## Dept. of Electrical Engineering

# **Indian Institute of Technology Delhi**

2<sup>nd</sup> February, 2012.

Sealed quotations are invited (in two bids: technical, commercial sealed separately) for supply of Programmable Electronic DC source having the following specifications/ features:

#### A. General Specifications for Programmable Electronic DC source:

- 1. The Programmable Electronic DC source should have capability to interface through USB.
- 2. It should generate DC voltage output with superimposed AC ripple (ripple frequencies in the range of 1 Hz to 500 Hz)
- **3.** It should have power analyzer features in addition to power source (front panel 5.7" LCD-display of various electrical quantities: voltage, current, Power measurement, power factor and harmonics etc,.)
- **4.** It should generate DC, Sine, Square, arbitrary DC+AC waveform
- **5.** Output modes: AC-INT, AC-EXT, AC-ADD, AC-SYNC, AC+DC-INT, AC+DC-EXT, AC+DC-ADD, AC+DC-SYNC.
- **6.** It should have capability of Store/Recall and it should accommodate at least 25 settings

### **B. Performance Specifications Programmable Electronic DC Source:**

**Technical Specification:** 

1. In DC-mode: 1.0 kW

2. In AC-mode: 1.0 kVA

- 3. Voltage range in AC-mode:  $0 \sim 270 \text{ V(rms)}$
- 4. Voltage range in DC-mode:  $-350 \sim +350 \text{ V}$
- 5. Current range in AC-mode:  $0 \sim 5$  A in 200 V range
- 6. Current range in DC-mode:  $0 \sim 10$  A in 100 V range, 5A in 200 V range
- 7. Peak current: 40 A in 100 V range, 20 A in 200 V range

- 8. Max. Load/ Line Regulations:  $\leq 0.5 \% / 0.2 \%$
- **7.** Power consumption of power supply: Less than 1.5 kVA
- **8.** Input power factor more than 0.8
- 9. External synchronization from 40 Hz to 500 Hz
- **10.** Frequency setting range:  $1 \text{ Hz} \sim 500 \text{ Hz}$
- 11. Frequency setting accuracy: 100 ppm
- **12.** AC Power input :  $100V \sim 230V \pm 10\%$ , 50 Hz single-phase AC utility supply
- 13. Weight: Less than or equal to 10 kg

Terms & Conditions: (i) Vendors need to quote the price of equipment on F.O.R/F.O.B basis, (ii) applicable taxes, (iii) Vendors have to supply the agency certificate and other essential documents, (iv) Warranty period, (v) quote delivery period, (vi) validity of quotation must be three months, (vii) LC terms must be specified clearly, (viii) compliance sheet and checklist of technical specifications must be supplied along with the quotation.

Complete technical information of the equipment should be supplied along with the quotation/ tender documents. Quotations with in-sufficient details of specifications, terms and conditions will not be considered. IIT Delhi reserves the right to reject any quotation or all without assigning any reason. Quotations (Technical and financial bids must be sealed in separate covers) in sealed cover should reach the undersign on or before **5.00 P.M of 21**<sup>st</sup> **February, 2012**.

## **Terms & Conditions:**

1. Please submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes. Mark the two envelopes clearly as "Technical Bid" and "Financial Bid". Both the sealed envelopes should be sent in a single sealed envelope, with clearly marked as "Compact Rack Mountable DC Power Supply". The quote should reach the following address on or before 21/02/2012 up to 5.00 P.M.

#### Name: Dr. M. Veerachary,

#### Dept. of Electrical Engineering, Indian Institute of Technology Delhi, Hauz Khas, NEW DELHI - 110 016

- 2. Please quote prices at F.O.R/F.O.B New Delhi, inclusive of installation charges.
- 3. Quote should be in Indian Rupees as well as US Dollars and to be valid for at least three months.
- 4. Attach all the technical literature of the above item.
- 5. A minimum of three years comprehensive onsite warranty, also exclude warranty for three years.
- 6. Mention if you can provide any technical support like training of IIT Delhi personnel at IIT Delhi or in your factory and providing a technical person for operation of the machine for the initial period of 2 years. Kindly mention about this in the technical bid.
- 7. If the quote is being submitted by the representative of the Principals/manufactures themselves, a valid Agency ship/Dealership Certificate authorizing the agent to quote to IIT Delhi on behalf of the Principals should be enclosed.
- 8. The Institute reserves the rights to accept/reject any/all quotations without assigning any reasons thereof.
- 9. Complete set of manuals for the operation and servicing of equipment should be given. All circuit diagrams, other mechanical and electrical schematics must be provided to Main unit, sub systems and accessories.
- 10. Spare set- A complete set of spares and consumables should be supplied for three years of trouble free operation.
- 11. Delivery period 4-6 weeks on receipt of PO.
- 12. Clearly specify the installation requirements such as space, power, frequency, environment (Temperature and humidity) etc.
- 13. If the items quoted are proprietary in nature, please enclose proprietary certificate from the principals stating "certified that ------ is a proprietary item of M/s. -- \_\_\_\_ and no other manufacture make these items".
- 14. If the bidder is Indian agent, the agency certificate should be enclosed.
- 15. Please produce compliance certificate for the specification.
- 16. Please ensure that the Indian agent has been enlisted with the Department of Expenditure, evidence may please be attached.