



Indira Gandhi Engineering College, Sagar, Jabalpur Road, Baheriya

Gadgad, Near Makronia Railway Station, Sagar – 470021

Email Id – prinigec.sgr@mp.gov.in

INVITATION FOR QUOTATION

Package Code: TEQIP-III/2019/MP/igec/69 /3173 23/09/2019

Current Date: 20-Sep-2019

Package Name: IGEC/EE/PSPL-2/EQIP/01,02,03,04,05

Method: Shopping Goods

For uploading on the Institute Website

Subject: INVITATION FOR QUOTATION FOR SUPPLY OF GOODS

Dear Sir,

- You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)
1.	3-Phase Power Transmission Line Trainer Model (400 KV)	1	EE Department, I.G. Engineering College, Sagar	Installation should be done free of cost.
2.	Performance and Testing of Generator Protection System	1	EE Department, I.G. Engineering College, Sagar	Installation should be done free of cost.
3.	DC Rectifier: DC Rectifier unit fitted with Ammeter and Voltmeter and fuse protection for over load (DC Power Source to run the DC Motors) (Industrial Grade) Continuous Rating	1	EE Department, I.G. Engineering College, Sagar	Installation should be done free of cost.
4.	3-phase Electrical Power Distribution Panel (415V, 100A, 50Hz)	1	EE Department, I.G. Engineering College, Sagar.	Installation should be done free of cost.
5.	Itemwise Cabling of motors and panel, Cabling and earthing of panels and motors	1	EE Department, I.G. Engineering College, Sagar.	Installation should be done free of cost.

- Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme [TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
- Quotation**
 - The contract shall be for the full quantity as described above.
 - Corrections, if any, shall be made by crossing out, initialling, dating and re writing.
 - All duties and other levies payable by the supplier under the contract shall be included in the unit Price.
 - Applicable taxes shall be quoted separately for all items.
 - The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
 - The Prices should be quoted in Indian Rupees only.
- Each bidder shall submit only one quotation.
- Quotation shall remain valid for a period not less than **90** days after the last date of quotation submission.
- Evaluation of Quotations: The Purchaser will evaluate and compare the quotations determined to be Substantially responsive, i.e., which
 - are properly signed; and
 - Confirm to the terms and conditions, and specifications.
- The Quotations would be evaluated for all items together.
- Award of contract - The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
 - Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of Contract.
 - The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

[Handwritten signature]

9. Payment shall be made in Indian Rupees as follows:

Payment Description	Expected Delivery Period (in Days)	Payment Percentage
Satisfactory Delivery, Acceptance, Installation & Testing	30	100

10. Liquidated Damages will be applied as per the below:

Liquidated Damages Per Day Min % : N/A

Liquidated Damages Max % : N/A

11. All supplied items are under warranty of **24** months from the date of successful acceptance of items and AMC/Others is No.

12. You are requested to provide your offer latest by **14:30** hours on **10-Oct-2019**.

13. Detailed specifications of the items are at Annexure I.

14. Training Clause (if any) – **Training on operation and handling of equipments free of cost as per department requirements.**

15. Testing/Installation Clause (if any) – **Full installation and testing/demonstration free of cost.**

16. Performance Security shall be applicable: **0%**

17. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.

18. Sealed quotation to be submitted/ delivered at the address mentioned below, **Indira Gandhi Engineering College, Sagar, Jabalpur Road, Baheriya Gadgad, Near Makronia Railway Station, Sagar – 470021**

19. **Qualification Criteria** : The bidder/supplier should have :

19.1 A minimum of 3 years experience of supplying similar items.

19.2 A turnover of Rs. 100 lakhs at least once in three years.

19.3 Not been blacklisted by any Government Institution/Organization.

20. The quotation should include the following information :

20.1 The copies of original documents defining the constitution or legal status, place of registration and principal place of business of the company firm or partnership etc. in India.

20.2 Report on financial status (balance sheet and auditor's report for the past three years).

20.3 An affidavit for not being blacklisted by any Government Institution/Organization.

20.4 Authorization Certificate from the OEM/Principal (if bidder/supplier is not an OEM) assuring full guarantee and warranty obligations during the liability period, for the goods offered.

20.5 The list of clients duly supported by copies of purchase orders, installation and performance report signed by purchasers/users.

21. In case of failure to supply the goods within the prescribed time and in accordance with the specifications given in the contract/purchase order, the institute shall be free to cancel the order and make purchase from the next higher tenderer/from the open market as the case may be.

22. The competent authority reserves the right to increase or decrease the quantity of any item of sale, during the period of contract. The tenderer/bidder will be bound to comply with the order of the competent authority without any claim and compensation.

23. Any controversy will be subject to disposal in Sagar Jurisdiction only.

24. Damaged, defective or substandard material will not be accepted under any circumstances.

25. Preference will be given to :

25.1 The bidders possessing relevant certification by an authorized body such as ISO etc., copy of which must be enclosed.

25.2 The bidders that have quoted the item certified for standard, quality and safety such as BIS, ISI etc., copies of which must be enclosed.

26. Please mention following on top of the sealed quotation submission envelope –

26.1. TEQIP – III

26.2 Package Code

26.3 Don't open before 02:30 PM on 10 Oct, 2019.

27. We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)

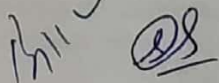
Name & Designation

Annexure I

Sr. No	Item Name	Specifications
1.	3-Phase Power Transmission Line Trainer Model (400 KV)	<p>3-Phase Power Transmission Line Trainer Model (400 KV). Electrical Power Transmission Line Training System should consist of Generating Station Module, Artificial Transmission line model (400 KV), Fixed VAR Compensation Module, Receiving Station Module, Measurement and Protection Section Module VI) RL Load Artificial Transmission line module (400 KV): 600 KM, Type: Artificial Transmission line 3Phase Bench Model. Experiments to be Done: To Determine Efficiency and Regulation of 3 phase Transmission model. Fault analysis (LL, LG, and LLG) of Transmission lines. Determination of ABCD Parameters of short, medium and long lines. VAR compensation (Power Factor Improvement). Protection against faults: 1. under/over voltage fails. 2. over current faults. 3. under/over frequency faults. (Only when Input supply is taken from Alternator). Details of Transmission Line Model: No. of Pi Sections : 20 nos., Operating Voltage : 110-220V Line to Neutral / Line to Line 415V, Current Rating : 10 Amps, Short Circuit Strength : 15 Amps, Line simulation through Iron cored inductor (DCC), Each pi-section for every 30 kms, Fixed VAR Compensation Module This should consist of shunt capacitors for voltage control and shunt reactor for Ferranti effect compensation, series reactor to reduce the fault current at the time of occurrence of fault. Accessories : Input Supply : 3 phase Dimmerstat 20 amps – 1 no. Generating Station Module : 3-Ph Squirrel Cage Induction motor coupled with 3 Phase Alternator. Induction Motor: 7.5 HP-415 volts AC –1440 RPM. Alternator: 5 KVA- 3 Phase, salient pole type Alternator 4 wire and separately excited Field winding with speed sensor and digital speed indicator. VFD drive: 10HP for AC Induction Motor Speed control, consist of closed type panel with front Hylam sheet, B.T.I 30 Terminals For Connections, MD Meter Schneider make – 1 no., 3 phase preventers, Push ON & OFF Switches, Contactor with over current relay, PLA Relay for trip the circuit, 3 Phase Preventers For Identifying 3 Phase Failure Faults. Sending End Panel : Consist of closed type panel with front Hylam sheet, B.T.I 30 Terminals For Connections, Digital Voltmeters – 3 nos., Digital Ammeters – 3 nos., MD Meter –1 nos., 3 over Current Earth fault Relay – 1 no. Numerical type, 3 phase preventers, Under/Over Voltage Relay – 1 no. Numerical type, Under/over frequency Relay – 1 no. Numerical type, 3 phase Power Transformer (7KVA) at sending end – 1 no., Push ON & OFF Switches, Contactor with over current relay, PLA Relay for trip the circuit, 3 Phase Preventers For Identifying 3 Phase Failure Faults. Transmission line model : Consist of closed type panel with front Hylam sheet, B.T.I 30 Terminals For Connections, No. of Pi Sections: 20 nos., Each pi-section for every 30 kms, Inductors 20 nos. for each phase (3 lines) – 60 nos., Capacitors 20 nos. for each phase (3 lines) – 60 nos. Digital Voltmeters – 2 nos., Digital Ammeters – 2 nos. Receiving End Panel : Consist of closed type panel with front Hylam sheet, B.T.I 30 Terminals For Connections, Digital Voltmeters – 3 nos., Digital Ammeters – 3 nos., MD Meter – 1 nos., 3 phase Power Transformer (7KVA) at Receiving End – 1 no., 3 Phase Preventers For Identifying 3 Phase Failure Faults. Measurement and Protection Panel : Consist of closed type panel with front Hylam sheet, B.T.I 30 Terminals For Connections, 3 over Current Earth fault Relay – 1 no. Numerical type, Under/Over Voltage Relay – 1 no. Numerical type. Under/over frequency Relay – 1 no. Numerical type. (Only when Input supply is taken from Alternator), Push ON & OFF Switches, Contactor with over current relay, PLA Relay for trip the circuit, Neon indications for trip status of Relay, 3 Phase Preventers for Identifying 3 Phase Failure Faults. VAR Compensation Panel : Consist of closed type panel with front Hylam sheet, B.T.I 30 Terminals For Connections, Power Factor Controller 6 Channel: Manual Thru Switch and Contactor, Shunt capacitor: 3ϕ delta connected shunt capacitor of 300 to 500 VAR Compensation, Under loading condition Shunt reactor available for</p>

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		<p>compensation under no load condition. Series reactor available in all the three phases for series compensation to improve the system stability, Total Capacity: 10 amps in Each Phase, 3 Phase Preventers For Identifying 3 Phase Failure Faults. Load Bank Panel : Consist of closed type panel with front Hylam sheet, B.T.I 30 Terminals For Connection, 3 Phase Preventers For Identifying 3 Phase Failure Faults, 3 phase Induction motor $\frac{1}{2}$ Hp – 1 no., Resistive Load – 10 amps each phase. or Inductive Load – 10 amps each phase. or Capacitor Load – 10 amps each phase, Type of Loads: 1. R - Load 2. RL - Load 3. RC – Load, and all other required accessories & instruments & table to perform above experiments. List of experiments to perform on setup : 1. Study of A, B, C, D, constant of Transmission line. 2. Study of Long, Medium, Short in transmission line. 3. Study of T, PI network on transmission line. 4. Study of Ferranti Effect on Three phase transmission line. 5. Study of VAR compensators. 6. Study of Voltage and current protection in Load side Transmission line. 7. To Determine Efficiency and Regulation of 3 phase Transmission model.</p>
2.	Performance and Testing of Generator Protection System	<p>Performance and Testing of Generator Protection System Consists of a Panel Closed type with front Hylam sheet, Panel size 2ft ht x 8 ft wd x 200mm depth, MCB for Switching on with Indications and BTI – 30 terminals for Connections, Variable Frequency Drive - 5HP, 3 Over Current, Earth Fault Relay (Numerical type), Under/Over Voltage Relay (Numerical type), Under/Over frequency Relay (Numerical type), Standard CT 5/5 amps – 4 Nos., 3 phase Load bank Balanced/Un Balanced, Metering : 5AAC – 4 nos., 500VAC – 2 nos., Multi Function Meter – 1 no., Load Bank 3 phase suitable for the above protection system, DC Shunt motor coupled to 3 Phase Alternator, Induction Motor : 5 HP-415 volts AC –1440 RPM, Alternator : 3 KVA- 3 Phase, 4 wire and separately excited Field winding.</p>
3.	DC Rectifier: DC Rectifier unit fitted with Ammeter and Voltmeter and fuse protection for over load (DC Power Source to run the DC Motors) (Industrial Grade) Continuous Rating	<p>DC Rectifier: DC Rectifier unit fitted with Ammeter and Voltmeter and fuse protection for over load (DC Power Source to run the DC Motors) (Industrial Grade) Continuous Rating Input : 3 Phase 415 Volts AC +/- 10% 50 Hz Output : 220 Volts +/- 2VDC Capacity : 100 AMPS Size : 700x1500x600mm</p>
4.	3-phase Electrical Power Distribution Panel (415V, 100A, 50Hz)	<p>3-phase Electrical Power Distribution Panel (415V, 100A, 50Hz)</p>
5.	Itemwise Cabling of motors and panel, Cabling and earthing of panels and motors	<p>Cabling Item wise Cabling earthing of motors and panel, Cabling and earthing of panels and motors is required to be done by the supplier Connections of Motors to the panels, panels to the MCB Boxes and cabling necessary to mains supply box of the lab, this will include supply of MCB's with proper ratings and box cabling using conduits and flexible pipes as and where necessary Proper earthing of panels, motors etc to earth using aluminum flat and GI wire of proper thickness and resistance. Installation & Commissioning of Machine Lab Equipments The Machines & panels should be interconnected from AC panel through UG Cable of size 20 /4 sq mm for 32 Amps switches and 10 / 4 sq mm for 16 Amps switches (depending upon rating of the machine as indicated in the schedule). The make of the underground cable should be of well known standard quality. Grounding/Earthing At least two points of Rod and Plate type of grounding of proper rating as per National Electrical Code, to keep the earth resistance less than 5 ohms are to be provided. In case the earth resistance is more than 5 ohm, Bentonite should be added to each point to keep earth resistance with in 5 ohms. Funnel type of cups should be provided for water injection. All the Machines & Panels should be properly connected to these ground/ earth points. Meters and Switch Gears All digital meters used should be of well-known standard quality. The Switch gears connected should be of well-known standard quality make. Where ever possible Multi Data Monitoring unit should be connected for Machines.</p>



FORMAT FOR QUOTATION SUBMISSION
(In letterhead of the supplier with seal)

Date: _____

To: _____

Sl. No.	Description of goods \ (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex-Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (Amount in figures) (Rupees) _____ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of _____ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier _____

Name: _____

Address: _____

Contact No. _____