

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03
Dt of Revision : 25.07.2017

Issue No : 2
Issue Dt. : 30.06.2003

Section : Formats
Topic : e-Tender Technical Specification Document

Issued by : P A
Documents : PPM
FORMAT NO.:CPRI/PUR/eTBID/GTP

Section II -Technical Specification

CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: www.cpri.in, www.tenderwizard.com/CPRI, Telefax: 080-2207 2010

Tender Enquiry No.: CPRI BLR19PS06S568

Description of the Equipment/Goods/Services: The voltage and current amplifier system

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

| Sl.No. | Parameters | CPRI Specification / Requirements | Qty | To be completed by the Bidder | |
|--------|-----------------|--|-----|--|-----------------------------------|
| | | | | Guaranteed Technical Particulars (GTP) | Specify deviations/Remarks if any |
| 1 | Scope | The voltage and current amplifier system with following specifications | 1 | | |
| 2 | Interface | It should have the capability to interface with Real Time Digital Simulation system supplied by RTDS Technologies which is present in CPRI, Bangalore campus | | | |
| 3 | Output Channels | 6 current channels and provision for neutral and volatge Channels | 3 | | |
| 4 | Output Range | 0 to 15A (RMS) phase current for current amplifier providing continuous output. Peak Current: 2 to 3 times of the continuous current 0 to 250V (RMS) phase voltage for voltage amplifier providing continuous output | | | |

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| 5 | Bandwidth | DC to 3kKz | | | |
| 6 | Amplifier Gain | 5 or more A/V for Current amplifier 40 or more V/V for Voltage amplifier | | | |
| 7 | Magnitude Error | less than 0.5% | | | |
| 8 | Resolution for AC | 0.001 A or less | | | |
| | | 0.1 V or less | | | |
| 9 | Input-Output Phase error | Less than or equal to 0.25 degrees | | | |
| 10 | Distortion | Less than 0.5% | | | |
| 11 | Protection | Protection for overloading, short circuit to be provided | | | |

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| 12 | Input Impedance | More than 20 k Ω | | | |
| 13 | Drift | Within 0.2% of the AC output of the Amplifier | | | |
| 14 | Environmental | Up to 50 ⁰ C, up to 95% relative humidity | | | |
| 15 | Nominal Frequency | 50Hz | | | |
| 16 | Nominal Supply | 200 to 240V Single Phase Voltage | | | |
| 17 | EMI/EMC | EMC Emission, EMC Immunity and Electrostatic Discharge Immunity to be provided | | | |
| 18 | Output Load Constraints | In the range of 0.3 Ω - 0.5 Ω for Current Amplifier. 24 Ω or more for voltage amplifier | | | |
| 19 | Noise | Noise level to be specified by the manufacturer | | | |

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| | | | | Guaranteed Technical Particulars (GTP) | Specify deviations/Remarks if any |
| 20 | References | Vendor needs to provide one reference/contact details where this amplifier has been successfully interfaced with RTDS system | | | |
| 21 | Place where equipment/service to be supplied/ provided | Power systems Division, CPRI, bangalore | | | |
| 22 | Pre-Dispatch Inspection at OEM | Not required | | | |
| 23 | Inspection in Stages | Not required | | | |
| 24 | Inspection of Goods on receipt at Consignee/ user site | Required | | | |
| 25 | Manufacturers quality self-certification | Required | | | |
| 26 | Inspection on Installation & Commissioning | Required | | | |

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| | | | | Guaranteed Technical Particulars (GTP) | Specify deviations/Remarks if any |
| 27 | External Inspection Agency / Authority | Not Required | | | |
| 28 | Factory Test Certificate as per relevant national/international standards | Required | | | |
| 29 | warrantee | 1 year Warranty | | | |
| 30 | Post warrantee comprehensive AMC including labour, travel , spare parts. | Not Required. | | | |
| 31 | user manual | Required | | | |
| 32 | Demonstration/training | Required | | | |

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| | | | | Guaranteed Technical Particulars (GTP) | Specify deviations/Remarks if any |
| 33 | Installation | The voltage and current amplifiers has to be interfaced with the Real time digital simulator (RTDS) available in CPRI. After interfacing, supplier has to demonstrate the dynamic real testing of the realy available at CPRI and satisfactory performance has to be shown to CPRI Engineers. All the required hardware and software for interfacing will be supplied by supplier of voltage and current Amplifer system | | | |
| 34 | Calibration Certificate traceable to national /international standards from an ISO 10725 accredited laboratory | Required | | | |

PN: 1) Bidder shall indicate complete details/information how the CPRI GTP are complied with against each and every specification parameters & mere statement of '**complied**' do not suffice the requirement.

2) A detailed technical/catalogue/literature/phamplet and any other details shall be submitted in hard copy in a sealed cover superscribing enquiry number and due date so as to reach the following address within the due date and time.

3) The Indian representative of the foreign/overseas firms shall submit the Letter of Authorization issued by their principals.

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4)The bidder shall submit the quotation / offer in the above prescribed format of Section IA , IB and II only . Informations any other forms shall shall be rejected.

Address : Joint Director (Purchase), Purchase Authority , Central Power Research Institute, Sadashiva Nagar P.O., P.Box.No.8066, Bengaluru-560 80.

Telefax: 080-2207 2010., email: purchase@cpri.in , web: www.cpri.in