Institute of Technology, Gopeshwar,The Director, Institute of Technology, Gopeshwar, Kothiyalsain, Chamoli-246424, Uttarakhand

INVITATION LETTER

Package Code: TEQIP-III/UK/iotg/106 **Current Date: 11-Jul-2019**

Package Name: ITG/GOODS/EQUIPMENTS/EE/03 **Method: Shopping Goods**

To,

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Sub: INVITATION LETTER FOR ITG/GOODS/EQUIPMENTS/EE/03

Dear Sir,

1. 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	POWER QUALITY ANALYSER	1	THE DIRECTOR, INSTITUTE OF TECHNOLOGY GOPESHWAR KOTHIYAL SAIN CHAMOLI UTTARAKHAND (246424)	YES
2	Multifunctional tester + Clamp + Earth Test kit	1	THE DIRECTOR, INSTITUTE OF TECHNOLOGY GOPESHWAR KOTHIYAL SAIN CHAMOLI UTTARAKHAND (246424)	YES
3	Infrared Thermal Camera	1	THE DIRECTOR, INSTITUTE OF TECHNOLOGY GOPESHWAR KOTHIYAL SAIN CHAMOLI UTTARAKHAND (246424)	YES

2. 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.

3. **Quotation**

3.1 The contract shall be for the full quantity as described above.

3.2 Corrections, if any, shall be made by crossing out, initialling, dating and re writing.

3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit Price.

3.4 Applicable taxes shall be quoted separately for all items.

3.5 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.

3.6 The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.

6. Evaluation of Quotations: The Purchaser will evaluate and compare the quotations determined to be Substantially responsive i.e. which

6.1 are properly signed; and

6.2 Confirm to the terms and conditions, and specifications.

7. The Quotations would be evaluated for all items together.

8. 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.

8.1 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.

8.2 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.

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

Satisfactory Acceptance - 100% of total cost

10. Liquidated Damages will be applied as per the below:
Liquidated Damages Per Day Min %: 0.10
Liquidated Damages Max % : 10

11. All supplied items are under warranty of **12** months from the date of successful acceptance of items and AMC/Others is **0.**

12. You are requested to provide your offer latest by **02:30** hours on **27-Jul-2019.**

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

14. Training Clause (if any) **YES**

15. Testing/Installation Clause (if any) **YES**

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

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, **Institute of Technology, Gopeshwar,The Director, Institute of Technology, Gopeshwar, Kothiyalsain, Chamoli-246424, Uttarakhand**

19. 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	Power Quality Analyser	
2.	Multifunctional tester + Clamp + Earth Test kit	
3.	Infrared Thermal Camera	

Three Phase Power Quality Analyzer Specifications as per latest IEC/IEEE standards.

Features	Required Specifications
Display	color liquid crystal display (LCD) 1/4 VGA or better
User Interface	Touch screen technology with simple PDA like user interface is preferable.
	Instrument should have capability to monitor record & display all common power quality disturbances & phenomena like Voltage Sags, Voltage Swells, Harmonics Inter harmonics, sub harmonics, Transients.
Voltage	
# Channels	4 channels required for 3 phase and one neutral
Range (L-N)	1-600Vrms, 0.1%
Accuracy	0.1% as defined by IEC 61000 from 1-600Vrms
Full Differential	For real delta measurements and safety of the operator.
AC/DC	Yes
Base Sampling	256 samples/cycle/channel
Vertical Resolution	16 bits
Current	
# Channels	4 channels required for 3 phase and one neutral
Range	0.1-6000A,with accuracy of 0.1% plus CT dependant
AC/DC	Yes
Sampling	256 samples/cycle
Frequency	Should be default 50 Hz & 16/20 Hz should also be available for VFD/VSD applications
Power Quality Triggers	
RMS Variations	
Cycle by Cycle, 1/2 Cycle Steps	Required
Simultaneous Line-Neutral & Line-Line	should be provided
Variable Pre/Post cycles	At least 50 or more
Internal cross-trigger	Required
Trigger on current	Required
Transients (per IEE1159)	
Low Freq (<5Khz)	Yes
Med Freq (5-500Khz)	Yes
Transient Characterization	should be available to characteris all transient parameters

Transient Trigger Methods	
RMS Peak	should be available
Wave shape	should be available
Distortion	
Harmonic Order	63rd
Interharmonic Order	63rd
Harmonics/Interharmonics per IEC 61000-4-7, Second Edition	Required
Power	
W, VA, VAR, TPF, DPF, Demand, Energy	Required
Advanced Metering-Unbalance, Sequence Components, etc	Required
Standards/Compliance	
IEEE1159	Required

Features	**Required Specifications**
IEEE1453 (flicker)	Required
EN50160	Required
IEC 61000-4-30 Class A	Preferred
IEC 61000-4-15 (flicker)	Required
IEC 61000-4-7 Second Edition (Harmonics)	Required
Data Storage	
Internal/External	External is preferred
Removable Media	Compact Flash for high speed data storage & transfer
Size	4 GB or better. Actual raw data not only screens.
Power Quality, Energy & Harmonics Software	
Data Review, Printing	Required
View Trends, Waveshapes, Harmonics	Required
Event Sorting, Filtering	Required
Automatic Report Writer	Required
Data Correction, rescale, adjust times, etc	Required
Harmonics Bar charts and tables	Required
Safety/Regulatory Compliance	
UL	Required
CE	Required

Monitoring Applications	
3 Phase Power Meter	Must be available
Basic Power Quality, Spot Checks	Must be available
Basic Energy Monitoring, Consumption, demand, etc	Must be available
Advanced Energy Monitoring, Sub metering, directivity, etc.	Must be available
Long Term Power Quality Surveys	Must be available
Long Term Energy Surveys	Must be available
Fault Recorder, Voltage Triggers	Must be available
Inrush, Current Triggers	Must be available
Motor Quality Mode	Must be available
To monitor, record & display Variable frequency drive capability	Must be available
Current Probes	10 Amps to 500 Amps- 4 Nos.

Technical specifications of Multifunctional tester + Clamp + Earth Test kit (ISO/ISI/CE/IEEE Certified)

Sr. No.	Parameters	Specifications
Features		
1	Multifunctional Installations tester	More than 15 parameters
2	Voltage and frequency	0 to 550 VAC/DC / DC and 15.8 to 500 Hz
3	Continuity	Maximum range: up to 300 Ω or higher
4	Resistance	Should be available up to 300 KΩ or higher
5	Insulation	Utest: 50 /100 / 250 / 500 / 1,000 VDC Insulation resistance range: 0.01 MΩ to 2 GΩ
6	3P Earth Resistance, Rasel (1P)- 1-stake selective earth measurement with power on (1 stake + current clamp)	3P Earth Resistance measurement range: 0.50 to 10 KΩ or higher Rasel: Maximum 300 Ω or higher
7	Loop Zs (L-PE)	Zs loop impedance measurement for No trip 3kΩ or higher and 300 Ω or higher for trip
8	Loop Zi (L-N,L-L)	line impedance measurement 350 Ω
9	PFC a PSCC calculation	Should be available up to 20 KA
	RCD Testing	AC, A and F-type RCDs
	Installation voltage / Frequency	90 V to 500 V / 15.8 Hz to 17.5 Hz and 45 Hz to 65 Hz

10	IΔn	6/10/30/100/300/500/650/1,000 mA (90 V – 280 V) or 6/10/30/100/300/500 mA (280-550 V) or variable Ramp and pulse test
	No trip test	at ½ IΔn – Duration: 1,000 ms or 2,000 ms
	Ramp mode	0.2 to 0.5 x IΔn (Uf) / 0.3 x IΔn to 1.06 x IΔn in increments of 3.3 % x IΔn
	Trip time measurement: Range / Resolution / Accuracy	0.2 to 0.5 x IΔn (Uf) / 0.5 x IΔn / 2 x IΔn (selective) / 5 x IΔn Pulse: 0 to 500 ms / 0.1 and 1 ms / 2 ms, Ramp mode: 0 to 200 ms / 0.1 ms / 2 ms
11	Current Measurement	5.0 mA to 199 A by using current clamp
12	Phase sequence	Should be available from 20 to 500 VAC
13	Alarms	Can be activated or deactivated and adjustment of alarm threshold
14	Contextual help	Contextual help providing the schematics on each feature should be available
15	Harmonics	Voltage and current / up to 50th order / THD-F /THD-R
16	Power	0 to 100 kW single-phase Simultaneous display of voltage and current waveforms, Power factor (PF)
17	Optimized terminal	common Ω/MΩ terminal
Compliance to Standards		
1	Protection	IP 53 / IK04
2	EMC	IEC 61326-1
3	Electrical safety	IEC 61010 -1 – 600 V CAT III – 300 V CAT IV – IEC 61557
4	Testing according to the international standards	IEC 60364-6, NF C 15-100, VDE 100, FD C 16-600

General Specifications		
1	Power Supply	Lithium-ion rechargeable battery
2	Display	Large 5.7” backlit graphic colour LCD screen
3	Battery life	More than 20 hours
4	Storage/Communication	via USB for data transfer and report creation
5	Weight	Less than 3.0 Kg
6	Temperature range of use	-10°C to + 55°C

7	Relative humidity	10 to 85 % RH at 45°C
Standard Accessories		
1	1 Carrying bag	
2	1 type-2 mains power pack / charger	
3	1 Li-Ion battery pack	
4	1 USB A/B cable, 1.80 m with ferrite	
5	1 three-point cable - 3 safety leads (red, blue and green)	
6	3 test probes, Ø 4 mm (red, blue and green)	
7	3 crocodile clips (red, blue and green)	
8	2 elbowed-straight safety leads 3 m (red and black)	
9	1 three-point Euro mains cable	
10	1 x 2P EURO mains cable	
11	1 remote-control probe	
12	1 wrist strap	
13	1 scratch-proof film mounted on the instrument	
14	1 x 4-point hands-free strap	
15	1 CT data export software on CD-ROM	
16	1 operating manual on CD	
17	1 safety datasheet	
18	Current clamp (Range: 5 mA to 199 A) for Current & leakage current measurement	
19	3P earth kit (50 m) comprises a standard carrying bag with rubber bottom containing: • 1 coil of red cable (50 m) • 1 coil of blue cable (50 m) • 1 flat spool of cable green: 10 m • 2 T-shaped rods • 1 hammer • 4 mm Ø banana jack/fork plug adapters (x 5)	

Technical specifications of Infrared Thermal Camera (ISO/ISI/CE/IEEE Certified)

Features	Required Specifications
Temperature	-50 °C to 200°C measurement range
Display	5” LCD touchscreen
pixel	120 x 90 infrared resolution (10,800 pixels)

QUALIFICATION CRITERION

Sr. No	General Specifications
1.	The product should be certified by standard certification bodies ISO/ISI/CE/IEEE and IEC.
2.	GST Registration Certificate Photocopy
3.	Income Tax Clearance Certificate Last Three Year
4.	PAN Card Photocopy

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. _____