

RAJASTHAN ELECTRONICS & INSTRUMENTS LIMITED, JAIPUR
(An ISO 9001 : 2015 & 14001 : 2015 “Mini Ratna” Central Public Sector Enterprise)
2, KANAKPURA INDUSTRIAL AREA, SIRSI ROAD,
JAIPUR-302034

Tel No: 0141- 2470879 / 0141 - 2470908

website: www.reiljp.com

NIT for “Design, Supply (except SPV Modules), Installation, Testing, Commissioning and Comprehensive Operation and Maintenance for 5 years of 1 MWp Grid Connected Solar Photovoltaic Power Plant in Hyderabad (Telangana State)”

TENDER NO.REIL/RE/2024-25/21 Dated 12.02.2025

Important Notes:

1.	TENDER FEE	Rs. 1,000/- only through Demand Draft / RTGS
2.	EMD	Rs. 4,90,000/- only (In form of Demand Draft/RTGS/Bank Guarantee)
3.	Estimated Cost of Work	Rs. 2,45,00,000/- only
4.	LAST DATE OF ONLINE TENDER SUBMISSION	27.02.2025 upto 17:00 HRS
5.	TECHNICAL BIDS OPENING DATE	28.02.2025 upto 17:00 HRS
6.	OFFER VALIDITY	90 Days from the last date of tender submission
7.	CONTACT PERSON(S) FOR TECHNICAL QUERIES	1. Sh. Kuldeep Singh Rathore, Sr. Engineer (RE), Email : kuldeep.rathore@reil.co.in , Contact : +91-7727007749 2. Sh. Deepak Gupta, AGM (RE), Email : deepak.gupta@reil.co.in
6.	CONTACT PERSON(S) FOR TENDER QUERIES & SUBMISSION OF HARD COPY OF TENDER FEE & EMD	1. Sh. Praveen kumar, Dy. Manager (MM), Email : praveen.kumar@reil.co.in , Contact : +91-7727011738 2. Sh. Arun Kumar Dwivedi, AGM (MM-BOS), Email : arun.dwivedi@reil.co.in

Kindly note that only online bid will be considered against this tender

Bidders Details

Information Details	Primary Contract	Secondary Contract
Name		
Designation		
Company Name		
Company Address		
Phone No.		
Mobile No.		
Email		
Website		

RAJASTHAN ELECTRONICS & INSTRUMENTS LIMITED, JAIPUR**NOTICE INVITING TENDER NO. REIL/RE/2024-25/21**

This is a Notice Inviting Tender (NIT) for “Design, Supply (**except SPV Modules**), Installation, Testing, Commissioning and Comprehensive Operation and Maintenance for 5 years of 1 MWp Grid Connected Solar Photovoltaic Power Plant in Hyderabad (Telangana State)” as per description and terms & conditions specified hereinafter:

Item Description:

S. No.	Description	Total Capacity
1.	Design, Supply (except SPV Modules), Installation, Testing, Commissioning and Comprehensive Operation and Maintenance for 5 years of 1 MWp Grid Connected Solar Photovoltaic Power Plant in Hyderabad (Telangana State)	1 MWp

E-Tendering Procedure: The work shall be carried out through submission of online tenders only. No offer in physical form will be accepted and any such offer if received by REIL will be out rightly rejected. Tender documents can be downloaded from our website www.reiljp.com or website of CPPP www.eprocure.gov.in. Final bids are to be submitted on website www.eprocure.gov.in. Any changes modification in the tender enquiry will be intimated through above websites only. Bidder are therefore, requested to visit our website regularly to keep themselves updated.

The bidder should have a valid Digital Signature certificate issued by any of the valid certifying Authorities to participate in the online tender.

The bids shall be uploaded in electronic form only through e-tendering system on website www.eprocure.gov.in.

Note: e- Procurement system does not allow submission of documents after due date of tender. Incomplete form or non-submission of documents to verify details may results into rejection of your offer and no communication shall be done for submission of documents.

Price Bid:- Price Bid format given with tender is to be uploaded after filling all relevant information like basic prices, taxes & duties. The Price bid should be uploaded strictly as per the format available with the tender failing which the offer is liable for rejection (blank or changing format of price sheet will not be accepted by system). **REIL reserve the right to distribute the work.**

The bid shall comprise of technical bid and commercial Bid. The detailed scope of work, terms and conditions etc. are available with the Bid documents.

REIL reserves the right to reject the whole or part of any or all bids received, without assigning any reason.

Addl. General Manager (MM-BOS)

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Annexure-I**RAJASTHAN ELECTRONICS & INSTRUMENTS LIMITED, JAIPUR****Process Compliance Form**

(Tenders are required to print on their company's letter head and signed, stamp before uploading).

To

**Addl. General Manager (MM-BOS)
M/s Rajasthan Electronics & Instruments Limited
2, Kanakpura Industrial Area, Sirsi Road,
Jaipur-302034**

Sub:- Acceptance to the process related Terms and Conditions for the e-Tendering

Dear Sir,

**This has reference to the Terms & Conditions for e-Tendering mentioned in the Tender No.:-
REIL/RE/2024-25/21 dated 12.02.2025.**

We hereby confirm the following:-

- 1) The undersigned is authorized representative of the company.
- 2) We have carefully gone through the NIT, Tender Documents and the Rules governing the e-tendering as well as this document.
- 3) We will honor the Bid submitted by us during the e-tendering.
- 4) We undertake that if any mistake occurs while submitting the bid from our side, we will honor the same.
- 5) We are aware that if REIL has to carry out e-tender again due to our mistake, REIL has the right to disqualify us for this tender.
- 6) We confirm that REIL shall not be liable & responsible in any manner whatsoever for my/our failure to access & submit offer on the e-tendering site due to loss of internet connectivity, electricity failure, virus attack problem with the PC, digital signature certificate or any other unforeseen circumstances etc.

With regards

Signature with company seal

Name:

Designation:

E-mail Id:

Annexure-II**INSTRUCTION TO BIDDERS**

1. The Bid forms containing the Terms and Conditions, the tender and the Schedule of contract, **should be submitted online** failing which the tender shall be liable for rejection. In the event of the space on the Schedule of contract / specifications of items/proforma being insufficient for the required purpose, additional pages may be added. Each such additional page must be numbered consecutively, bearing the Tender Number and be duly signed and stamped by the bidder. In such cases, reference to the additional pages must be made in the Tender Form. If any modification of the schedule is considered necessary, you should communicate the same by means of separate letter sent along with the Tender.

2. **PROCEDURE FOR SUBMISSION OF TENDERS / BIDS:**

The tender should be submitted in **“TWO BID” SYSTEM:**

PART -1 TECHNICAL BID:

Technical Bid along with tender documents (duly signed on each page) to be uploaded in the e-procurement portal. Technical Bid to be opened by the REIL committee. Board resolution/ Authorization letter for signing of the bid document from the bidder be submitted. Prices / Costs of the items should not be indicated anywhere in the Technical Bid. This should be followed meticulously failing which the bid is liable to be rejected.

All eligibility documents should be submitted with the technical bid.

PART -2 FINANCIAL BID:

Price Bid BOQ given with tender is to be uploaded strictly as per the format available with the tender failing which the offer is liable for rejection (renaming or changing format of BOQ sheet will not be accepted by the system).

Note: e-Procurement system does not allow submission of documents after due date of tender.

Incomplete form or non-submission of required documents may results into rejection of your offer and no Communication shall be done for submission of documents.

1. **OPENING OF TENDER:**

The **Price/Financial bids** of the bidders whose technical bids are found technically suitable only will be opened later. **The decision of the evaluation committee on technical suitability shall be final and binding.**

2. **PRICES:**

- i. Prices/Financial bid are to be in BOQ format in Indian Rupees and must be meaningful and measurable in the context.
- ii. Bidders should clearly specify whether prices quoted are inclusive of GST/duties/ statutory charges or such charges as extra. Where no specific mention GST or other duties quoted shall be **deemed to be inclusive of such taxes / charges.**
- iii. Price must be quoted in original sheet of BOQ failing which the same is liable to be rejected.
- iv. Evaluation will be done on total price quote by bidders.
- v. REIL has reserve to right for negotiation with L1 bidder.

3. OFFER VALIDITY: Validity of offer shall be 90 days from tender opening date.

4. EMD:

Interested bidder shall submit Earnest Money (EMD) of Rs. 4,90,000/- only in form of Demand Draft/RTGS/Bank Guarantee to REIL. EMD should be valid for a period of 45 days beyond the bid validity period (i.e 135 days from last date of submission of bid). The bid shall be treated as non responsive in case of non submission of EMD amount. No interest shall paid towards EMD amount.

EMD shall be forfeited without prejudice to the bidder being liable for any further consequential loss or damage incurred to REIL under following circumstances :-

100% of EMD amount will be revoked, if a Bidder withdraws/revokes or cancels or unilaterally varies his bid in any manner.

Note: MSE (Micro & Small Enterprises) shall be exempted from payment of Tender Document Fee & EMD. It is mandatory for MSE bidders to declare their UDHYOG AADHAR NUMBER on CPP Portal, failing which such bidders will not able to enjoy the benefits of procurement policy for MSE and also attach the relevant certificate with their bid submission.

5. OTHERS -

- i. Bidder has to submit per kW rates.
- ii. The tender fee and Bid Security as detailed under to be deposited in REIL office in hard copy as per the Bid timeline given in the Bid Information Sheet.

Annexure – III**ELIGIBILITY CRITERIA:****A) TECHNICAL ELIGIBILITY CONDITIONS:****Bidder must fulfill following criteria:-**

1. The Bidder should be a Company / Firm / Corporation, incorporated in India under the Companies Act, 1956 or 2013 and having experience in Design, Supply, and Installation & Commissioning of Grid Connected Solar Power Plants.
OR
A Limited Liability Partnership Firm (LLP) registered under section 12 of Limited Liability Partnership Act, 2008 and having experience in Design, Supply, and Installation & Commissioning of Grid Connected Solar Power Plants.
2. Experience of having successfully completed similar works (**Design, Supply, Installation & Commissioning of Grid Connected Solar Power Plants**), during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following:
 - a) Three similar completed works costing not less than the amount equal to 40% of the estimated cost (Rs. 98.00 Lacs).
 - OR
 - b) Two similar completed works costing not less than the amount equal to 50% of the estimated cost (Rs. 122.50 Lacs).
 - OR
 - c) One similar completed work costing not less than the amount equal to 80% of the estimated cost (Rs. 196.00 Lacs).
3. Out of above, bidder has to submit satisfactorily O&M report of minimum one year for at least one completed work.

B) FINANCIAL ELIGIBILITY CONDITIONS:-

1. Average Annual Financial Turnover during the last 3 years, ending 31st March of the previous financial year (2023-24), should be at least 30% of the estimated cost (Rs. 73.50 Lacs). Turnover of 3 years (2021-22, 2022-23 & 2023-24) is required duly certified by CA alongwith balance sheets.
2. The bidder should have minimum net worth @ 10% of the estimated cost. Net worth certificate is required duly certified by CA.
3. The bidder should have adequate financial resources or should have sufficient resources audited financial statement to undertake the contract. Below mentioned documents are required:
Letter from a Financial Institution that it is willing to fund the project (estimated project cost to be mentioned in letter).

OR

Declaration on bidder's letter head (in case the bidder wish to use the internal resources for funds / shall be furnished). Estimated project cost to be mentioned in letter.

4. The bid shall be not considered for bidders, who is having prior contract terminations due to non-performance or litigation history against government entities. Annexure-IX is required from bidder duly notarized.

Bidder should submit following documents along with Technical bid:-

1. Company Incorporation Certificate / Company Registration Certificate.
2. Balance sheet & ITR for last three years i.e. 2021-22, 2022-23 & 2023-24.
3. Turnover of last 3 years and Networth value duly certified by CA.
4. Past Experience details as per technical eligibility asked in the NIT. Kindly attach verified documents from customer such as Work Orders, Completion Certificates and O&M Certificate. The experience documents should be duly certified by Chartered Engineer.
5. Photocopy of GST Registration no. & PAN no.
6. Any other relevant documents
7. All required annexure in tender

OTHER CONDITIONS:

- a) **Responsibility for executing Contract:** The contractor is to be entirely responsible for The execution of the contract in all respects in accordance with the terms and conditions as specified in the acceptance of tender.
- b) The contractor shall not sublet transfer or assign the contract to any part thereof without the written permission of the Addl. General Manager (MM-BOS). In the event of the contract or contravening this condition, Addl. General Manager(MM-BOS) be entitled to place the contract elsewhere on the contractors account at his risk and the contractor shall be liable for any loss or damage, which the Addl. General Manager(MM-BOS), may sustain in consequence or arising out of such replacing of the contract.
- c) **Document:** The bidder should have a valid **PAN / TAN /GST NO. & other statutory document as applicable** and produce attested copies of such certificates along with the tender papers in Technical Bid, failing which the tender is liable to be rejected. Check list be attached.
- d) **Right to accept / reject:** REIL reserves the right to reject any or all tender without assigning any reason whatsoever. Also, the REIL authority reserves the right to **award** any or part or full contract to any successful agency at its discretion and this will be binding on the bidder.
- e) The capacity of SPV Power Plant shown in the tender can be increased or decreased to any extent depending upon the actual requirement.
- f) **Assistance to contractor:** The contractor shall not be entitled for assistance either, in the procurement of raw materials required for the fulfillment of the contract or in the securing of transport facilities.

Electrical Contractor License

- The work shall be carried out by the contractor, having valid Electrical Contractor License for carrying out installation work under the direct supervision of the persons holding valid certificates of competency issued by the State Government. The same shall be submitted to REIL by successful bidder after placement of work order.
- The successful BIDDER shall furnish the names and particulars of the certificate of competency of supervisor and workmen to be engaged for carrying out this work.

DETAILED SCOPE OF WORK OF BIDDER

Scope of work covers “Design, Supply (except SPV Modules), Installation, Testing, Commissioning and Comprehensive Operation and Maintenance for 5 years of 1 MWp Grid Connected Solar Photovoltaic Power Plant in Hyderabad (Telangana State)” conforming to technical specification of tender documents. It will be ground mounted type SPV Power Plant.

Detailed scope of work is given hereunder:-

Scope of Work SPV grid connected Systems shall involve:

- (i) Survey of Identified Site.
- (ii) Preparation of Detailed Project Report (DPR) of the proposed Proposal of SPV Power Plant (if required).
- (iii) Preparation of Array Layout.
- (iv) Obtaining No objection certificate from concerned DISCOM for grid connectivity & Obtaining Net Metering Permission.
- (v) Supply of Material (except SPV Modules), Installation, Commissioning with Net Metering along with required civil work, and O&M of SPV grid connected Power Plant as per schedule.
- (vi) Establishing after “sales service centre” in concerned area for cater maintenance needs of beneficiary if required.
- (vii) Obtaining permission from customer regarding completion of project.
- (viii) 5 years maintenance of SPV Power Plant & submission of yearly maintenance certificates.

Project Cost:

The Project cost shall include all the costs related to above Scope of work. Bidder shall quote for the entire facilities on a “single responsibility” basis such that the total Bid Price covers the obligations mentioned in the Bidding Documents in respect of Survey, Material Delivery, installation and Commissioning of project. The Bidder has to take all permits, approvals and licenses, insurance etc., provide training and such other items and services required to complete the scope of work mentioned above.

The price quoted is on lumpsum turnkey basis including all taxes & duties applicable and the bidder is responsible for the total scope of work described as above.

The project cost shall remain firm and fixed and shall be binding on the Successful Bidder till completion of work. No escalation will be granted on any reason whatsoever. The bidder shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever. The cost shall be inclusive of all duties and taxes, insurance etc. The prices quoted by the firm shall be complete in all respect and no price variation / adjustment shall be payable. The Project cost shall be specified by the successful Bidder quote @ Rs./Wp (Watt peak). The project cost shall be in accordance with all terms, conditions, specifications and other conditions of the Contract as accepted by the REIL and incorporated into the Rate Contract order.

The Vendor shall be responsible and take an Insurance Policy for storage-cum-erection for all the materials to cover all risks and liabilities for supply of materials on site basis, storage of materials at site, erection, testing and commissioning.

The Vendor shall also take insurance for Third Party Liability covering loss of human life, engineers and workmen and also covering the risks of damage to the third party / material/equipment/ properties during execution of the Contract. Before commencement of the work, the Successful bidder will ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work or in carrying out the Contract. Liquidation, Death, Bankruptcy etc., shall be the responsibility of Successful bidder.

Scope of Work (REIL):

The following material will be supplied for Ground Mounted Grid Connected SPV Power Plant by REIL, Jaipur:

S. No.	Description
1.	540 Wp SPV Modules

Scope of Work (Bidder):

The following material is required for installation & commissioning of each Power Plant:

S. No.	Description of item	Rating	Make	Quantity
1.	Module Mounting Structures – Ground Mounted Type	For 1 MWp (as per MNRE norms)	Standard reputed make	As per site requirement / Design of system
2.	String Inverters	For 1 MWp SPV Power Plant (as per MNRE norms)	Sungrow / Hitachi / K-Solare / Power One / any other reputed make	As per site requirement / Design of system
3.	Cable 1Cx4sq mm CU unarm cable for interconnection of SPV Modules	1100 V , min. 4 sq. mm copper cable	Polycab / RR / KEI or any other reputed make	As per site requirement / Design of system
4.	Cable 2Cx4sq mm CU unarm cable from Array to String Inverter	1100 V , min. 4 sq. mm copper cable	Polycab / RR / KEI or any other reputed make	As per site requirement / Design of system
5.	AC cable of suitable size	1100 V, Aluminum cable	Polycab/RR/KEI or any other reputed make	As per site requirement / Design of system
6.	Earth electrode	Copper bounded min. 3 mtr. Length	Standard reputed make	As per site requirement / Design of system
7.	Lightning arrester	As per IE rules	Standard reputed make	As per site requirement / Design of system

8.	Fire Fighting Equipments (Fire extinguisher, Fire bucket etc.)	As per IE rules	Standard reputed make	As per site requirement / Design of system
9.	ACDB with suitable MCCB/MCB and SPD protection with enclose & with locking facility	16/32/63/100A/250 A 440V, 4Pole & Hire rating as per plant capacity	Schneider / ABB / Legrand / Havells / HPL / Standard reputed make	As per site requirement / Design of system
10.	DCDB with SPD Protection	As per plant capacity	Standard reputed make	As per site requirement / Design of system
11.	Isolator switch	As above	Standard reputed make	As per site requirement / Design of system
12.	AC Combiner Box	As per plant capacity	Standard reputed make	As per site requirement / Design of system
13.	Copper Bus bar (if required)	As per requirement	Standard reputed make	As per site requirement / Design of system
14.	Power Sockets	As per requirement	Standard reputed make	As per site requirement / Design of system
15.	MC4 Connector	Appropriate for 1CX 4 sq mm Cu unarmored cable	Standard reputed make	As per site requirement / Design of system
16.	Ring/Pin type Copper/Alu. lug crimping type	As per cables size (make Dowelles etc.)	Dowelles or any reputed ISI make	As per site requirement / Design of system
17.	Ferrule (Alphabetic & Numeric)	Good quality rubber make UV Resistance	ISI mark UV Resistance	As per site requirement / Design of system
18.	PVC/Flexible conduit pipe HDPE Type	Good quality UV Resistance (IS mark)	Modi/Jindal/Jain/finlex or HDPE ISI mark with	As per site requirement / Design of system
19.	GI Cable tray	Suitable Size of GI cable tray (perforated type)	Reputed make	As per site requirement / Design of system
20.	Cable ties	UV resistant cable ties	Reputed make	As per site requirement / Design of system
21.	Cable Glands Single compression heavy duty (Make: Comet)	Required as per Cu armoured cable at PCU output & load panel connection	Reputed make	As per site requirement / Design of system
22.	Sign boards for arrays, PCU, control room, Caution sticker (format attached) etc	Wall mounted and separate structure mounted Al channeled painted signboards	--	As per site requirement / Design of system
23.	Hot dipped GI strip	25X3 (in mm) size Hot dipped GI strip for earthing and LA connections	--	As per site requirement / Design of system

24.	Solar Meter, Net Meter / ABT Meters	As per Discom norms	As per Discom approved or Reputed make	As per site requirement / Design of system
25.	Sanitary fitting for Module Cleaning arrangement with pressure Motor pump	0.5 H.P pressure Motor pump for lifting water and Grid of sanitary fitting around the Modules	Kirlosker/shakti/Crompton/Havells/ Reputed make	As per site requirement / Design of system
26.	Rubber Pipe flexible	Good Quality, UV Resistance (IS mark)	Reputed Make ISI marked	As per site requirement / Design of system
27.	Installation accessories ladders, safety belts/shoes etc required for safe I&C of Power plants	Required for installation of Power Plant	Reputed make	As per site requirement / Design of system
28.	Any other item/material/services for completion of the particular job as well as commissioning of Power Plant	Meeting to IS standards	Reputed make	As per site requirement / Design of system
29.	Energy Meters, CTs for Net metering	As per concern Discom Norms	As per Discom approved or Reputed make	As per site requirement / Design of system
30.	Transformer (if required)	As per concern Discom Norms	As per Discom approved or Reputed make	As per site requirement / Design of system

- Safety and security of the Materials at Site.
- Insurance shall be in bidder's scope till handover the system.
- Material required such as cables glands, tags, cable trays, GI Strip for earthing material & item mention in above list etc. to complete job.
- Installation & commissioning of String Inverter, Energy meters, Accessories etc.
- Installation of earthing material and lightning system, testing and commissioning of complete earthing and lightning system as per specification requirement.
- Laying, Termination, Glanding, Ferruling of all interconnecting cables among sub array, String Inverter, Cduiting, Cable Trays and load panel etc .
- Wiring of complete solar system as per requirement.
- Testing of DC/AC wiring as per requirement.
- The scope of work of the bidder is to complete the I&C of SPV Power Plant.
- REIL shall handover/deliver all material at Site on ground floor only.
- Any other work tools & takels required for completion of the project shall be arranged by the bidder.
- Supply of Energy Meters, CT's , accessories etc. and Meter testing, CT testing in Discom Lab and liasioning with Discoms in the scope of bidder.
- All necessary items/manpower/arrangements required for Proper and Safe Installation & Commissioning of Power Plant will be arranged by the agency/Bidder. Any material/item other then mentioned in Scope of work (REIL) which is required for I&C of Power Plants is in scope of the agency.

- Bidder shall take all necessary steps, follow up & liasoning towards the Net Metering arrangements .
- Bidder will take necessary statutory approvals/ clearances from all concern departments , Electrical Clearance from department etc. for installation & commissioning of Power Plant.
- Bidder shall re-arrange the existing AC wiring if required.
- All arrangements for their deployed workman/manpower at site will be take care by the agency.
- Bidder/agency shall give declaration that site has been visited and all information towards timely completion of project has been collected and taken care before quoting for the above enquiry.
- Prices quoted must be firm and fixed. No price variation/escalation shall be allowed.
- Bidder shall arrange all the manpower and material required for inter-connection of the SPV Power Plant to the load.
- After successful installation – commissioning of the Power Plant Bidder shall get a certificate of installation, commissioning and satisfactory operation from beneficiary as per requirement of work order. The scope of work also includes verification of documents from the customer.
- After installation – commissioning of the Power Plant Bidder shall arrange the inspection of Power Plant from customer/ designated agency/ REIL as per work order requirement and expanses, if any, shall be borne by bidder.
- Bidder shall install and commission the Power Plant in the stipulated time given by the agency.
- The payment of bidder shall be released after release of payment from beneficiary.
- Bidder will submit weekly Project Execution Plan (PEP) along with offer. In which bidder gives the details that how will project accomplished. Bidder shall be also submit the PERT CPM for project scheduling & Management (if required).

Annexure – III B**TECHNICAL SPECIFICATIONS****1. ARRAY STRUCTURE – Ground Mounted Type**

- a) Hot dip galvanized MS mounting structures may be used for mounting the modules/ panels/arrays. Each structure should have angle of inclination as per the site conditions to take maximum insolation. However to accommodate more capacity the angle inclination may be reduced until the plant meets the specified performance ratio requirements.
- b) The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed in Rajasthan. It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard and submit wind loading calculation sheet to REIL. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed.
- c) The mounting structure steel shall be as per latest IS 2062: 1992 and galvanization of the mounting structure shall be in compliance of latest IS4759.
- d) Structural material shall be corrosion resistant and electrolytic ally compatible with the materials used in the module frame, its fasteners, nuts and bolts. Aluminium structures also can be used which can withstand the wind speed of respective wind zone. Necessary protection towards rusting need to be provided either by coating or anodization.
- e) The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels
- f) Regarding civil structures the bidder need to take care of the load bearing capacity of the roof and need arrange suitable structures based on the quality of roof.
- g) The total load of the structure (when installed with PV modules) on the terrace should be less than 60kg/m².
- h) The minimum clearance of the structure from the ground should be 300 mm.
- i) Bidder shall provide the valid STAD report of structures with dully verified by Chartered authorized Safety Engineer

Civil work for mounting structures of SPV module

The Structure should be made with concrete blocks made of PCC (1:2:3). The minimum size of concrete blocks in 200mm X200 mm X200 mm (Vendor must ensure that it is anchored directly to the roof slab. The waterproofing must be done ensure that there is no leakage.

2. Inverter/PCU:

- i. Inverters/PCU should comply with applicable IEC/equivalent BIS standard for efficiency measurements and environmental tests as per BIS Std.
- ii. Maximum Power Point Tracker (MPPT) shall be integrated in the inverter/PCU to maximize energy drawn from the array.
- iii. All inverters/PCUs shall be compliant for electromagnetic compatibility, harmonics, Surge, etc. PCU/inverter should also be DG set interactive. The PCU should also have provision of charge controller in case of systems. The PCU shall have a minimum comprehensive warranty of 5 years.
- iv. The PCU/ inverter shall have an overloading capacity of minimum 20%.

- v. Typical technical features of the inverter shall be as follows-
 - a) Switching devices: IGBT/MOSFET
 - b) Control: Microprocessor/DSP
 - c) Nominal AC output voltage and frequency: as per CEA/State regulations
 - d) Output frequency: 50 Hz
 - e) Grid Frequency Synchronization range: as per CEA/State Regulations
 - f) Ambient temperature considered: -20°C to 60°C
 - g) Humidity: 95 % non-condensing
 - h) Protection of Enclosure: IP-54 (Minimum) for indoor and IP-65(Minimum) for outdoor.
 - i) Grid Frequency Tolerance range: as per CEA/State regulations
 - j) Grid Voltage tolerance: as per CEA/State Regulations
 - k) No-load losses: Less than 1% of rated power
 - l) Inverter efficiency (Min.): >93% (In case of 10 kW or above with in-built galvanic isolation)
Inverter efficiency (Min.): >97% (In case of 10 kW or above without inbuilt galvanic isolation)
Inverter efficiency (Min.): > 90% (In case of less than 10 kW)
 - m) THD: < 3%
 - n) PF: > 0.9 (lag or lead)
 - o) Should not inject DC power more than 0.5% of full rated output at the interconnection point.
 - p) The PCU / inverter shall have a minimum comprehensive warranty of 10 years from the date of purchase which shall not be before the date of LOA.
 - q) The PCU/Inverter shall be capable of controlling power factor dynamically. PCU/inverter should be equipped with components required to support reactive power The output power factor of inverter should be suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustain fault in feeder line and against the lightning on feeder.
- vi. The output power factor of inverter should be suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustain fault in feeder line and against the lightning on feeder.
- vii. All the Inverters should contain the following clear and indelible Marking Label & Warning Label. The equipment shall, as a minimum, be permanently marked with:
 - a) The name or trademark of the manufacturer or supplier;
 - b) A model number, name or other means to identify the equipment,
 - c) A serial number, code or other marking allowing identification of manufacturing location and the manufacturing batch or date within a three-month time period.*
 - d) Input voltage, type of voltage (a.c. or d.c.), frequency, and maximum continuous current for each input.
 - e) Output voltage, type of voltage (a.c. or d.c.), frequency, maximum continuous current, and for a.c. outputs, either the power or power factor for each output.
 - f) The Ingress Protection (IP) rating
- viii. Marking shall be located adjacent to each fuse or fuse holder, or on the fuse holder, or in another location provided that it is obvious to which fuse the marking applies, giving the fuse current rating and voltage rating for fuses that may be changed at the installed site.
- ix. In case the consumer is having a 3- ϕ connection, 3- ϕ inverter shall be provided by the bidder as per the consumer's requirement and regulations of the State.
- x. Inverter/PCU shall be capable of complete automatic operation including wake-up, synchronization & shutdown.

- xi. The Inverter should have a provision of remote monitoring of inverter data through sim card. Required website/mobile app platform, where REIL / End customer and the user (Consumer) can access the data, should be provided/explained to REIL / End Customer and user while installation. Additionally, if inverter has the facility of in-built wi-fi module, that should also be explained to the consumer. On demand, Inverter should also have provision to feed the data to the remote monitoring server using relevant API/ protocols. All the inverter data should be available for monitoring by giving web access. Charges for internet and website/mobile app platform shall be borne by the bidder throughout the contract period.
- xii. Integration of PV system with Grid & Grid Islanding:
- a) The output power from SPV would be fed to the inverters/PCU which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization.
- b) In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as “islands.” Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided, if not available in inverter.
- c) MCB/MCCB or a manual isolation switch, besides automatic disconnection to grid, would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.
- xiii. **PCU front panel shall be provided with display (LCD or equivalent) to monitor the following (optional):**
- DC power input
 - DC input voltage
 - DC current
 - AC output power
 - AC voltage (all the 3 phases)
 - AC current (all the 3 phases)
- xiv. **Protection required in Inverter (minimum)**
- Input side disconnection switch
 - Earth leakage /Ground fault monitoring
 - DC reverse polarity protection
 - DC over voltage / current limitation protection
 - AC short circuit/Earth fault protection
 - AC over voltage / current limitation protection
 - DC and AC side surge protection (MOV)in built
 - Anti- islanding protection
- xv. The PCU shall have arrangement for adjusting DC input current and should trip against sustainable fault downstream and shall not start till the fault is rectified.

- xvi. The PCU shall be able to withstand an unbalanced load conforming to IEC standard and relevant electricity condition. The PCU shall include appropriate self-protective and self-diagnostic features to protect itself and the PV array from damage in the event of PCU component failure or from parameters – beyond the PCU's safe operating range due to internal or external causes.
- xvii. PCU shall go to shutdown/standby mode, with its contacts open, under the following conditions before attempting an automatic restart after an appropriate time delay.
- xviii. When the power available from the PV array is insufficient to supply the losses of the PCU, the PCU shall go to standby/shutdown mode.
- xix. The PCU control shall prevent excessive cycling of shut down during insufficient solar irradiance.

3. JUNCTION BOXES(JBs)

The junction boxes are to be provided in the PV array for termination of connecting cables. The J. Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminium /cast aluminium alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands. Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP65 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single /double compression cable glands. Provision of earthing. It should be placed at **appropriate** height or above for ease of accessibility.

Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) / SPDs, suitable Reverse Blocking Diodes. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.

Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.

All fuses shall have DIN rail mountable fuse holders and shall be housed in thermoplastic IP 65 enclosures with transparent covers.

4. DC DISTRIBUTIONBOARD:

- A. DC Distribution panel to receive the DC output from the array field.
- B. DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 65 protection. The bus bars are made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

5. AC DISTRIBUTION PANELBOARD:

- a) AC Distribution Panel Board (DPB) shall control the AC power from PCU/inverter, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- b) All switches and the circuit breakers, connectors should conform to IEC60947, part I, II and III/ IS60947 part I, II and III.

- c) The changeover switches, cabling work should be undertaken by the bidder as part of the project.
- d) All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air - insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz
- e) The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- f) All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.
- g) Should conform to Indian Electricity Act and rules (till last amendment).
- h) All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions Variation in supply voltage : +/- 10 % Variation in supply frequency : +/- 5 Hz

6. PROTECTIONS

The system should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

LIGHTNING PROTECTION

The SPV power plants shall be provided with lightning & over voltage protection. The main aim in this protection shall be to reduce the overvoltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per NFC17-102:2011 standard. The protection against induced high-voltages shall be provided by the use of metal oxide varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

SURGE PROTECTION

Internal surge protection shall consist of three SPD type-II surge-arrestors connected from +ve and -ve terminals to earth (via Y arrangement)

EARTHING PROTECTION

- i. Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987. In addition the lightning arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of Department/REIL as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly.
- ii. Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

7. CABLES

Cables of appropriate size to be used in the system shall have the following characteristics:

- i. Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards
- ii. Temp. Range: -10°C to $+80^{\circ}\text{C}$.
- iii. Voltage rating 660/1000V
- iv. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- v. Flexible
- vi. Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum (2%).
- vii. For the DC cabling, XLPE or, XLPO insulated and sheathed, UV-stabilized single core multi-stranded flexible copper cables shall be used; Multi-core cables shall not be used.
- viii. For the AC cabling, PVC or, XLPE insulated and PVC sheathed single or, multi-core multi-stranded flexible copper/Aluminium cables shall be used; Outdoor AC cables shall have a UV-stabilized outer sheath.
- ix. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use. Outer sheath of cables shall be electron beam cross-linked XLPO type and black in colour.
- x. The DC cables from the SPV module array shall run through a UV-stabilized PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5mm.
Cables and wires used for the interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers
- xi. All cables and conduit pipes shall be clamped to the rooftop, walls and ceilings with thermo-plastic clamps at intervals not exceeding 50 cm; the minimum DC cable size shall be 4.0 mm² copper; the minimum AC cable size shall be 4.0 mm² copper. In three phase systems, the size of the neutral wire size shall be equal or half to the size of the phase wires.
- xii. Cable Routing/ Marking: All cable/wires are to be routed in a GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable easily identified. In addition, cable drum no. / Batch no. to be embossed/printed at every one meter.
- xiii. Cable Jacket should also be electron beam cross-linked XLPO, flame retardant, UV resistant and black in colour.
- xv. All cables and connectors for use for installation of solar field must be of solar grade which can withstand harsh environment conditions including High temperatures, UV radiation, rain, humidity, dirt, salt, burial and attack by moss and microbes for 25 years and voltages as per latest IEC standards. DC cables used from solar modules to array junction box shall be solar grade copper (Cu) with XLPO insulation and rated for 1.1kV as per relevant standards only.
- xvi. The ratings given are approximate. Bidder to indicate size and length as per system design requirement. All the cables required for the plant shall be provided by the bidder. Any change in cabling sizes if desired by the bidder shall be approved after citing appropriate reasons. All cable schedules/ layout drawings shall be approved prior to installation.
- xvii. Multi Strand, Annealed high conductivity copper conductor PVC type A pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armoured cable for underground laying. All cable trays including covers to be provided. All cables conform to latest edition of IEC/ equivalent BIS Standards as specified below: BoS item / component Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V, UV resistant for outdoor installation IS /IEC69947.
- xviii. The total voltage drop on the cable segments from the solar PV modules to the solar grid inverter shall not exceed 2.0%.

- xix. The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0%.
- xiv. The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0%

8. TOOLS & TACKLES AND SPARES:

- i. After completion of installation & commissioning of the power plant, necessary tools & tackles are to be provided free of cost by the bidder for maintenance purpose. List of tools and tackles to be supplied by the bidder for approval of specifications and make from REIL.

A list of requisite spares in case of PCU/inverter comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes. Fuses, MOVs /arrestors, MCCBs etc along with spare set of PV modules be indicated, which shall be supplied along with the equipment or can be maintained at Empanelled Vendor end. A minimum set of spares shall be maintained in the plant itself for can be maintained at Empanelled Vendor end for the entire period of warranty and Operation & Maintenance which upon its use shall be replenished.

9. DANGER BOARDS AND SIGNAGES

Danger boards should be provided as and where necessary as per IE Act/IE rules as amended up to date. Three signage shall be provided one each at battery –cum– control room, solar array area and main entry from administrative block.

10. FIRE EXTINGUISHERS:

The firefighting system for the proposed power plant for fire protection shall be consisting of:

- a) Portable fire extinguishers in the control room for fire caused by electrical short circuits
- b) Sand buckets in the control room
- c) The installation of Fire Extinguishers should conform to TAC regulations and BIS standards. The fire extinguishers shall be provided in the control room housing PCUs as well as on the Roof or site where the PV arrays have been installed.

11. DRAWINGS & MANUALS:

- i. Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied to beneficiaries. Bidders shall provide complete technical datasheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the power plant and power evacuation, synchronization along with protection equipment. Approved ISI and reputed makes for equipment be used.

12. PLANNING AND DESIGNING:

- The bidder should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labor. The bidder should submit the array layout drawings along with Shadow Analysis Report to REIL for approval.
- REIL reserves the right to modify the landscaping design, Layout and specification of sub-systems and components at any stage as per local site conditions/requirements.
- The bidder shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The bidder submit three sets and soft copy in CD of final drawing for formal approval to proceed with construction work.

13. DRAWINGS TO BE FURNISHED BY BIDDER AFTER AWARD OF CONTRACT

The Contractor shall furnish the following drawings /documents with each Power Plant.

- i. O&M Manual/ User Manual
- ii. General arrangement and dimensioned layout
- iii. Schematic drawing showing the requirement of SV panel, Power conditioning Unit(s)/ inverter, Junction Boxes, AC and DC Distribution Boards, meters etc.
- iv. Structural drawing along with foundation details for the structure.
- v. Itemized bill of material for complete SV plant covering all the components and associated accessories.
- vi. Layout of solar Power Array
- vii. Shadow analysis of the roof

14. SOLAR PV SYSTEM ON THE ROOFTOP FOR MEETING THE ANNUAL ENERGY REQUIREMENT

The Solar PV system on the rooftop of the selected buildings will be installed for PV capacity permissible by Discom as per regulation issued by State agency.

15. INTEGRATION OF PV POWER WITH GRID:

The output power from SPV would be fed to the inverters which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization. In case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be disconnected from the grid. Once the DG set comes into service PV system shall again be synchronized with DG supply and load requirement would be met to the extent of availability of power. 4 pole isolation of inverter output with respect to the grid/ DG power connection need to be provided.

1. Fixing & Installation of solar system equipments

1. Survey of Site and submit Array layout
2. Fabrication and supply of Super Structures
3. Fixing of SPV module.
4. Fixing of Mounting structure & Accessories.
5. Installation of String Inverter with data logger.
6. Installation of Export-Import & Solar Meter.
7. Lighting Arrestor
8. Laying, testing of all the AC/DC cables.
9. Wiring of complete SPV Power Plant & testing, commissioning of the same.
10. Danger/Caution Sign board.

Note:- defect liability period is 5 years from date of commissioning and handing over the Power plant(s) to beneficiary.

2. Installation of Earthing material and Lightning system, testing and commissioning

- Earthing including earthing pits, earth electrodes, earthing strips, grounding conductor of various sizes, Cu strip for flange jumper and Cu earth plates etc as per specification/standard drawing.
- Lightning surge protection must be provided for the SPV array and other solar system components.
- GI pipes, GI Cable-trays and accessories, cable markers, identifier tags, GI saddles and all other associated accessories as required for cable laying.
- FLP type double-compression nickel-plated brass cable glands, tinned-copper lugs, clamping material etc. for cable termination.
- Fabrication and supply of MS frames, supports, canopies and brackets for miscellaneous Electrical equipments, including welding, supply of bolts, nuts etc for mounting and other necessary supplies, all inclusive of painting etc as required.

3. JET PUMP 1 HP or 1/2 HP (CROMPTON/ KIRLOSKOR/EQUIVALENT)

As per site requirement, 1 H.P or 1/2HP BIS approved surface pumps shall be installed for each SPV Power Plant. Suitable Nos. of water outlets shall be provided through ISI Marked Pipes CPVC for cleaning of the modules.

4. STANDARDS:

The work shall be carried out in the best workmanship manner in conformity with this specification, the relevant specifications/codes of practice of Indian Standard Institution, approved drawings and instructions of the Engineer-in-Charge or his authorized representative issued from time to time. In case of any conflict between the standards, the instructions of Engineer-in-Charge shall be binding.

5. EARTHING NETWORK:

The earthing installation shall be done in accordance with the earthing drawings, specifications and the standard drawings.. The entire earthing system shall fully comply with the Indian Electricity Act and Rules framed there under.

6. TESTING:

Earthing systems/connections shall be tested as follows:

1. Resistance of individual electrodes shall be measured by MEGGER after disconnecting it from the grid.
2. Earthing resistance of the grid shall be measured after connecting all the electrodes to the grid. The resistance between any point on the metallic earth grid and the general mass of earth shall not exceed 1 ohm.
3. The resistance to earth shall be measured at the following:
 4. At each electrical system earth or system neutral earth.
 5. At each earth provided for structure lightning protections.
 6. At one point on each earthing system used to earth electrical equipment enclosure.
 7. At one point on each earthing system used to earth wiring system enclosures such as metal conduits and cable sheaths or armor.

7. LIGHTNING PROTECTION:

Lightning protection system shall generally comprise lightning finials (air terminals), roof conductors, down conductors, test links, and earth electrodes. The number, types, materials and sizes shall be in accordance with the drawings.

8. MISCELLANEOUS MATERIALS SPECIFICATIONS-

Connectors & Termination: Cable terminations shall be made with aluminium/tinned copper crimped type solder less lugs of M/s Dowells make or approved equivalent for all aluminium conductors and stud type terminals.

Cable Identification-Cable tags shall be of 2 mm thick, 20 mm wide aluminium strap of suitable length to contain cable number, equipment no., etc.

Ferrules-Ferrules shall be of approved type size to suit core size mentioned and shall be employed to designate the various cores of control cable by the terminal numbers to which the cores are connected for ease in identification and maintenance.

Cable Glands- Cable glands to be supplied shall be nickel-plated Brass double compression type of reputed make.

Cable Trays -This shall be either prefabricated hot dip galvanised sheet steel tray of suitable Size.

Cable Laying

All cable routes shall be carefully measured and cables cut to the required lengths, leaving sufficient lengths for the final connection of the cable to the terminal of the equipment. The various cable lengths cut from the cable reels shall be carefully selected to prevent undue wastage of cables.

AC Combiner box

Bidder shall provide AC Combiner box for parallel connection of more than Two inverters. The Combiner box should be reputed ISI approved Make.

9. DRAWING

Successful bidder shall submit the Drawing of General Arrangement (3D view) of SPV Modules, AC/DC wiring, Losses calculation, PVsyst report and any other reports if required by REIL for approval.

10. MAINTENANCE SERVICE

Free maintenance services shall be provided by the successful bidder during the period of 5 years, no payment will be made on this account as it is included in the cost of I & C and 5 years maintenance work. This Maintenance service will include such as cleaning of module in every 30 days to maintain the CUF more than 15% yearly, check loose connection of terminal and nut bolt, performance of SPV Plant etc. successful bidder shall submit maintenance certificate as per schedule.

11. PREVENTIVE & ROUTINE MAINTENANCE: -

Successful bidder will provide maintenance services for a period of 5 years from the date of commissioning. Preventive maintenance of Solar PV Systems shall be carried out for satisfactory running. It shall include such checks and maintenance activities at least routine quarterly maintenance visits and submit quarterly maintenance certificate, which are required to be carried out on the components of the Solar PV Systems to minimize the breakdown and to ensure smooth and trouble free running of the Solar PV Systems. successful bidder shall be responsible to carry out the routine & preventive maintenance services and shall provide all labor, materials for the same. successful bidder will submit the maintenance certificate dully signed by customer/ authorized person of beneficiary as per format provided by REIL .

12. GENERATIONS DETAILS

Vendor shall submit monthly Solar generation details and Solar Meter reading of individual Power Plant to REIL as per format provided by REIL.

PLANT PERFORMANCE EVALUATION:

REIL shall monitor the performance of the grid connected SPV Power Plants as per feasible subject to availability of proper measuring equipment being in vogue in DISCOM as under:

The successful bidders shall be required to meet minimum guaranteed generation with

Performance Ratio (PR) at the time of commissioning and related **Capacity Utilization Factor (CUF)** as per the DNI level for the location during the O&M period. PR should be shown minimum of 75% at the time of inspection for initial commissioning. Minimum CUF of 15% should be maintained for a period of 5 years. For CUF less than as specified, penalty can be imposed for the loss of energy generation at the retail tariff of the particular consumer of the DISCOM subject to force majeure conditions. The Successful bidder should send the periodic plant output details to REIL for ensuring the CUF. The PR will be measured at Inverter output level during peak radiation conditions. The PR and CUF will be evaluated considering 100% grid availability

13. DISPLAY AND SIGN BOARD

Sign Board shall be installed near Control room, String inverter, Solar meter & net meter etc. detail will provide after placing of work order.

Annexure – III C**IMPORTANT NOTES**

1. Contractor shall carry out detailed site survey first and shall submit design and drawings to REIL for approval. All design calculations & Make will be required for selection of equipments.
2. Contractor shall place well qualified and dynamic graduate engineer at site to handle all the activities at site.
3. Safety, Health and Environment Protocols to be followed by the contractor as per site rules and regulations.
4. Timely delivery of material is required.
5. SIMs shall be provided by contractor for remote monitoring of systems. The charges pertaining to recharge the SIM of all inverters, shall be borne by Contractor till completion of the 5 years O&M period.
6. Module cleaning arrangements to be done by the contractor at all sites. Appropriate size of Tank and suitable Motor (to lift the water) shall be provided by the contractor. The water shall be provided the customer.
7. Cable Tranches (wherever required) shall be done as per requirement and upto satisfaction level of the REIL / customer.
8. Solar Meters, Energy meters, Net Meters (as per DISCOM specifications) shall be installed at each location by the contractor and shall be sealed by the DISCOM to fulfill RPO / any other obligations. Contractor shall arrange approvals with concerned DISCOM & Electrical Inspector for required clearances.

Annexure – III D**GENERAL TERMS & CONDITIONS OF THE CONTRACT****1) AMENDMENT**

Except as otherwise provided herein, no addition, amendment to or modification of the Contract shall be effective unless it is in writing and signed by and on behalf of both parties.

2) SEVERABILITY

In the event that any or any part of the terms conditions or provisions contained in the Contract shall be determined invalid, unlawful or unenforceable to any extent such term, condition or provision shall be served from the remaining terms, conditions and provisions that shall continue to be valid and enforceable to the fullest extent permitted by law.

3) CONFIDENTIAL TREATMENT

It is understood and agreed that data, know-how and other such proprietary information that was provided or will be provided by either party, will remain confidential.

4) RELATIONSHIP OF THE PARTIES

REIL relationship with Vendor will be that of a Business Associate, and nothing in this Contract shall be construed to create a relationship, joint venture, partnership.

5) INDEMNITY

REIL and the Vendor will indemnify, defend, and hold harmless each other and its divisions, successors, subsidiaries and affiliates, the assigned of each and their directors, officers, agents and employees from and against all liabilities, claims, losses, and damages of any nature, including, without limitation, all expenses (including attorney's fees), cost, and judgments incident there to REIL and REIL's obligations under this indemnity will survive the expiration, termination, completion or cancellation of this Contract or an order hereunder.

6) RESTRICTIN ON EMPLOYMENT

Both the parties have agreed that they will not recruit any members of staff of other party directly or indirectly.

7) ARBITRATION

The parties agree to use their best efforts to resolve any dispute that may arise under the Agreement through good faith negotiations. No party shall commence any litigation in relation to this Agreement unless it has first invited the Chief Executive of the other party (or any person duly authorized to action his behalf) to meet with its own Chief Executive (or any person duly authorized to act on his behalf) for the purpose of endeavoring to resolve the dispute on mutually acceptable terms. Any dispute arising under this Agreement which cannot be settled by negotiation/mediation between the parties, or their respective representatives shall be submitted to the competent court of law. The courts situated at Jaipur only shall have the jurisdiction.

8) RISK AND COST

In the event of failure on the part of the contractor in the supply, installation and commissioning of goods and services, which is required in view of the pending orders, REIL shall be entitled to cancel the remaining order and procure the outstanding quantity through other sources at risk and costs of the contractor.

9) TERMINATION OF CONTRACT:

REIL shall be entitled to terminate this Contract, in the event of any or all or any of the following events, with a written notice of 15 days with due consent of the Vendor:-

- i. has abandoned the Contract
- ii. has without valid reason failed to complete the projects in respect of the contract.
- iii. persistently fails to execute the Contract in accordance with the Contract or persistently neglects to carry out its obligations under the Contract without just and proper cause.

10) DURATION OF CONTRACT

This contract shall take effect on the day of execution of this contract and shall endure until commissioning and hand over the Power Plant(s) to beneficiary and renewable as per mutual agreement.

11) GOVERNING LAW

This contract and its validity, interpretation and performance will take effect and be governed under the laws of India. Venue in any action in law or equity arising from the terms and conditions of this contract shall be the court of appropriate jurisdiction in Jaipur, Rajasthan (India)

12) PREFERENCE TO MSE

Preference to MSE will be given and procurement from SC/ST and Women Entrepreneurs shall be done as per the government guidelines. Start Ups are exempted from condition of prior turnover and prior experience subject to meeting of quality and technical specifications as per clause mentioned in Eligibility Criteria (Annexure - III)

13) CONTRACT:

Before execution of the work, performance security deposit be submitted and a contract agreement for execution of the work shall be signed by the Vendor with REIL as per terms & conditions mentioned in work order / tender. In case agreement is not executed within the stipulated time, earnest money will be forfeited. In case of sub-contracting of work, contractor has to take prior approval from REIL. The main contractor shall be liable for all acts of its subcontractors.

14) NO NEAR RELATIVE CLAUSE

The bidder should give a certificate that none of his/her near relative is working in REIL as defined below along with their technical bid as per the attached Annexure . In case of proprietorship firm certificate will be given by the proprietor. For partnership firm certificate will be given by all the partners and in case of limited company by all the Directors of the company excluding Government of India/Financial institution nominees and independent non-Official part time Directors appointed by Govt. of India or the Governor of the state and full time Directors of PSUs both state and central.

Due to any breach of these conditions by the company or firm or any other person the tender will be cancelled and Bid Security will be forfeited at any stage whenever it is noticed and REIL will not pay any damage to the company or firm or the concerned person. The company or firm or the person will also be debarred for further participation in REIL's Tender. The near relatives for this purpose are defined as:- (a) Members of a Hindu undivided family. (b) They are husband and wife. (c) The one is related to the other in the manner as father, mother, son(s) & Son's wife (daughter in law), Daughter(s) and daughter's husband (son in law), brother(s) and brother's wife, sister(s) and sister's husband (brother in law).

15) FORCE MAJEURE:

- i. Notwithstanding the provisions contained in the Bidding Documents; the Contractor shall not be liable to forfeit (a) Bid Security for delay and (b) termination of contract; if it is unable to fulfill its obligation under this Contract due to force majeure conditions.
- ii. For purpose of this clause, "Force majeure" means an event beyond the control of the Contractor and not involving the Contractor's fault or negligence and not foreseeable, either in its sovereign or contractual capacity. Such events may include but are not limited to Acts of God, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes etc. Whether a "Force majeure" situation exists or not, shall be decided by REIL and its decision shall be final and binding on the Contractor. REIL may extend the date of completion for a further period corresponding to the period of force majeure.
- iii. If a force majeure situation arises, the Contractor shall notify REIL in writing promptly, not later than 7 (seven) days from the date such situation arises. The Contractor shall notify REIL not later than 3 days of cessation of force majeure conditions. After examining the cases, REIL shall decide and grant suitable additional time for the completion of the work, if required.

16) OTHER TERMS & CONDITIONS:

- i Compliance with Regulations and Indian Standard:- All works shall be carried out in accordance with relevant regulations, both statutory & those specified by the Indian standard related to the works covered by this specification. In particular the equipment and installation will comply with the following:-
 - a. Work man's compensation act.
 - b. Minimum wages Act.
 - c. Payment wages Act.
 - d. Contact Labour regulation & abolition Act.
 - e. ESI, PF & Bonus Act.
 - f. Regulation under Indian Electricity Rules,
 - g. Safety & electrical Standard as applicable
- ii Watch & Ward:-

The Vendor shall supply material for installation work at site, shall continue to be responsible for their safe custody till they are installed in position, tested, commissioned and handed over to beneficiary as per format provided by REIL.
- iii Vendor shall arrange for compliance with statutory provision of safety regulation and departmental requirements of safety codes in respect of labour employed on the work by the Vendor. Failure to provide such safety requirements would make the Vendor liable for penalty. The department will make arrangement for the safety requirements at the cost of the Vendor & recover the cost thereof from him.
- iv Company shall not be held liable or responsible for any illness and for physical harm sustained by the Vendor authorized representative during the execution of this agreement as they will not be deemed in any manner as employee of the company.
- v The Vendor authorized representative shall take due care in handling the SPV system under this contract. Unwarranted activities, if found any, the company shall be authorized to recover the same from the Vendor.
- vi Correction, over-writing and alteration should be initialed and dated by the Vendor otherwise the bid is liable to be rejected. The bid shall be typed or written in ink. Unit rates should be mentioned in the specified format failing which the bids are not likely to be considered.

- vii All Vendors shall therefore, furnish declaration that their firm is not involved in any litigation that may have an impact of affecting or compromising the delivery of services as required under this assignment. It is also to be declared that their firm has not been black listed by any Central/State/ Public Sector Undertakings in India. The declaration should be verified by the Notary Public.
- viii The Vendor shall sign these conditions on each page at the end in token of acceptance of all the terms and it would be attached with the bid along with the declaration mentioned in above. He should also sign at the bottom of each of the pages of his bid to be submitted.
- ix The company reserves the right to visit and inspect any site under this contract at any time and if defects are noted, payments may be stopped / recovered from Vendor. The company reserves the right to terminate this contract without giving any notice, if in the opinion of the company, the performance of the Vendor is not found satisfactory and according to terms stipulated by this contract.
- x The company shall be fully absolved from the third party claims and damages during the execution of the contract..
- xii The contract agreement shall be executed at Jaipur and shall be subject to Jaipur court jurisdiction alone.
- xiii The company shall deduct the TDS as per the Income Tax Act.
- xiv The Vendor shall be fully responsible for all repairs of the defects in maintenance during the period under contract.

NOTE:

1. **If Bidder/ Contractor is found deficient/non-adherent to the provisions of the above work, then they may not be awarded any assignment in future.**

17. Work Completion period: Within 180 days from the date of placement of work order.

18. Performance Security (Site Wise):

Contract Performance Security @ 3% of total EPC contract value (without O&M) shall be submitted by successful bidder within 14 days after placement of work order of site. This security shall be valid till completion of commissioning work. However, in case of delay in Completion of Facilities, the validity of all the contract performance securities shall be extended by the period of such delay.

After the end of successful completion of period mentioned above, Contract Performance Security shall be returned to agency, provided agency has submitted CPG @ 10% of O&M Contract price.

19. LD / Penalty against delay in completion of work:

If the contractor fails to achieve the successful Completion of Facilities within the agreed work schedule, the Contractor shall pay to the Employer as liquidated damages and not as penalty, a sum calculated at the following rates:

1. 0.5% per week of the contract value corresponding to the capacity not commissioned for the premises.
2. The total amount of liquidated damages for delay under the contract will be subject to a maximum of five percent (5%) of the total Contract Price excluding O&M.

Further, REIL is authorized to terminate the contract for non-performance, delays and quality related issues. REIL shall terminate the contract without any liability in cases of fraudulent representation by the contractor.

20. Defect Liability Period:

For all other items/equipments in Technical specification, the Defect Liability Period shall be 60 months from the date of Completion of Facilities of Entire Project.

If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Plant and Equipment supplied or of the work executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the Employer regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall at its discretion, determine) such defect as well as any damage to the Facilities caused by such defect.

21. Payment Terms (Site Wise):

- a) Sixty Percent (60%) of Contract price on receipt of major material at site (i.e. Module Mounting Structures, String Inverters, DC Cables, AC Cables etc.). Release of REIL payment is required from end customer.
- b) Thirty Percent (30%) of Contract price on successful Commissioning of SPV Power Plant (including net metering). Release of REIL payment is required from end customer.
- c) Ten Percent (10%) of Contract price shall be released in equal part during O&M after successfully completion of O&M activities. 2% every year shall be released after submission of maintenance certificate.

PRICEESCALATION

No Price escalation is allowed. The rate(s) quoted against the work shall remain firm during the entire Rate Contract period.

22. Site Details: Netravidyalaya College, Shamshabad, Hyderabad (Telangana)

Annexure -IV
CHECKLIST OF TENDER TERMS & CONDITIONS

S. No.	Term	Description	Complied / Not Complied	Deviation if any
1.	GST / Taxes	As applicable.		
2.	Tender EMD	As per given in tender document		
3.	Technical & Financial Eligibility Criteria	As per given in tender document		
4.	Terms of payment	As per given in tender document		
5.	Contract period	As per given in tender document/LOI /Work order		
6.	Performance Security	As per given in tender document		
7.	Comprehensive O&M	As per given in tender document		
8.	LD Clause	As per given in tender document		
9.	Warranty of equipment supplied	As per given in tender document		
10.	Completion Period	As per given in tender document/LOI /Work order		
11.	Special Terms & Conditions	As per given in tender document		
12.	General Terms & Conditions	As per given in tender document		
13.	Udhyam Registration	As per recent Government guide line, manufacturer / Service provider has to take Udhyam registration to avail benefit of MSME. Attach your copy of Udhyam Registration with tender.		
SIGNATURE WITH STAMP				



Annexure -V

(To be submitted on Bidder's Letter Head)

Tender ref.: REIL/RE/2024-25/21 Dated 12.02.2025

Authorization Certificate

To

Date

Addl. General Manager(MM-BOS),
Rajasthan Electronics & Instruments Limited,
2, Kanakpura Industrial Area,
Jaipur-302034
Rajasthan

Dear Sir,

Mr. is hereby authorized to sign and submit tender document in reference to your tender no **REIL/RE/2024-25/21 Dated 12.02.2025 on behalf of M/s** for “Design, Supply (except SPV Modules), Installation, Testing, Commissioning and Comprehensive Operation and Maintenance for 5 years of 1 MWp Grid Connected Solar Photovoltaic Power Plant in Hyderabad (Telangana State)”.

On behalf of company

Name and Designation

Signed and sealed (who has signed the tender)

Annexure-VI

(To be submitted on Bidder's Letter Head)

Tender ref.: REIL/RE/2024-25/21 Dated 12.02.2025

UNDERTAKING OF NO NEAR RELATIVE

Date

To

Addl. General Manager (MM-BOS),
Rajasthan Electronics & Instruments Limited,
2, Kanakpura Industrial Area,
Jaipur-302034
Rajasthan

Dear Sir,

We, M/s. _____ hereby certify that none of our relative(s) as defined in the tender document is/are employed in Rajasthan Electronics & Instruments Limited (REIL) as per details given in tender document. In case at any stage, it is found that the information given by me is false/incorrect, REIL shall have the absolute right to take any action as deemed fit/without any prior intimation to us

On behalf of company

Name and Designation

Signed and sealed (who has signed the tender)



Annexure-VII

(To be submitted on Bidder's Letter Head)

Tender ref.: REIL/RE/2024-25/21 Dated 12.02.2025

CERTIFICATE FOR NON BLACK LISTING

Date

To

Addl. General Manager (MM-BOS),
Rajasthan Electronics & Instruments Limited,
2, Kanakpura Industrial Area,
Jaipur-302034
Rajasthan.

Dear Sir,

We, M/s.confirm that we are not blacklisted in any PSUs/Government/Semi Government / Quasi Government department in India, as on date of submission of bid. This undertaking is submitted to the best of my knowledge. If at any stage it is found wrong, then REIL may take necessary action against us.

On behalf of company

Name and Designation

Signed and sealed (who has signed the tender)

**Annexure -VIII****Tender ref.: REIL/RE/2024-25/21 Dated 12.02.2025****CA CERTIFICATE TOWARDS PLANT & MACHINERY**

Date

To

Addl. General Manager (MM-BOS),
Rajasthan Electronics & Instruments Limited,
2, Kanakpura Industrial Area,
Jaipur-302034
Rajasthan.

Dear Sir,

It is certified that M/s is falling under MSE category as per guidelines contained in the provisions of the MSMED Act,2006 and notification No. S.P. 1722(E) dated 05.10.2006 and having UdhogAdhar no.

We also certify that the investment in plant and machinery (Imported and indigenous) as on date isRs.....

Chartered Accountant

Firm name:-

Signature with seal

UDIN



Annexure-IX

(To be submitted on Bidder's Letter Head)

CERTIFICATE TOWARDS LEGAL / CONTRACTUAL DISPUTES

Tender ref.: REIL/RE/2024-25/21 Dated 12.02.2025

Date.....

To

Addl. General Manager (MM-BoS),
Rajasthan Electronics & Instruments Limited,
2, Kanakpura Industrial Area, Jaipur-302034
Rajasthan

Dear Sir,

We M/s do hereby confirm that we do not have any legal /contractual disputes with REIL / Any other PSU / Any Govt. Organization.

Also, we confirm that we do not have any prior contract terminations due to non-performance or litigation history against any government entity.

On behalf of company

Name and Designation



Annexure-X

(To be submitted on Bidder's Letter Head)

CERTIFICATE TOWARDS COMPLETION OF WORKS
(APPLICABLE ONLY FOR REIL PAST CONTRACTORS)

Tender ref.: REIL/RE/2024-25/21 Dated 12.02.2025

Date.....

To

Addl. General Manager (MM-BoS),
Rajasthan Electronics & Instruments Limited,
2, Kanakpura Industrial Area, Jaipur-302034
Rajasthan

Dear Sir,

We, M/s do hereby confirm that we do not have any pending work, assigned by REIL till FY 2021-22.

On behalf of company.....

Name and Designation

Annexure-XI**(MII CERTIFICATE BY CA)****PP- PREFERENCE TO MAKE IN INDIA**

To,

AGM (MM-BOS),

Rajasthan Electronics & Instruments Limited,

2, Kanakpura Industrial Area,

Jaipur-302034 Rajasthan

Ref: Tender No..... Dated.....

Dear Sir,

I/We.....(Name of bidder) undertake that, we meet the mandatory Local Content (LC) requirement for qualifying as “Class I Local Supplier as per the PP-LC Policy against this tender. The percentage of Local Contents the bid is%

On behalf of company

Name and Designation

Annexure-XII**INTEGRITY PACT****Between**

Rajasthan Electronics & Instruments Limited (REIL), a company registered under the Companies Act 1956 and having its registered office at 2, Kanakpura Industrial Area, Jaipur-302012 (India) hereinafter referred to as “The Principal”, which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as “The Bidder/ Contractor” which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - 1.1.1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2. The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3. The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 The Bidder(s)/ Contractor(s) of foreign origin shall disclose the name and address of the agent(s)/ representative(s) in India if any. Similarly the Bidder(s)/ Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principal(s) if any. Further details as mentioned in the "Guidelines on Indian Agent of Foreign Suppliers" shall be disclosed by the Bidder(s)/ Contractor(s). Further as mentioned in the guidelines all the payments made to the Indian Agent/ Representative have to be in Indian Rupees only.

2.1.5 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidders(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines for Suspension of Business Dealings with Suppliers/ Contractors" framed by the Principal.

Section 4 – Compensation for Damages

4.1 If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.

4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

Section 5 – Previous Transgression

5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-contractors

6.1 The Bidder(s)/ Contractor(s) undertake(s) to demand from his sub-contractors a commitment in conformity with this Integrity Pact. This commitment shall be taken only from those sub-contractors whose contract value is more than 20% of Bidder's/ Contractor's contract value with the Principal.

6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.

6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 – Criminal Charges against violating Bidders/ Contractors Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to Vigilance Office.

Section 8 –Independent External Monitor(s)

8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

Ms. Arundhaty Ghosh, Director General (Postal Services) (Retd.) has been appointed as IEM for this contract. Her address is as below.

CG 151 ,1st Floor, Sector II, Salt Lake, Kolkata – 700091

E- Mail :arundhatyg@gmail.com

Mr. Shekhar Prasad Singh, IAS (Retd.) has been appointed as IEM for this contract. His address is as below.

Plot No. 176, Road No. 11, Prashasan Nagar, Jubilee Hills, Hyderabad - 500033

E- Mail :spsinghias1983@gmail.com

8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the MD, REIL.

8.4 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.

8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

8.6 The Monitor will submit a written report to the MD, REIL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.

8.7 If the Monitor has reported to the MD, REIL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the MD, REIL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.8 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

9.1 This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the MD, REIL.

Section 10 – Other Provisions

10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. Jaipur.

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal

For & On behalf of the Bidder/ Contractor

(Office Seal)

(Office Seal)

Place-----

Date-----

Witness: _____

Witness: _____

(Name & Address) _____

(Name & Address)_____

Annexure–XIII**FORMAT FOR EMD BANK GUARANTEE**

M/s. _____ (Name & Address of the Firm) having their registered office at _____ (Address of the firms Registered office) (Hereinafter called the 'bidder') wish to participate in the tender No. _____ for _____ Rajasthan Electronics & Instruments Limited (REIL) and WHEREAS a Bank Guarantee for (Hereinafter called the "Beneficiary") Rs. _____ (Amount of EMD) valid till _____ (Mention here date of validity of this Guarantee which from the date of the submission of Tender's offer) which is required to be submitted by the bidder along with the tender.

We, _____ (Name of the Bank and address of the Branch giving the Bank Guarantee) having our registered office at _____ (address of Bank's Registered office) hereby give this Bank Guarantee No. _____ dated _____ and hereby agree unequivocally and unconditionally to pay immediately on demand in writing from the Rajasthan Electronics & Instruments Limited or any officer authorized by it in this behalf any amount not exceeding Rs. _____ (Amount of E.M.D.), (Rupees _____ (In words) to the said Rajasthan Electronics & Instruments Limited on behalf of the bidder.

We _____ (Name of the Bank) also agree that withdrawal of the tender or part thereof by the bidder within its validity or Non submission of Security Deposit by the bidder within one month from the date tender or a part thereof has been accepted by the Rajasthan Electronics & Instruments Limited would constitute a default on the part of the bidder and that this Bank Guarantee is liable to be invoked and en-cashed within its validity by the Beneficiary in case of any occurrence of a default on the part of the bidder and that the en-cashed amount is liable to be forfeited by the Beneficiary.

This agreement shall be valid and binding on this Bank upto and inclusive of _____ (mention here the date of validity of Guarantee) and shall not be terminable by notice or by Guarantor change in the constitution of the Bank or the firm of bidder or by any reason whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, conceded with or without our knowledge or consent by or between the bidder and the REIL.

"Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this Guarantee shall not be assignable, transferable by the beneficiary (i.e. REIL). Notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the Bank. Any invocation of the Guarantee can be made only by the beneficiary directly.

NOTWITHSTANDING anything contained hereinbefore, our liability under this guarantee is restricted to Rs. _____ (Amt. of E.M.D.) (Rupees _____) (in words). Our Guarantee shall remain in force till _____ (Date of validity of the Guarantee). Unless demands or claims under this Bank Guarantee are made to us in writing on or before _____ (Date of validity of the Guarantee), all rights of Beneficiary under this Bank Guarantee shall be forfeited and we shall be released and discharged from all liabilities there under:

Place:

Date:-

Please mention here Complete Postal Address of the Bank with Branch Code, Telephone.

SIGNATURE OF THE BANK'S
AUTHORISED SIGNATORY WITH
OFFICIAL ROUND SEAL

NAME OF DESIGNATED BANKS:

Note -1: The Bank Guarantee (B.G) shall be from the Nationalize Banks or any other Banks, as Notified by the Finance Department, from time to time.

Note -2: The B.G shall be signed by two bank officer jointly if the amount of B.G is more than Rs 50,000/- and B.G must have proper B.G number as per R.B.I guidelines.

Annexure–XIV**FORMAT FOR PERFORMANC SECURITY BANK GUARANTEE**

(To be stamped in accordance with Stamp Act If any, of the Country of the issuing Bank)

Bank Guarantee No.....

Date.....

To [Purchaser's Name & Address]

Dear Sirs,

In consideration of the...*Purchaser's Name].....(Hereinafter referred to as the 'Purchaser' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) having awarded to M/s....*Contractor's Name].....with its Registered/Head Office at.....(Hereinafter referred to as the 'Contractor'. Which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), a Contract by issue of Purchaser's Purchase Order No.....dated.....and the same having been acknowledged by the contractor, for.....[Contract sum in figures and words] for.....*Name of the work] and the Contractor having agreed to provide a Contract Performance Guarantee for the faithful performance of the entire Contract equivalent to -----% (*).....of the said basic value of the aforesaid work under the Purchase Order.

We.....[Name & Address of the Bank].....having its Head Office at.....(hereinafter referred to as the 'Bank', which expression shall, unless repugnant to the context of meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Purchaser's on demand any and all monies payable by the Contractor to the extent of.....(*) as aforesaid at any time up to.....[@).....*days/month/year] without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the Purchaser's on the Bank shall be conclusive and binding notwithstanding any difference between the Purchaser's and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Purchaser's and further agrees that the guarantees herein contained shall continue to be enforceable till the Purchaser discharges this guarantee or till....*days/month/year] whichever is earlier.

The Purchaser shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, from time to time to extend the time for performance of the Contract by the Contractor. The Purchaser shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Purchaser and the Contractor or any other course or remedy or security available to the Purchaser.

The Bank shall not be released of its obligation under these presents by any exercise by the Purchaser of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance of other acts of omission or commission on part of the Purchaser's or any other indulgence shown by the Purchaser or by any other matter or thing whatsoever which under law would, but for this provision have the effect of relieving the Bank.

The Bank also agrees that the Purchaser at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Purchaser may have in relation to the Contractor's liabilities.

Notwithstanding anything to the contrary contained herein.

1. Our liability under this Guarantee shall not exceed Rs. ----- (Rupees ----- Only).
2. This Bank Guarantee shall be valid up to -----
3. Further, a claim period of 60 days after validity period -----is available to you to make a demand under the Bank Guarantee, in respect of a cause of action which has arisen during the validity period only.
4. We are liable to pay up to the guarantee amount only and only if we receive from you a written claim or demand duly received by authorized Bank officials within the validity period of the guarantee as above or within claim period, if any.

The said letter of guarantee has been transmitted through SFMS gateway to your bank. It is advised that in your own interest, you may verify the genuineness of above letter of guarantee from your bank/branch

WITNESSES: Signature.....
 Name.....
 Official Address.....
 Address.....
 Designation.....

Signature.....
 Name.....
 Official
 Seal

Signature.....
 Name.....
 No.....
 Address.....

Annexure–XV**REIL BANK DETAILS**

Name of Organization	Rajasthan Electronics & Instruments Limited (REIL), Jaipur, Rajasthan, India
PAN Number	AABCR1528G
GST Number	08AABCR1528G1ZL
Banker Name	Punjab National Bank
Branch Name	Large Corporate Branch, M.I.Road, Jaipur, Rajasthan, India
Bank Account Number	0221008700000152
IFSC Code	PUNB0022100
Type of Account	Cash Credit Account

Annexure –XVI**(To be submitted on Bidder's Letter Head)****CHECK LIST OF ALL ANNEXURES**

Sr. No.	Required Documents	Remark
1.	Sealed and signed process compliance form. (Annexure-I)	
2.	Sealed and signed Instruction to Bidders (Annexure-II)	
3.	Sealed and signed Annexure-III	
4.	Sealed and Signed Annexure-IV (Checklist of Tender terms & conditions)	
5.	Authorization certificate (Annexure-V)	
6.	Sealed & signed Undertaking of No Near Relative (Annexure-VI)	
7.	Sealed & signed Certificate for Non Black listing (Annexure-VII)	
8.	Sealed & signed CA Certificate for MSME firms(Annexure -VIII)	
9.	Certificate towards Legal / Contractual Disputes (Annexure-IX)	
10.	Certificate towards Completion of Works (Annexure -X)	
11.	Integrity Pact (Annexure -XI)	
12.	Format for EMD Bank Guarantee (Annexure -XII)	
13.	Format for Performance Security Bank Guarantee (Annexure -XIII)	
14.	REIL Bank Details for preparation of BG (Annexure -XIV)	
15.	Checklist (Annexure -XV)	