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Subject: **BID BULLETIN No. 1**

PROJECT: **Completion of the National Center for Teacher Education (NCTE) Building (formerly The PNU Convention and Training Center), Manila Campus**

Date: **December 15, 2025**

This is to inform all Potential Bidder/s of the following additional specifications for the 20 kVA Rack-Mounted Uninterruptible Power Supply (UPS) with Complete Accessories – One (1) Set. These additional specifications were not discussed nor agreed upon during the Pre-Bid Conference or the onsite inspection. Bidders are required to submit the corresponding technical datasheets.

SPECIFICATIONS OF 20 KVA RACK MOUNTED UNINTERRUPTED POWER SUPPLY (UPS) WITH COMPLETE ACCESSORIES – 1 SET (submit technical datasheet)

- Modes of Operation. The UPS will operate in the following modes:
    - Normal: The UPS inverter continuously supplies the critical AC load.
    - ECO Mode: The critical AC load will be continuously powered by the bypass with the inverter available to power the load if the bypass source voltage or frequency exceeds adjustable parameters of power quality.
    - Battery: Upon failure or degradation of the primary AC source, the load will be supplied through the inverter drawing power from the battery.
    - Recharge: If the primary AC source returns within tolerance limits prior to a UPS automatic end of discharge shutdown, the rectifier will recommence powering the inverter and simultaneously recharging the battery through the battery converter.
    - Bypass: If the UPS must be taken out of service, the static transfer switch will transfer the load to the bypass source.
    - Off-Battery: If the battery only is taken out of service, it will be disconnected from the DC-DC converter by means of an external disconnect circuit breaker.
    - Parallel: Inherent scalability features should be available to meet higher capacity and higher reliability requirements.

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  - Common Battery (for external battery bank): The UPS should be able to support the common battery function when multiple UPS systems are connected in parallel.

- Performance Requirements. The solid-state power components, magnetic, electronic devices and over current protection devices will operate within the manufacturer's recommended temperature when the UPS is operating at 100% critical load and maintain battery charging under either of the following conditions: Any altitude within the specified operating range ≤3000m elevation and any ambient temperature within the specified operating range of 0°C to 50°C.
- Input
  - A. Voltage: Input/output voltage specifications of the UPS will be
    - Rectifier AC Input: 220/230/240Vac, single-phase, two-wire-plus-ground for 5/6kVA
    - 380/400/415Vac, three-phase, four-wire-plus-ground for 16/20KVA
    - Single-Phase or Three-phase supply for 10kVA
  - Bypass AC Input: 220/230/240Vac, single-phase, two-wire-plus-ground for 5/6kVA
    - 380/400/415Vac, three-phase, four-wire-plus-ground or Single Phase for 16/20KVA
    - Single-Phase or Three-phase supply for 20kVA
  - AC Output: 220/230/240Vac, single-phase, two-wire-plus-ground for 5/6/10kVA
    - 380/400/415Vac, three-phase, four-wire-plus-ground or Single-Phase for 16/20kVA
- Voltage Range: 305-498Vac at full load; 173-498Vac at 50% derated load conditions without battery discharge.
- Frequency Range: 40 - 70Hz
- Maximum Inrush Current: UPS inrush current not to exceed 1.5 times rated input current.
- Power Factor: Minimum 0.99 at full load & 0.98 at half load with nominal input voltage
  - Minimum 0.95 at full load for 3phase in/1 phase out for 10kVA
- Current Distortion: Less than 5% THD at full load input current in double-conversion mode.
- Surge Protection: Sustains input surges of 4kV (Line to ground) without damage as per criteria listed in EN 61000-4-5: 1995.
- AC Output
  - Load Rating: 100% of load rating @ 30˚C, 80% of load rating @ 40˚C, 70% load rating @ 50˚C for any load from 0.5 lagging to unity
  - Load power factor: Unity
  - Voltage Tolerance
    - ±1% RMS average for a balanced, three-phase load
    - ±2% for 100% unbalanced three phase load

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- +/- 3% for parallel UPS

- Voltage Adjustment Range: ±5% for line drop compensation adjustable by factory service personnel
- Voltage Distortion:
  - <2% for 0-100% linear loads
  - <5% for 0-100% Non-linear loads
- Frequency Regulation:
  - Synchronized with internal clock: +/-0.25%
  - Synchronized with bypass: +/-0.25%
- Frequency synchronization window: Synchronized to bypass: Nominal ±5% Hz
- System Efficiency: defined as output kW/input kW at rated lagging load power factor; and not less than the values listed below

In Online double conversion mode: (depending on load)
For 5/6kVA – up to 95.5%
For 10kVA- up to 95.8%
For 16/20kVA- up to 96.2%
In Eco mode: up to 99%

- Phase Imbalance:
  - Balanced loads 120° ±1°
  - 100% unbalanced loads 120° ±1°
- Voltage Transients (average of all three phases):
  - 0-100% or 100-0%

Response Meets IEC 62040-3: 2010 Figure 2 Curve 1, Class 1
Meets ITIC and CBEMA Curve Requirements

- Overload Capacity:

105% - 125% of full load for 5minutes
125% - 150% of full load for 1minute
>150% of full load for a minimum of 200 milliseconds

- Grounding. The UPS chassis will have an equipment ground terminal.
- ENVIRONMENTAL CONDITIONS. The UPS will be able to withstand the following environmental conditions without damage or degradation of operating characteristics:
  - Operating Ambient Temperature
    - UPS: 0 to 50˚C
    - Battery: 25°C ± 3°C (depends on battery mfg. recommendations)
  - Storage temperature
    - -40°C ~ +70°C (battery excluded); -25°C ~ +55°C (battery included)
  - Relative Humidity
    - 0 to 95%, non-condensing
  - Altitude

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- ≤ 3000m; above sea level derate power by 1% per each 100m increase
- Audible Noise Level (measured 1m from the surface of the unit)
  - <55 dBA for 5/6/10kVA
  - <58 dBA for 16/20kVA

- **OR**
  - Input: Output - 1-in: 1-out, 3-in: 1-out or 3-in: 3-out
  - Mains Input
    - Input Wiring : L+N+PE /3Ph+N+PE
    - Rated Voltage : L-N: 220/230/240V AC
    - Input Voltage Range : L-N: 80-280V AC
    - Input Frequency Range : 40-70Hz
    - Input Power Factor : 0.99
  - Bypass Input
    - Rated Voltage : L-N: 220/230/240V AC
    - Frequency : 50/60 ± 6Hz
  - Battery
    - Rated Voltage : 384-480V DC, 32-40 section adjustable, default 40
  - Output
    - Output Power Factor : 0.9
    - Waveform : Sine wave, THDv<2%
    - Efficiency : 95%
    - ECO Efficiency : 98%
  - Certifications
    - EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE
  - Communications

1. USB (optional RS485/Dry contact/SNMP)

This **Supplemental Bid Bulletin No. 1** shall form part of the Bid Documents (should be included/attached in your Bidding Documents). Any provisions in the Bid Documents inconsistent herewith are hereby amended, modified, and superseded accordingly.

For the information and guidance of all concerned.

DR. DENMARK L. YONSON
Chairperson, R-BAC