

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 05

Issue No. : 02

Dt of Revision : 27.08.2020

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Page No. : 1 of 2

Issued by : P A

Section : Formats

Document : PPM

Topic : Price Bid format for local supplies (Indigenous offer)

FORMAT NO.:CPRI/PUR/ePBID/IND

Section IV L - Price Bid for local supplies

CENTRAL POWER RESEARCH INSTITUTE, BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

Tender Enquiry No : STDS/12-01/2022-23/PUR/RTL-NK-36/

Description of the Equipment/Goods/Services : Supply Installation and Commissioning of Portable three phase energy meter test system with integrated power source and reference.

Name and address of the Bidder *

Quotation Number and Date*

HSN code (Harmonized system nomenclature)*

GSTIN No*

SAC code (Services Accounting Code)*

Income Tax permanent account number(PAN)*

Details of EMD submitted*

| Sl.No | Particulars | Qty | Unit Rate in Rupees | Total Amount in Rupees |
|-------|-------------|-----|---------------------|------------------------|
|-------|-------------|-----|---------------------|------------------------|

| | | | | |
|-------------|--|----------|--|-------------|
| 1 | Basic Price (Including mandatory spares, packing and forwarding charges) (The list of mandatory spares shall be provided in the technical bid without mentioning the price) Insurance is under Supplier's Scope | 1 | | 0.00 |
| <i>1(a)</i> | <i>GST rate as applicable in percentage only</i> | | | |
| | <i>IGST</i> | | | 0.00 |
| | <i>CGST</i> | | | 0.00 |
| | <i>SGST</i> | | | 0.00 |
| | <i>UTGST</i> | | | 0.00 |
| | <i>CESS if any</i> | | | 0.00 |
| 2 | Transportation Charges (To be Quoted in Lumpsum ,if applicable) | | | 0.00 |
| <i>2(a)</i> | <i>GST rate as applicable in percentage only</i> | | | |
| | <i>CGST</i> | | | 0.00 |
| | <i>IGST</i> | | | 0.00 |
| | <i>SGST</i> | | | 0.00 |
| | <i>UTGST</i> | | | 0.00 |
| | <i>CESS if any</i> | | | 0.00 |
| 3 | Installation and Commissioning Charges (To be Quoted in Lumpsum ,if applicable) | | | 0.00 |
| <i>3(a)</i> | <i>GST rate as applicable in percentage only</i> | | | |
| | <i>CGST</i> | | | 0.00 |
| | <i>IGST</i> | | | 0.00 |
| | <i>SGST</i> | | | 0.00 |
| | <i>UTGST</i> | | | 0.00 |
| | <i>CESS if any</i> | | | 0.00 |
| | TOTAL LANDED COST | | | 0.00 |
| | Total Landed Cost in Words | | | |

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 05
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Page No. : 2 of 2
Section : Formats
Topic : Price Bid format for local supplies (Indigenous offer)

Issue No. : 02
Issue Dt. : 30.06.2003
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FORMAT NO.:CPRI/PUR/EPBID/IND

Section IV L - Price Bid for local supplies

CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

| | | | | |
|----|---|--|--|--|
| 4 | OPTION-1 : Post warrenty comprehensive AMC including, Labour, Travel, Spare Parts etc. in INR (lumpsum) (This cost is optional hence will not to be considered for cost comparission evaluations.) | | | |
| 5 | OPTION-2 : Optional accessories in INR (lumpsum) List of items with breakup price to be furnished in case CPRI demands for the same. (This cost is optional hence will not to be considered for cost comparission evaluations.) | | | |
| 6 | Guarantee/Warrantee period | | | |
| 7 | After sales and service facility (location of the facility and address to be furnished) | | | |
| 8 | Delivery period | | | |
| 9 | Validity of the offer | | | |
| 10 | Payment terms (as per CPRI payment terms) | | | |
| 11 | Details of enlistment if any under Department of expenditutre , Minsitry Of Finance , GOI. | | | |
| 12 | Name and address of the customer, if any to whome a similar equipment/items has been supplied with their purchase order number and date (as per the APPENDIX I). | | | |

| | | | |
|----|---|--|--|
| 13 | Whether a similar equipment could be demonstrated to our representative in case required. | | |
| 15 | Acceptance for submission of security deposit in the event of placement of order. | | |

PN:

- 1) The price bid shall be submitted in this format only.
- 2) All blue fields are madatorily to be filled in.
- 3) As a policy of CPRI High Sea Sales bids are not acceptable and shall be rejeced.
- 4) CPRI reserves the right to conduct "predispatch inspection" prior to dispatch at the works of the supplier and the expenditure towards PDI shall be borne by CPRI. However information regarding the rediness of the equipment/machinary for the PDI shall be communicated in writing at lease 70 days in advance.
- 5) UNDER TAKING: THE OFFER MADE IS IN STRICT COMPLAINCE WITH THE QUALITY AND OTHER TECHNICAL REQUIREMENT MENTIONED IN SECTION - IV T.

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

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Section : Formats

Topic : Price bid format for Non - Local supplies (Import) offers

Issue No : 2

Issue Dt. : 30.06.2003

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FORMAT NO.:CPRI/PUR/EPBID/IMP

Section IV NL - Price Bid format for Non - Local supplies (Import) Offer

CENTRAL POWER RESEARCH INSTITUTE, BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

Tender Enquiry No : STDS/12-01/2022-23/PUR/RTL-NK-36/

Description of the Equipment/Goods/Services : Supply Installation and Commissioning of Portable three phase energy meter test system with integrated power source and reference.

Name and address of the Bidder

Quotation Number and Date

HSN code (Harmonized system nomenclature)

GSTIN No (if applicable)

SAC code (Services Accounting Code)

Income Tax permanent account number(PAN)

Details of EMD submitted

| Sl.no | Particulars | Qty | Unit Rate in Figures | Currency Type | Amount |
|-------|-------------|-----|----------------------|---------------|--------|
|-------|-------------|-----|----------------------|---------------|--------|

| | | | | | |
|------|---|---|--|--|-------------|
| 1 | FOB value of the complete system (Including mandatory spares, packing and forwarding charges) (The list of mandatory spares shall be provided in the technical bid without mentioning the price) | 1 | | | 0.00 |
| 2 | Insurance charges upto CPRI(ware house to ware house basis in Lumpsum) | | | | 0.00 |
| 3 | Freight Charges,As applicable(Lumpsum) | | | | |
| | 3a) Air Freight Charges.(Lumpsum) | | | | 0.00 |
| | 3b) Sea Freight Charges.(Lumpsum) | | | | 0.00 |
| 4 | Total CIP/CIF cost | | | | 0.00 |
| | Total CIP/CIF cost in words | | | | |
| 5 | Installation and commission charges in INR (Lumpsum) | | | | 0.00 |
| 5(a) | <i>GST as applicable (GST rate in percentage only)</i> | | | | |
| | <i>IGST</i> | | | | 0.00 |
| | <i>CGST</i> | | | | 0.00 |
| | <i>SGST</i> | | | | 0.00 |
| | <i>UTGST</i> | | | | 0.00 |
| | <i>CESS if any</i> | | | | 0.00 |
| | TOTAL COST | | | | 0.00 |
| | Total Cost in Words | | | | |

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 05
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Section : Formats
Topic : Price bid format for Non - Local supplies
(Import) offers

Issue No : 2
Issue Dt. : 30.06.2003
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Documents : PPM
FORMAT NO.:CPRI/PUR/ePBID/IMP

Section IV NL - Price Bid format for Non - Local supplies (Import) Offer

CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

| Sl.no | Particulars | Qty | Unit Rate in Figures | Currency Type | Amount |
|--------------|---|------------|-----------------------------|----------------------|---------------|
| 6 | OPTION-1 : Post warrenty comprehensive AMC including, Labour, Travel, Spare Parts etc. in INR (lumpsum) (This cost is optional hence will not to be considered for cost comparission evaluations.) | | | | |
| 7 | OPTION-2 : Optional accessories in INR (lumpsum) List of items with breakup price to be furnished in case CPRI demands for the same. (This cost is optional hence will not to be considered for cost comparission evaluations.) | | | | |
| 2 | Guarantee/Warrantee period | | | | |
| 3 | After sales and service facility (location of the facility and address to be furnished) | | | | |
| 4 | Delivery period | | | | |
| 5 | Validity of the offer | | | | |
| 6 | Payment terms (as per CPRI payment terms) | | | | |
| 9 | Name and address of the customer, if any to whome a similar equipment/items has been supplied with their purchase order number and date (as per the APPENDIX I). | | | | |
| 10 | Whether a similar equipment be demonstrated to our representative in case required. | | | | |

| | | | |
|---|--|--|--|
| 12 | Acceptance for submission of security deposit in the event of placement of order. | | |
| NOTE : CPRI IS EXEMPTED FROM PAYMENT OF CUSTOMS DUTY UNDER NOTIFICATION NO.51/96 DATED 23-071996 AND AMENDED NOTIFICATION NO.24/2007-CUSTOMS DATED 1-3-2007(HOWEVER CONCESSIONAL CUSTOMS DUTY AND ADDITIONAL CUSTOMS DUTY AS APPLICABLE WIIL BE CONSIDERED. | | | |
| UNDER TAKING: THE OFFER MADE IS IN STRICT COMPLAINCE WITH THE QUALITY AND OTHER TECHNICAL REQUIREMENT MENTIONED IN SECTION IV T | | | |

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 04
 Dt of Revisio : 27.08.2020
 Page No. : 1 of -----
 Section : Formats
 Topic : Technical Specifications format

Issue No : 2
 Issue Dt. : 30.06.2003
 Issued by : P A
 Documents : PPM
 FORMAT NO.:CPRI/PUR/eTBID/GTP

Section IV T -Technical Specification

CENTRAL POWER RESEARCH INSTITUTE, BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI

Tender Enquiry No : STDS/12-01/2022-23/PUR/RTL-NK-36/

Description of the Equipment/Goods/Services : Supply Installation and Commissioning of Portable three phase energy meter test system with integrated power source and reference.

Note : 1) The technical bid submitted in other than this format is liable to be rejected.

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

| Name of the Vendor | | | | | | |
|---------------------------|------------|--|-----|--|--|------------------------------------|
| Quotation Number and Date | | | | | | |
| Sl.No. | Parameters | CPRI Specification / Requirements | Qty | To be completed by the Bidder | | |
| | | | | Details of guaranteed technical parameters offered by the bidder | Guaranteed Technical Particulars (GTP) | Specify deviations/ Remarks if any |
| 1.00 | Objective | To provide facilities for carrying out testing of Accuracy at different load and with other influence quantities at lab as well as on site on all types of Electro Mechanical /Electronics, 1 Phase / | 1 | | | |
| 2.00 | Scope | Design, Engineering, Manufacture, Supply, Installation and Commissioning of Portable Three Phase Test System with Integrated Power Source & Reference Meter accuracy class 0.05 in active and reactive and Apparent mode with all accessories. Place of supply and installation: CPRI Nashik | | | | |
| 3.00 | Training | Two days training excluding duration of Installation and commissioning to CPRI Engineers on all aspects of operation and maintenance at CPRI Nashik. | | | | |
| 4.00 | Warrantee | One Year form the date of Installation and Commissioning. The supplier has to give undertaking regarding post warranty technical support, service and supply of spare parts for successful operation of the equipment's for ten year. | | | | |

| | | | | | | |
|-------|--|--|--|--|--|--|
| 5.00 | Calibration | Reference standard with power source shall be calibrated from ISO/IEC 17025 accredited laboratory. All the parameters with full ranges indicating with the claimed accuracies shall be covered in the certificate. Factory certificate will not be accepted for these items. | | | | |
| 6.00 | | QUALIFYING REQUIREMENTS (FOR MANUFACTURERS): | | | | |
| 6.10 | | Should have supplied at least two similar or better equipment of same make of quoted equipment during the last five years. At least two of such equipment should be in successful operation at ISO/IEC/ 17025 accredited Govt laboratories in India. | | | | |
| 6.20 | | Bidder must give details like Copy of P.O, name of the users, contact person, address and phone no. of user who is using similar system in support of above. | | | | |
| 6.30 | | Nil | | | | |
| 6.40 | | The Bidder should have its own service centre and trained engineers dedicated for trouble shooting and technical support permanently posted in India. | | | | |
| 7.00 | | Meter Test System shall be CE compliant for Operating and Safety Requirement. The test system shall meet requirement of IEC60736 | | | | |
| 8.00 | Power supply | The meter test system shall be suitable for giving an uninterrupted service in following conditions: Ambient temperature (+) 10°C to (+) 40°C for operation. Relative humidity up to 90%, Mains voltage shall be 240V ±10%phase to neutral. Frequency 50Hz ± 5 %. The Equipment must be Dust proof. Meter Test system shall be designed to work satisfactory in laboratory on mains supply and available supply at site. | | | | |
| 9.00 | General Features | 1. The Power Source and Reference Standard Meter shall be integrated in single unit and shall accommodate in one enclosure. | | | | |
| 10.00 | Measurement Mode | Single Phase two wire active , reactive and apparent | | | | |
| | | Three phase three wire active, reactive and Apparent | | | | |
| | | Three phase four wire active, reactive & apparent | | | | |
| 10.1 | Power Source Unit with Voltage and current source | | | | | |
| a) | Voltage source | Range : 30V to 500V (Phase - Neutral) | | | | |

| | | | | | | |
|--------------|---|---|--|--|--|--|
| | | Accuracy : < 0.2% | | | | |
| | | Distortion : < 0.5% | | | | |
| | | Power Rating : Minimum 30 VA or better | | | | |
| | | Harmonics : up to 40th Harmonics | | | | |
| b) | Current source | Range : 1 mA ... 120 A | | | | |
| | | Accuracy : < 0.2 % | | | | |
| | | Distortion : < 0.5 % | | | | |
| | | Power Rating : Minimum 30 VA or better | | | | |
| | | Harmonic : up to 40th Harmonics | | | | |
| c) | Phase Angle Setting | Power Angle range : 0° to 360° | | | | |
| | | Phase Angle Accuracy : <0.01° (at symmetrical load) | | | | |
| | | Phase Angle Stability : <0.01° | | | | |
| d) | Frequency settings | Frequency Range : 45 to 65 Hz (quartz controlled) | | | | |
| | | Frequency Accuracy : < 0.01Hz | | | | |
| | | Resolution : 0.01 Hz | | | | |
| 11.00 | Reference Meter (Measurement Unit) | | | | | |
| a) | Test Voltage | Voltage Range : 5 mV to 500V (Phase to Neutral) | | | | |
| | | Test Voltage resolution : better than 0.01mV | | | | |
| | | Test Voltage Accuracy : <0.05 % (30V ... 500V) | | | | |
| | | Voltage measurement Long Term Stability : 100 PPM/Year | | | | |
| b) | Test Current | Current Range : 1 mA ... 120 A | | | | |
| | | Test Current resolution : better than 0.01mA | | | | |
| | | Test Current Accuracy : < 0.05 % (10 mA ... 120 A) in Direct Mode | | | | |
| | | Current measurement Long Term Stability : better than 100 PPM/Year | | | | |
| c) | Power/Energy measurement | Power/Energy measurement Accuracy : 0.05 % (10 mA to 120A) in Direct Mode | | | | |
| | | Power/Energy Long Term Stability: 200 PPM/Year | | | | |
| | | Voltage measurement temperatures drift : better than 20 PPM/K | | | | |
| | | Current measurement temperatures drift : better than 20 PPM/K | | | | |
| | | Power/energy measurement temperatures drift : 20 PPM/K | | | | |
| d) | Phase Angle measurement | Phase Angle measurement range : 0 to 360° | | | | |
| | | Phase Angle measurement Accuracy : 0.01° | | | | |
| e) | Frequency Measurement | Frequency range: 45 ... 65 Hz | | | | |
| | | Frequency Resolution : 0.01 Hz | | | | |
| | | Frequency Accuracy : ± 0.01 Hz | | | | |
| 12.00 | Display | The offered unit shall have legible display of minimum 10 " Colour graphical back lit LCD display and shall display the following system parameters | | | | |

| | | | | | |
|--------------|---|--|--|--|--|
| | | a) Phase to Neutral Voltage of each phase | | | |
| | | b) Phase to Phase Voltage | | | |
| | | c) Phase current of each phase | | | |
| | | d) Vector Diagram | | | |
| | | e) Waveforms | | | |
| | | f) Harmonic measurement up to 40th harmonics in tabular form, linear form, bar graph and Logarithmic form for voltage and current circuit with angle of superimposition. | | | |
| | | g) Phase angle between all voltages and currents | | | |
| | | h) Active, Reactive and Apparent power | | | |
| | | i) Power factor for each phase | | | |
| | | j) Total active, reactive and apparent power | | | |
| | | k) Phase rotation sequence | | | |
| | | l) Phase angle between voltages | | | |
| | | m) Frequency | | | |
| 13.00 | Interface | | | | |
| | | a) RS 232 or USB interface with PC. | | | |
| | | b) Frequency output to calibrate the reference standard itself. | | | |
| | | c) The optical scanner head shall be capable to evaluate the error through calibrating pulses output of electronic meter & Red/Black mark on the rotor disc of electromechanical meter. | | | |
| 14.00 | Instantaneous Parameters To Be Logged In Memory During Each Test | a. Date & Time stamp. | | | |
| | | b. sr.no. of MUT | | | |
| | | c. Consumer identification. | | | |
| | | d. Meter constant of MUT. | | | |
| | | e. No. of revolution/Pulse for which test is being carried out. | | | |
| | | f. Instantaneous voltage of each phase. | | | |
| | | g. Instantaneous current of each phase. | | | |
| | | h. Instantaneous frequency. | | | |
| | | i. Instantaneous power factor of individual phases & total P.F. | | | |
| | | j. Energy logged by equipment (active/reactive/apparent.) | | | |
| | | k. Instantaneous load in kW, kVA & kVAR | | | |
| | | h. phase angle | | | |
| | | i. Percentage error of kWh/kVArh/kVAh. | | | |
| 15.00 | Memory | The Portable Three Phase Test System shall have facility to store up to 500 error test results in its memory with following instantaneous parameters. It shall be possible to transfer those readings to PC/Laptop, Suitable software for report generation shall be supplied. | | | |

| | | | | | | |
|--------------|--------------------|--|--|--|--|--|
| | | a) Voltage & Current of each phase | | | | |
| | | b) Angle between voltage and current | | | | |
| | | c) Power | | | | |
| | | d) Measuring mode | | | | |
| | | e) No of revolution | | | | |
| | | f) MUT meter constant | | | | |
| | | g) Error in percentage | | | | |
| | | h) Energy logged/recorded by ERS during test as per selected measurement mode while test was performed with scanner or snap switch. | | | | |
| | | i) Phase to phase voltage | | | | |
| | | l) Phase angle between voltages | | | | |
| | | m) Phase angle between current | | | | |
| | | n) Selected current and voltage ranges | | | | |
| | | o) Voltage ratio (if any) (As per meter under test rating plate) | | | | |
| | | p) Current ratio (if any) (As per meter under test rating plate) | | | | |
| | | q) Frequency in Hz | | | | |
| | | r) Phase sequence | | | | |
| | | s) Total power active, Reactive and apparent | | | | |
| | | t) Harmonics in the form of table with absolute value of harmonics up to 40th order and angle of superimposition of harmonics. | | | | |
| 16.00 | Functions | <ul style="list-style-type: none"> • Verification for accuracy of energy meters using scanner and using key pad start stop push button. • It shall have facility to enter meter constant in imp/kwh, imp/kVArh, imp/kVah and Wh/imp, VARh/imp and Vah / imp. • Offered equipment shall have facility to view/monitor system parameters, vector diagram and harmonics during performing • It shall have facility to enter No. of pulses and revolutions of the meter under test. The no. of pulses and constant shall be entered up to 10 digits. • It should have facility to display the energy logged during test while testing is performed by Scanner and snap switch. • Harmonics analysis of the supply up to 40th harmonics. Equipment should have facility to store active, reactive and • Waveform and vector display to analysis the circuit connections. • Equipment shall have facility to operate in automatic mode without use of external PC. | | | | |
| 17.00 | Accessories | Portable Three Phase Test System shall be supplied along with following accessories: | | | | |

| | | | | | |
|--------------|-------------------------|---|--|--|--|
| | | i) Common optical sensor for automatic testing, which can be used to sense disc revolutions in electromechanical meters as well as indicating LED's in static meters. | | | |
| | | ii) Mounting arrangement (clamp) for the optical sensor. | | | |
| | | iii) 4 nos. of voltage lead with insulated clips. (1Red, 1Yellow, 1Blue, 1 Black) | | | |
| | | iv) A set of clips and connectors as following: | | | |
| | | • Cable Adopter / connection Pins 10Nos | | | |
| | | • Voltage adopters 4 Nos | | | |
| | | • Banana clips (straight) 6 Nos . | | | |
| | | • Banana clips (bended) 4 Nos | | | |
| | | • Crocodile Clips 3 Nos. | | | |
| | | • U clips 6 Nos. | | | |
| | | v) 6 nos. of Current leads to connect Electronic Reference Standard Meter in direct mode (12 A Capacity). (2 Red, 2 Yellow, 2 Blue) | | | |
| | | vi) 6 nos. of Current leads to connect Electronic Reference Standard Meter in direct mode (120 A capacity). (2 Red, 2 Yellow, 2 Blue) | | | |
| | | vii) Serial communication cord with RS232 connector to control with PC. | | | |
| | | viii) Base Computer Software (BCS) | | | |
| | | ix) Operating Manual. | | | |
| 18.00 | Carrying case | Carrying case of the equipment shall be supplied | | | |
| 19.00 | Make & Model | Bidder shall have to specify the Make & Model of the offered equipment. | | | |
| 20.00 | Weight | Weight of the offered equipment shall be specified by bidder. | | | |
| 21.00 | Documents | One Set of Operation & User manual in English | | | |