



University of Calcutta
Dept. of Applied Physics
92 APC Road, Kolkata 700009

Tender Notice

Enq No.: AP/UGC-SAP-DRS-II/JNB/18-19/02 Dated: 08/09/2018

To
The All Interested Parties

Dear M/s.

Please submit sealed quotation within **24/09/2018 (4 PM)** at the Office of the Department of Applied Physics for the following item.

Please enclose the copy of the following papers along with the quotation.

1. Trade License, 2. PAN Card, 3. VAT & Service Tax Registration wherever necessary

1. Introduction

Department of Applied Physics, University of Calcutta (CU) invites sealed bids from GST compliant bidders for a turnkey contract based jobs

2. Background

Department of Applied Physics, University of Calcutta (CU) wants to make a smart power system lab, which is a part of smart grid test bed system, will facilitate hardware based simulation of power systems phenomena including major features of smart grid, testing and analysis for experiments and research purpose. The requirement envisages supplies to be made as modular components and future expansion of the modules to be integrated with the present scope to further introduce additional components for necessary analysis and testing.

3. Requirement for this Tender

Supply of 1 (one) no. Module for **Synchronous generator Control panel with digital communication** for a customised remote monitoring and control along with installation and commissioning services for the entire system.

4. Scope of Work.

Module: Synchronous generator control panel with digital communication facility

- I. The scope of work will cover design, engineering, procurement of material/equipment, fabrication/ manufacturing, supply, inspection, transportation to site, storage, insurance, handling, erection, testing, trial run and commissioning of offered system for Synchronous

generator control panel with digital communication along with all associated equipment in fully integrated manner on turnkey basis. The basic scope of work includes the following:

- II. The buyer is having a synchronous generator set, which is required to be controlled through DC drives units. Tenderer will supply the drive based control panel for DC motor (prime mover) and excitation of synchronous generator of 3 HP rating.
- III. Integration: The Drive system should be integrated with the Synchronous generator, and necessary interfacing provision with Smart controller panel (profibus) should be available for monitoring and control of the DC drives remotely from PLC.
- IV. The alternator supply will have provision for synchronising with grid power which will be available in a separate station with synchronising unit. Only monitoring for synchronising with Grid power supply should be possible from the offered drive panel. A 4" Panel Display to be provided for such purpose. Necessary configuration software license to be considered in the supply.
- V. Site survey for understanding the technical requirements.
- VI. Existing equipment to be relocated, if required.
- VII. The panel should be floor mounted, with provision for laying cable suitably (Tenderer to visit site for offering suitable solution). Necessary power and control terminals to be provided for external interfacing. 20% spare terminals to be provided.
- VIII. Panel should have space provision for future installation of another drive module.
- IX. GI, conduits pipes, tools and tackles, cable trays racks, junction box, foundation bolts, inserts and anchor etc. and all required materials fittings, and accessories to be provided as necessary.
- X. Spares and consumables for commissioning of the total system.
- XI. Any small civil work if necessary during erection.
- XII. Drawing documents to be furnished.
- XIII. Tenderer should supply required power cables for incoming power to Drive panel, Motor and Alternator excitation connection from Drive. Profibus communication cable will not be part of this supply. For cable length estimations the tenderer is required to make prior site survey.

5. General terms of supply.

- a. Power tapping source will be 10 metres from the location of control panel.
- b. Power supply will be 3 phase, 415 VAC, 50 Hz.
- c. Experts to be provided by the bidder for installation and commissioning till handover.

6. Preferred make list

- Drives: Siemens, Rockwell, ABB
- Enclosure: Rittal, Pyrotech, Valrack
- Panel Display: Siemens, Beckhoff, Mitsubishi

For
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