

Request for quote (RFQ) from domestic (India-based) manufacturers, Indian OEM or its authorized Indian distributor

Summary

1.	Tender Date	16 th Oct 2023
2.	Item Description	Bidirectional Programmable DC Power Supply with PV Simulation Software
3.	Tender Type	Two bid system: (a) Technical Bid (Part A) (b) Commercial Bid (Part B)
4.	Place of tender submission	Dr. Sarasij Das Associate Professor Department of Electrical Engineering, Indian Institute of Science Bengaluru - 560012
5.	Last Date & Time for submission of tender	6 th November, 5:00 PM

To whom it may concern

This is a **Request for quote (RFQ) from domestic (India-based) manufacturers, Indian OEM or its authorized Indian distributor only** for procurement of **Bidirectional Programmable DC Power Supply with PV Simulation Software** at the department of **Electrical Engineering (EE)**, Indian Institute of Science, Bangalore.

All interested vendors shall submit a response demonstrating their capabilities to produce the requested equipment to the primary point of contact listed below.

With respect to this tender, the rules laid out by the Government of India in order No. P45021/2/2017-pp-BE-II issued by the Public Procurement Section, Department or Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, dated 4th June 2020 will be followed. As per this order, the government has defined a 'Class-I local supplier' as "a supplier or service provider whose goods, services or work offered for procurement, has local content equal to or more than 50%". A 'Class-II local supplier' is "a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%". **Only Class-I and Class-II local suppliers are eligible to participate** in this open domestic tender. Any "Non-local supplier" i.e. "a supplier or service provider, whose goods, services or works offered for procurement, has local content less than 20%" is ineligible to participate in this tender.

Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.

Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to the Class-1 supplier.

MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details.

The deadline for submission of proposals is **6th November 2023 by 5:00 PM**. Proposals should arrive at the office of **Dr. Sarasij Das, Associate Professor, Department of Electrical Engineering, Indian Institute of Science, Bangalore, Karnataka 560012, India**.

Direct all questions concerning the acquisition to addresses to **Dr. Sarasij Das** at: sarasij@iisc.ac.in

General Terms and Conditions

1. The bid should be submitted in the two-cover system, i.e. technical bid and commercial bid separately in sealed covers. The technical bid should contain all commercial terms and conditions, except the price.
2. The technical bid must contain a point-by-point technical compliance document. The technical proposal should contain a compliance table that should describe your compliance in a "yes" or "no" response against each of the items in the table listed in this RFQ. If "no" the second column should state the extent of deviation. The third column should state the reason for the deviation, if any. The fourth column can be used to compare your tool with that of your competitors or provide details as requested in the technical requirement table below.
3. In the commercial bid, the price should be inclusive of all discounts.
4. The vendor should have qualified technical service personnel for the equipment based in India (preferably in Bangalore).
5. The covering letter should clearly state that whether the vendor is a Class-I or Class-II local supplier. Failing this the bid will be automatically rejected.
6. The vendor to state the percentage of the local content and provide self-certification that the item offered meets the minimum local content requirement. They should also give details of the location(s) at which the local value addition is made.

7. The lead time for the delivery of the equipment should not be more than 3 months from the date of receipt of our purchase order. It should be clearly mentioned in the technical and commercial bids.
8. All the quotations must be valid for at least 90 days at the time of submission.
9. List of customers and references: The Bidder should have supplied similar equipment in Central Universities preferably in centrally Funded Technical Institutes (IITs, IISC, IISER, NIT) . Please provide the details and contact information.
10. The Bidder must not be blacklisted/banned/suspended or have a record of any service- related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
11. Items in addition to that listed in the technical table that you would like to bring to the attention of the committee, such as data sheets, technical plots etc. can be listed at the end of the compliance table.
12. Vendors are encouraged to highlight the advantage of their tools over comparable tools from the competitors.
13. If needed, a meeting for any technical clarifications can be scheduled with the undersigned by sending an email.
14. The Institute reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids, at any time prior to the award of contract without thereby incurring any liability of the affected bidder or bidders.
15. Warranty terms and additional warranty options is a must for all the components. Please specify the service plan like whether the local distributor will address the issue or the parent company.
16. Terms and conditions for the annual maintenance contract beyond the warranty period should be mentioned.
17. After the award of purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.
- 18. Please quote the price of each optional line item, separately. The quotations should be on FOR-IISc Bangalore basis in INR only.**

Technical requirements: Please note that the requirements listed below are only guidelines. It does not disbar bids that do not meet the criteria listed. Vendors are requested to quote for equipment that meets the criteria to the best extent possible and list deviations. Deviations are NOT an automatic reason for disqualification. They will be discussed by the technical committee prior to making an informed decision.

Technical Specification

S.No	Parameter	Specification	
1.	Input Voltage	380 – 480V 3 phase AC, 50/60 Hz, Bi-directional Regenerative Power Supply	
2.	Output Voltage range	0 – 1500 V DC	
3.	Current range	≥30A DC for both source as well sink	
4.	Source & Sink Power	≥15kW for Source and Sink (Constant power characteristic for full range of output voltage & current) Sink power not dissipated but fed back to the grid.	
5.	Input Power Factor	≥ 0.98	
6.	Efficiency	≥ 90%	
7.	Ripple (BW = 300kHz)	Source mode: CV: ≤40 mVrms CC: ≤15 mArms	Sink mode: CV: ≤30 mVrms CC: ≤10 mArms
8.	Load Regulation (0 – 100% load)	CV mode: ≤10mV CC mode: ≤ 5mA	
9.	Line Regulation (For 380–480V AC line voltage)	CV mode: ≤ 2mV CC mode: ≤ 2mA	
10.	Operating mode	Constant Voltage, Constant Current, Constant Power	
11.	Programming Speed	Rise time: For 10 to 90%, ≤5ms @ full load Fall time: For 90 to 10%, ≤5ms @ full load	
12.	Stability (long term over 8hrs under constant conditions)	CV: ≤ 50 ppm CC: ≤ 90 ppm	

13.	Temperature Coefficient	CV: ≤ 30 ppm CC: ≤ 60 ppm
14.	MTBF	500000 hrs
15.	Protection	Overload, Short circuit, Over temperature protection
16.	Operating Temperature	0 to 50°C
17.	EMC & Safety standards	Compliance as per following standards: Generic Emission: EN61000-6-3 Generic Immunity: EN61000-6-2 Safety Standard as per EN60950/ EN61010 Certificate of Compliance for EMC standards and Safety Standards should be submitted along with the offer.
18.	Interface	Web interface and Ethernet Interface for programming and Remote control with capability to generate user defined arbitrary waveform.
19.	Software	PV Simulation: Software should calculate Static & Dynamic MPPT efficiency as per standard EN50530. Load and save P-V and I-V data from excel file. Maximum power point tracking performance under different time period conditions spanning from morning to nightfall. Run time data from power supply can be viewed in live graph and export to csv file. Configuring data in Excel file and loading to Soft Panel. Max no. of points 4096.
20.	Weight & Dimensions	≤ 40 kg;
21.	Standard Product	Quoted product should be a standard catalogue product form a reputed manufacturer & not a custom-built product.
22.	Warranty	1 Years

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