



**ASTI-FM 03-11  
REV 1/08 JUN 2022**

**DOST-ASTI Bids and Awards Committee  
Invitation to Bid (Public Bidding)**

<b>IB No:</b>	24-03-4718	<b>Date:</b>	March-26-2024
<b>PR No:</b>	GAA-24-02-18734	<b>Date:</b>	February-27-2024
<b>Source of Funds:</b>			
<b>Total ABC:</b>		Php 6,500,000.00	
<b>Time, Date &amp; Venue of Pre-bid Conference:</b>		April 02, 2024, 9:00 AM at Videoconferencing (MS Teams)	
<b>Time and Date of Submission of Bids:</b>		April 15, 2024, 09:00 AM	
<b>Time, Date &amp; Venue of Opening Bids:</b>		April 15, 2024, 9:30 AM at DOST-ASTI and Videoconferencing (MS Teams)	
<b>Date of availability of Complete Set of Documents:</b>		March 26, 2024	
<b>Deadline of Potential Bidder's Clarifications:</b>		April 05, 2024	
<b>Deadline of ASTI's Supplemental Bid Bulletin:</b>		April 08, 2024	
<b>Delivery Schedule:</b>			

The *Department of Science and Technology (DOST) - Advanced Science and Technology Institute (ASTI)*, through its Bids and Awards Committee (BAC), hereby invites all interested Bidders to submit their bids for the *item/s* listed below. *Section II. Instructions to Bidders (ITB) of the DOST-ASTI Bidding Documents provides information necessary for bidders to prepare responsive bids, in accordance with the requirements of DOST-ASTI. The ITB likewise provides information on bid submission, eligibility check, opening and evaluation of bids, post-qualification, and award of contract.*

Bidding will be conducted through open competitive bidding procedures *using a non-discretionary "pass/fail" criterion as specified in the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184.*

A complete set of *DOST-ASTI Bidding Documents may be acquired by interested Bidders on the date and address given on this document, and upon payment of the applicable fee, pursuant to the latest Guidelines issued by the Government Procurement Policy Board. Further, the DOST-ASTI Bidding Documents may be accessed through the DOST-ASTI website (<https://asti.dost.gov.ph/>).*

For further inquiries, *you may contact the DOST-ASTI BAC Secretariat at telephone number +63 2 8249-8500 / +63 2 8426-9755 local 1206/1212 or send your message to bac-sec@asti.dost.gov.ph .*

Respectfully,

**BAYANI BENJAMIN R. LARA**  
*BAC Chairperson*

NO.	TECHNICAL SPECIFICATIONS	QTY	UNIT	UNIT PRICE(Php)	TOTAL PRICE(Php)
1	<p><b>Supply, Delivery and Installation of New Uninterruptible Power Supply (UPS) as replacement UPS unit</b></p> <p>1. General Statement</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply, Delivery, Installation, Commissioning, Testing, and Power Up of One (1) Lot 48kVA Modular Uninterruptible Power Supply (UPS) as Back-up/Redundancy Unit for Data Center Operations to protect critical loads from utility-supplied power problems such as spikes, power interruptions, fluctuations, etc. ultimately enhancing stability of its Data Center Operations</p>	1	lot	6500000.00	6,500,000.00

1.2. The ABC is inclusive of all applicable government taxes and services charges (e.g., VAT, cancellation cost, duties, cost of delivery, etc.).

## 2. Technical Specifications (Minimum requirements)

### 2.1. Uninterruptible Power Supply

2.1.1. Quantity: One (1) lot

2.1.2. The maximum frame capacity shall be 48kVA/48kW

2.1.3. The UPS Battery shall be sized for 48kW

2.1.4. Battery runtime shall not be less than four (4) minutes at full load

2.1.5. UPS batteries must be hot swappable, modular, and VRLA

2.1.6. UPS System must not exceed 800kgs.

2.1.7. UPS Mains Input

2.1.7.1. Grid system: 3 phases + neutral + ground

2.1.7.2. Voltage range (full load): 340 – 477 V

2.1.7.3. Frequency range: 40 – 70 Hz with 10 Hz/sec slew rate

2.1.7.4. Power factor (PF): >0.98 @ load > 50%

2.1.7.5. Current Distortion: < 5%

2.1.7.6. Maximum input short-circuit level: 30 kA

2.1.7.7. Protection Backfeed contactor

2.1.8. UPS Bypass Input

2.1.8.1. Grid system: 3 phases + neutral + ground

2.1.8.2. Voltage (nominal): 380 V/400 V/415 V

2.1.8.3. Voltage (range): +/-10% (from selected voltage)

2.1.8.4. Frequency (nominal): 50/60 Hz

2.1.9. Frequency (range): +/-0.1 Hz, +/-3 Hz, +/-10 Hz (user selectable)

UPS Output

2.1.9.1. Grid system: 3 phases + neutral + ground

2.1.9.2. Voltage (nominal): 380 V/400 V/415 V L-L

2.1.9.3. Frequency regulation: 50/60 Hz bypass synchronized, 50/60 Hz +/-0.1% free running

2.1.9.4. Overload (normal and battery operation): 150% for 60 seconds, 125% for 10 min, 100% continuous

2.1.9.5. Voltage Distortion: < 2% from 0 to 100% linear load, < 6% full nonlinear load according to IEC/EN62040-3

2.1.10. Load PF: 0.5 leading to 0.5 lagging without any derating

2.1.11. Batteries

2.1.11.1. Nominal Battery voltage: +/-192 VDC (2x96 cells at 2 V)

2.1.11.2. Float voltage: +/-218 VDC (2x96 cells at 2.27 V)

2.1.11.3. End of discharge voltage (full load): +/-154 VDC (2x96 cells at 1.6 V)

2.1.11.4. End of discharge voltage (no load): +/-168 VDC (2x96 cells at 1.75 V)

2.1.11.5. Battery management system to continuously monitor the health of each removable battery module. This system shall notify the user in the event that a failed or weak battery module is found.

2.1.12. Efficiency

2.1.12.1. Normal operation: ≥ 95% at 35% – 100% load; ≥90% @ 15% – 34% load

2.1.12.2. Battery operation:  $\geq 94\%$  at 25% – 100% load;  $\geq 90\%$  @ 15% – 34% load

#### 2.1.13. Operation

2.1.13.1. Normal operation: The input converter and output inverter shall operate in an on-line manner to continuously regulate power to the critical load. The input and output converters shall be capable of full battery recharge while simultaneously providing regulated power to the load for all line and load conditions within the range of the UPS specifications.

2.1.13.2. Battery: Upon failure of the AC input source, the critical load shall continue being supplied by the output inverter, which shall derive its power from the battery system. There shall be no interruption in power to the critical load during both transfers to battery operation and retransfers from battery to normal operation.

2.1.13.3. Recharge: Upon restoration of the AC input source, the input converter and output inverter shall simultaneously recharge the battery and provide regulated power to the critical load.

2.1.13.4. Soft-Start Operation: As a standard feature, the UPS shall contain soft-start functionality, capable of limiting the input current from 0-100%

#### 2.1.14. Display, Controls, Software, and Connectivity

2.1.14.1. Control Logic: The UPS shall be controlled by two fully redundant, user-replaceable/swappable control modules.

2.1.14.2. Display Unit: The display shall consist of an alphanumeric display with backlight, four LEDs for quick status overview, and a keypad consisting of pushbutton switches.

2.1.14.3. Event log: The display unit shall allow the user to display a time and date stamped log of the most recent status and alarm events.

2.1.14.4. Network Adaptor: The Network Management Card shall allow one or more network management systems (NMS) to monitor and manage the UPS in TCP/IP network environments.

#### 2.1.15. Features

2.1.15.1. Must have six (6) 3x1 Pole 3 Wire 16A 3xIEC309 300cm, 360cm, 420cm

2.1.15.2. Must have automatic internal bypass

2.1.15.3. Must have self-diagnosing, field replaceable modules

2.1.15.4. Must have redundant intelligence module

2.1.15.5. Must have swappable static bypass

2.1.15.6. Must have intelligent battery management

2.1.15.7. Must have network management

2.1.15.8. Must have remote access over HTTP, HTTPs, Telnet, SSH, and SNMP v1 and v3

2.1.15.9. Must have dual mains input, top or bottom feed

2.1.15.10. Regulatory Compliance

2.1.15.11. CE, UL1778, EN/IEC 62040-1-1, EN/IEC/UL60950-1, EN50091-2/IEC 62040-2 (class A), FCC15A, EN/IEC 62040-3

#### 2.1.16. With Power Distribution Unit

2.1.16.1. Six (6) units

2.1.16.2. Acceptable input voltage: 220-240 VAC +6%, -10%

- 2.1.16.3. Maximum input current (phase): 32 A
- 2.1.16.4. Input frequency: 50/60 Hz
- 2.1.16.5. Input connection: 32 A, 3-pin
- 2.1.16.6. Input power: 7.4 kVA
- 2.1.16.7. Output voltage: 220-240 VAC
- 2.1.16.8. Maximum output current (outlet): IEC-320-C13 (10 A), IEC-320-C19 (16 A)
- 2.1.16.9. Maximum output current (phase): 32 A
- 2.1.16.10. Maximum input current (bank): 16 A
- 2.1.16.11. Output connections: thirty-six (36) IEC-320-C13, six (6) IEC-320-C19
- 2.1.16.12. Overload protection (internal): two (2) 16 A, 1-pole hydraulic-magnetic circuit breakers
- 2.1.16.13. Dimensions (H x W x D): 179.1 x 5.6 x 4.4 cm (70.5 x 2.2 x 1.7 in) (depth does not include toolless pegs)
- 2.1.16.14. Power cord length: 3.0 m (10 ft)
- 2.1.16.15. EN 55032 & EN 55035, EN 61000-3-2 & EN 61000-3-3, AS/NZS CISPR 32, KN 32 & KN 35, UL-EU, CE, EAC
- 2.1.16.16. Must have two (2) toolless mounting pegs for Zero U mounting
- 2.1.16.17. Must have liquid crystal display (LCD)
- 2.1.16.18. Must have input buttons allows to monitor parameters and measurements
- 2.1.16.19. Must have serial port, USB ports and LAN ports
- 2.1.16.20. Must have remote communication through network port
- 2.1.16.21. Must have environmental sensor port allows for monitoring of temperature and humidity of room or enclosure
- 2.1.16.22. Must have network management (TELNET, SNMP)
- 2.1.17. Electrical
- 2.1.17.1. The winning supplier must include the Supply, Delivery, and Installation of the following:
  - 2.1.17.1.1. New Electrical THHN wires and Conduits for the new UPS
  - 2.1.17.1.2. Enclosed Circuit Breaker (ECB) in NEMA 1 Enclosure with Neutral and Ground bus bar, 100AT, 400VAC, 3Phase, 3Pole, 60Hz
  - 2.1.17.1.3. 60KVA Stepdown Transformer
  - 2.1.17.1.4. Other Consumable Materials

### 3. Qualification and Documentary Requirement

- 3.1. Bidder must be an Elite Partner (tier 1) of the offered UPS Manufacturer Certificate must be provided
- 3.2. Offer UPS must have Local 3-tier support.
  - 3.2.1. 1st level-Supplier
  - 3.2.2. 2nd Level-Distributor
  - 3.2.3. 3RD Level- Manufacturer
- 3.3. Certificate Stating the Contact Person, Numbers, and email must be submitted
- 3.4. Bidder must have at least three (3) technical personnel with a Minimum of Five (5) Years 'work experience in Installation and maintenance of UPS. Curriculum Vitae of each personnel and Certificate of Employment (COE) must be submitted
- 3.5. Bidder must have a following personnels engaged to oversee the Installation, commissioning, and testing

of the New Modular UPS

3.5.1. Electrical Engineer

3.5.2. Safety Officer

3.5.3. Certified Datacenter Professional

3.6. Certificate of Employment, Curriculum Vitae, Valid PRC ID for Electrical Engineer, Safety training certificate from DOLE

3.7. Bidder must have at least one (1) employed personnel fully certified by the manufacturer on the similar Modular UPS product/brand being offered

3.8. The Offered Modular UPS /Model AS/Product line should not be End-of-Life (EOL) for the next Five (5) years and must have a local representative office customer care center in the Philippines with local hotline number to ensure quality of support and same timezone.

3.9. Offered brand must have a manufacturing plant in the Philippines to ensure the readiness and availability of parts and maintain the Mean Time to Repair requirement.

3.10. The winning supplier shall conduct a UPS user/operation orientation.

#### 4. Warranty and Support

4.1. The proposed UPS solution must have a warranty of three (3) years from turnover and acceptance

4.2. Must have 24x7 telephone, email, remote, and on-site support for three (3) years.

4.3. Support must always be available and accessible as part of the Support and Maintenance Agreement for three (3) years.

4.4. The winning Supplier must conduct Quarterly preventive Maintenance to ensure the operation efficiency of the UPS machine

4.5. For support and trouble call. winning bidder must provide a Service level agreement indicating the local hotline number, list of Engineer and the Local 3-tier support (1st level is the Supplier, 2nd Level is the distributor, and the 3RD Level the manufacturer)

#### 5. Training

5.1. The Winning Supplier shall provide administration training and knowledge transfer for a maximum of ten (10) DOST-ASTI personnel and enable the team to manage the day-to-day operations of the UPS installed.

5.2. Training shall be onsite for at least one (1) day and in batches, depending on the availability of both parties.

#### 6. Payment and Delivery Terms

6.1. Delivery and Installation of the item shall be made by the supplier within ninety (90) calendar days upon issuance of NTP.

6.2. Payment shall be processed only upon the issuance of certification of acceptance by the End-user that the items are delivered in accordance with the terms of this contract and have been duly inspected. No payment shall be made for items not yet delivered under this contract.

<b>TOTAL APPROVED BUDGET FOR THE CONTRACT (ABC):</b>	<b>Php 6,500,000.00</b>
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<b>RESERVATION CLAUSE</b>
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The Advanced Science and Technology Institute reserves the right to accept or reject any proposal, to annul the bidding process, and to reject all proposals at any time prior to contract award, without thereby incurring any liability to the affected proponent or proponents.
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