

TENDER NO. SSSCT/PROJ/25-26/E&P/006

Date: 16-06-2025

TENDER DOCUMENT

**SRI SATHYA SAI CENTRAL TRUST
PRASANTHI NILAYAM, PUTTAPARTHI**



**WORKS TENDER NOTIFICATION
SUPPLY AND INSTALLATION OF SOLAR PLANT AT NANDAGIRI
CAMPUS SSSIHL**

Address for communication:

SRI SATHYA SAI CENTRAL TRUST
PRASANTHI NILAYAM,
PUTTAPARTHI
SRI SATHYA SAI DISTRICT
ANDHRA PRADESH – 515134.

Website: www.srisathyasai.org

Email: ce@mail.sssct.org

Aum Sri Sairam

**Sri Sathya Sai Central Trust, Prasanthi Nilayam Puttaparthi, Sri Sathya Sai District, A.P.
- 515134**

TENDER DOCUMENT

Tender Notice Number: SSSCT/PROJ/25-26/E&P/006

**Name of work: Supply and Installation of Solar Plant at Nandagiri Campus
SSSIHL.-Estimated cost Rs.25 lakhs**

On behalf of Sri Sathya Sai Central Trust, Prasanthi Nilayam Sri Sathya Sai District here-in-after mentioned as the Owner, you are hereby invited to bid Supply and Installation of Solar Plant at Nandagiri Campus SSSIHL.

1. Scope of work: Solar works of the above mentioned work as per BOQ and the specification provided along with this tender document.
2. The documents comprising the tender, are
 - A) Notice inviting tender
 - B) General conditions of contract (GCC)
 - C) Special conditions of contract (SCC)
 - D) List of materials to be used.
 - E) Site visit declaration.
 - F) Bill of quantities (BOQ)
3. The Bidder shall furnish the following documents soft copy through mail i.e tenders@mail.sssct.org and hard copy need to be sent to the following address i.e. Chief Engineer, Sri Sathya Sai Central Trust, Prasanthi Nilayam A.P. 515134 on or before 27-June-2025
 - i) Covering letter
 - ii) BOQ duly filled and signed by the bidder
 - iii) Declaration of site inspection by the bidder before quoting the tender.
 - iv) Acceptance of general conditions of the contract, duly signed.
4. The last date of submission of the tender is 27-June-2025 at 11.00 AM

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I-WORKS BID**INVITATION OF BIDS FOR THE SUPPLY AND INSTALLATION OF SOLAR PLANT AT NANDAGIRI CAMPUS SSSIHL.**

The Sri Sathya Sai Central Trust, Prasanthi Nilayam, Puttaparthi, Andhra Pradesh hereby invites tender from for the said work as per the specifications. “Interested parties who wishes to participants may submit their bids as per process mentioned here under”

To:

**The Chief Engineer,
Sri Sathya Sai Central Trust, Prasanthi Nilayam
Puttaparthi, Sri Sathya Sai District,
Andhra Pradesh. Pin: 515134**

Sl. No	Bid issue	Description
1	Tender Inviting Authority	Chief Engineer, Sri Sathya Sai Central Trust
2	Name of the Work	Supply and Installation of Solar Plant at Nandagiri Campus SSSIHL.
3.	Place at which Tender document available	Tender Document can be downloaded from Website: http://tenders.sssct.org/Supply_Inst_Solar_Plant_ND_Campus.pdf
4.	Earnest Money Deposit (EMD)	Estimated Value of the Bid Rs.25Lakhs EMD: 25,000/- (Rupees Twenty Five thousand only) To be paid by all the Bidders by bank Transfer as per the details below, at the time of submission of tender bid. SSSCT PROJECTS-INDIAN FUNDS UTILIZATION A/C No: 39117267217. IFSCODE:SBIN0010480 STATE BANK OF INDIA, PRASANTHI NILAYAM

5.	Security Deposit	Further Security Deposit of 1.5% is to be paid by the selected Bidder
6.	Last Date for Submission of Bid	27-June-2025 (Until 11.00 AM)

1. PROCEDURE FOR BID SUBMISSION:

The Bidder shall submit the Bids on or before 27-June-2025 (Until 11:00 AM)
To the Tender Inviting Authority as per the procedure detailed below:

- a. The Bidders shall submit their Bid in a sealed cover along with all the documents as per the Works Bid Invitation along with the Bid.
- b. The Bidder shall sign on all the statements, documents, certificates, and sent by the, owning responsibility for their correctness / authenticity.

2. TENDER DOCUMENT:

The Bidder is requested to download the Tender Document and read all the terms and conditions mentioned in the Tender Document and seek clarification if any, from the Tender Inviting Authority through e mail: ce@mail.sssct.org

- 3. LATE BIDS:** Sri Sathya Sai Central Trust will not accept any bid after the deadline for submission of bids.

II. GENERAL CONDITIONS OF CONTRACT

1. DEFINITIONS

In this Contract, the following terms shall be interpreted as indicated:

A .“The Contract” means the agreement entered into between the Sri Sathya Sai Central Trust and Contractor as recorded in the contract form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein:

B .“The Contact Price” means the price payable to the Contractor under the Contract for the full and proper performance of its contractual obligation;

C .“Services” means services ancillary to the work, such as transportation and insurance, and all other incidental services, such as commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the Contract;

D “GCC” means the General Conditions of Contract contained in this section;

E “SCC” means the Special Conditions of Contract;

F. “The Contractor” means the Bidder selected for and services under this Contract.

G. “The Trust” means the Sri Sathya Sai Central Trust, the tender Inviting Authority for the work.

2. CHANGE OF ORDERS:

The Trust may, at any point of time, by written order given to the Contractor make changes modifications within the general scope of the contract in any one or more of the following:

A .The scope of work;

B .The specifications of work; and / or

c. The services to be provided by the Contractor

3. APPLICABLE LAWS:

The contract shall be interpreted in accordance with the prevailing laws of the Government of Andhra Pradesh and Union of India.

4. NOTICES:

Any notice given by the Trust to the Contractor pursuant to this Contract shall be sent in writing or by e-mail and/or confirmed in writing to the Contractor’s address specified in Contract.

A notice shall be effective when delivered or on the notice's effective date, whichever is later.

5. AGREEMENT:

The successful Bidder(s) shall execute an agreement for the fulfilment of the contract on **Rs.100/-** non-judicial stamp paper in the prescribed format provided, within seven days from the date of acceptance of the Bid and intimation of the award of Contract.

The incidental expenses of execution of agreement shall be borne by the successful Bidder(s).

The conditions stipulated in the agreement should be strictly adhered to and violation of any of the conditions in full or in part will entail termination of the Contract without prejudice to the rights of The Trust towards Contractor and recovery of any consequential loss from the Contractor.

6. CHANGE OF SPECIFICATIONS:

No change of specifications after the placement of Order shall be entertained unless the alternate model offered is equivalent or higher in specifications and approval of the Competent Authority has been obtained in writing for such a change of model before execution of the work. Execution of work without such an approval shall not be accepted.

7. CONFLICT OF INTEREST.

Any Bidder having a conflict of interest, which substantially affects fair competition, shall not be eligible to bid in this tender. Bids found to have a conflict of interest shall be rejected as non-responsive. Bidder shall be required to declare the absence of such conflict of interest. A Bidder in this Tender Process shall be considered to have a conflict of interest if the Bidder:

- i. Directly or indirectly controls and/is controlled by or is under common control with another Bidder; or
- ii .Receives or have received any direct or indirect subsidy/ financial stake from another Bidder; or
- iii. Has the same legal representative/ agent as another Bidder for purposes of this bid. A Principal can authorize only one agent, and an agent also should not represent or quote on behalf of more than one Principal or
- iv. Has a relationship with another bidder, directly or through common third parties, that puts it in a position to have access to information about or influence the bid of another Bidder or influence the decisions of the Procuring Entity regarding this Tender process; or
- v. Participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of a non-bidder firm as a sub-contractor in more than one bid; or
- vi. Would be providing goods, works, or non-consulting services resulting from or directly related to consulting services that it provided (or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm), for the procurement planning (inter-alia preparation of feasibility/ cost estimates/ Detailed Project Report (DPR), design/ technical specifications, terms of reference (ToR)/ Activity Schedule/ schedule of requirements or the Tender Document etc) of this Tender process; or
- vii. Has a close business or family relationship with a staff of the Procuring Organisation who: (i) are directly or indirectly involved in the preparation of the Tender document or specifications of the Tender Process, and/or the evaluation of bids; or (ii) would be involved in the implementation or supervision of

resulting Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Procuring Entity throughout the Tender process and execution of the Contract.

The Bidder shall go through instructions, terms and conditions given in this tender document. Failure to furnish all the requisite information called for in this Tender will be at the Bidders' risk and may result in rejection of the tender. The Bidder shall download the tender document, sign and send again by e-mail confirming that the Bidder has gone through all the terms and conditions of the tender.

8. AMENDMENT OF BIDDING DOCUMENTS

At any time prior to the deadline for submission of bids, the Sri Sathya Sai Central Trust may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the bidding documents by amendment.

Any such amendment/ corrigendum shall be posted on the Sri Sathya Sai Central Trust website only and no other communication shall be made to any firm in this regard.

In order to allow prospective Bidders reasonable time, in which to take the amendment into account in preparing their bids, the Sri Sathya Sai Central Trust, at its discretion, may extend the deadline for the submission of bids.

9. LANGUAGE OF BID

The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Sri Sathya Sai Central Trust shall be written in English language. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the translation shall govern.

10. FORUM FOR LEGAL PROCEEDINGS:

In all cases of disputes, the decision of the Tender Inviting Authority shall be final. Any dispute or difference or any matter arising out of contract or incidentals thereto under this enquiry shall be subjected to jurisdiction of a competent Court of Law in Puttaparthi in Andhra Pradesh alone and not in any other place.

11. ACCEPTANCE or REJECTION OF BIDS:

A .The Tender Inviting Authority reserves the right to accept or reject any or all bids and to annul the bidding process at any time prior to award of contract, without thereby incurring any liability or any obligation to inform the affected Bidder or Bidders of the grounds for the said action.

B .Any Bid with incomplete information is liable for rejection.

C .For each category of pre-qualification criteria, the documentary evidence is to be produced duly attested by the Bidder, serially numbered and enclosed with the bids. If the documentary proof is not

enclosed for any/all criteria the Bid is liable for rejection.

If any information given by the Bidder is found to be false / fictitious, the Bidder will be debarred for 2 years from participating in any other tenders and will be blacklisted.

12. OTHER IMPORTANT CONDITIONS:

1. Validity of offer: The prices quoted must be FIRM and the offers made must remain open for acceptance for 90 days from the date of opening of Tender.
2. Payment Terms: Payment will be released within 15 days after receipt of the certified bill.
3. The Trust will not issue any statutory forms like, Form C, Form D, Way bill etc., and this should be taken into account by the Contractor while quoting the rates.
4. The Tender Quantity is Tentative. It can be increased or decreased at the discretion of the Trust.
5. After finalization of Tender, a work completion schedule shall be submitted by the Contractor which can be revised by the Trust.
6. Penal clauses of the Contractor whatsoever like payment of interest on late payment of bills etc. shall not be acceptable to Sri Sathya Sai Central Trust.
7. Impermissible variations to specifications of work will be viewed seriously and will lead to black-listing.
8. The Trust reserves the right to override all the terms and conditions of the tender at any moment. It may reject any tender without assigning any reasons thereof and the same shall not be questioned in any court of law on any ground, whatsoever.
9. TAXES: TDS as applicable under the Income Tax Act will be deducted from all payments made to the contractor.
10. DISCIPLINE AND BEHAVIOUR OF WORKMEN: The Contractor shall ensure proper decorum, discipline and decency within the premises of the Institution. Smoking, consumption or possession of alcoholic drinks, and non-vegetarian food items within the premises are prohibited.
11. STATUTORY REQUIREMENTS: All necessary permits, licenses, registration and other Environment / Planning-related clearance needed for the works will be arranged by the Trust, assisted by the Contractor in respect of provision of the required data.
12. ASSIGNMENT AND SUBLETTING: The Contractor shall not assign or sub-contract any part of the work to another agency without prior written approval of the Trust.

13. LIQUIDATED DAMAGES: The Contractor undertakes to complete the work within the stipulated period. In case there are delays not attributable to Force Majeure, and without acceptable justification, the Trust can issue a notice of 15 days to the Contractor to make up the delay, and if there is still a delay, the Trust reserves the right to levy Liquidated Damages to the extent of 2% of the contract value per week of delay. If and when the Liquidated Damages reach a limit 10%, the Trust shall be entitled to determine the Contract and get the work carried out by another agency, with any relevant costs in excess of the contracted value accruing to the Contractor's account

14. LABOUR LAWS:

The Contractor shall be responsible for full compliance with all laws and regulations relating to labour, employment, compensation, wages, working conditions, environment, insurance, safety, etc., and the Trust stands fully indemnified against any claim in this regard.

III.SPECIAL CONDITIONS OF CONTRACT

1. **SCOPE OF WORK:** Supply and Installation of Solar Plant at Nandagiri Campus SSSIHL.
2. **EMD (Earnest Money Deposit)**
 - A. EMD of 1% value of work shall be enclosed along with the Bid. Without EMD, the Bid will not be accepted. This will be refunded to the unsuccessful bidders after awarding the work.
 - B. The successful bidder shall deposit a further amount of 1.5% towards FSD (Further Security Deposit) before signing of the Agreement.
 - C. The total EMD/FSD of 2.5% of successful contractor will be released after Defect liability period of 24 months after completion of the work.
3. **DURATION OF THE CONTRACT:** 120 Days from the date of issuing the letter of Intent. **Time is the essence of the contract.** Contractor shall submit a work schedule highlighting the various milestones immediately after award of work.
4. **CONTRACT AGREEMENT:** Will be executed between the Contractor and SSSCT, Prasanthi Nilayam on a Rs. 100/- stamp paper.
5. **MACHINERY:** All the required machineries should be brought by the contractor. Contractor will be responsible for its maintenance and supply of fuel.
6. **MATERIAL:** All the material required for this construction should be brought by the Contractor. List of approved material Brands is attached separately.
7. **MANPOWER:** All the required manpower both skilled and unskilled should be arranged by the Contractor. The accommodation, safety of the work force is Contractor's responsibility.
8. **SUPERVISION:** A full time experienced supervisor/ Engineer shall be engaged by the Contractor to supervise the work.
9. **TYPE OF CONTRACT:** Item rate Contract. The rates quoted for different items should cover the cost of labour, transport, Tools & plants materials, Lead, Lift, over heads, incidental charges etc.
10. **MODE OF PAYMENT:** Intermediate/Part Payments will be made based on bills containing detailed measurements to be submitted by the contractor duly certified by the engineer-in-charge and processed through Finance department after effecting Tax Deduction at Source (TDS) as per IT Act.
11. **DEFECT LIABILITY PERIOD:** 24 months from the date of handing over. The work completed in all respects as per BOQ and conditions of Contract.
12. **RETENTION AMOUNT:** 5% of the bill value will be deducted from each R.A. Bill. And same will be released to the contractor along with Final bill after satisfactory completion work. The FSD amount release after 24 months.

13. MODE OF MEASUREMENT: As per IS Codes.**14. REPORTING THE PROGRESS OF THE WORK**

- A. The Contractor shall maintain a Site Order Book, where in inspecting Engineers will write day to day observations, instructions and progress of work. This book shall accompany the bills submitted from time to time.
- B. The contractor shall send the pictures of the work progress to the whatsapp group, (which will be formed). From time to time.

15. STATUTORY REQUIREMENTS: Contractors shall arrange to pay the WCP Insurance, on mining material and all other necessary formalities required to execute the work.**16. QUALITY OF WORK:** Certificate issued by the local site-in-charge appointed by the SSSCT shall be final. Any defective material/ work found by these authorities during their inspection shall be replaced by the contractor at his cost immediately.

SSSCT reserve the right to terminate the contract if it is found that the work is not up to the mark as for the quality and speed of the progress is concerned, without giving prior notice.

17. Mobilization advance : No mobilisation advance will be paid by the owner**18. ‘The contractor must employ well qualified Electricians and foreman’s (supervisors) to monitor work. The person must be dedicated full time for the project’.****19. The tender related queries mail ID: ce@mail.sssct.org****20. → All Technical queries Cell no-93989 85071 (“Gangi Reddy”). ©****a. Location link for Tender submission:**

<https://maps.app.goo.gl/8wErz5WksHFKF7PX8>

IV.ANNEXURE -I

RefNo:Date:

To

Sri Sathya Sai Central Trust

Prasanthi Nilayam, Puttaparthi

Sri Sathya Sai District,

Andhra Pradesh – 515134.

Sir/Madam,

Having examined the Bidding Documents including Addenda Nos. (insert numbers) the receipt of which is hereby duly acknowledged, we, the undersigned, offer to execute the work in conformity with the said bidding documents for the sum of Rs. _____ (total bid amount in words and figures) or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith as part of this bid.

Conditions:

1. We undertake that if our Bid is accepted, for execution of work in accordance with the terms and conditions in the Bidding document.
2. If our bid is accepted, we will obtain the guarantee of a bank for the sum, specified under Tender Conditions in the form prescribed by the Trust.
3. Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.
4. We understand that you are not bound to accept the lowest or any bid you may receive.
5. We confirm that we comply with the eligibility Criteria as per Sl 20 of Special Conditions of Contract of the Tender document.

Dated this

Signature:

(In the Capacity of):

Duly authorized to sign bid for and on behalf of

Place:

(In the case of a Partnership Firm, all the partners of the firm should authorize the concerned person for signing the Bid Form. In the case of a Company a copy of the resolution authorizing the concerned person to sign the Bid Form. Copies to be enclosed)

V.ANNEXURE – III**DETAILS OF THE BIDDER/CONTRACTOR**

S.No.	Particulars		
1	Name of the Firm/ Organization/ Society:		
2	Year of Establishment:		
	Registration No. & Date :		
3	Complete Address: Pin Code Phone No. Fax No. e-mail:		
4	Authorized person Name, Address: Designation Phone No. e-mail id		
5	If Partnership Firm a) Name & Address of all Partners b) If Registered under Companies Act, Name of the Chairman and Managing Director with full address c) Name & Address of Proprietor If Proprietor concern.		
6	PAN No. & Date:		
7	GST No.		
8	Branches:		
9	Annual Turn-Over		
	For 22-23		

	For 2023-2024:		
	For 2024-25:		
10	Key personnel experience		
11	Details of men & machinery available for execution of work		
12	Business Background/History:		
13	Special Accreditations or Awards, if any:		
14	Customer Testimonials:		
15	Details of man power and equipment		

PLACE

DATE :

SIGNATURE OF THE BIDDER

VI.ANNEXURE –IV**SRI SATHYA SAI CENTRAL TRUST, PRASANTHI NILAYAM****List of Documents to be submitted by the Bidder along with Technical Bid in a sealed cover****NAME OF THE BIDDER:**

- 1.Name:
2. Address:
3. Email:
- 4.Name of Authorised Person
5. Contact Phone Number

Sl No	List of the Documents (Duly attested by the Authorized person on all the documents)
1	Tender Document duly signed & with seal on all pages by the Authorized Signatory.
2	Status of the Bidder - Proprietary / Partnership Firm / etc. submit documentary evidence.
3	Copy of Resolution authorizing the Bidder to Sign the Bid Documents.
4	PAN of the Establishment.
5	GST Registration Certificate.
6	Authorized Person PAN And AADHAAR*
7	Details of the Key Person and experience*
8	Copies of Income Tax returns filed and Assessment orders for the last three financial years. Financial statements for last three financial years.
9	Bidder's Bank Details.
10	Site visit Declaration.

All the above documents are must for the bid to be considered as valid

VII. LIST OF APPROVED MAKES / BRAND OF MATERIALS

LIST OF BRAND/MAKE TO BE USED

Cement - Ultratech, ACC, Dalmia, JSW ,RAMCO- OPC 43/53 grade

Steel reinforcement bars/Rods - TATA/ Jindal Neo FE500-FE550 /Vizag steel/SAIL

CPVC /UPVC/PVC-pipes & its accessories - Astral, Supreme, Ashirwad

PHE items & accessories/fittings - Cera, Parryware, Hindware , Jaguar, JAL (Havay duty) & watertec ,Slimline ,SEIKO

Valves- Zolotto, Kartar / Astral, Watertec(PVC, GI,SS)

Electrical items – Crompton Greaves, Polycab, Finolex, Havells, Legrand, Gloster(cables), C&S, ABB, Philips, Schneider, HPL. Wires should be FRLSH. KEI (Cable),Atom berg,Roma Anchor, Anchor Penta ,L&T indo asian andAkarui.

Tiles - Kajaria, Somany, Johnson, AGL, RAK Regency

Paints - Asian, Berger , Nerolac, JSW.

Pumps- Kirloskar, KSB.(CRI Wilo for hot water)

Extinguishers - Safex, Ceasefire, Kanex.

Any materials to be used/purchased at site should be from approved vendor & duly certified by SSSCT Engineer & the same to be mentioned in the bills for payment.

VIII. SITE VISIT DECLARATION

To

Sri Sathya Sai Central Trust,

Prasanthi Nilayam,

Puttaparthi (A.P)

NIT No. TND/ / / - Dated / /

Dear Sir,

I/We _____Undersigned visited the project site on_____and collected all the required information and data regarding availability of material and noted the environmental condition. I have also signed the attendance register maintained at site in presence of Site-In-charge.

Yours faithfully,

(Signature of the Tenderer)

Seal of Tenderer

Dated

Bill of Quantities

BOQ for Supply and Installation of Solar Plant at Nandagiri Campus SSSIHL

SI	Description	Make	Unit	Qty	Rate	Amount
1	Supply and installation of a 590 Wp solar module, including shifting, lifting, termination, testing, etc.	Waaree	Nos	68		
2	Supply and installation of a 40 kW solar inverter, including shifting, lifting, termination, testing, etc.	Growatt	Nos	1		
3	Supply and laying of 3.5 C x 70 sq mm aluminum armored XLPE cable, including shifting, lifting, clamping, lugging, gladding, termination, testing, etc. (laying in trench and clamping on wall)	KEI	Mtr	60		
4	Supply and laying of 5C x 25 sq mm copper flexible cable, including shifting, lifting, clamping, lugging, termination, testing, etc. (laying in trench and clamping on wall)	KEI	Mtr	10		
5	Supply and laying of 1C X 70 sq mm copper flexible PVC cable with lifting, shifting, lugging, connections, testing, etc.	KEI	Mtr	20		
6	Supply and laying of 1C X 10 sq mm copper wire with lifting, shifting, lugging, connections, testing, etc.	KEI	Mtr	50		
7	Supply Laying of 1C x 4 sq mm copper wire with lifting, shifting, connections, testing, etc.	KEI	Mtr	90		
8	Supply and installation 14-gauge outdoor isolator box with a double door and 1 no. of 4P 100A 16 KA MCCB with an extension busbar and handle with all connections, testing, etc	MCCB: ABB / LEGRAND	Nos	1		

9	Supply and installation of a 75 mm (w) x 50 mm (h) x 1.5 mm thick GI-perforated powder-coated cable tray with cover, 50 mm (w) x 50 mm (h) base clamp, required accessories with lifting, shifting, connection, testing, etc.	Any reputed	Mtr	120		
10	Supply and installation of 1" (25mm) PVC FRLS heavy-duty pipe with all accessories, etc.	VIP/Modi	Mtr	300		
11	Supply and installation of a 25 x 3 GI earth strip with welding the joints (the strip should be overlapped) and laying on insulators with lifting, shifting, connections, testing, etc. (including insulator cost)	Any reputed	Mtr	140		
12	Supply and installation of a 2-meter, 17.2 mm copper-bonded electrode with a 250 mm micron coating, an earth pit cover, and a 50 kg chemical bag with digging. Connection, testing, etc.	Cikit/ Ashlok	Nos.	7		
13	Supply and installation of a lightning arrester in the 107-meter range has a withstand capacity of 200 KA. Model: armor 60, 107 mtr radius, NFC 107-102-2011-flange, mast 4.5 mtr, 6 mtr wire, accessories, etc. test link: an ADLEC 6-digit meter with all connections, etc.	Cikit/ Ashlok	Set	1		
14	Supply and Laying 2 runs of 1C x 4 sq mm, 1.8 kV, -40 to 120 degree temperature range, EBXL UV resistance DC cable laying inside the existing cable tray, PVC pipe, flexible pipe, including lifting, shifting, connection,	Seichem	Mtr	500		

	testing, etc.					
15	Supply and installation of MC4 connectors (male and female) with connection and testing, etc.	Staubli/ Ningbo	Pair	100		
16	Supply & Erection of HDG (80 Microns) Structure with SS Fasteners	Any reputed	LS.	1500		
17	Supply and installation of 27kg M20 grade concrete blocks with SS nut bolts, etc. (300 L x 250 B x 150 H)		Nos	80		
18	Supply of other miscellaneous items such as lugs, glands, cable ties, ferrules, insulating tapes, foams, sealants, nuts & bolts, etc.	Standard	LS.	1		
19	Net Metering Approval & DISCOM Approval including solar energy meters with CTs, etc.		Nos.	1		
	Sub Total					
	12% GST on 70% 18% GST on 30%					
	Grand Total					

Compliance Matrix

1. Vendors are requested to fill the compliance matrices (Tables) for technical evolution. The vendors should fill-in the numbers for specifications in the compliance tables and enclose technical brochures
2. They should also ensure that they meet all the other criteria discussed/listed in different section of the RFP for technical evolution
3. Vendors should supply the major subsystems in the order of preference. Vendors should take prior permission to move down the order of preference in the list.

List of components with make to be used

Sl. No	Item	Make	Quantity
1	Solar Modules	RenewSys India Pvt, Ltd., Waaree energies Ltd.	
2	Inverter	Growatt	
3	Module Mounting structure	Evolve India, Bhavita Engg., Sms Solutions, PV-Fix Solar Module Mounting Structure.	
4	Junction Boxes	Any reputed	
5	AC Cables	KEI	
6	DC Cables	Siechem	
7	Earthing, Lightning Arrestor & BOS	CIKIT/Ashlok	
8	ACDB	Any reputed	

Solar Panels

SI. No	Item	Description	Complaint Yes/No	Remarks If any
1	Type	Bifacial Topcon		
2	Efficiency	> 23%		
3	Degradation warranty	Panel output (Wp) capacity to be . 90% of design nominal power after 10 years and > 80% of design nominal power after 25 years.		

4	Module frame	Non-corrosive and electrolytic ally compatible with the mounting structure material.		
5	Termination box	Thermo-plastic, IP 65, UV resistant		
6	Blocking diodes	Schottky type		
7	Module minimum rated power	The nominal power of a single PV module shall not be less than 590 Wp. The output of any supplied module shall not be less than the rated output and shall not exceed the rated power by more than 5 Wp. Each module, therefore, has to be testing and rating displayed.		
8	RF Identification tag data (RFID)	<p>Shall be provided inside the module and must be able to withstand environmental conditions and last the lifetime of the solar module.</p> <p>a) Name of the manufacturer of PV Module.</p> <p>b) Name of the manufacturer of Solar cells</p> <p>c) Month and year of manufacture (separately for solar cells and module)</p> <p>d) Country of origin (separately for solar cells and module)</p> <p>e) I-V curve for the module.</p> <p>f) W_m, I_m, V_m and FF for the module.</p>		

		<p>g) Unique serial number and model number of module.</p> <p>h) Date and year of obtaining IEC PV module qualification certificate.</p> <p>I) Name of the test lab issuing IEC certificate.</p> <p>J) Other relevant information on traceability of solar cells and modules as per ISO 9000 standard.</p>		
9	Power output rating	To be given standard test conditions (STC). I-V curve of the sample module shall be submitted.		
10	Compliance with standards and codes	IEC 61215/ IS 14286 IEC 61730 part 1 and 2		
11	Salt Mist corrosion Testing	As per IEC 61701		

Solar Grid Inverter				
Sl. No	Item	Description	Complaint Yes/No	Remarks If any
1	Total output power (AC)	To match solar PV plant capacity while achieving optimum system efficiency.		
2	Input DC voltage range	As required for the solar grid inverter DC input		

3	Maximum power point tracking (MPPT) and protection.	MPPT controller, inverter and associated control and protection devices, etc. all shall be integrated into the SGI		
4	Number of independent MPPT Inputs	1 or more		
5	Operating AC voltage	SGI/ string inverter shall provide 3 phase, 415V (with grid tracking of +15%/-20%)		
6	Operating Frequency range	50 Hz (with grid tracking of + or- 5% i.e. 47.5 to 52.5 HZ) supply on AC side with voltage third harmonic distortion of less than 3% and current third harmonic distortion of less than 3%.		
7	Power factor of the inverter	> 0.98 at nominal power		

8	Built in protection	<p>Degree of protection will be minimum IP20 for non - electronic portion where transformer, etc are mounted, if any and for the rest of the portion including electronics; it will be ip31 for units of capacities upto 15 KWp and IP41 for units of units of capacities greater than 15KWp. IP 65 for outdoor mounting, IP 54 for indoor mounting.</p> <p>Following is the list of protections:</p> <ul style="list-style-type: none"> a) Over- voltage both input and output b) Over- current both input and output c) Over/under grid frequency d) Over temperature e) Short circuit on AC side f) Reverse polarity protection g) Array ground fault protection h) Protection against lightning induced surges Class II, 10 kA as per IEC 61643-1 Protection against surge voltage induced at output due to external source i) Anti-islanding protection : As per VDE 0126-1-1, IEC 60255.5/IEC 60255.27 		
9	Operating ambient temperature range	minus 10 to plus 60 degrees		
10	Humidity	0-95% Rh		

11	Inverter efficiency (Transformer-less design)	>95%		
12	Inverter Weighted efficiency (Transformer-less design)	>94%		
13	Communication interface	RS 485/ RS 232		
14	Environment tests (as per IEC 60068/ IS 9000	<p>a) Dry Heat Test: 50 plus or minus 2 degree for 16 hours</p> <p>b) Damp heat test (Steady state): 40 degrees, 93% RH for 4days</p> <p>c) Damp heat test (Cyclic): 40 degrees 93% RH for 6 cycles (duration of one cycle shall be 24 hrs)</p> <p>d) Cold test: 0 degrees for 16 hours.</p> <p>e) Change of temperature test: minus 10 degrees / minus 5 degrees to 50 degrees for 3 cycles (Rate of change in temperature shall be 3 degree per minute).</p>		
15	EMI and EMC Requirements	<p>System shall comply the following EMI and EMC requirements:</p> <p>1) Emitted interference as per IEC: 61000-6-4</p> <p>2)Interference emitted as per IEC: 61000-6-2</p>		
16	Noise level	Should be less than 65 DbA		

		(nominal) at 1m		
17	Safety compliance	IEC 62109-1, IEC 62109-2		
18	Display type and display parameters	LCD for data display. LCD/LED for status display. a) Inverter ON b) Grid ON c) Inverter under voltage /over voltage d) Inverter overload e) Output power f) Cumulative energy g) DC Voltage h) DC Current i) AC Voltage j) AC Frequency k) AC Current l) Cumulative hours of operation m) Inverter over - temperature n) Earth fault		

Module Mounting Structure				
SI. No	Item	Description	Complain t Yes/No	Remarks If any
1	Wind velocity withstanding capacity	150 km / hour		
2	Structure material	Hot dipgalvanizeed steel with a minimum galvanization thickness of 80 microns or aluminim		

		alloy.		
3	Bolts, nuts, fasteners, panel mounting clamps.	Stainless steel SS 304 (TVS)		
4	Mounting arrangement for RCC-flat roofs.	Module mounting structure with removable concrete ballast made of pre-fabricated PCC (1:1.5:3) M20		
5	Mounting arrangement for metal sheet roofs.	Mounting directly on sheet metal, ensuring stability and wind withstanding capacity, or penetrating the sheet metal and fixing to the substructure, ensuring that the roof remains water proof and ensuring stability and wind withstanding capacity.		
6	Mounting arrangement for elevated structures	The elevated structure has to be securely anchored to the supporting surface. Concrete foundations of appropriate weight and depth for elevated structures mounted directly on the ground; Bolted with anchor bolts of appropriate strength for elevated structures mounted on RCC surfaces.		
7	Installation	The structure shall be designed for simple mechanical onsite installation. There shall be no requirement of welding or complex machinery at the		

		installation site.		
8	Minimum distance from roof edge and table to table.	0.6 m		
9	Access for panel cleaning and maintenance	All solar panels must be accessible from the top for cleaning and from the bottom for access to the module junction box.		
10	Panel tilt angle	North - south orientation with a fixed tilt angle of 11 - 13 degrees (depending on location), south facing to provide maximum efficiency.		