.2.3.

5.3.10 Default by the Contractor

If the Contractor neglects or fails to proceed with the works with due diligence and expedition or violates any of the provision of the Contract, the Engineer-in-Charge may give the Contractor a notice identifying deficiencies in performance of the Contract and demanding corrective action within the period of 14 days. After receipt of notice the Contractor shall take immediate action to rectify the mistakes and other deficiencies pointed out by the Engineer-in-Charge and report the matter to him.

5.3.11 Termination of Contract

If the Contractor fails to take satisfactory corrective action within the time frame specified in the notice i.e., 14 days after receipt of the notice, the Agreement authority reserves the right to terminate the contract in whole or in part after issuing seven days' notice to the Contractor based on the recommendation from the Engineer-in-charge seeking explanation from the Contractor why the Contract should not be terminated at his risk and cost. Materials, machinery, tools, plant and equipment, scaffolding materials etc. available shall not be removed from the site thereafter, without previous sanction from the Engineer-in-Charge. If the Contractor fails to give a satisfactory reply to the notice within the stipulated time of seven days or the reply received is not satisfactory, the Agreement Authority shall terminate the contract either in whole or part without further notice and shall arrange to execute the balance works at the risk and cost of the Contractor. The Contractor shall be issued the letter of termination of the contract intimating that the Work will be rearranged at his risk and cost. The Contractor's amount available with the KSEBL such as Security Deposit, Retention Money, running account bill payable if any etc. shall not be released to him until the balance works are carried out and the liabilities of the Contractor are fully assessed. All the Bank Guarantees and other security bonds, if any, shall be got extended or encashed if necessary to protect the interests of the KSEBL. The amount retained with the KSEBL and the Bank Guarantees etc. will be credited to KSEBL account to make good the losses that may be incurred by KSEBL on rearrangement of the works. The list of Contractor's equipment, machinery, tools, scaffolding materials etc. available at site shall be prepared by the Engineer-in-Charge in the presence of the Contractor or his authorised representative and shall be got signed by both parties. The KSEBL reserves the right to confiscate the above items and sell the same by public auction or any other means and credit the net proceeds to KSEBL account towards realisation of the losses that may occur on rearrangement of the works.

If there is any surplus amount available with the KSEBL after execution of the balance works, KSEBL is not bound to pay the surplus amount to the Contractor.

In the event of termination, the Engineer-in-Charge may also take possession of the works, site, plant, equipment and materials brought or placed thereon and cause the balance works to be completed by utilising them through other agencies, at the risk and cost of the Contractor. In such a case, the value of work done through such agencies will be credited to the Contractor at his contract rates.

On completion of such works, if the expenses incurred for carrying out such work, by other agencies as certified by the Engineer-in-Charge are in excess of the value of the work credited to the Contractor, the difference shall be recovered from the Contractor by the KSEBL from the amount of Security for performance and any other money withheld from the Contractor. In case, this results in expenditure in excess of the total of the amount of security for performance, retention money and other money withheld from the Contractor, the KSEBL shall have right to make good this amount by resorting to legal proceedings. In addition, he shall also be liable for the imposition of Liquidated Damages under the Contract as per clause 5.3.9.

The Engineer-in-Charge may also direct that a part or the whole of such plant, equipment and materials be removed from the site within a stipulated period. If the Contractor fails to do so, the Engineer-in-Charge may cause them to be sold, holding the net proceeds of such sale to the credit of the Contractor. After completion of the works and settlement of accounts, the lien of the KSEBL on the Contractor's plant, equipment and balance of materials will be released.

In the event of termination of contract, the Contractor, shall within 30 days thereof, make available to the KSEBL all the working areas and access thereto, as well as sites which were in his occupation for the performance of the Contract. He shall also return the tools and plants, if any, given to him by KSEBL.

Termination of the contract shall be adequate authority for the Engineer-in-Charge to demand discharge of the obligation from the guarantors of the security for performance.

5.3.12 Power, Water, Fuel and Lubricants

The Contractor shall make his own arrangements for availing power, providing fuel, water for the works, camps, colonies, street lighting and all other requirements at his cost. The KSEBL will render all assistance and help for getting the power supply. The Contractor shall not use trees available in the project site or adjacent forest land for the purpose of firewood.

5.3.13 Re-Assignment of Work

The work shall not be re-assigned to any one by the Contractor on any reasons

5.3.14 Foreclosure

If KSEBL does not require the whole or any part of the Work to be carried out at any time after award of the Contract, the Engineer-in-Charge will give notice to the Contractor in writing to that effect. The notice shall be issued 28 days prior to the last date required by the KSEBL for taking over of the Work or part of the Work. The Contractor shall hand over the works completed and demobilise from the site. The Contractor shall not have any claim to any compensation whatsoever, on account of any profit or advantage which he might have derived had he executed such works.

Thereupon, the Contractor shall be paid at contract rates for works executed as certified by the Engineer-in-Charge for the items which could not be fully utilised because of the foreclosure.

Materials supplied by KSEBL except for normal wastage shall be returned to the place from where it was issued.

5.3.14 Possession Prior to Completion

The Engineer-in-Charge has the right to take possession or use any completed part of the Work. Such possession or use shall not be deemed as acceptance of any work.

5.3.15 Communication Facilities

The Contractor shall install, operate and maintain communication facilities connected to the site offices of the Contractor in good working order at or near the different work sites in order to have prompt communication round the clock every day, with some responsible employee of the Contractor, put in charge. The Contractor shall also install, maintain and operate other communication and signal facilities necessary for the safe and efficient execution of the Work. The Contractor shall have internet facilities at the work site. Authorised employees of the KSEBL shall have free use of such facilities installed by the Contractor for the transmission of official message. The entire cost of providing and maintaining communication as provided in this paragraph shall be included in the quoted amount and no extra claim for the above will be entertained.

5.3.16 Quality Assurance

The Contractor shall establish a Quality Assurance system for the Work to demonstrate the compliance of such part with the requirement of the contract and specifications. The Quality Assurance system shall be subject to the approval of the Engineer-in-Charge. The

system shall be in accordance with the specifications stated in the Contract or with BIS specifications unless otherwise specified anywhere in this Contract. The Engineer-in-Charge shall be entitled to inspect the system and the reports shall be periodically sent to him by the Contractor. Compliance with the Quality Assurance system shall not relieve the Contractor from any of his obligations or responsibilities under the Contract.

The cost of all Quality Assurance operation shall be included in the quoted amount under the price schedule and no extra claim will be entertained. The details of sampling, testing, procedures etc. for different works are given in the Technical Specifications of the Contract. If these details are not stated in the technical document, BIS specification shall be followed. The Contractor shall provide samples and test without any extra cost and cooperate in the testing of materials if so desired by the Engineer-in-Charge.

5.3.17 Supervision

The KSEBL will engage sufficient number of supervisory staff at the site of Work. The Contractor shall provide them necessary facilities and assistance to examine and measure the works. The supervisory staff shall not have power to revoke, alter, enlarge or relax any requirement of the Contract, but may sanction to execute the works authorised by the Engineer-in-Charge. The supervisors will act as the representatives of Engineer-in-Charge and his delegated officers and will have power to give notice to the Contractor or his foreman of non-approval of any work, and such work shall be suspended or use of such material shall be discontinued until the decision of the Engineer-in-Charge or his delegated officer is obtained. The Engineer-in-Charge shall have access at all times to the places of storage and places where materials are being manufactured or processed or equipment are being manufactured for use in work under the Contract to determine whether their manufacture and process are proceeding in accordance with the drawings and specifications.

The work shall be conducted under the general direction and control of the Engineer-in-Charge and his delegated officers and is subject to inspection to ensure strict compliance with the terms of the Contract. Any failure from the part of KSEBL to detect or discover errors, faults, defects or the Work not in accordance with the requirement of Contract during the progress of work shall not be deemed as acceptance thereof or waiver of defect.

The Contractor shall execute the whole and every part of the work in the most substantial and workman like manner and in all other aspects.

If any work found as unsound, imperfect or done with unskilled workmanship or any material or article provided are unsound or quality inferior to that in accordance with the Contract, the Contractor shall forthwith rectify, reconstruct or remove in whole or part at his own charge and cost as noticed by the Engineer-in-Charge. In the event of failing to do

so within seven days from the written notice from the Engineer-in-Charge, KSEBL may have the right to rectify, re-execute, remove or replace such work or material as the case may be at the risk and expense of the Contractor in all respects. The Engineer-in-Charge may reject any work at any stage which he considers to be defective in quality.

5.3.18 Clean Up

Upon completion of the Work, the Contractor shall remove from the vicinity of the Work all plant, buildings rubbish, unused materials, concrete forms and other like materials belonging to him or under his direction during construction to the satisfaction of the Engineer-in-Charge and in the event of his failure to do so, the same may be removed by the KSEBL at the expense of the Contractor within 15 days from the date of handing over. The cost on account of clean up shall be included in the quoted rate and no additional extra claim shall be entertained.

5.3.19 Protection of Work

The Contractor shall maintain all works including Preliminary and Enabling works, Temporary works, Care and Diversion works etc. during the progress of work till taking over, and shall take necessary measures to protect and preserve them in good condition at his own expense. The rates quoted shall include cost on account of this and no extra claims shall be entertained.

5.4 CONTRACTOR

5.4.1. Power of Attorney

The Contractor shall not execute Power of Attorney without previous sanction in writing of the authority accepting the Bid in respect of any matter touching this contract and any such Power of Attorney executed without such sanction shall neither be recognized by, nor will be binding upon the KSEBL or its officers. It shall be entirely within the discretion of the authority accepting the Bid either to grant such sanction or to refuse it or to revoke a sanction once given.

5.4.2. Contractor's Nominee

If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies, and if the Contractor is a partnership concern and one of the partners dies, then all sums payable under this contract will be paid to the nominees of the individual Contractor/proprietor if there is one or to his/her legal representative and in the case of partnership, to the surviving partners and the Contractor should fill up the 'Form of

Nomination' at the time of executing the agreement and should sign in the presence of two witnesses.

5.4.3. Management of Work

It is the responsibility of the Contractor to manage the entire works to produce the results as contemplated herein. It is for him to plan, organise and execute the work and manage the labour.

In case the Contractor is not able to manage the Work properly and his conduct is conducive to create indiscipline at site and to create confusion in contract administration as adjudged by the agreement Authority, it shall be competent to the agreement Authority to terminate the Contract at the risk and cost of the Contractor as per clause 5.3.11

The Contractor shall also comply with the directions of Engineer-in-Charge in respect of planning, organising, execution and management of works. Failure to do so will lead to termination of contract at the risk and cost of Contractor. In the case of termination, provisions provided in clause 5.3.11 shall apply. In case of labour strikes, indiscipline or unrest of the labourers of the Contractor, the Contractor sustains any loss or damages, the KSEBL shall not be liable for any loss or damage to the Contractor. No extension of time of completion shall be granted due to labour strikes, indiscipline or unrest of the labourers of the Contractor.

5.4.4. Contractor's Representative

The Contractor may with prior consent of Engineer-in-Charge appoint his representative giving him necessary authority to act on Contractor's behalf under the Contract. The Contractor shall furnish the name and details of such representatives to the Engineer-in-Charge and to his delegated officers well in advance. Without the prior consent of Engineer-in-Charge, the Contractor shall not revoke or replace such appointments.

If the Contractor's representative is to be absent from the site, replacement shall be made by a suitable person with the prior consent of Engineer-in-Charge. The Contractor's representative shall receive instructions on behalf of the Contractor from the Engineer-in-Charge and such instructions shall be deemed to have been given to the Contractor.

The Contractor's representative shall be fluent in language for communication, competent for understanding drawing, executing and managing work.

The Contractor shall employ for the entire period of the contract, sufficient number of competent and qualified Engineering personnel (Graduates and Diploma holders) as

required and approved by the Engineer-in-Charge for execution of the Work. The Contractor shall intimate the Engineer-in-Charge in writing the names and identity of technical personnel proposed to be engaged on the Work.

The Engineering Graduates and Engineering Diploma holders are to be paid by the Contractor at the prevailing rates during the entire period of execution of the Work.

In case minimum technical personnel as prescribed by the Engineer- in- charge are not continuously engaged in the Work at site by the Contractor, the expenditure that would have been incurred by the Contractor on such engagement of personnel, subject to the amount as per the provisions of PWD Schedule of Rates, will be recovered from the Contractor.

For large works, the technical organisation shall be suitably enlarged such that the works can be carried out smoothly as determined by the Engineer-in-Charge. The Engineer-in-Charge may require the Contractor to engage a specialist based on nature of works.

Cost of works	Number of persons to be employed
For works costing from Rs. 2 lakhs to Rs. 5 lakhs	One Diploma holder
For works costing above Rs. 5 lakhs to Rs. 10 lakhs	One Engineering Graduate and one Engineering Diploma holder
For works costing over Rs. 10 lakhs	One Engineering Graduate and two Engineering Diploma holders

The Contractor shall intimate the Engineer-in-Charge in writing the names and identity of the technical personnel proposed to be engaged on the work. In case minimum technical personnel as mentioned in this clause is not continuously engaged in the work at site by the Contractor, the expenditure that would have been incurred by the Contractor on such engagement of personnel, subject to a minimum amount assessed at the rates of minimum remuneration mentioned above will be recovered from the Contractor.

5.4.5 Engagement and Removal of KSEBL Personnel and Others

The Contractor shall not recruit or attempt to recruit staff and labour from amongst the KSEBL personnel or any person previously in service of the KSEBL or of the Government who has not completed two years after retirement.

The Contractor shall remove any workman or Sub-Contractor or employee in his service from work/site at the instance of directions from the Engineer-in-Charge or other Officer-in-Charge

5.4.6 Notices, Instructions and Correspondence

The Contractor shall have an office near the Work site where notice of directions and instructions from the Engineer-in-Charge may be served. The Contractor shall have an authorised person present in the office during all times who shall receive such notice on behalf of the Contractor.

The Contractor shall furnish the postal address of his site office, e-mail address, telephone and fax numbers. Any notice or instruction to be given to the Contractor under the terms of contract shall be deemed to have been served on him if it has been delivered to his authorised agent or representative at site or sent by registered post to the site office or address of the firm last provided by the Contractor.

5.4.7 Security of the Site

Unless otherwise stated in the Special Conditions

- (a) The Contractor shall be responsible for keeping unauthorised persons off the site and equipments installed
- (b) Authorised persons shall be limited to the Contractor's personnel and the KSEBL personnel; and any other personnel notified as authorised personnel of the KSEBL.

5.4.8 Fencing and Lighting

The Contractor shall be responsible for the proper fencing, if required, guarding, lighting and watching of all works comprised in the Contract and for the proper provision of temporary road way, footways, guards and fences as far as the same may be rendered necessary by reasons of the work for the accommodation and protection of pedestrians or other traffic and owners and occupants of adjacent property and the public.

5.4.9 Site Investigations and Representations

The Contractor shall satisfy himself about the nature and location of work, general and local conditions including those bearing upon transportation, disposal, handling and storage of materials, flow through the river at site, availability and nature of labour, availability of water etc. or similar physical conditions at the site, the configuration and condition of ground, the character, quality and quantity of the surface and sub surface

materials to be encountered, the character, and capacity of equipment and facilities needed preliminary to and during the execution of the Work and all other matters which can any way affect the Work or the cost thereof under this contract. Any default or failure by the Contractor to acquaint him with all the available information concerning this condition will not relieve him from the responsibility for the execution of the contract.

If the drawings, specifications or description of items do not contain particulars of materials and work which are obviously necessary for the proper completion of the Work and the intention to include which is nevertheless to be inferred all such materials and works shall be supplied and executed by the Contractor without extra charge, and the KSEBL will furnish to the Contractor with responsible expedition after receiving from the Contractor a request in writing thereof, such details as are necessary.

5.4.10 Liability Due to Damage of Work or Plant

The Contractor shall, during the progress of the Work, properly cover up and protect the work and plant from injury by exposure to the weather, natural calamities such as flood, rain and by any other cause. He shall take every reasonable, proper, timely and useful precaution against accident or injury to the same from any cause. The Contractor shall remain answerable and liable to accidents or injuries thereto which may arise or be occasioned by the acts or omissions of the Contractor or his supervisory staff or his workmen or his Sub- Contractors and all losses and damages to the works or plant arising from such accidents or injuries as aforesaid shall be made good in the most complete and substantial manner by and at the sole cost of the Contractor and to the reasonable satisfaction of the Engineer - in -charge. Should any such loss or damage happen to units of works or plant or material falling outside the scope of this contract, the same shall be replaced or compensated for, to the satisfaction of the Engineer-in-Charge.

Until the Work is taken over or deemed to be taken over by the agreement Authority, the Contractor shall be liable for and shall indemnify the KSEBL in respect of all damages or injury to any person or to any property of the KSEBL or of others occasioned by the act of the Contractor or members of his organisation including his workmen or his Sub-Contractors or piece - work Contractor or by defective work or materials but not due to causes completely beyond his control.

5.4.11 Time Limit for Claims

Any claim arising out of this Contract should be submitted before the agreement Authority within 30 days from the date of occurrence of the event which leads to such claim. The Contractor is precluded from raising any such claim after the expiry of the above period.

5.5 KSEBL

5.5.1. A) Role of agreement Authority

The agreement Authority is the Kerala State Electricity Board Ltd., constituted by the Government of Kerala and is represented by an officer of the KSEBL as authorized by the KSEBL. Here, Chief Engineer (Renewable Energy& Energy Savings)& Chief Safety Commissioner will be the represented agreement Authority. He / She is represented by Deputy Chief Engineer, Executive Engineer, Assistant Executive Engineer, Assistant Engineer and subordinate staffs as per Delegation of Powers prevailing in the KSEBL. These Officers shall exercise within their delegated power as prevalent in KSEBL regarding management, co-ordination and directions in execution of the contract with the Engineer-in- Charge and the contractor. The commitments made by these officers are based on the agreement executed and powers delegated. If an ambiguity or discrepancy is found in the document of contract, necessary clarification will be made and instructions will be issued by the Agreement Authority.

Approval of major items such as PV modules, inverters, mounting structures and transformers if any, as per tender specifications and recommended by the Technical committee and Single line diagram, other drawings, BOM and other component approval shall also be issued by the Agreement authority.

The contractor shall submit letters of inspection calls sufficiently in advance specifying the date and venue of inspection to the agreement authority. 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 test, shall approve and issue Material Dispatch Clearance Certificate.

B) Role of Engineer- in Charge.

Deputy Chief Engineer of the corresponding Transmission Circle/ Electrical circle or Executive Engineer of the Electrical Division/ Transmission Division in which the work is executed will be the Engineer-in Charge of the project and will be defined in the LoA. The

scope of the duties include site Inspection, installation, issuing layout approvals, testing and commissioning of the project, sorting out the bottle necks arising with the contractor, communicating the daily progress with the Agreement Authority and if necessary for taking up the matter in which decision is required and the following.

- After executing the agreement, the site will be handed over to the Contractor, by the Engineer- in –Charge at the time of commencement of work.
- The Contractor shall submit a general lay out plan to the Engineer-in-Charge before the commencement of work for approval, showing details such as dump yards, camp facility, storage area, construction plant and equipment for execution of the work etc as directed by Engineer-in-Charge.
- **Engineer-in-Charge shall take necessary actions such as tree cutting sanction from social forestry department and land construction approval if required.**
- Contractor is responsible for obtaining consents, clearances including Electrical Inspectorate sanction, various permit and approval from appropriate authorities. Engineer-in-Charge shall provide sufficient support in this regard and for grid interconnection.
- Functional testing and erection of equipments should be carried out in the presence of officer appointed by the Engineer-in-Charge and the approvals will be given only if the same is satisfactory.
- The Engineer-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 civil supervision and work measurement.
- The Engineer-in-Charge shall engage sufficient number of supervisory staff at the site of Work. The supervisors will act as the representatives of Engineer-in-Charge and his delegated officers. The work shall be conducted under the general direction and control of the Engineer-in-Charge and his delegated officers and is subject to inspection to ensure strict compliance with the terms of the Contract.
- Commissioning test with all required testing shall be conducted by the contractor in presence of KSEBL officers delegated by the Engineer-in-Charge.
- Engineer-in- Charge shall be the Payment authority of the projects.

5.5.2. Site Inspection/Acceptance Test

- a. Except as otherwise provided in paragraph (d) hereunder, all materials and workmanship shall be subject to inspection, examination and testing by the Engineer-in-Charge at any and all times during manufacture and/or construction at any and all places where such manufacture and/or construction are carried out.

The KSEBL shall have the right to reject defective material and workmanship or require its correction/rectification. Rejected workmanship shall be satisfactorily rectified and rejected material shall be replaced with proper material without charge therefore, and the Contractor shall promptly segregate and remove the rejected material from the premises at his own cost. If the Contractor fails to proceed at once with the replacement of rejected material and/or the correction of defective workmanship, the KSEBL may, by a contract or otherwise, replace such material and/or correct such workmanship and charge the cost thereof to the Contractor and/ or may terminate the right of the Contractor to proceed further as provided under clause 5.3.11 of these Specifications. The Contractor and his surety are liable for any damage caused to the KSEBL resulting from the above.

- b. The Contractor shall furnish promptly and without any additional charge all reasonable facilities, labour and materials necessary for the safe and convenient inspection and test that may be required by the Engineer-in-Charge. All inspection and test by the KSEBL shall be performed in such a manner as not to unnecessarily delay the work. Special, full-size, and performance tests shall be done as described in the Specification. The Contractor shall be charged with any additional cost of inspection when material and workmanship are not ready for inspection at the time of inspection, as required by the Engineer-in-Charge.
- c. Should it be considered necessary or advisable by the KSEBL any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out the same, the Contractor shall, on request, promptly furnish all necessary facilities, labour and material if such work is found to be defective with respect to the Specifications due to the fault of the Contractor or of his Sub - Contractor who shall defray all expenses of such examination and satisfactory reconstruction.
- d. Inspection of materials and finished articles to be incorporated in the work shall be made at the place of production, manufacture or shipment wherever the quantity justifies it, unless otherwise stated in the Specifications and such inspection and written or other formal acceptance, unless otherwise stated in the Specification, shall be final except, as regards latent defects, departure from specific requirements of the Contract, damage or loss in transit, fraud or such other gross mistake if at all found later. Subject to the requirements contained in the preceding sentence the inspection of materials and workmanship for final

acceptance as a whole or in part shall be made at site, nothing contained in this paragraph shall in any way restrict the KSEBL's right under any warranty or guarantee.

- e. If the Contractor fails to comply with any of the conditions of the Contract or with instructions or decision of the Engineer-in-Charge issued there under, except where otherwise specifically provided in this contract, the Engineer-in-Charge may after giving written notice to the Contractor take necessary steps for the compliance of the said conditions, instructions or decision and any expenditure thus incurred shall be recoverable from the Contractor.
- f. The work during its progress (or) during the defect liability period can also be inspected by the Chief Engineer (or) his authorized representative(s) and any defects pointed out by him shall be attended by the Contractor under intimation to the Engineer in charge.
- g. SAT Documentation for material approval including RFID reading for the panel shall be submitted two weeks before material acceptance test and if necessary additional test will be added and on acceptance of documents the test will commence.

5.5.3. Correctness of Bid

It shall definitely be understood that the KSEBL does not accept any responsibility for the correctness or completeness of the bid.

5.5.4. Orders after Award

After the Bid has been accepted by the KSEBL, all orders and instructions to the Contractor shall be given by the Engineer-in-Charge on behalf of the KSEBL except otherwise provided in the Contract.

5.5.5. Lien Withhold Payments

The KSEBL shall have a lien on and over all or any money that may become due and payable to the Contractor under this Contract and also over the Security and Retention deposits/guarantees, in respect of any debt or sum that may become due and payable to the Government and/or KSEBL by the Contractor, either alone or jointly with another or others, or either under this or under any other contracts or transactions of any nature whatsoever between the Government and/or KSEBL and the Contractor and also in respect

of any Government tax or taxes as Governed by GST or other money which may become due and payable to the Government by any other statutory enactment or enactments in force or modifications or substitutions thereof and KSEBL shall at all time be entitled to deduct the said debt or sum or tax as Governed by GST due by the Contractor from the money, Securities like Bank Guarantee or deposit which may become payable/ returnable to the Contractor under this contract.

5.6 LABOUR

5.6.1 General

The Contractor shall be bound by the provisions of 'Contract Labour (Regulation and Abolition) Act of India, 1970' and amendment thereof and the Rules framed there under. He shall get himself registered under the Act at the appropriate time. Contractor shall implement the provisions of Act scrupulously.

The Contractor shall also be bound by the applicable contract labour regulations in respect of wage, payment of wages, fixation of wage periods, hours of work, leave, registers to be maintained by the Contractor, display of notices regarding wages, fines and deduction, maintenance of registers, submission of returns etc.

The rates quoted by the Contractor shall include labour costs on the following items as well as other fringe benefits that are fixed to the labour as per the existing provisions of law.

- (i) Fair wages including Dearness Allowance
- (ii) Leave wages
- (iii) Wages for paid holidays (National and festival holidays)
- (iv) Retrenchment compensation.
- (v) Workmen compensation
- (vi) Bonus
- (vii). Other allowances, if any.

The responsibility for paying wages and other benefits to the labourers is entirely that of the Contractor. KSEBL takes no responsibility, towards the wages and other benefits which the Contractors have to pay to the labourers till the completion of the Contract. All the expenditure towards this is deemed to have been included in the rates/amount quoted by the Contractor. The Contractor shall comply with the provision of various labour laws , rules and regulations as applicable in regard to all matters provided therein and shall indemnify the KSEBL in respect of all claims that may be made against the KSEBL for non-compliance thereof by the Contractor.

Notwithstanding anything contained herein, the Engineer-in-Charge may take such actions as may be necessary for compliance of the various labour laws and recover the costs thereof from the Contractor.

Any dispute between the labour and the Contractor shall be resolved by the Contractor without loss of time and in case the dispute cannot be resolved in reasonable time, it shall be referred to the Labour Department of the Government for conciliation and settlement of dispute. The decision taken by the Labour Department during conciliation meeting shall be binding on the Contractor. Any extra cost involved as a result of conciliation settlement shall entirely be borne by the Contractor.

All disputes between the Contractor and Labourers shall be classified as Industrial Disputes. In case it is found that the disputes between Labour and Contractor are not resolved in time the KSEBL may help the Contractor in accelerating conciliation settlement without any commitment on the part of the KSEBL.

Fair wages not less than the minimum wages that may be fixed from time to time in accordance with the law or Act or Rules there under applicable to the area covered by the Work shall be paid by the Contractor to all labourers and their wage rate shall be prominently displayed in the labour camps and important work sites in Malayalam and English script. All statutory and other increase in wages, customary and fringe benefits that may become payable by the Contractor to his labourers entirely shall be borne by the Contractor and the KSEBL will not compensate additional expenditure, if any, incurred by the Contractor on such accounts. Payment of wages to the labourers shall be made at regular and reasonable intervals and shall be governed by labour regulations. Proper identity cards shall be issued to the labourers and acquittance records for the payments shall be maintained and made available for inspection by the KSEBL.

The Contractor shall assume all responsibility for payment of wages and other benefits from time to time till the completion of the Work whether minimum wages have been notified or not.

5.6.2 Recruitment of Labour

The Contractor shall not employ child labour or criminals or outlaws. While recruiting labourers, the Contractor should give preference to those available in local areas.

5.6.3 Law and Order

The maintenance of the law and order is the responsibility of the Government. It is the Contractor's responsibility to maintain good relations with the labour and others and to maintain discipline of labour at site. Any problem on maintenance of law & order shall be referred to the appropriate Government authority, for redressal, by the Contractor.

5.6.4 Labour Reports

The Contractor shall report monthly, within 5 days after the close of each calendar month, on specified forms, the number of persons under different category on their respective pay rolls and such other information as may be required by the Engineer – in- Charge.

Labour reports showing the strength of labourers and other details under each category should be submitted every week by the Contractor, if so required by the Engineer-in-Charge.

5.6.5 Accidents

It shall be the responsibility of the Contractor to take protective measures to prevent accidents on the works. He shall indemnify the KSEBL against any claim for damages or for injury to persons or property resulting from and in the course of the work and also under the provisions of the Workmen Compensation Act. The Contractor shall take CAR (Contractor's All Risk) policy in order to cover all risk, which may arise from the Contract and produce the certificate before the Engineer-in -Charge and convince the Engineer-in-Charge of the existence of such insurance coverage failing which the payments to the Contractor will be withheld.

On the occurrence of an accident during the course of the work which results in death or which is so serious as likely to result in death, the Contractor shall report the facts stating clearly and with sufficient details, the circumstances of the accident and the subsequent action taken by him, in writing to the Engineer-in-Charge, Labour Commissioner and other concerned authorities within twenty four hours of such accident. In case of fatal accidents, the Contractor shall at once inform the Commissioner for Workmen Compensation, the details of the accident stating whether he accepts or disclaims the liability. All other accidents on the works involving injuries to persons or damage to property shall also be promptly reported to the Engineer-in-Charge stating clearly and with sufficient details, the facts and

circumstances of the accidents and the action taken. In all cases, the Contractor shall indemnify the KSEBL against all losses or damage resulting directly or indirectly from the Contractor's failure to report in the manner aforesaid. This includes penalties or fines, if any, payable by the KSEBL as a consequence of failure to give notice under the Workmen's Compensation Act or failure to conform to the provisions of the said Act in regard to such accidents.

In the event of an accident in respect of which compensation may become payable under the Workmen's Compensation Act, the Engineer-in-Charge will retain such amount which he feels sufficient to meet the liability, from the amount due and payable to the Contractor. On receipt of any award of compensation from the competent authority under the said Act, the difference in amount will be adjusted.

The Engineer-in-Charge will have the right to deduct from the amount due to the Contractor any sum required for making good the loss suffered by a worker or workers on any reasons of non-fulfilment of the conditions of the Contract. The Contractor shall primarily be responsible for all payments to be made under and for the observance of the regulations aforesaid without prejudice to his right to claim indemnity from his Labourers. The applicable contract labour regulation currently in force and future amendments thereof shall be deemed to be part of this Contract and any breach of this shall be violation of contract.

5.6.6 Work During Night or on Holidays

Wherever work is carried out at night, adequate lighting of working areas and access paths should be provided by the Contractor, at his cost.

Sufficient notice is to be given by the Contractor to the Engineer-in-Charge regarding the details of work in shifts so that necessary supervision by the KSEBL could be provided.

To achieve the required progress, the work shall be carried out whenever necessary round the clock in shifts even on holidays. No extra amount on account of any shift work or work on holidays is payable to the Contractor. The work shall be arranged on holidays after getting the permission of the Engineer-in-Charge so that necessary supervision by the KSEBL could be provided.

When some unavoidable works are to be carried out, on considerations of safety of property, security of personnel, and / or on technical considerations, such works shall be carried out on an emergency basis by the Contractor as per the directions of the Engineer-in-Charge.

The cost of such works shall be borne by the KSEBL and the Contractor shall be paid accordingly. The decision of the Engineer-in-Charge in all matters in this regard shall be final and binding.

5.6.7 Other Workmen

The Engineer-in-Charge will have full authority to depute workmen on the worksite to execute other works not included in the contract. The Contractor shall afford reasonable facility during working hours to enable such workmen to carry out other works provided that such works shall be carried out in such a manner as not to impede the progress of the work included in the contract. The Contractor however shall not be liable for any damage which may happen to such other works, provided he complies with the instructions in connection therewith and provided that the damage is not caused by the Contractor or his workmen.

5.7 MATERIALS

5.7.1 General

No material will generally be issued by the KSEBL for the work to the Contractor. All materials required for the work including cement and steel shall be supplied by the Contractor at site as per the specifications. Materials supplied or brought by the Contractor at site shall not be taken out of the site without the written permission of the Engineer-in-Charge.

If it is intended by the KSEBL to supply any material, it shall be specifically mentioned in the Special Conditions of Contract or the Engineer-in-Charge may with special sanction of the KSEBL opt for supply of any material in the interest of maintaining quality and timely execution of work. Any material under the ownership, custody or possession of the KSEBL should not be used without specific permission from the Engineer-in-Charge or his authorised representative. If there is any misuse or wastage through negligence by the Contractor, the Contractor is liable to pay penalty as decided by the Engineer-in-Charge.

5.7.2 Storage of material

The Contractor shall at his own expense, provide and furnish sheds and yards in such situations and in such numbers as in the opinion of the agreement Authority and requisite for carrying on the work under this contract for the storage of materials arranged by him or handed over to him by KSEBL. The Contractor shall keep at each of

such sheds and yards, a sufficient quantity of materials in stock so as to avoid delay in carrying out the works with due expedition.

5.7.3 Misuse of Materials

No material or equipment under the ownership or possession of the KSEBL shall be used by the Contractor without written permission from the competent authorities. Any use in contravention to above condition will constitute misuse of material or equipment. If there is any misuse or waste of material through negligence by the Contractor, he shall be liable to pay penalty as decided by the Engineer-in-Charge.

5.8 ENVIRONMENT

5.8.1 Safeguards for Environmental Protection

The Contractor is bound to follow the safeguards that are provided herein, in respect of safeguard for environmental protection at no extra cost. The Acts, Rules and Regulations regarding environmental protection enacted from time to time shall be followed at his cost without fail. Preservation of Existing Vegetation

The Contractor will preserve and protect all existing vegetation such as trees on or adjacent to the site which do not interfere with or cause inconvenience to the construction as may be determined by the Engineer-in-Charge. The Contractor will be held responsible for all unauthorised cutting or damaging of trees including damage due to careless operation of equipment, stockpiling of materials or tracking grass areas by equipment. Care shall be taken by the Contractor, especially in the existing solar plant, in felling trees authorised for removal to avoid any unnecessary damage to vegetation and trees that are to remain in place and to structures under construction by workmen. Cutting and removal of trees, if any, shall be done by the Contractor or his men only after obtaining due permission from the agreement Authority.

5.8.2 Interference with Public, Public Properties, Other Departments and Safety of Public

All access to work sites and other areas other than those specifically agreed to be constructed by the KSEBL herein in these specifications, if any, shall be provided by the Contractor at his own expense. The KSEBL assumes no responsibility for the condition of roads and structures thereon that may be used by the Contractor in performing the work under these specifications or in travelling to and from the site of the work. No Payment will be made to the Contractor by the KSEBL for any work done in constructing, improving, repairing or maintaining any road or structure thereon for use in the performance of the work under these specifications. All roads subject to interference by

work shall be kept open or suitable detours shall be provided by the Contractor during the period of time covered by this Contract for the KSEBL and others who may be engaged in other construction work in the vicinity of the Work covered by this specification.

The Contractor shall arrange and prosecute the Work under these Specifications so as not to interfere with other works or with existing improvements. The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient red lights, danger signals and shall take all necessary precautions for the protection of the Work and the safety of the public. Roads closed to traffic shall be protected by effective barricades and warning and detour signs shall be displayed suitably.

All barricades and obstructions shall be illuminated at night and all lights shall be kept lit from sunset to sunrise.

5.8.3 Protection of Adjoining Premises, Structures etc.

The Contractor shall protect adjoining sites against structural, decorative and other damage that may be caused during the course of execution of the Work and he shall make good any such damage occurred at his own cost.

5.9 MISCELLANEOUS

5.9.1 Toll & Duties

The Contractor shall, unless otherwise specifically provided in the Contract, pay all duties, Seigniorage charges, tolls, quarry fees, Octroi, Royalties and other taxes on all materials and articles that he may use and as governed by the GST.

5.9.2 Taxes, Duties and Recoveries

Only GST registered persons should be made eligible to participate in tenders. The contractor should quote only the amount excluding GST. The contractor should mandatorily specify the registration status and GST Registration Number along with the copy of GST Registration Certificate.

The payment will be made to the contractor for total value of work plus the applicable GST, if applicable, subject to recovery of TDS, other recoveries, etc. GST will be given extra over and above the quoted amount as per actual.

Registered/compounding dealer/supplier shall produce GST Invoice containing all the particulars stated in Rule 46 of the CGST Rules, 2017. In case where contractor is having annual turnover of more than Rs.100 crores (or as amended from time to time), E-Invoice shall be submitted.

Nothing in the Contract shall relieve the Contractor from his responsibility to pay tax on all profits made by him in respect of the Contract. Recoveries of Income Tax, and any other taxes payable by the Contractor as governed by the GST will be made from the bills due to him and will be regularised on receipt of advice from the assessing authorities and as per rules in force from time to time. All taxes and levies recoverable under the statutes in force from time to time shall be recovered from the Contractor. Clause 4.1, 'Bid Prices', shall also be referred in this connection.

Bidder should submit an undertaking to the effect that if any dispute on payment of taxes from the concerned tax authorities occurs in future, the bidder shall indemnify KSEBL from such liabilities and the contractor will be liable for the additions, loss or cost on account of such discrepancies / disputes.

5.9.3 Tax Clearance Certificate

The KSEBL may require the Contractor to produce Income Tax, Agriculture Income Tax and any other applicable tax clearance certificates from the respective authorities and copy of PAN card, before entering into the agreement with him for the Contract and the Contractor will have to produce all such documents as and when called for. Final payment of the Contractor will be made only after the production of all applicable tax clearance certificates and other certificates regarding compounded rate of work, contract tax, concessional rate of sales tax, non-deduction of work contract tax etc as governed by the GST from the departments concerned and attested copy of PAN Card in the case of Income Tax.

5.9.4 Insurance

The Contractor shall secure and maintain throughout the duration of this Contract, insurance of such types and in such amounts as may be necessary to protect himself and the interests of the KSEBL, against all usual hazards or risk of loss. The form and limits of such insurance and the company together with the underwriting thereof in each case, such as will be acceptable to the KSEBL but, regardless of such acceptance, it shall be the responsibility of the Contractor to maintain adequate insurance coverage at all times. Failure of the Contractor to maintain adequate coverage shall not relieve him of any contractual responsibility.

The Contractor, without limiting KSEBL's obligations and responsibilities shall insure:

- (a) the works, 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 costs 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.

The insurances under item (a) and (b) shall be in the joint names of Contractor and KSEBL and shall cover:

(i) 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 works 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 neighbouring habitats, life and property around the boundary of the site.

If the Contractor fails to effect in force the insurances referred in 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 case, KSEBL 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 KSEBL as aforesaid from any amounts due or which may become due to the Contractor, or recover the same as a debt due from the Contractor

5.9.5 Death, Insanity, Bankruptcy, Insolvency, Imprisonment, or Varying Joint Venture Arrangement.

1. In the event of death or insanity of the Contractor, his legal heirs, legatees, next friend, Manager or other representative as per law or any person in whom the Contract may become vested shall forthwith give notice thereof in writing to the

Engineer-in-Charge and within one month shall take all reasonable steps to prevent stoppage of the work.

The said person or persons have the option of carrying out the Contract, subject to his or their providing such guarantee as may be required by the Engineer-in-Charge not exceeding the value of the work remaining unexecuted and an agreement executed for continuing the balance work. In the event of the stoppage of the works, the period of the option under this clause shall be fourteen days only, provided the above option not been exercised, then, the Contract may be terminated by the KSEBL by notice in writing pasted at site and advertised in one issue of the local news paper. In the event of termination, same power and provisions reserved by the Engineer-in-Charge in clause 5.3.11 shall apply.

2. If the Contractor is imprisoned, becomes insolvent, goes on liquidation or amalgamated,

a) The KSEBL is at liberty to terminate the contract unless the KSEBL is compelled by the order of Court to permit the persons authorised by the Court, Receiver, and Liquidator or other person with whom the Contract become vested to carry out the Contract as directed by the Court to the satisfaction of the KSEBL.

b) In case of termination of Contract, notice in writing, should be given to the Contractor, Receiver, Liquidator or the person to whom the Contract is vested and take further action as provided in clause 5.3.10 'Default by the Contractor' treating as if this termination is ordered under that clause, complying with legal requirements, such as moving appropriate court of law, as may be required.

3. Where, as a result of acceptance of the tender, the execution of this Contract is to be undertaken by the Contractor as a joint venture as per the joint venture agreement annexed to the Contract entered into by the Contractor with the KSEBL, the terms of joint venture agreement shall not be changed by the parties to such agreement during the subsistence of the Contract without the previous approval of the KSEBL.

In case of violation of this condition the KSEBL will be entitled,

a) to terminate the contract entered into with the Contractor and take further actions as provided by clause 5.3.10 'Default by the Contractor,' treating as if this termination is ordered under that clause or to implement any alternative instead of terminating the contract.

b) enter in to a fresh arrangement with the Contractor for executing the remaining work or part thereof, subject to the condition that the terms and conditions of the

original Contract except those which are specifically altered by the KSEBL and communicated in writing to the other party, will be automatically applicable to fresh agreements entered into.

Operation of any of the two alternatives will be at the discretion of the KSEBL and decision of the KSEBL will be final and binding.

4. If the Contractor is an individual or a proprietary concern and the individual or proprietor dies and if the Contractor is a partnership concern and one of the partners dies, then all sums payable under this contract will be paid to the legatee of the individual Contractor/proprietor if there is one, or to his/her legal heirs and in the case of partnership, to the surviving partners and the legal heirs of deceased partner or as per the terms of the partnership deed. The Contractor should fill up the 'form of nomination' at the time of executing agreement and should sign in the presence of two witnesses.

5.9.6 Performance of this contract, Arbitration / Settlement of Disputes

This contract has to be performed complying with the laws of India and Kerala and any dispute arising out of this contract will be subject to the exclusive jurisdiction of Civil Courts at Thiruvananthapuram.

5.9.7 Patents and Copyrights

The Contractor shall hold and save the KSEBL, its officers, agents, servants and employees, harmless from liability of any nature or kind, including costs and expenses for or on account of any copy with or without copyright composition, secret process, patented or unpatented invention, article or appliance, manufactured or used in including their use by the KSEBL unless otherwise specifically stipulated in this Contract. The Contractor shall not use any patent invention over which the KSEBL has a right to use, except with the written permission of the agreement Authority. The agreement Authority may permit the Contractor to use such patent invention on collecting Royalty or otherwise. A patent invention which has been permitted to be used in respect of one contract shall not be used in any other contract or anywhere else or for any other purpose.

5.9.8 Right To Information

The Contractor shall be bound to provide all documents/information required by the State Public Information Officer in discharge of his duties under the Right to Information Act.

5.9.9 Old Curiosities

All gold, silver, oil or other minerals of any description and all precious stones, coins, treasures, relics of antiquity and other similar things and any other item of archaeological importance which shall be found in or upon the site during excavation or demolition of existing structures or anywhere in the site, shall be the absolute property of the Government and the Contractor shall duly preserve the same to the satisfaction of the Engineer-in-Charge and shall from time to time deliver the same to such officials of the Government as per the law in force.

5.9.10 Collusion and Bribery

Any bribe, commission, gift or advantage given, promised or offered by or on behalf of the Contractor or his partner, agent or servant or any one on his or on their behalf to any officer, servant, representative or agent of the KSEBL relating to the obtaining or to the execution of his or any other contract with the KSEBL shall in addition to any criminal liability which he may incur, subject the Contractor to the cancellation of this and all other contracts and also to payment of any loss or damages resulting from any such cancellation to like extent as is provided in case of cancellation under clause 5.3.11 and the KSEBL shall be entitled to deduct the amounts so payable from the Contractor. Any question of dispute as to the commission of any offence under the present clause shall be settled by the KSEBL in such manner and on such evidence or information as the KSEBL shall think fit and sufficient and the decision of the KSEBL shall be final and conclusive.

5.9.11 Observance of Local Rules, Regulation, Laws etc.

The Contractor shall conform to all laws of the land and the regulation and bye-laws of the Local Authority, Corporation, Board or Local Self Government etc. constituted as per the statute of Government of Kerala and Government of India and the Contractor shall strictly abide by all such Laws, Rules and Regulations.

5.9.12 Interventions by Extraneous Forces / Agencies

The KSEBL will not be liable for any damage or compensation for holdups or delay in discharge of obligations of KSEBL caused by intervention of court or extraneous forces beyond the control of the KSEBL. If, however, such delays are found to cause delay in completion of Works, and if the KSEBL is satisfied that the delay or hold up is not due to the fault of the Contractor, the KSEBL may consider suitable extension of

Time Of Completion and/or revision of rates, subject to relevant provisions in the General Conditions of Contract and/or Special Conditions of Contract to compensate the losses that may be incurred by the Contractor in that respect.

5.9.13 Safety Aspects

The Contractor is bound to follow the applicable safety provisions provided in these specifications and to follow the directions of the Engineer-in-Charge in this respect. The cost for providing safety provisions shall be deemed to be included in the rates agreed to. All safety rules and regulations introduced from time to time by appropriate authorities shall also be followed at no extra cost.

5.9.14 Co-operation With Other Contractors

When two or more Contractors are engaged in the same premises, they shall work together in a spirit of co-operation and accommodation. The Contractor shall not take or cause to be taken any step or action that may cause disruption, discontentment or disturbance to the works, labour and arrangement of other Contractor(s). In the case of difficulties in coordination amongst the Contractors, the Engineer-in-Charge will direct the manner in which each Contractor shall conduct his work.

Each Contractor shall, while scheduling his works, take into account the timings for interlinking of works of other Contractors, if such interlinking is necessary for proper fulfilment of the Contract as per Schedule.

5.9.15 Foreign Exchange

No Foreign Exchange will be provided by the KSEBL for carrying out the works.

5.10 SAFETY ENGINEERING AND SAFETY CODE

5.10.1. General

Accident prevention shall be an essential part of the programme of the Contractor for the work in order to reduce the cost of construction measured in terms of,

- (a) human life sacrificed;
- (b) temporary and permanent disabilities to workers;
- (c) loss of materials resulting from accidents;
- (d) loss or damage to equipment;

- (e) the cost of workmen's compensation and insurance; and
- (f) loss of time due to accidents.

The safety programme should be developed to cope with the particular hazards for each operation such as, blasting, tunnelling, drilling, excavation, transport, handling concrete etc.

5.10.2 General Safety Programme

The following programme shall be promoted by the Contractor to reduce the accident rate on construction.

- (a) Render full support to the work force in observing safety measures.
- (b) Designate a qualified person to organise and monitor safety programme.
- (c) Develop a public safety programme.
- (d) Develop a safety programme for each job.
- (e) Indoctrinate new employees. Educate the employees regarding the hazards of their work and explain to them how they can reduce the accidents to themselves and to other workers.
- (f) Make safety practices effective.
- (g) Promote good housekeeping.
- (h) Maintain adequate first aid facilities,
- (i) Seek assistance from insurance carrier, if available.

5.10.3 Safety Equipment

All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the persons employed on the site and maintained in a condition suitable for immediate use and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.

5.10.4 Display of Safety Provisions

The safety provisions should be brought to the notice of all concerned by display on a notice KSEBL at a prominent place at the work spot. The persons responsible for compliance of the Safety Code shall be named therein by the Contractor.

5.10.5 Inspection by Officers

To ensure effective enforcement of the Rules and Regulations of safety precautions, the arrangements made by the Contractor shall be open to inspection by the Labour Officer, Engineer-in-Charge or their representatives.

5.10.6 Safety Acts and Rules

Notwithstanding the above clauses, the Contractor is bound to comply with all Acts, Rules and Regulations in force from time to time regarding safety of person and property.

5.10.7 Compensation

All works shall be carried out adhering to the provisions of Safety Engineering Code and the rates quoted by the Contractor shall include the costs incidental thereto.

5.11 MISCELLANEOUS

The Contractors are expected to maintain good relations with their labour/employees and trade unions and any dispute arising between the Contractors and their labour/employees will be considered as Industrial Dispute between the Contractors and their labour/employees and shall be settled by them without any delay failing which the conciliation machinery of Government of Kerala may begin to function. It may even be referred to Labour Department for arbitration. In such an event the award by the Labour Department shall be binding on the Contractors and the Contractors shall implement the award at their cost. It shall be noted that the KSEBL will not be liable for financial implications due to settlements as aforesaid.

5.12 HEALTH AND SANITARY PROVISIONS

All Enactments, Rules, Regulations or by-Laws regarding Health and Sanitation, with special reference to First Aid, drinking water, latrines and urinals, drainage and sewerage system, rest room in work places, facilities for children of workers, canteen etc. shall be strictly followed.

Part 6 SPECIAL CONDITIONS OF CONTRACT FOR SUPPLY, ERECTION & COMMISSIONING AND OPERATION & MAINTENANCE

6.1 INTRODUCTION

The Bidder is advised to read carefully all instructions and conditions appearing in this document and understand them fully. Bidder should furnish duly filled Bid Response sheets, Schedules, and Annexure etc contained in this Bid documents along with desired documents. Failure to provide the information as required may render the bid technically unacceptable.

6.2 TECHNICAL

- The total number of solar panels offered for each location should not be less than the proposed plant output capacity (kWp) (with 400Wp panel or above each). The components offered for the Solar PV Plants should meet the Technical Specifications of the Bid Documents. **The contractor shall design the solar plant with sufficient number of solar PV panels so as to produce the desired capacity of each location specified in the Part 7 of this document**
- Any offer which does not include all the jobs/services mentioned in the Scope of Work will be considered as incomplete and rejected.

6.2.1 Bidder's Qualification

- Bidder shall be System Integrator cum EPC contractor who have designed, engineered, installed, tested and commissioned Grid Connected Solar Power plants of offered technology and meeting experience detailed at Para 6.2.2 below and 6.3.

6.2.2 Experience

- The bidder should have successfully installed solar photovoltaic power plants (On-Grid) of at least 2MWp aggregate capacity in the last 5 years as on date of NIT, out of which at least one plant should be a Grid Connected SPV Power Plant (without Battery) of capacity 1MWp or more which should be in successful operation in India for minimum period of six months as on the date of Notice inviting tender.
- The Bidder shall furnish the following documentary evidences to establish his qualification and experience above along with the bid.
 - Copy of Work Order/Contract agreement and completion certificate that the bidder has experience as above.
 - Performance Certificate from the user regarding successful operation of the Solar PV power plant Project for at least six months.

6.3. FINANCIAL

6.3.1 Solvency

The Bidder should produce, a Solvency Certificate obtained within a period of 6 months immediately preceding the date of notification of the bid, for an amount equivalent to 50 % of the Probable Amount of Contract or more, from the Tahsildar or Nationalized/ Scheduled Bank or a Net Worth Certificate issued by a registered Chartered Accountant, along with the bid.

6.3.2 Annual turn over

The Bidder should have a minimum annual turnover of 75% of the Probable Amount of Contract or more for at least 3 years in the last 5 financial years. This shall be supported by audited financial statements.

6.4 PERFORMANCE OF THE SPV PLANT

The PV Power Plant should be designed and simulated with the offered quality components by the bidder (PV Modules, Inverters, transformers, Module mounting structure etc.) and Manufacturer's warrantee certificate shall be obtained for the module's performance as given below.

The electrical degradation of power generated shall not exceed 5% of the minimum rated power of the project over the 5 year period and not more than 10% after ten years and not more than 20% at the end of 25 years.

6.5 ANNUAL MAINTENANCE CONTRACT (AMC)

The Annual Maintenance contract shall begin after the Operations and Maintenance period. If desired, the EPC contractor may be asked to execute the AMC for 5 years on agreement between KSEBL and the contractor at mutually agreed price.

6.6 GENERAL

- 1 Bid document may be checked before submission to ensure that all information/documents required for qualification are included.
- 2 Bidder or any authorized representative of the bidders may attend the Bid opening.
- 3 KSEB Ltd may at its sole discretion, extend the bid submission due date/ time.

6.7 Documents to submit - who receives the Contract

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 and their standards, Guaranteed Technical Particulars, details of each items, make, model number and specification conforming to relevant standards, entire drawings, detailed test reports, list of Operation & Maintenance 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 receipt of the Award of contract .

The bidder should submit and get the necessary approval of the following detailed Engineering Drawings in addition to the proposed Project Execution Schedule, before execution of the project:

- a. Single Line Diagram of the PV Power Plant
- b. Detailed plan of PV Array installation
- c. Schematic Diagram
- d. Module Mounting Structure (Plan & Elevation)

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 provided in the volume III of the tender document and corrigendum and as per the Guaranteed Technical Particulars offered in the bid.

The PV Plant installation shall be with the same components as per the successful bid offer.

6.8 PROJECT REVIEW MEETINGS

The Contractor shall present the Programme and status at various review meetings as required.

A. Weekly Review Meeting:

Level of Participation: Representative of Engineer-in-charge, Contractor's Site In charge and Job Engineers

Agenda:

- a) Weekly programme v/s actual achieved in the past week and programme for next week.
- b) Remedial Actions and hold up analysis.
- c) Client query/approval

B. Monthly Review Meeting:

Level of Participation: Engineer in charge /Senior Officers of KSEBL and Contractors.

Agenda:

- a) Progress Status/Statistics.
- b) Completion Outlook
- c) Major hold ups/slippages
- d) Assistance required
- e) Critical issues.
- f) Client query/approval

6.9 OPERATION AND MAINTENANCE

Operation and maintenance of the solar plant up to the point of supply for a period of 5 years of Defects Liability period is the responsibility of the bidder.

Operation and Maintenance during this period shall include supply of spares of panels, inverters and all equipments in the solar plant including transportation of these items from the original manufacturer, consumables, general comprehensive insurance covering fire, earthquake.

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 KSEBL official.

Copies of the Insurance Policies are to be given to KSEBL as and when taken.

The contractor shall ensure efficient operation of the SPV plant and the associated facilities to achieve the maximum power generation from the plant. For this purpose the contractor shall engage the services of adequate number of Engineers and Technicians trained under "Suryamitra" Skill Development Programme of MNRE. The contractor shall also attend to all failures, rectifications, breakdowns, 5 year comprehensive Operation and Maintenance checks.

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

Monthly System (MIS) reports with generation and down time analysis data has to be sent to KSEBL Corporate office as well as the Engineer in charge by E – mail during the defect liability period.

The contractor should not misuse the land and assign responsibility

for the safety of machinery within the premises.

7.0 PROGRESS REPORTS:

7.1 Monthly Progress Report:

This report shall be submitted (e-mailed) to the agreement Authority as well as Engineer in charge on a monthly basis within Ten Calendar days from cut-off date as agreed upon, covering overall scenario of the work.

The report shall include but not be limited, to the following:

- a) Brief introduction of the work.
- b) Activities executed/achievements during the month
- c) Schedule v/s Actual percentage progress manufacturing/delivery, sub- contracting, construction and overall work.
- d) Quantum wise status of purchase orders against scheduled shall also be indicated.
- e) Areas of concern/problem/hold ups, impact and action plans.
- f) Resources deployment status.

7.2 Time Schedule

The Bidder is required to submit a Project Time Schedule in Bar Chart Form, along with the Bid. The Schedule shall cover all aspects like sub- ordering, manufacturing and delivery, sub-contracting and construction within the completion time indicated in the Bid Document. The KSEBL interface activities, if any, shall be clearly identified with their latest required dates. KSEBL reserves the right to disqualify the Bidder if the above Schedule submitted by the Bidder is not in line with the overall project requirement.

8.0 GENERAL

1. Bid document may be checked before submission to ensure that all information/documents required for qualification are included.
2. Bidder or any authorized representative of the bidders may attend the Bid opening.
3. KSEB Ltd may at its sole discretion, extend the bid submission due date/ time.
4. Special Conditions of Contract shall be read in conjunction with the general conditions of contract, Schedule of Price, technical specifications, drawings and any other document forming part of this contract wherever the context so requires. Where any portion of the Special Conditions of Contract is repugnant to or at variance with any provisions of the General

Conditions of Contract then unless a different intention appears, the provision of the Special Conditions of Contract shall be deemed to override the provisions of the General Conditions of Contract only to the extent that such repugnancy or variations in the Special Conditions of Contract are not possible of being reconciled with the provisions of General Conditions of Contract.

The materials, design and workmanship shall satisfy the applicable standards, specifications contained herein and Codes referred to. Where the Detailed Technical Specifications stipulate requirements in addition to those contained in the Standard Codes and Specifications (both International and Indian Standards wherever applicable), those additional requirements shall also be satisfied. In the absence of any Standard/Specifications covering any part of the work covered in this tender document, the instructions/directions of Engineer-in-Charge will be binding on the Contractor.

PART 7**List of locations in which the solar plants to be installed**

	Name of location	Usable Area available(m2)	Capacity proposed (kWp)	Name of Electrical Circle
	<u>Land details</u>			
1	Manathavady	60000	3100	Kalpetta
2	Land near to Banasurasagar dam	7000	500	Kalpetta
3	Kinaloor	800	80	Kozhikode
4	110KV Substation, Payangadi	930	100	Kannur
	<u>Roof details</u>			
5	Kasaragod Vydyuthi Bhavan	200	20	Kasargod
6	Kassargod 33kv Town S/S	170	15	Kasargod
7	Kanhangad 33 KV Town S /S	170	15	Kasargod
8	Trikkaripur Electrical Section office	200	20	Kasargod
9	Ambalawayal 66kV SS	250	25	Kalpetta
10	110KV Substation, Ezhimala	250	25	Kannur
11	220KV Substation Taliparamba	250	25	Kannur
	<u>Land details</u>			
12	Methala 33kv S/s	675	40	Irinjalakkuda
13	33 kvSubstation Anjangady	1380	130	Irinjalakkuda
14	110 kv SubstationValapad	300	30	Irinjalakkuda
15	33kv Substation vadanapally	980	90	Irinjalakkuda
16	33kv Substationmullassery	600	50	Irinjalakkuda
17	Old 66 kv s/s compound,Kandasankadavu	1770	150	Irinjalakkuda
18	110KV Substation, Pudukad	2700	250	Irinjalakkuda
19	110KV Substation, Kattoor	2370	200	Irinjalakkuda
20	POOKOTTUPADAM 33KV	300	30	Nilambur
	<u>Roof details</u>			

21	33kv Pothukallu	250	30	Nilambur
22	33kV S/s Pookottupadam	200	20	Nilambur
23	110kV Irinjalakuda	320	30	Irinjalakuda
24	110kV Kattoor	320	30	Irinjalakuda
25	Methala 33kV S/s	128	10	Irinjalakuda
26	110 kv SubstationValapad	250	25	Irinjalakuda
27	Electrical Circle Tirur	185	20	TIRUR
28	Electrical Section Venniyur	110	10	TIRUR
29	Electrical Section Thavanur	140	10	TIRUR
Land details				
30	Neyyattinkara 110kv	900	100	Thiruvananthapuram
31	BALARAMAPURAM S/s	1600	150	Thiruvananthapuram
Roof details				
32	110kv Alappuzha-proposed	228	25	Alappuzha
33	110KV Eramallore	216	25	Alappuzha
34	110kv S.L Puram	225	25	Alappuzha
35	33kv Kuthiathode	147	15	Alappuzha
36	220KV Punnapra	110	10	Alappuzha
37	66 kv Kattanam	257	25	Alappuzha
38	66KV Odakkali	300	25	Thodupuzha
39	33kV substation Vandenmedu	178	15	Thodupuzha
40	110kV substation Adimali	210	20	Thodupuzha
41	110kV S/s Malayatoor	379	35	Thodupuzha
42	110 kv Erumeli	150	15	Kottayam
43	33 kv Manimala	240	25	Kottayam
44	110 kv Koothattukulam	160	15	Kottayam
45	110 Mundakkayam	150	15	Kottayam
46	Electrical Section Kanjirapally	150	15	Pala
47	110k V S/S Pala	70	10	Pala
48	33kV S/S Paika	80	10	Pala
49	110kV substation Pampady	300	30	Pala
50	110kV substation Ayarkunnam	297	30	Pala
51	110kv Pathanamthitta	190	20	Pathanamthitta
52	66kv Adoor	240	25	Pathanamthitta
53	66kv Enathu	204	20	Pathanamthitta
54	110kv Mallapally	240	25	Pathanamthitta
55	Karunagapally 110kV SS	300	25	kollam

56	Ayathil 110kV SS	270	20	kollam
57	Anchal 110kV SS	160	15	kollam
58	Pathanapuram 110kV	220	20	kollam
59	110KV Kilimanoor Substation	198	20	Thiruvananthapuram
60	33KV Muttathara-TVM	260	30	Thiruvananthapuram
61	Transmission Division- Kazhakootam	130	15	Thiruvananthapuram
62	33kv Aryanad	162	20	Kattakkada
63	110kV Substation Attingal	255	25	Kattakkada
	Total(ground & roof)	92374	5995	

5MWp in land & 0.995MWp in rooftops of KSEBL

PART 8
Annexures

(The annexure given here are for guidance only. The contents of the annexure are to be modified suitably with reference to the nature of the Contract.)

Annexure – 1

(AGREEMENT TO BE EXECUTED BY THE BIDDER AND TO ACCOMPANY THE BID IN KERALA GOVERNMENT STAMP PAPER WORTH Rs.200/-)

Articles of agreement executed on this the.....day of.....two thousand.....between the Kerala State Electricity Board Ltd acting through the Chief Engineer(Renewable Energy & Energy Savings), Vidyuthi Bhavanam, Pattom, Thiruvananthapuram, (hereinafter referred to as "The KSEBL") of the one part and Shri..... (here enter name and address of the Bidder) (hereinafter referred to as "the bounden") of the other part.

WHEREAS in response to the invitation for Bid as per Notification No.....dated.....and subsequent amendments thereto, the bounden has submitted to the KSEBL a Bid for thespecified therein subject to the terms and conditions contained in the said Bid documents.

WHEREAS the bounden has also furnished **Rs** as e-payment towards EMD for execution of agreement undertaking the due fulfilment of the Contract in case his Bid is accepted by the KSEBL.

NOW THESE PRESENTS WITNESS AND it is hereby mutually agreed as follows:

In case the Bid submitted by the bounden is accepted by the KSEBL with or without modifications and the Contract for the execution of is awarded to the bounden, the bounden shall within 15 days of Award of his Bid execute an agreement with the KSEBL incorporating all the terms and conditions under which the KSEBL accepts his Bid.

In case the bounden fails to execute the agreement as aforesaid incorporating the terms and conditions governing the Contract the KSEBL shall have power and authority to recover from the bounden any loss or damages caused to the KSEBL by such breach as may be determined by the KSEBL, appropriating the moneys inclusive of Bid Security deposit or any kind of security furnished by the bounden and if the money or security is found to be inadequate, the deficit amount may be recovered from the bounden and his properties movable and immovable and also in the manner hereinafter contained. The bounden will have no claim or right over the moneys and/or securities and Bid Security appropriated by the KSEBL and those moneys or / and securities shall belong to the KSEBL. All sums found due to the KSEBL 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 also in such other manner as the KSEBL may deem fit.

In witness whereof Shri/Smt.(here enter name and designation) for and on behalf of the KSEBL and Shri/ Smt.....the bounden have here unto set their names the day and year shown against their respective signatures.

Signed by Shri. / Smt.(Date)

In the presence of witnesses:

- 1.
- 2.

Signed by Shri. / Smt.(Date)

In the presence of witnesses:

- 1.
- 2.

Annexure 2

LETTER OF APPLICATION

(To be filled up by the Bidder)

Name of work:

To

The Chief Engineer (Renewable Energy & Energy Savings)
KSE Board Ltd, Vydyuthi Bhavanam, Pattom,
Thiruvananthapuram, Pin-695004, Kerala State, India.

Sir/Madam,

1. I/We have downloaded the Bid document from the web site etenders.kerala.gov.in and I/We have not tampered/ modified the Bid forms in any manner. In case, if the same is found to be tampered/modified at a later stage, I/We understand that my/our tender will be summarily rejected and full bid security will be forfeited
2. Having examined carefully the specifications together with the conditions of bid & contract, Schedules, drawings and the accompaniments, I/we hereby offer to carry out the works described in the said specifications, drawings etc. at rates entered herein.
3. I/We hereby undertake to plan, organize, execute and complete the whole of the work entrusted to me / us strictly according to the conditions of contract and the specifications if the work is awarded to me/us.
4. If the work is awarded to me/us, I/we also undertake to remit the Performance security deposit, execute agreement and commence the work as directed by you.
5. I/We have remitted an amount of Rs towards the Bid security and Rs towards tender cost including GST through e-payment.
6. I am/We are enclosing
 - i) Power of Attorney of the signatory to the Bidding Document
 - ii) Documents showing Financial Situation Information for the last three years such as annual reports, profit and loss account, net worth etc
7. I am/We are also enclosing the agreement in Kerala Stamp Paper worth Rs.200/- to be executed while submitting bid duly executed by me/us.
8. I/We also undertake to abide by the instructions of the KSEBL in carrying out the work envisaged under this contract.

Yours faithfully,

Station:

Date:

Acc: (to be filled up the bidder)

N.B. Portions not applicable to be struck off.

Annexure 3

DECLARATION BY BIDDER

I/We,.....hereby

.....hereby declare that I am not in any way related to any KSEBL's servant who is in charge of or having control of this work. I agree that if, at any stage, it is found that this declaration is untrue the Bid security/ Performance security deposit as Bank guarantee, paid by me will be forfeited and the contract entered will stand cancelled. It is understood that the relationship with KSEBL's servant referred to herein will be restricted to my Father, Mother, Son, Daughter, Brother, Sister, Direct Uncle, Nephew, Father-in-law, Mother-in-law, Brother-in-law, Sister-in-law, and First Cousins of the Officer concerned.

Place:

Date:

Signature of bidder

Annexure 4

**FORM OF CONTRACT AGREEMENT
(IN KERALA GOVERNMENT STAMP PAPER WORTH Rs. 1 /- for every 1000/Rupees of
agreed total Contract amount as desired by KSEBL)**

Articles of agreement Nomade the.....Day
of.....20.....between Sri./Smt

..... (here
enter name, designation and address of agreement authority) acting for and on behalf of
the Kerala State Electricity Board Ltd (*herein after* called the "KSEBL") and
Shri.....of.....a
nd Company Limited incorporated under the.....and having its
registered office at.....(hereinafter called the Contractor) of the other part.

WHEREAS the Kerala State Electricity Board Ltd is taking up the construction
of.....in connection with
the.....project.

AND WHEREAS the KSEBL is desirous of starting the actual construction of
the..... at an early date for the benefit
of the people.

AND WHEREAS the KSEBL has invited tenders for the construction of
.....

AND WHEREAS the Contractor has tendered for
.....work as per specifications,
drawings and conditions mentioned herein after and appended to this.

AND WHEREAS the KSEBL has been pleased to accept the bid for
.....without any modification/with the modifications
incorporated as annexure.

AND WHEREAS the KSEBL issued detailed LOA No dt..... for the execution of
the project by the contractor.

AND WHEREAS the Contractor has furnished Performance security deposit Bank Guarantee
NoDated.....offor sum of Rs.....for the
proper performance and the completion of the contract in every aspect strictly as per LOA
no.....dt..... issued to the contractor and as per the documents appended to this
agreement.

Now these presents witness and it is hereby mutually agreed as follows.
In this agreement words and expressions shall have the same meaning as are respectively
assigned to them in the conditions of contract herein after referred to.

ARTICLE 1 – SCOPE OF WORK

The Contractor shall perform everything required to be performed for the execution
of.....Project as described in and could be gathered from the documents

appended herewith so that they will be finished in complete form as early as possible. He shall provide and furnish all labour, materials, tools, plant and equipment, design, manufacturing and supply of electro mechanical equipments and incur all other expenses required to perform the work except to the extent provided in the attached documents and he shall complete every item of work in workman like manner complete in every respect strictly in accordance with drawings, specifications and conditions of contract as finally agreed to.

ARTICLE II - PAYMENT

In consideration of what the Contractor does under the provisions of this contract, strictly in accordance with the terms thereof the KSEBL agrees to pay the Contractor in Indian currency for the work as shown in schedule of items which includes all the items of work contemplated under the agreement at the percentage rate/rates mentioned therein.

ARTICLE III - COMMENCEMENT AND COMPLETION

The date of commencement of work under this contract shall be from the date of handing over of the site by the Engineer-in Charge after executing the agreement and shall be diligently executed until it is complete in every respect. It shall be made ready for commissioning on or before 8 months.

ARTICLE IV - COMPONENT PARTS OF THE AGREEMENT

The Contract documents among other things consist of this agreement on stamp paper.

Bid document consisting of

- Volume I - Conditions of Bid and Contract
- Volume II - Pre Qualification Bid
- Volume III - Technical Specifications
- Volume IV - Schedule of Technical particulars and prices

Corrections and amendments to the specifications and conditions of contract included in the above volume.

Annexure, if any, to the above volume containing the change in specifications and conditions of contract arrived at after mutual negotiations before awarding the work.

Drawings as listed in the conditions of contract

Schedule of prices as finally accepted.

Approved Construction Programme.

ARTICLE V - ON ANNEXURE

In case of modifications, if any, an annexure containing all modifications agreed to only will be appended and not the intervening correspondence between the parties and all such correspondence including bid forwarding letters will be inoperative.

ARTICLE VI - RATES TO HOLD GOOD IN CASE THE PERIOD OF THE CONTRACT IS EXTENDED

The percentage rate/rates quoted by the Contractor in Schedule of items and accepted by the KSEBL shall hold good for all works done towards the completion of the contract whether during the period mentioned herein or during the extended period, if any.

ARTICLE VII - SERVICE OF NOTICE

Every notice to be given to the Contractor may be given to him personally or left at his residence or last known place of abode or business or handed over to his agent, personally or may be addressed to the Contractor by post at his usual or last known place of abode or business and if so addressed and posted shall be deemed to have been served on the Contractor on the date on which in the ordinary course of post, a letter so addressed and posted would reach his place of abode or business.

ARTICLE VIII - ASSIGNMENT AND SUBLETTING

The Contractor shall not assign or make over the Contract or the benefits or burdens thereof, or any part thereof, to any other person or persons or body corporate. The Contractor shall not underlet or sublet to any person or persons or body Corporate, the execution of the Contract or any part thereof without the consent, in writing, of the KSEBL.

ARTICLE IX - INSOLVENCY OR LIQUIDATION

In case the Contractor becomes insolvent or goes in to liquidation or makes or proposes to make any assignment for the benefit of his creditors or proposes any composition with his creditors for the settlement of his debts or carries on his business or the contract under inspection on behalf of his creditors or in case any orders for the administration of his estate are made against him or in case the Contractor shall commit any act of insolvency or in case in which, under any clause or clauses of this contract the Contractor shall have rendered himself liable to damages amounting to the whole of his security deposit, the Contract be determined and the agreement authority may complete the contract in such time and manner by any such person as the KSEBL shall think fit. But such termination of the contract shall be without any prejudice to any right of remedy of the KSEBL against the Contractor or his sureties in respect of any breach of contract committed by the Contractor.

ARTICLE X - BREACH OF CONTRACT

If the Contractor commits breach of all or any of the terms or Conditions of Contract the KSEBL shall be entitled to recover from the Contractor all damages it might suffer thereby. The amount thus due could be recovered from the Contractor in any manner the KSEBL chooses including recovery by Revenue Recovery Proceedings.

ARTICLE XI – SETTLEMENT OF DISPUTES

In case of disputes between the Contractor and the KSEBL, the matter shall be referred to a 'Dispute Resolution Committee' to be formed by the KSEBL for resolving the dispute.

ARTICLE XII – LAW AND JURISDICTION OF CONTRACT

Any dispute arising out of this contract will be subject to the exclusive jurisdiction of Civil Courts at Thiruvananthapuram.

ARTICLE XIII - PERFORMANCE GUARANTEE:

During the performance security deposit guarantee period of 5 years from the date of commissioning, the Contractor shall repair free of charge, any defect noticed in the works and/or any damage or defects or functional failure noticed in any accessory transported or installed by the Contractor which fails or proves unsatisfactory under normal operations due to his faulty material handling or workmanship.

However during the guarantee period, if the Contractor fails to rectify the defects if any, in reasonable time, the KSEBL shall arrange to make good the defects in works, accessories etc. and the amount incurred by the KSEBL on this account will be recovered together with 21% of the expenses from the amounts payable to the Contractor.

ARTICLE XIV - RELEASE OF PERFORMANCE SECURITY DEPOSIT GUARANTEE

The performance security deposit will be released after the defect liability period after assessing the Performance Ratio as specified in clause 2.2.3 of Vol I

ARTICLE XV

The Contractor hereby agrees to extend the period of validity of Bank Guarantee furnished by him towards Performance security deposit Guarantee under this contract till such an extension is not required by the agreement.

In witness whereof the parties here to have here unto set their hands the day and year first above written,

Signed, sealed and delivered by(agreement authority) on behalf of the Kerala State Electricity Board Ltd.

agreement Authority

In the presence of:

Full name, address and Signature

Full name, address and Signature

Contractor

Signed, sealed and delivered by.....on behalf of the contractor

In the presence of:

Full name, address and Signature

Full name, address and Signature

Annexure 5
PERFORMANCE BANK GUARANTEE

BG No.

Date:

This guarantee is made on this day of 20.... by (complete postal address of the bank) hereinafter called 'the **Bank**', which expression shall unless repugnant to the context or meaning thereof shall include its successors and assigns.

WHEREAS the Kerala State Electricity Board Limited, a Company incorporated by the Government of Kerala under the Companies Act, 1956 having its registered office at Vidyuthi Bhavanam, Pattom, Thiruvananthapuram, Kerala, PIN – 695 004, hereinafter called as 'the **Purchaser**', which expression shall unless repugnant to the context or meaning thereof shall include its successors and assigns in having agreed to exempt(hereinafter called "**supplier/contractor(s)**") which expression unless repugnant to the context and meaning thereof shall include its successors and assigns) from depositing with the **Purchaser** a sum of Rs. towards Performance Security Deposit in lieu of the said **supplier/contractor(s)** having agreed to furnish a bank guarantee for the said sum of Rs. as required under the terms and conditions of Purchase Order No. dated (hereinafter referred as the 'order') placed by the **Purchaser** on the said **supplier/contractor(s)** and on specific request on the part of the said **supplier/contractor(s)**, we the **Bank** hereby unconditionally and irrevocably affirm and undertake-

- (a) At the request of the **supplier/contractor(s)**, we 'the **Bank**', do hereby unconditionally and irrevocably affirm and undertake that we are the Guarantor and are responsible to the **Purchaser** up to a total sum of `..... [Rupees

..... only] such sum being payable by us to the **Purchaser** immediately upon receipt of first written demand from the said **Purchaser**.

- (b) We unconditionally and irrevocably undertake to pay to the **Purchaser** on an immediate basis, upon receipt of first written demand from the said **Purchaser** and without any cavil or argument or delaying tactics or reference by us to the **supplier/contractor(s)** and without any need for the **Purchaser** to convey to us any reasons for invocation of the guarantee or to prove the failure to perform on the part of the **supplier/contractor(s)** or to show grounds or reasons for the demand or the sum specified therein, the entire sum or sums within the limits of [Rupees only].
- (c) We hereby waive the necessity of the **Purchaser** demanding the said amount from the **supplier/contractor(s)** prior to serving the demand notice upon us.
- (d) We further agree and affirm that no change or addition to or other modification to the terms of the agreement, shall in any way release us from any liability under this unconditional and irrevocable guarantee and we hereby waive notice of any such change, addition or modification. We further agree with the **Purchaser** that the **Purchaser** shall be the sole and exclusive judge to determine that whether or not any sum or sums are due and payable to him by the **supplier/contractor(s)**, which are recoverable by the **Purchaser** by invocation of this guarantee.
- (e) This guarantee will not be discharged due to the change in constitution of the **Bank** or the **Purchaser**. We undertake not to withdraw or revoke this guarantee during its currency/validity period, except with the previous written consent of the **Purchaser**.

- (f) We unconditionally and irrevocably undertake to pay to the **Purchaser**, any amount so demanded not exceeding [Rupees only] notwithstanding any dispute or disputes raised by the Employer or anyone else in any suit or proceedings before any dispute review expert, arbitrator, court, tribunal or other authority, our liability under this guarantee being absolute, unconditional and unequivocal. The payment so made by us under this guarantee to the **Purchaser**, shall be a valid discharge of our liability for payment under this guarantee and the **supplier/contractor(s)** shall have no claim against us for making such payment.
- (g) This unconditional and irrevocable guarantee shall remain in full force and effect and shall remain valid untiland shall be extended from time to time for such period as may be desired by the **supplier/contractor(s)** on whose behalf this guarantee has been given.

Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed (value in figures) [value in words].
2. This unconditional and irrevocable Bank Guarantee shall be valid with effect from..... to
3. We are liable to pay the guaranteed amount or any part thereof under this unconditional and irrevocable Bank Guarantee only and only if the **Purchaser** serves upon us a written claim or demand on or before [validity date].

For and on behalf of the Bank

[Signature of authorized signatory(ies)]

Signature:

Name :

Designation:

POA Number:

Contact Nos. : Tel..... Mobile.....

Fax No.

Email

Common seal of the Bank:

Witness:

1.

2.

Signature:

Name:

Address:

Contact No. Tel. Mobile

email:

Note:

1. *For the purpose of executing the bank guarantee, the non-judicial stamp papers of appropriate value shall be purchased in the name of Bank which issues the Bank Guarantee.*
2. *The Bank Guarantee shall be signed on all the pages by the Bank authority indicating their POA Nos. and should invariably be witnessed.*

Annexure 6
PAYMENT DETAILS APPLICATION

Project	Date:
Equipment:	Contract No:
Name of contractor:	Contract Name:
Contract Value:	Application:
Unit reference:	Serial No.:

To

The Chief Engineer (Renewable Energy & Energy Savings)
Kerala State Electricity Board Ltd

Sir,

Pursuant to the above referred contract dated.....the undersigned here by applies for payment of the sum of Rs. (specify amount) .The above amount is claimed on account of progress of Status of Implementation with ref. to payment schedule of contract

The application consists of this page, a summary of claim statement and the following signed schedule.

(Please enlarge listing, if necessary)

Note: All progress payments on Works shall be measured in M Books as per Activity Schedule

Signature of contractor/Authorised signatory

Tender No.KSEBL/PMKUSUMC/Feeder/10/21-22

Annexure - 7
NO DEVIATION CERTIFICATE

Bid No.....

To

The Chief Engineer (Renewable Energy & Energy Savings)
Kerala State Electricity Board Ltd

Dear Sir,

We understand that any deviation/exception in any form from our bid against the above mentioned reference number may result in rejection of our bid. We, therefore, certify that we have not taken any exceptions/deviations anywhere in the bid and we agree that if any deviation is mentioned or noticed, our bid may be rejected.

Yours faithfully,
(Signature of Authorized Signatory)

Name :

Designation :

Company seal :

Note : This "No Deviation Certificate" should be written on the letter head of the bidder indicating BID No. duly signed and stamped with date by a person competent and having the power of attorney to bind the bidder.

Annexure 8
SITE INSPECTION CERTIFICATE

This is to Certify that, I/We.....
..... had inspected the
at thoroughly and understood the scope of works to be carried out.
Agreeable to all Terms & Conditions of Contract and assure to undertake the works as per the contract.

CONTACTOR (SIGN & SEAL)

Annexure - 9
CHECK LIST

List of required Formats/documents to be submitted online duly signed digitally by Authorized Signatory:

Documents to be submitted in Cover No.- 1.

The bidder shall attach :

Scanned copy of agreement to accompany the Bid as per Annexure 1 shall be uploaded as a single pdf

Document to be submitted in Cover No.- 2.

- i. Pre-qualification bid questionnaire as per clause 1 of Volume II
- ii. Volume-I Conditions of Bid and Contract. (downloaded from the website)
- iii. Volume-II Prequalification Bid document (downloaded from the website)
- iv. Volume-III Technical Specification (downloaded from the website)
- v. Unpriced list of materials/equipment/works required for successful completion, commissioning and operation for first year & maintenance for 5 years of the total 5995 kWp plant in the Kerala.
- vi. Scanned copy of certificates in proof of financial and technical capability and any other documents specified in Volume I, II & III can be attached
- vii. The bidder shall submit an attested copy of PAN card of the Authorized Signatory/Firm along with the bid. The bidder should mandatorily submit the GST details such as GST registration status and GST Registration Number along with the copy of GST Registration Certificate.
- viii. Attachments to Volume-I, Volume-II, Volume-III and Additional documents if any as a single pdf.

Sl. No **Necessary Attachments**

- 1 Attested copy of PAN Card of the Authorized Signatory/Firm along with the bid.
- 2 Letter of application, Declaration by the bidder, No deviation certificate Site inspection certificate- as per Annexure 8
- 3 Certificate of incorporation of the Company
- 4 Joint venture or consortium or group agreement or MoU executed between the parties exclusively for the Project legally enforced by way of attesting by a notary.
- 5 Power of Attorney of the signatory to the Bidding Document
- 6 Copy of Work Order/ Contract agreement and completion certificate that the bidder has experience

- 7 Performance Certificate from the user regarding successful operation of the Solar PV power plant for at least six months.(documentary evidence supporting Clause 6.2.2 of Vol 1).
- 8 Solvency certificate from the Nationalized/Scheduled Bank or Net Worth Certificate issued by a Chartered Accountant, Audited financial statements for the at least 3 years in the last 5 financial years(Annual Turnover , Balance sheet , profit and loss account)
- 9 Litigation History details and proof confirm that they have not been banned or de-listed by any Govt. or Quasi-Govt. Agencies or PSU's.
If so banned this fact must be clearly stated by Bidder in his offer (volume 2 Cl.2(c, d))
- 10 Complete construction programme, Sketch/ Schematic diagram of the proposed plant.
- 11 Test certificates for IEC standards in full of relevant / all major equipments like Inverters, Solar Modules, Transformer etc.Certificate showing MNRE approval for the offered solar panels.
- 12 Technical particulars of components offered (Cl.5 of Vol 2),Guaranteed Technical Particular data sheet 1& 2 as per volume 3, Technical bid deliverables specified in volume 3
- 13 All other documents as per the tender document.

Eligible bidders shall upload scanned copies of the above documents. If any of the documents is not submitted in cover 2, the tender will be rejected.

Document to be submitted in Cover No.- 3.

Price bid (BOQ).

The total amount quoted by the bidder for the tender will be the sum of the amount quoted for supply, design & installation (inverters, PV modules, BoS, meters, support structures, DC and AC cables for the plant, transformers) transportation, erection, civil works, inspection and testing charges and for the operation and maintenance cost for 5 years. Each of this above should be including all inclusive rate with taxes, duties, CESS, freight and insurance charges, logistics etc. **The price quoted shall be excluding GST.**

Price bid of bidders who have furnished all documents to meet the qualification criteria, technically and commercially responsive offer will only be opened.