

INVITATION FOR BIDS/NIT

Tender No. NAL/PUR/CSMST/312/17-X

Dated: 02-Mar-2018

CSIR- National Aerospace Laboratories (NAL), Bengaluru, India is one of the premier laboratories under Council of Scientific and Industrial Research (CSIR), an autonomous body under Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organization. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

Sl.No.	Description of Items	Unit	Quantity
1	Charge Controller (1Kw WIND + 1 Kw solar) Cum 2Kw Grid tie Inverter as per enclosed the specification	Nos	5
Single / Double Bid		Single	
Bid Security (EMD) (in INR)		Nil	

01. Tender Documents May be downloaded from Central Public Procurement Portal <https://www.etenders.gov.in>. Aspiring Bidders who have not enrolled/ registered in e- procurement should enroll/ register before participating through the website <https://www.etenders.gov.in>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.
02. Tenderers can access tender documents on the website (For searching in the NIC site <https://www.etenders.gov.in>, kindly go to Tender Search option, select tender type and select ' Council of Scientific and Industrial Research' in organization tab and select 'NAL-Bengaluru-CSIR' in department type Thereafter, Click on "Search" button to view all CSIR-NAL, Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://www.etenders.gov.in> as per the schedule given in the next page.
03. Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but not both. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. To maintain sanctity of tendering system, one Indian Agent cannot represent two different Foreign principals in one tender.
04. Unsolicited / conditional / unsigned tenders (Quotations) **shall not** be considered. Quotations received after the due date and time **shall be summarily rejected**.
05. The Bidder shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.
06. The Director, CSIR- National Aerospace Laboratories., Bengaluru reserves the right to accept any or all the tenders either in part or in full or to split the order without assigning any reasons there for.


(Raman Kumar)
Section Officer (S&P)

Specification of Charge Controller (1kW wind + 1kW solar) Cum 2kW
Grid Tie Inverter

Description	Values
SOLAR PV INPUT	
PV: Maximum Power / Nominal Voltage	1.2kW / 48V dc
Optimum MPPT Voltage Range / Max. DC voltage	35V to 60V / 80Vdc
Number of MPPT inputs / Max. PV current	1 / 25A
WIND GENERATOR INPUT	
Maximum Power / Nominal Voltage	1.2kW / 24V ac
Optimum MPPT Voltage Range / Max. AC voltage	24V to 40V / 60Vac
Max. generator current	30A
Battery and Charger	
Tubular Battery (Capacity / Voltage)	200AH / 24V dc
Maximum Charging Current for Battery (Boost Charge)	30A
Maximum Power Conversion Efficiency	Above 90%
Output AC (Single Phase)	
Max Apparent power (@ 230 V, 50 Hz)	3.0kVA; 2.4 kW
Nominal AC voltage range	180 - 260Vac
Rated power frequency / grid voltage	50 Hz / 230 V
Max. output current	13.5A
Enclosure	
Enclosure Material	MS Sheet Metal Chassis
Dimension (w x h x d) in cm	Approximately 30 x 80 x 120
Operating Temperature	0 to 50 deg C
Weight	Less than 25 kg
Method of Installation	Floor Mounted

Note:

The following features should be provided for Measurement, Data Storage and Real Time display:

1. Date and Time (Current date as well as Installation Date)
2. Instantaneous voltage, current and power consumed from the renewable energy
3. Frequency of Wind Generator voltage
4. Wind speed
5. Number of Energy Units Consumed from Renewable Power Source
6. Number of Energy Units consumed from Electricity Grid
7. Number of Energy Units fed back to Electricity Grid
8. Storage of Energy unit data per month / half year / year
9. GPS location co-ordinates
10. Provision should be provided for connecting external computer to the Hybrid Inverter system via Ethernet Cable, to download stored energy information data
11. Graphical User Interface software should be provided with the hybrid charge controller to monitor and control
12. ADCs-2 channel, GPIOs, UART ports; GPS System, Communication protocols: SPI, I2C and Ethernet Communication also to be provided for interface.
13. Provision shall be provided for Suitable Dump load connectivity for Wind system with desired capacity
14. Protection should be provided for over voltage, short circuit, over current, over speed, etc
15. Provision should be provided for Isolation for Power and signal circuitry
16. Pure Sine Wave output
17. Grid-Tie Inverter and Battery Back-up of load when Grid Fails
18. In-Build Wind and Solar Charge Controller with MPPT
19. 24V Battery configuration for Energy Storage

Acceptance Test Plan for Permanent Magnet Generator for charge controller (1kW wind + 1kW solar) cum 2kW Grid Tie Inverter

1. Solar charge controller

Charge controller section will be tested by providing DC supply from regulated power supply and output will be observed for specified rating as given below

Maximum power of 1.2kW, operating DC voltage of 35-60V, no load voltage of 80V DC and input current of 25A.

2. Generator charge controller

Generator charge controller section will be tested by providing 3 phase supply given from generator and output will be observed for specified rating as given below

Maximum power of 1.2kW, operating DC voltage of 24-40V, no load voltage of 60V AC and input current of 30A.

3. Battery charging section

Battery charging section will be connected to 200Ah, 24V battery. The charging and discharging voltage and current will be monitored.


4. Inverter section

Battery and grid will be connected then the output of inverter section will be monitored for single phase 230V AC, 50Hz for no load and 2kw load.



SCHEDULE CUM CRITICAL DATE SHEET

1	Name of Organization	CSIR-National Aerospace Laboratories, Bengaluru	
2	Tender Reference No	NAL/PUR/CSMST/312/17-X dated 01-Mar-2018	
3	Tender Type (Open/Limited/EOI/Auction/Single)	Open	
4	Type/Form of Contract (Work / Supply / Auction / Service / Buy / Empanelment / Sell)	Supply	
5	No of Covers (One/Two/Three/Four)	One	
6	Tender Category (Services/Good/Works)	Goods	
7	Allow Resubmission (Only in online mode within scheduled period)	Yes	
	Allow Withdrawal (Only in online mode within scheduled period)	Yes	
8	Allow Offline Submission	No	
9	Work Item Title	Charge Controller	
10	Work Description	Charge Controller	
11	Delivery Schedule	30 days from the date of purchase order	
12	Product Category (Civil Works / Electrical Works / Fleet Management / Computer Systems)	R & D Equipment	
13	Is Multi Currency Allowed	Yes	
14	a) Tender Publishing Date -	05-Mar-2018	1700 Hrs
	b) Document Download Start Date-	06-Mar-2018	0930 Hrs
	c) Seek Clarification Start Date-	06-Mar-2018	0930 Hrs
	d) Seek Clarification End Date -	13-Mar-2018	1400 Hrs
	e) Bid Submission Start Date	06-Mar-2018	0930 Hrs
	f) Bid Submission End Date-	15-Mar-2018	1000 Hrs
	g) Bid Opening Date-	16-Mar-2018	1100 Hrs
15	Bid Validity Days	90 days	
16	Address for communication	Stores and Purchase Officer CSIR-National Aerospace Laboratories, HAL Airport Road, Kodihalli, Bengaluru - 560017	
17	Inviting Officer	Director, CSIR-NAL	
18	Contact No	25086040, 25086041	
19	E-mail Address	spo@nal.res.in / purchasek@nal.res.in	
20	Detailed specification of item	Invitation for bids / NIT	
21	Tender Terms & Conditions & Instruction for online bid submission	Invitation for bids / NIT	


(Raman Kumar)
Section Officer (S&P)

Terms & Conditions

1. Quotations received after due date & time shall be summarily rejected.
2. The bid should be submitted in the E-procurement portal at <https://www.etenders.gov.in> only. **No manual bids will be accepted.**
3. Tender Documents may be downloaded from Central Public Procurement Portal <https://www.etenders.gov.in>. Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <https://www.etenders.gov.in>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.
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5. Kindly indicate clearly about the chargeable percentage of GST or other levies and their financial impact separately on the basic price otherwise, it will be presumed that taxes are inclusive in the basic cost and CSIR-NAL is not liable to pay any taxes separately from the basic cost.
6. Kindly mention the rates in the quotation both in figures and words. If any discrepancies found in figure and word, the amount in words shall prevail unless the amount expressed in words is related to an arithmetic error.
7. **ELIGIBILITY CRITERIA:** Kindly quote your rates item-wise basis. Purchase Order will be issued to the lowest quoted firm on item-wise basis not on lump-sum basis until unless specified in our standard terms & conditions
8. **PAYMENT TERMS:-**
 - a) **FOR INDIGENIOUS PURCHASES:** - 100% Payment can be released within 30days after satisfactory receipt of the material, installation commissioning and acceptance of material by the user at CSIR NAL
9. **FOR FOREIGN PURCHASES:-** 100% through Sight Draft/Irrevocable Letter of Credit (excluding the Agency Commission due to the Indian Agents) opened in favour of the Supplier through, **State Bank of India, NAL Branch, Kodihalli, Bengaluru – 560 017 (India)** Bank Charges: All Bank Charges within India to CSIR-NAL's account and outside India to Supplier/Beneficiary account. **"No advance payment request will be considered"**.
10. As the time is the essence of the order, hence bidders are requested to kindly mention the delivery schedule clearly in the quotation and the same should be strictly adhered to.
11. Delivery of ordered material will be at Central Stores, NAL, Kodihalli.
12. The acceptance of the quotation will rest with the competent authority of NAL, Bangalore who does not bind to accept the lowest quotation and reserves the right to reject, or partially accept any or reject all the quotations received without assigning any reasons.
13. **The offer shall be valid for ninety days from the date of opening of the quotations.**
14. **For Goods offered In Indian Rupees:** Kindly send your offer indicating the basic cost, taxes, packing, forwarding, freight, transportation, insurance, installation & commissioning charges etc., separately upto the F.O.R destination prices. **Where there is no mention of these charges, the offer would be consider as inclusive of all such charges otherwise rejected as incomplete.**
15. **For Goods Offered From Abroad:** Your offer / Quotations should be inclusive of charges FOB /FCA and CIF/CIP basis. FOB/FCA and CIF/CIP should be indicated separately to facilitate proper comparison at our end. **Offers without such charges will be rejected.** Price schedule for indigenous / imported goods are appended herewith for details description and logistics charges upto our destination. Please fill up rates only in the enclosed prescribed proforma
16. In case of FCA/FOB consignment, port of shipment / International Gateway airport of carrier should be clearly mentioned. Also indicate approximate weight and dimension of the consignment.



17. Complete specification with manufacture's name and address should be given while quoting. Literature / Pamphlets should also be enclosed wherever applicable.
18. Prices are required to be quoted in units indicated in the enquiry. When quotations are given in terms of other units, relationship between two sets of units should be furnished. Quantity, discount, if any should also be indicated. The items should be quoted indicating the serial No. of our RFQ.
19. No price negotiation will be entertained in normal course of action. However, negotiation can be called for specific cases after the approval of the committee
20. Please furnish a list of Indian Purchasers with their satisfactory performance certificates, if any.
21. Please furnish the authorization from OEM for quoting their product incase of indigenous items.
22. Please furnish the name contact number local address of service centre/after sales service provider of OEM during warranty and after warranty period
23. Either the Indian Agent on behalf of the foreign principal can bid directly in a tender but not both. However the offer of the Indian Agent should also accompany the authorization letter from their principal, without authorization of Principal, quotation will be rejected. To maintain sanctity of tendering system, one Indian Agent can not represent two different foreign principals in one tender.
24. Please indicate if you have any agents in India, their Address, and the details of service rendered by them & the percentage of commission payable to them. Agency commission payable to the Indian Agent should be clearly indicated. The Indian agent should be registered with DGS & D for the items appearing in the restricted list of the current EXIM policy of the Government of India.
25. **This lab. /instt. is registered with Dept. of Scientific & Industrial Research, Govt. of India and thus concessional GST is leviable vide notification no. 45/2017 (CGST) ,47/2017 (IGST) and FD 48 CSL 2017 (SGST) dated 14.11.2017 and concessional customs duty is leviable vide notification no. 51/96 dt. 23.07.1996.**
26. The mode of dispatch of the items must be mentioned clearly in the quotation.
27. Samples, if called for, shall be submitted free of charge.
28. **Warranty:- Minimum 12 months from the date of acceptance (After supply / installation & imparting of training, if required).**
29. **ESI, IT would be recovered as per rules in case of Fabrication / Servicing / Maintenance jobs / Installation charges etc.**
30. Kindly furnish your GST Number in your quotation for our records.
31. Payment will be made to the suppliers through ECS against the receipt of Pre - receipted bill in duplicate in favour of The Director, CSIR – NAL, Bangalore. For releasing of payment through ECS, bidders are requested to kindly furnish your bank details i.e., Complete Bank Account Number, Beneficiary Name (As per Pass Book), Address, Bank Name & Branch Name, Bank Address & Phone Number, MICR Code, Branch Code, IFSC Code, Contact Number & Email ID of the Beneficiary.
32. Bank Guarantee for EMD/PBG/Advance Payment etc, wherever applicable, shall be submitted from any nationalized / scheduled bank. In case of issue of such guarantees by a foreign bank, then the same should be confirmed by any Nationalized or scheduled bank located in India. The format of bank guarantee is enclosed. The banks issuing the guarantees must be requested by the bidder to immediately send an unstamped duplicate copy of the guarantee by registered post [A.D] directly to the purchaser with a covering letter, to facilitate its verification.
33. All disputes arising out of this shall be referred to the sole arbitrator appointed by Director General, Council of Scientific & Industrial Research, New Delhi. All suits shall be in the courts of Bangalore jurisdiction only.
34. Tender conditions (printed on the reverse), if any, or otherwise sent along with the tender shall not be binding on us.
35. All the above instructions and our standard terms and conditions must be complied, failing which the offer may be liable for rejection.
36. Conditional offer (differ from the RFQ) will not be accepted.
37. Our Pan No. AAATC2716R, Central Excise Registration No. AAATC2716REM001, Service Tax Registration No. AAATC2716RSD040 and GST No. **29AAATC2716R1ZB.**

