



National Institute of Solar Energy

(An Autonomous Institution under Ministry of New and Renewable Energy
Government of India)

No. 3/ 02/ 006/ NISE – PVTF (part-1)

NOTICE INVITING TENDER

On behalf of the Office of Director General, National Institute of Solar Energy (NISE), Gurugram invites sealed tenders from reputed suppliers of Solar Grid Tie Inverters for **Supply, installation, testing and commissioning of 3 nos. of 50 kVA solar grid tie inverters at NISE** as per technical specifications given in the tender document. Tender document may be downloaded free of cost from the website of NISE i.e. www.nise.res.in. The last date of receipt of bids will be 12:00 Hrs on **25 October 2017**.

National Institute of Solar Energy

(An Autonomous Institute of Ministry of New & Renewable Energy)

Gwal Pahari,
Gurugram-Faridabad Road
Gurugram - 122 003; Haryana**Subject: Supply, installation and Commissioning of 3 nos. of 50 kVA Solar Grid Tie Inverters at NISE Campus – reg.**

On the behalf of Director General, National Institute of Solar Energy, Gurugram sealed tenders are invited from reputed suppliers of Solar Grid Tie Inverters for **supply, installation, testing and commissioning of 3 nos. of 50 kVA Solar Grid Tie Inverters** at NISE Campus as per technical specifications & standards given in tender document.

The interested bidders are encouraged to visit the Institute Campus, Gwal Pahari, Gurugram to assess & inspect the job requirement before submitting the bid.

Notice Inviting Bid (NIT) No	<u>3/ 02/ 006/ NISE– PVTF (part-1)</u>
Scope of Work	Supply, installation and Commissioning of 3 nos. of 50 kVA Solar Grid Tie Inverters at National Institute of Solar Energy (NISE), Gurugram.
Supply, Installation and Commissioning	As per technical specification – Annexure - 1
Submitting of Tenders	Sealed tenders are to be submitted in two parts i.e. Part-I should contain Technical Bid along with Demand Draft for EMD and should be kept in a sealed envelope super scribed as technical bid. Part-II should contain the commercial invoice and should be kept in a separate sealed envelope super scribed as Commercial bid. Both the envelope should be kept in another envelope super scribed as Tender for “name of tender “addressed to: The Director General, National Institute of Solar Energy, Faridabad- Gurugram Road, Gwal Pahari, Gurugram – 122003, Haryana, India.
Bid Validity	Bids shall be valid for at least 90 days from the date of technical bid opening.
Earnest Money Deposit	Rs. 50,000/- (Rupees Fifty Thousand Only) (refundable to the unsuccessful bidders without any interest) by Demand Draft drawn in favor of “National Institute of Solar Energy” payable at Gurugram **Relevant certificate shall be submitted with the bids in case bidder(s) is/are exempted to furnish the EMD**
Previous Customers details list	The bidders are requested to provide a minimum of 5 (Five) previous customer’s details list to whom similar equipment has been satisfactorily supplied. This is mandatory, which needs to be submitted along with the bid.
Performance Security	i. Performance Security should be for an amount of 10% (Ten per cent) of the value of the contract.

	ii. Performance Security may be furnished in the form of an Account payee Demand Draft, fixed deposit Receipt from a Commercial bank, Bank guarantee from a Commercial bank.
Delivery time	(2 – 4 weeks) Two to Four weeks
Last date for submission of bids	12.00 Noon on 25 October, 2017
Date of opening of Technical bids	3.00 P.M. on 26 October, 2017 <small>(Note : In case this date is declared as holiday by NISE or Govt. of India in future, then next working day shall be the last date for submission of Bids or Technical bidding opening)</small>
Opening of Price Bids	The time & date for opening of price bids will be intimated to the technically qualified bidders.
Address for Communication	The Deputy Director General (Administration), National Institute of Solar Energy, Gurugram - Faridabad Road, Gwal Pahari, Gurugram - 122 003, Haryana, India. Email: ddgsk.nise@gmail.com , nise.mnre@gmail.com Ph: +91 124-285 3060 (Reception) / 285 3095 (Direct)

1) INSTRUCTIONS TO BIDDERS

1. Eligibility of Bidders

- (i) The Bidder should be a reputed Solar Grid Tie Inverters having an annual turnover of not less than Rs 50 lakhs during the last financial year. The proof of turnover and list of clients will be submitted with the technical bids. Such equipment must be of the most recent series/models incorporating the latest improvements in design. The models should be in successful operation for at least one year as on date of Bid Opening.
- (ii) Details of Service Centres located in Gurugram or adjoining areas and information on Service support facilities that would be provided after the warranty period (In the Service Support Form).
- (iii) The Bidder shall be equipped and able to carry out the Supplier's maintenance, repairs and Spare parts, stocking obligations prescribed by the conditions of the contract.
- (iv) That the adequate and specialized expertise is already available or will be made available following the execution of the contract in the Purchaser's city, to ensure that the support services are responsive and adequate.
- (v) That the Bidder will assume total responsibility for the fault-free operation of equipment and Maintenance during the warranty period and provide necessary maintenance services for five years after end of warranty period if required.
- (vi) Bidders who does not meet the criteria given above, if they have made untrue or false representation in the forms, statements and attachments submitted in proof of the qualification requirements or have a record of poor performance, not properly completing the contract, inordinate delays in completion or financial failure, etc. are subject to disqualification.
- (vii) AMC for one year after the expiration of warranty period.

2) Technical Specifications

Please refer **Annexure – 1** on **Page No. 8** for Technical Specifications of 50 kVA Solar Grid Tie Inverters.

3) GENERAL CONDITIONS OF CONTRACT

1. Codes & Standards: The Solar Grid Tie Inverters and its components shall comply with the latest edition of the applicable standards.

2. Inspections and Tests: All routine test & acceptance tests as per relevant standards and specification shall be carried out by the vendor on the premises of the MANUFACTURER. Charges for all these tests for all the equipment & components shall be included. Drawings and production data shall be furnished to the inspectors at no charge basis to the Purchaser, Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods.

3. Commissioning Check Tests/Performance and Guarantee Test: In addition to the checks and test recommended by the manufacturer, the contractor shall supervise the following acceptance tests to be carried out on each set.

4. Certificate: The vendor shall furnish, at its own cost, test certificate for the various material and equipment as called for. Such certificate shall be from the manufactures for the particular consignment / lot/piece and shall be duly authenticated by respective consultants.

5. Packing: The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

6. Delivery and Documents: Delivery of the goods should be made within **(2 – 4 weeks) Two to Four Weeks** from the date of placement of purchase order at **National Institute of Solar Energy, Gurugram – Faridabad Road, Gwal Pahari, Gurugram - 122003, Haryana, India.**, Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/ AWB etc. and date, description of goods, quantity, name of the consignee, invoice etc. The Supplier shall mail the following documents to the purchaser with copy to the insurance company:

- i) Copies of the Supplier invoice showing contract number, goods' description, quantity, and unit price, total amount;
- ii) Acknowledgment of receipt of goods from the consignee(s) by the transporters;
- iii) Insurance certificate, if any.
- iv) Manufacturer's/Supplier's warranty certificate;
- v) Inspection Certificate issued by the Competent Authority, and the Supplier's factory inspection report; and Certificate of Origin.
- vi) Two copies of the packing list identifying the contents of each package.

The above documents should be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

7. Insurance: For delivery of goods at the purchaser's premises, the insurance shall be obtained by the Supplier to an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes.

8. Transportation : Where the Supplier is required under the Contract to transport the Goods to a specified place of destination including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.

9. Warranty: The vendors must provide full comprehensive warranty for a period of 60 months (FIVE years) post installation. During this period they should provide all spare parts required for repair and maintenance. Along with repair maintenance service within 12 hrs of communication of such services, warranty of 5 years against manufacturing defects shall be provided. Warranty should be provided by the original manufacturer.

10. Performance Security: Performance Security should be for an amount of 10% (Ten per cent) of the value of the contract in the form of Interest free Fixed Deposit Receipt from a commercial bank for the period of 5 (Five) years or till warranty period.

11. Performance Guarantee: Performance Guarantee shall be provided against warranty for FIVE years (5 years) of 10% of order value.

12. AMC: The vendor must have provision for prompt and high quality after-sales services after Completion of the warranty period in an AMC basis (Hardware Portion) and must quote the cost of such AMC in the main tender after warranty period.

13. Payment: 100% payment against supply, testing, commissioning and acceptance of the system /equipment to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee of the amount of 10% of the Contract Value which will be retained for a period of warranty.

14. Taxes and Duties: Suppliers shall be entirely responsible for all taxes, duties, license fees, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser. Being the purchases for scientific purpose, the customs/Excise duty exemptions are applicable.

15. Penalty Clause: If the Supplier fails to deliver the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty (Half percent of contract price per week of delay subject to a ceiling of 5% of final contract price).

16. Applicable Law: The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction in Gurugram, Haryana.

17. FREE MAINTENANCE AND DEFECTS LIABILITY PERIOD OF THREE YEAR. The vendor must have a permanent address in Delhi NCR with at least three years of local after-sales Service history. Following are the works shall be carried out during the free maintenance period.

- Emergency call back service
- Inspect, clean, where necessary
- Adjustment of machinery
- Replacement of any defective parts

18. Rejection of Tender: Incomplete, conditional, fax, late tenders and tenders without EMD will be rejected summarily. Director General, National Institute of Solar Energy reserves the right to reject any or all the tenders at his discretion without assigning any reason thereafter.

19. Interested bidders are requested to inspect the work site at the address above mentioned and get them acquainted with the nature of work and local conditions that may have a bearing on the rates.

THE FOLLOWING FORMS TO BE FILLED BY THE BIDDER as part of the Technical Part of the Bid.

- (i) **Performance Statement Form (As per the attached Format)**
- (ii) **Service Support details;**
- (iii) **Manufacturer's Authorization Form**
- (iv) **Certificate of experience of two similar jobs.**

NOTES

- a) NISE, Gurugram reserves right to accept or reject any or all applications without assigning any reasons.
- b) The offers from OEM or OEM's authorized dealer of Solar Grid Tie Inverters only will be considered. The offers received from unauthorized dealer/firms may not be considered.
- c) OFFERS with INCOMPLETE INFORMATION ARE LIABLE TO BE REJECTED, which may be noted.

The Director General
National Institute of Solar Energy
Gurugram-Faridabad Road
GwalPahari
Gurugram – 122 003, Haryana

Technical specifications for 50 kVA solar grid tie string inverter

S.No.	Parameter	Specification
Output (AC)		
1.	Rated output AC Power	50 kW
2.	Rated grid voltage	400 V
3.	Grid Voltage range	3Ph 400 \pm 15% ,it may be adjustable
4.	Output frequency	50 \pm 2.5 Hz
5.	THD	<3%
6.	Operation phase	3 phase
7.	Reactive Power factor (adjustable)	0.8 to 0.8
9.	Power factor at rated power	Unity
Input(DC)		
10.	Maximum dc input power	55 kW
11.	No. of Maximum Power point tracker (MPPT)	4 Nos
12.	Max DC Voltage	1100 V
13.	Max input current	25 A – 33 A/ MPPT
14.	MPPT Voltage range	(200 – 1000) V
15.	Input string	3 X 4 MPPT = 12 input Strings
16.	Connection type	MC4 connectors for DC
Efficiency		
17.	Maximum efficiency	Greater than 98%
18.	MPPT efficiency	99%
Communication		
19.	Communication port	RS 485 / WIFI
20.	Display	LCD
21.	Energy logger	Inbuilt with inverter and easily accessible by user
System safety		
22.	Ingress protection	IP 65
23.	Operating temperature range	(-10 to 60) $^{\circ}$ C

24.	Noise emission	<60 dBA
Protection		
25.	DC reverse polarity protection	Required
26.	Short circuit protection	Required
27.	Output over current protection	Required
28.	Output over current protection	Required
29.	Output over /Under voltage protection	Required
30.	Islanding protection	Required
31.	Surge protection	Required
32.	Temperature protection	Required
Certifications		
33.	Grid monitoring test	EN 50438 or equivalent
34.	Islanding prevention measures for utility-interconnected photovoltaic inverters	As per IEC 62116 or equivalent
35.	Grid parallel operation test - Characteristics of the utility interface	As per IEC 61727 or equivalent
36.	Environmental condition test	As per IEC 60068-2 (1,2,14,30)
37.	Safety compliance	As per IEC 62109-1, IEC 62109-2
38.	EMC	EN 61000-6-2; EN 61000-6-4 or equivalent IEC
39.	Efficiency	IEC 61683 or equivalent
Warranty		
40.	Duration	5 years (minimum)
General		
41.	Installation	Indoor & outdoor
42.	Topology	Transformer less
43.	Night time consumption	<1 W
44.	Permitted humidity	0 - 100%

Performance Statement Form

(For the last three years)

Name of Bidder: _____

Order No. & Date	Client	Contact person/ phone	Description & quantities of ordered items	Value of order (in Rs Lakhs)	Date of completion		Satisfactory completion
					As per contract	Actual	

To be attached: Documentary evidence (client's letter or certificate) in support of satisfactory completion of above orders. Minimum 5 Customers

Signature and seal of the Bidder

Date

Price Bid Format
(On Company's Letterhead)

Ref No.

Date:

PRICE BID

The Director General
National Institute of Solar Energy (NISE)
Gurugram – Faridabad Highway
Gwal Pahari; Gurugram – 122 003
Haryana

**Subject: Purchasing of 10 kW Solar Grid Tie Inverters at NISE Campus –
No.3/02/006/NISE – PVTF (part-I) - reg.**

S No	Item	Basic Price (in Rs)	AMC Charges for 2nd Year (Rs)	Taxes (in Rs)	Other Charges (if any) (in Rs)	Total (in Rs)
	Total					

Amount (in words) Rupees

Signature: _____

Name of the Representative Submitting the Bid:

Designation:

Company Seal