



**NATIONAL INSTITUTE OF ELECTRONICS**  
**Ministry of Science and Technology**  
**Government of Pakistan**  
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**TENDER NO. 08/2021-22/NIE**

**PROCUREMENT OF LED POWER TESTER, DC ELECTRONIC LOAD, PURE SINE WAVE AC POWER SOURCE, WORKSTATION FOR TESTING, SIMULATION AND PROBABILISTIC MODELING, HIGH RESOLUTION LED DISPLAY FOR TESTING, PROBABILISTIC MODELING AND SIMULATION, STANDARD LIGHT SOURCE, DIGITAL CONSTANT CURRENT AND CONSTANT VOLTAGE POWER SUPPLY AND INSTALLATION AND COMMISSION-ING OF 10 KVA, 3-PHASE ISOLATION TRANSFORMER FOR COTC-EP LAB**

<b>S #</b>	<b>Name of Item</b>	<b>Qty</b>	<b>Unit Price</b>	<b>Total Price</b>
1	<p><b>Led Power Driver Tester with standard accessories and following specifications:</b></p> <p><b>Make: Any Renowned Manufacturer</b></p> <p><b>Specifications:</b></p> <ul style="list-style-type: none"> <li>• LED Power Driver Tester should be powered with 220 V AC @ 50 Hz with necessary protection like fuse and must be capable to test characteristics of LED Power Drivers with following specifications:</li> <li>• Input frequency: 45Hz~65Hz or above</li> <li>• Input voltage range: 0.15~300 V or above</li> <li>• Input current range: 1.5mA ~ 2.7A or above</li> <li>• Input power range: 15mW~800 W or above</li> <li>• Power factor range: 0~1 or equivalent</li> <li>• Output voltage range: 0.15~500V (AC) &amp; 0.15~300V (DC) or above</li> <li>• Output current range: 1.5mA~8A (AC) &amp; 1.5mA~2.7A (DC) or above</li> <li>• Output power range: 15mW~800W (AC) &amp; 15mW~4kW (DC) or above</li> <li>• Ripple wave current: 5mA~2.5A (DC) or above.</li> <li>• Be capable to test harmonic(s) of voltage and current up to 15th order or above.</li> <li>• Be provided with ISO/ IEC 17025 accredited calibration certificate.</li> <li>• After sales service is desirable</li> <li>• Any other/ above specifications would be preferred</li> </ul>	01		
2	<p><b>DC Electronic Load with standard accessories and following specifications:</b></p> <p><b>Make: Any Renowned Manufacturer</b></p> <p><b>Specifications:</b></p> <ul style="list-style-type: none"> <li>• The DC electronic Load should be powered with 220 V AC @ 50 Hz with necessary protection like fuse and must be capable to measure/ test the following specifications of LED Power Drivers and Batteries via programming or appropriate means:</li> <li>• Input Parameters: 0~150V/30A (DC) or equivalent/ above</li> <li>• Input power: 300 Watts (DC) or above</li> </ul>	01		

	<ul style="list-style-type: none"> <li>• Be able to simulate the load characteristics of LED power by means of CR mode or equivalent</li> <li>• Voltage &amp; current resolution: 0.1mV &amp; 0.1mA or equivalent/above</li> <li>• Be able to operate in Constant Current (CC), Constant Voltage (CV), Constant Power (CP) &amp; Constant Resistance (CR) modes or equivalent</li> <li>• Be able to accurately capture critical parameters using test functions of over current protection &amp; over power protection or equivalent</li> <li>• Be able to test Battery discharge Capacity</li> <li>• Must be compatible with LED Power driver tester by appropriate means like RS 232 cable communication with software or equivalent</li> <li>• Must be provided with ISO/ IEC 17025 accredited calibration certificate</li> <li>• After sales service is desirable</li> <li>• Any other/ above specifications would be preferred</li> </ul>			
3	<p><b>Pure Sine Wave Ac Power Source with standard accessories and following specifications:</b></p> <p><b>Make: Any Renowned Manufacturer</b></p> <p><b>Specifications:</b></p> <ul style="list-style-type: none"> <li>• AC Power Source should be powered with 220 V AC @ 50 Hz with necessary protection like fuse and should be capable to provide Pure Sine Wave with low harmonics and high accuracy with the following specifications:</li> <li>• Be capable to provide protection for over hot, thundering voltage and current or equivalent</li> <li>• Shoud acheive output by AC-DC-AC frequency conversion technology, Controlled &amp; tested or equivalent</li> <li>• Output frequency: 45~70Hz, 100Hz, 200Hz &amp; 400Hz or above</li> <li>• Output voltage: 0~300 V AC or above</li> <li>• Total voltage distortion: <math>\leq 0.2\%</math> or above</li> <li>• Voltage stability: <math>\leq 0.05\%</math> /30 min or equivalent</li> <li>• Load adjust rate: <math>\leq 0.05\%</math> or equivalent</li> <li>• Frequency stability: <math>\leq 0.01\%</math>/30 min or above</li> <li>• Load regulation: <math>\leq 0.1\%</math> or above</li> <li>• Must be compatible with LED Power driver tester by appropriate means like RS 232 cable communication with software or equivalent</li> <li>• Must be provided with ISO/ IEC 17025 accredited calibration certificate</li> <li>• After sales service is desirable</li> <li>• Any other/ above specifications would be preferred</li> </ul>	01		
4	<p><b>Workstation for Testing, Simulation and Probabilistic Modeling with standard accessories and following specifications:</b></p> <p><b>Make: Any Renowned Manufacturer</b></p> <p><b>Specifications:</b></p> <ul style="list-style-type: none"> <li>• The Workstation should be supplied with power supply option of 220 V AC @ 50 Hz as input and necessary protection like fuse etc. The workstation should have the following</li> </ul>	03		

	<p>specifications:</p> <ul style="list-style-type: none"> <li>• Should be capable to run sophisticated simulation, probabilistic modeling and testing with equipment</li> <li>• Processor i7, 9<sup>th</sup> generation, 2019 or above/ equivalent</li> <li>• Clock speed 3.0 GHz with turbo of 4.6 GHz, 12MB Cache, 8 Cores, 12 Threads or above/ equivalent</li> <li>• Storage 256 GB SSD for operating system and software/ firmware or equivalent/ better</li> <li>• Storage of 1 TB HDD or equivalent/ better</li> <li>• Ram: 16 GB DDR4, 2019 or above</li> <li>• Operating System Microsoft® Windows 10 (registered)</li> <li>• Graphics card 4GB or better/ equivalent</li> <li>• Must be provided with expansions like 1x USB 3.1 Gen 2 (Type-C), 5x USB 3.1 Gen 1 Type A, 4x USB 2.0 Type-A, 1x HDMI 2.0b, 1x USB Type-C Alt Mode or better</li> <li>• Power supply 500W typical 85% Efficient PSU (80 PLUS Bronze) ENERGY STAR compliant, Active PFC or above/ equivalent</li> <li>• Must be provided standard accessories like numeric Keyboard, optical mouse, DVD ROM and power cable or above/ equivalent</li> <li>• Must be provided with warranty</li> <li>• After sales service is desirable</li> <li>• Any above/ better specification would be preferred</li> </ul>			
5	<p><b>High Resolution LED Display for Testing, Probabilistic modeling and Simulation with standard accessories and following specifications:</b></p> <p><b>Make: Any Renowned Manufacturer</b></p> <p><b>Specifications:</b></p> <ul style="list-style-type: none"> <li>• The High Resolution LED Display should be supplied with power supply option of 220 V AC @ 50 Hz as input and necessary protection like fuse. The LED display should have the following specifications:</li> <li>• 4K UHD (3840x2160p) resolution or above/ equivalent</li> <li>• Wide Range of Colors, See all and do all from a single monitor or above/ equivalent</li> <li>• HDMI 2.0 x 2, and Display Port x1 inputs, VESA Compatibility or above/ equivalent</li> <li>• Response time, 4 ms or equivalent</li> <li>• Screen display 27 inches or above/ equivalent</li> <li>• Viewing angle: 178° (H) / 178° (V) or equivalent</li> <li>• Display Colors: 1.07 Billion or above/ equivalent</li> <li>• Dual Integrated Speakers (2.5W x 2) or better or above/ equivalent.</li> <li>• After sales service is desirable</li> <li>• Any above/ better specification would be preferred</li> </ul>	03		
6.	<p><b>Standard Light Source with standard accessories and following specifications:</b></p> <p><b>Make: Any Renowned Manufacturer</b></p> <p><b>Specifications:</b></p> <ul style="list-style-type: none"> <li>• Standard Light Source must be capable to calibrate the Standard Sphere and/ or Integrating Sphere System with the following specifications:</li> </ul>	01+01 = 02		

	<ul style="list-style-type: none"> <li>• 30 V DC/ 100 W standard lamp, class 1-accuracy with ISO/ IEC 17025 accredited calibration certificate or equivalent</li> <li>• 10 V DC/ 10 W standard lamp class 1-accuracy with ISO/ IEC 17025 accredited calibration certificate or equivalent</li> <li>• After sales service is desirable</li> <li>• Any other/ above specifications would be preferred</li> </ul>			
7.	<p><b>Digital Constant Current and Constant Voltage Power Supply with standard accessories and following specifications:</b></p> <p><b>Make: Any Renowned Manufacturer</b></p> <p><b><u>Specifications:</u></b></p> <ul style="list-style-type: none"> <li>• Digital Constant Current and Constant Current Power supply should be powered with 220 V AC @ 50 Hz with necessary protection like fuse and capable to provide adjustable Voltage/ Current &amp; Power with following specifications:</li> <li>• Must be capable to provide stable and accurate power supply to standard lamp(s)</li> <li>• Output voltage: 0 to 30 V or above</li> <li>• Output current: 0 to 5 A or above</li> <li>• Maximum power: 150 W or above</li> <li>• Full scale current drift: 0.08 % of reading/ 10 min or equivalent/ above</li> <li>• Be able to work efficiently in temperature up to 30 °C and relative humidity up to 85% or equivalent</li> <li>• Must be provided with ISO/ IEC 17025 accredited calibration certificate</li> <li>• After sales service is desirable</li> <li>• Any other/ above specifications would be preferred</li> </ul>	01		
8.	<p><b>Installation and Commissioning of 10 KVA, 3-phase Isolation Transformer with standard accessories and following specifications:</b></p> <p><b>Make: Any Renowned Manufacturer</b></p> <p><b><u>Specifications:</u></b></p> <ul style="list-style-type: none"> <li>• Installation and Commissioning of 10 KVA, 3-phase Isolation Transformer should be installed with:</li> <li>• Installation in laboratory premises with necessary items and protection like appropriate Distribution board, circuit breakers &amp; wiring etc.</li> <li>• Over and under voltage/ current protection</li> <li>• Installation of changeable switch bi-directional, 3-phase with 600 VAC @ 63 A rating, number poles four (04) i.e. Ground, Phase (1<sup>st</sup>, 2<sup>nd</sup> &amp; 3<sup>rd</sup>) or above</li> <li>• Installation of allied devices like voltage/ current/ power monitor etc. would be a plus</li> <li>• After sales service is desirable</li> <li>• Any other/ above specification would be preferred</li> </ul>	01		



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**TERM & CONDITIONS:**

1. Price to be quoted in Pak Rupees on (FOR) free home delivery basis.
2. As the equipment/ items to be procured are based on high tech technology therefore for competitive bidding single stage-two envelopes bidding procedure shall be adopted.
  - (i). the bid shall be comprised a single package containing two separate envelopes, containing separately "**TECHNICAL PROPOSAL**" and "**FINANCIAL PROPOSAL**".
  - (ii). the envelope shall be marked as "**TECHNICAL PROPOSAL**" and "**FINANCIAL PROPOSAL**" in the bold, properly sealed and with legible letters to avoid any confusion.
  - (iii). initially the envelope marked with "**TECHNICAL PROPOSAL**" shall be opened.
  - (iv). the envelope marked with "**FINANCIAL PROPOSAL**" shall be retained in the custody of NIE without being opened.
  - (v). upon evaluation of technical proposals, NIE shall publically open the financial proposal of the technically accepted bids only. The financial proposal of the bids found technically rejected shall be returned un-opened to the respective firms.
3. The bids of the firm operating from their residential address and P.O. Box number will not be considered.
4. Tender number must be specified on the left corner of the bidding envelope.
5. The rates should be valid for at least "90" days from the date of tender opening.
6. The offered equipment/ items must be brand new of the original manufacturer and covered under normal warranty/guarantee with necessary back-up support.
7. The bid must be supported with necessary catalogue/ brochure indicating make, model detailed specification and country of origin of the offered equipment.
8. The scope of supplies includes supply of equipment, installation, testing and commissioning of equipment and if necessary training to NIE Personnel's.
9. The financial bid should reflect at sight the following costs separately for fair comparison purpose.
  - i. Unit Price of equipment.
  - ii. GST, if applicable.
10. **Non-Blacklist Affidavit/ Certificate** confirming that bidder has never been blacklisted by any government organization.
11. Conditional/ ambiguous bids will not be entertained.
12. Earnest money @ 2% of quoted prices (Refundable) must be accompanied with tender in shape of a crossed bank draft/ pay order in favour of the Director General NIE.
13. E/M of the successful bidder will be refunded upon submission of prescribe performance/ bank guarantee to NIE and the same shall be released after satisfactory completion of warranty/ guarantee period of the supplied goods.
14. NIE may ask the successful bidder to provide 5% performance/ bank Guarantee of the total order value of the order to NIE for satisfactory execution of the supply order.
15. The bid found to be lowest evaluated bid shall be accepted only either overall whole tender/items base or each item wise.
16. The estimated delivery/ completion period of supplies/ work must be specified in the quotation.
17. In case of any delay in supplies of ordered items, the successful bidder shall bound to inform NIE to prior to "15" days of the ending of last date of delivery, so that necessary approval regarding

extension in delivery period may be obtained from Director General NIE otherwise at the time of payment to firm a penalty @ 2% per month of the total order value will be charged from the successful bidder without any notice.

18. Tender of all items may be awarded either to a single party or can be divided among different parties depending upon their professional capabilities and competitiveness in prices individually.
19. **No advance payment will be made.**
20. NTN and GST number must be mentioned on the quotation along with providing copy of its documentary evidence, failing which bid will not be considered.
21. Payment will be made on submission of the prescribed bill in duplicate through crossed cheque after satisfactory completion of supply order and our acceptance thereof, which includes installation, testing, commissioning of the equipment and training etc.
22. As per Government Policy payment to the firm is subject to the registration of firm name in **Active Tax Payer List of FBR**, otherwise payment will be stopped till the appearance of vendor name in ATL of FBR.
23. Income Tax/ Sales Tax etc. will be deducted from bill as per Govt. Rules.
24. Last date for receipt of the tender in the Procurement Section of NIE is **November 22, 2021 up to 11:00 hours**. Technical proposals of the received firms shall be opened on the same day at **11:30 hours** in the presence of those who wish to be present. Tenders received late will not be considered in any case.
25. The Director General NIE reserves the right to accept or reject any or all tenders in part or whole, or change the quantity of tendered items as per provision of PPRA Rules.

**GUL HAYAT KHAN**  
**Dy. Director Procurement**  
**NIE, Islamabad**  
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