



Republic of the Philippines  
 Department of Budget and Management  
**PROCUREMENT SERVICE**  
**BIDS AND AWARDS COMMITTEE**



**Bid Bulletin No. 1**  
 February 20, 2019

**Public Bidding No. 19-045-2**

**SUPPLY, DELIVERY, INSTALLATION, TESTING, AND COMMISSIONING OF UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM FOR THE LIGHT RAIL TRANSIT AUTHORITY (LRTA)**

Issued pursuant to Sec. 22.5 of the IRR of R.A. 9184 to clarify and/or amend certain provisions in the Bidding Documents issued for this project, considering the issues raised and clarifications made by prospective bidders during the **Pre-Bid Conference** held on **13 February 2019**, likewise, respond to bidders' written queries received within the prescriptive period for filing.

This Bid Bulletin is being issued to amend<sup>1</sup> portions of the bidding documents. Specifically, the following portion of the bidding documents shall now be read as follows:

**I. AMENDMENTS**

**1. SECTION III: BID DATA SHEET**

Clause	Reference		Bases for Amendment/s
	From	To	
29.2	No licenses and permits required:  xxx  1. 2. 3. 4. 5. 6. 7. 8. Certificate of Distributorship duly notarized by the consular Section of the embassy from the country of origin (Red Seal, if applicable) 9. Certificate of Distributorship duly notarized by the Consular Section of the embassy from the country of origin (Red Seal)	No licenses and permits required:  xxx  1. 2. 3. 4. 5. 6. 7. 8. Certificate of Distributorship duly notarized by the consular Section of the embassy from the country of origin (Red Seal, if applicable) <del>9. Certificate of Distributorship duly notarized by the Consular Section of the embassy from the country of origin (Red Seal)</del>	To delete the redundant requirement.

<sup>1</sup> For the purpose of this Bulletin and for better understanding of its contents, the following rules shall apply: (a) Double Strike out – denotes deletion; denotes inclusion or new item/requirement; and "xxx" – denotes separation of phrase/s being amended from the rest of the main text.

For the purpose of this Bulletin and for better understanding of its contents, the following rules shall apply: (a) Double Strike out – denotes deletion; (b) Underline – denotes inclusion or new item/requirement; and "xxx" – denotes separation of phase/s being amended from the rest of the main text.



2. SECTION VII: TECHNICAL SPECIFICATIONS

Page	Reference		Bases for Amendment/s
	From	To	
73	<p>xxx</p> <p>1. Uninterruptible Power Supply (UPS) – Five (5) units                      - 60 KVA / 60 KW, 3φ, 480 Vac/230Vac, 60 Hz                      - 1 hour back-up time at 60% load                      - xxx</p>	<p>xxx</p> <p>1. Uninterruptible Power Supply (UPS) – Five (5) units                      - 60 KVA / 60 KW, 3φ, 480 Vac/230Vac, 60 Hz                      - <b><u>With Battery Bank VRLA – Five (5) units</u></b>                          &gt; <b><u>Voltage Rating: 12 volts</u></b>                          &gt; <b><u>Capacity: 100Ah (minimum)</u></b>                          &gt; <b><u>Constant Voltage: 13.6 – 13.8V Charge for Standby use</u></b>                          &gt; <b><u>Self-discharge at 20°C &lt;2%/month</u></b>                      - xxx</p>	<p>To insert the requirement that was deleted under item no. 3 for better understanding.                      (Refer to Appendix A)</p>
79	<p>xxx</p> <p>2. Uninterruptible Power Supply (UPS) – One (1) unit                      - 80 KVA / 80 KW, 3φ, 480 Vac/230Vac, 60 Hz                      - 1 hour back-up time at 60% load                      - xxx</p>	<p>xxx</p> <p>2. Uninterruptible Power Supply (UPS) – One (1) unit                      - 80 KVA / 80 KW, 3φ, 480 Vac/230Vac, 60 Hz                      - <b><u>With Battery Bank VRLA – Two (2) units</u></b>                          &gt; <b><u>Voltage Rating: 12 volts</u></b>                          &gt; <b><u>Capacity: 100Ah (minimum)</u></b>                          &gt; <b><u>Constant Voltage: 13.6 – 13.8V Charge for Standby use</u></b>                          &gt; <b><u>Self-discharge at 20°C &lt;2%/month</u></b>                      - xxx</p>	<p>To insert the requirement that was deleted under item no. 3 for better understanding.                      (Refer to Appendix A)</p>
84	<p>3. Battery Bank VRLA – Seven (7) units                      - Voltage Rating: 12 volts                      - Capacity: 100Ah (minimum)                      - Constant Voltage: 13.6 – 13.8V Charge for standby use                      - Self-discharge at 20°C &lt;2%/month</p>	<p><del>3. Battery Bank VRLA – Seven (7) units                      - Voltage Rating: 12 volts                      - Capacity: 100Ah (minimum)                      - Constant Voltage: 13.6 – 13.8V Charge for standby use                      - Self-discharge at 20°C &lt;2%/month</del></p>	<p>To delete the requirement and distribute to item no. 1 and no.2 for better understanding.                      (Refer to Appendix A)</p>



		<p><b><u>owner and sole proprietor or authorized representative of Name of Bidder, has the full power and authority to participate, submit the bid, and to sign and execute the ensuing contract, on the latter's behalf for the Supply, Delivery, Installation, Testing and Commissioning of Uninterruptible Power Supply (UPS) System for the Light Rail Transit Authority.</u></b></p> <p><b><u>We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.</u></b></p>	
	xxx	xxx	
98 Annex "C"	<p>Xxx</p> <p>Statement of Single Largest Completed Contract Similar to the Contract to be Bid</p> <p>This is to certify (Company) has the following completed contracts for the period CY 2007-2017. (Note: covering 10 years up to the opening of bids)</p>	<p>Xxx</p> <p>Statement of Single Largest Completed Contract Similar to the Contract to be Bid</p> <p>This is to certify (Company) has the following completed contracts for the period <del>CY 2007-2017</del>. (<del>Note: covering 10 years up to the opening of bids</del>)</p>	<p><b>To correct and amend the Bid Form Annex "C" for better understanding as approved by the BAC.</b></p>

**II. CLARIFICATION/S FROM PROSPECTIVE SUPPLIERS:**

Company	Query/Clarification/ Suggested Revision	BAC Response/Remarks
<b>During the Pre-bid Conference held on February 13, 2019 at 10:00AM</b>		
Wite Lite	Clarified if the requirement for the SLCC can be changed to aggregate contract.	<p><b>BAC took note of the clarification.</b></p> <p><b>As agreed with the end-user, the BAC retains the requirement.</b></p>
Wite Lite	Clarified if Consultant is allowed to be included in the list as key personnel even if it is not employed in the company.	<p><b>BAC took note of the clarification.</b></p> <p><b>As agreed with the end-user, it should be under the company's list of personnel.</b></p>
Transmolitor	Clarified if practitioner Safety Officer would possibly be considered to be part of the list of key personnel even if it is not accredited by DOLE	<p><b>BAC took note of the clarification.</b></p> <p><b>The Chairperson reiterated that the requirement is accredited by DOLE</b></p>
Transmolitor	Clarified if the BAC will consider their project as Supply and Delivery of	<p><b>BAC took note of the clarification.</b></p> <p><b>The end-user (TWG) affirmatively</b></p>

	Hybrid Power Supply as a similar contract for this project.	responded that it is acceptable as long as it includes the "Supply, Delivery and Installation" as required
Unison	Clarified if sub-contracting is allowed.	The BAC reply affirmatively subcontracting is not allowed.
Comfac	Clarified if the company has a branch office in the Philippines do they need to have the document/certification notarized by the consular section of the embassy from the country of origin.	BAC took note of the clarification. The Chairperson reiterated that if the document is in a foreign language not in English language then it should be notarized by the embassy of the country of origin.
LSI	Clarified who will issue the Certificate of Distributorship, if the company has a local partner, is it the manufacturer or the Distributor? Does the document/certification need to be notarized?	BAC took note of the clarification. The Chairperson reiterated that the requirement will be issued by the manufacturer and need to be notarized if it is not in English language by the Consular Section of the Embassy from the country of origin.
ZI-Argus	Clarified if it is needed to provide 480 volts using a transformer if their proposal is lower than the required 480volts.	BAC took note of the clarification. The end-user TWG reiterated to provide transformer.
Global Empire and LSI	Clarified if the battery temperature Sensor is per battery or there is required location.  P2RO gave some information that it is part of the UPS only and not for additional requirement needed in the technical specifications.	BAC took note of the clarification.  The BAC agreed that the requirement is for the UPS only.
Transgen	Clarified that the 3.2A rating shall be seen in the reference materials.	BAC took note of the clarification. The BAC reiterated that it should be reflected in any of the reference materials as validation of the evaluation of the technical specification.
Prospective bidders	Requested for site visit	The BAC set the schedule with coordination with the End-user TWG  Schedule is February 14, 2019 Time : 10:00AM Meeting Place: LRTA Line 2 Depot
<b>Letters received within the deadline of submission of written clarification (due date: February 15, 2019)</b>		
Global Empire International Group of Companies	Regarding the power analyzer is it 3 phase or single phase tester?	BAC took note of the manifestation.  As referred to the End-User thru email, End-user affirmatively answer 3 phase

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Global Empire International Group of Companies	Please confirm if the battery cabinet is open or close casing?	<b>BAC took note of the manifestation.</b>  As referred to the End-User thru email, End-user clarified that Open or Close casing of battery cabinet is acceptable.
Global Empire International Group of Companies	UPS to be supplied will not have inclusion of external maintenance bypass?	<b>BAC took note of the manifestation.</b>  As referred to the End-User thru email, End-user clarified that External maintenance bypass is included.
Global Empire International Group of Companies	Can we supply 6-units Battery Bank instead of 7 units?	<b>BAC took note of the manifestation, and hereby denies the request.</b>  As referred to the End-User thru email, End-user replies "No".
Global Empire International Group of Companies	For battery VRLA 12 volts 100AH minimum can be use less 100AH capacity	<b>BAC took note of the manifestation, and hereby denies the request.</b>  As referred to the End-User thru email, End-user replies "No".
PNC Computer Services Inc.	UPS Power Factor 1 or unity – is it strictly or we can offer higher capacity to meet your requirements?  Example: A. - 90KVA x PF 0.9 = 81 Kw for 80KVA UPS requirement - 100KVA x PF 0.8 = 80 Kw for 80KVA UPS requirement. B. - 90KVA x PF 0.9 = 81Kw for 60KVA UPS requirement - 80KVA x PF 0.8 = 64Kw for 60KVA UPS requirement	<b>BAC took note of the manifestation.</b>  As referred to the End-User thru email, End-user replies "Power Factor shall be one (1)".
PNC Computer Services Inc.	Is it okay to purchase other product such as: <b>Power Quality Analyzer, Battery Tester and Infrared Thermometer</b> from other vendor/ direct supplier.	<b>BAC took note of the manifestation.</b>  As referred to the End-User thru email, End-user replies "Yes, provided that it will conform to the minimum technical specification".
PNC Computer Services Inc.	Do we have to strictly comply on the technical specification of other product requirement such as <b>power quality analyzer, battery tester and infrared thermometer.</b>	<b>BAC took note of the manifestation.</b>  As referred to the End-User thru email, End-user replies "Yes".
P2RO Inc.	Are all bidders required to submit during the bidding the Battery Computation of the Back-up time for 60KVA/60KW and 80KVA/80KW for 1 hour at 60% load?	<b>BAC took note of the manifestation.</b>  As referred to the End-User thru email, End-user replies "Yes".

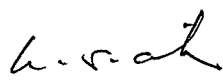
P2RO Inc.	<p>“60KVA/60KW, 3Ø, 480Vac / 230Vac, 60Hz” page 73</p> <p>“680KVA/80KW, 3Ø, 480Vac / 230Vac, 60Hz” page 79</p> <p>Following the specifications, will you be accepting a factory tested UPS with 480VAC input and 230VAC output (with transformers if necessary) during the FAT</p>	<p><b>BAC took note of the manifestation.</b></p> <p>As referred to the End-User thru email, End-user replies “Yes”.</p>
Kolonwel	<p>During the Pre-Bid Conference and was reiterated thru Written Clarification Letter, the prospective bidder suggested to delete the requirement (b) and (c) under Bid Data Sheet, ITB Clause 12.1(b)(ii) and replace with 1% retention money</p>	<p><b>BAC took note of the manifestation, and hereby denies the request.</b></p> <p>As referred to the End-User thru letter, End-user recommended to retain the requirement thru reply letter dated 06 November 2018.</p>
Kolonwel	<p>During the Pre-Bid Conference and was reiterated thru Written Clarification Letter, the prospective bidder suggested to delete the word “Exclusive” under the requirement (f) of the Bid Data Sheet, ITB Clause 12.1(b)(ii).</p>	<p><b>BAC took note of the manifestation, and hereby denies the request.</b></p> <p>As referred to the End-User thru letter, End-user recommended to retain the requirement thru reply letter dated 06 November 2018.</p>
Kolonwel	<p>During the Pre-Bid Conference and was reiterated thru Written Clarification Letter, the prospective bidder suggested to delete the requirement of Certification from the fire pump manufacturer that the fire pump of the fire truck being offered bidder has been available in the Philippine Market for the last fifteen (15) years preceding the submission and opening of bids under Bid Data Sheet, ITB Clause 12.1(b)(ii)(h).</p>	<p><b>BAC took note of the manifestation, and hereby denies the request.</b></p> <p>As referred to the End-User thru letter, End-user recommended to retain the requirement thru reply letter dated 06 November 2018.</p>
Kolonwel	<p>During the Pre-Bid Conference and was reiterated thru Written Clarification Letter, the prospective bidder suggested to delete the word “Exclusive” under the requirement (f) of the Bid Data Sheet, ITB Clause 12.1(b)(ii).</p>	<p><b>BAC took note of the manifestation, and hereby denies the request.</b></p> <p>As referred to the End-User thru letter, End-user recommended to retain the requirement thru reply letter dated 06 November 2018.</p>
Kolonwel and Palmer Asia	<p>During the Pre-Bid Conference and was reiterated thru Written Clarification Letter, the prospective bidder suggested to delete the requirement no. 7 letters (a up to d) of the Bid Data Sheet, ITB Clause 29.2 and replace with Service Agreement between the Bidder and the declared Service Center.</p>	<p><b>BAC took note of the manifestation, and hereby denies the request.</b></p> <p>As referred to the End-User thru letter, End-user recommended to retain the requirement thru reply letter dated 06 November 2018.</p>

Kolonwel	During the Pre-Bid Conference and was reiterated thru Written Clarification Letter, the prospective bidder suggested to extend the submission of the prototype model from Sixty (60) CD to Ninety (90) CD under Section VI: Schedule of Requirements	<p><b>BAC took note of the manifestation, and hereby denies the request.</b></p> <p>As referred to the End-User thru letter, End-user recommended to retain the requirement thru reply letter dated 06 November 2018.</p>
Kolonwel	During the Pre-Bid Conference and was reiterated thru Written Clarification Letter, the prospective bidder suggested to amend the requirement from Sandwich type PTO to PTO Engine Operated under Section VII: Technical Specifications, page 82 of the bidding document.	<p><b>BAC took note of the manifestation, and hereby denies the request.</b></p> <p>As referred to the End-User thru letter, End-user recommended to retain the requirement thru reply letter dated 06 November 2018.</p>
Kolonwel	All other clarifications received thru Letter Dated October 30, and 31, 2018 are referred to the end-user.	<p><b>BAC took note of the manifestation, and hereby denies the request.</b></p> <p>As referred to the End-User thru letter, End-user recommended to retain the requirement thru reply letter dated 06 November 2018.</p>

All other portions of the Bidding Documents affected by these amendments shall be made to conform to the same.

Amendments/inclusions/clarifications made herein shall be considered an integral part of the Bidding Documents.

The changes made in the Philippine Bidding Documents (5<sup>th</sup> Edition, October 2016) are deemed integrated in the terms and conditions for this project.

  
**ENGR. MANUEL S. AVILA**  
 Chairperson, BAC II



TECHNICAL SPECIFICATIONS

LOT NO. 1 : Supply, Delivery, Installation, Testing, and Commissioning of Stations' Uninterruptible Power Supply (UPS) System (Phase 2) and Depot Electrical Room – Line 2

QUANTITY : One (1) Lot

APPROVE BUDGET FOR : P 11,680,290.00  
THE CONTRACT

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
Supply, Delivery, Installation, Testing and Commissioning of Uninterruptible Power Supply (UPS), branded, brand new, complies with the following minimum requirements unless specified:			
<b>1. Uninterruptible Power Supply (UPS) – Five (5) units</b>	Brand/Model:	Brand/Model:	
- 60 KVA / 60 KW, 3 $\phi$ , 480 Vac/230Vac, 60 Hz			
- <b>With Battery Bank VRLA – Five (5) units</b>	Brand/Model:	Brand/Model:	
> <b>Voltage Rating: 12 volts</b>			
> <b>Capacity: 100Ah (minimum)</b>			
> <b>Constant Voltage: 13.6 – 13.8V Charge for Standby use</b>			
> <b>Self-discharge at 20°C &lt;2%/month</b>			
- 1 hour back-up time at 60% load			
- Continues duty, on-line double conversion			
- IGBT Technology (consists of but not limited to the following components):			
> Rectifier			
> Inverter			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
➤ Static Switch			
➤ Static bypass			
➤ Batteries			
➤ Manual bypass			
➤ Monitoring and control panel			
➤ Battery management system			
1. Real time calculation of the remaining back-up time			
2. Real time measure battery voltage, current and capacity			
3. Periodical battery test for monitoring battery efficiency and for programming preventive or curative maintenance in case of abnormal situations			
4. Manages battery charger that responds to the networking temperature to maximize battery lifetime			
5. With adaptive algorithm that automatically selects the recharging method according to the environmental and battery conditions.			
➤ Capable for parallel and/or N+1 configuration			
- Standard Communication and Management Kit:			
➤ RS232/ RS485 interface ports and manufacturer's standard			
- Standard Electrical Kit:			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
➤ Integrated maintenance by-pass			
➤ Double input network (optional separate auxiliary mains)			
➤ Integrated back feed protection			
➤ Smart batteries recharge temperature dependent			
➤ Output synchronization			
- Standard Mechanical and Environmental Kit:			
➤ IP 20			
➤ Battery temperature sensor			
- Input Parameters:			
➤ Voltage 480Vac line to line with ground (used input isolation transformer if necessary)			
➤ Voltage Tolerance: <b>At least ±10%</b> of nominal voltage			
➤ Frequency Tolerance: 60 Hz ( <b>At least ±10%</b> )			
➤ Power Factor: <b>1.0 or unity</b>			
➤ THDI: <b>maximum</b> of 5% without any external filter while operating at Full Load Condition			
- Output Parameters:			
➤ Voltage: 230Vac line to line with ground (used output transformer if necessary)			
➤ Voltage Regulation Static: ±1%			
➤ Dynamic: VF-SS-111 (EN62040-3) compliant			
➤ Frequency Regulation: ±2%Hz			
➤ Power Factor: <b>1.0 or unity</b>			
➤ Crest Factor: 3:1			
➤ Harmonic Distortion: <1% doe linear loads,			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
6% for non-linear loads			
➤ Overload: 110% continuous, 125% for 10 minutes, 150% for 60 seconds			
➤ Inverter Shortcut Circuit: 3.2 <u>Amperes</u> in 40ms capability			
➤ Bypass: Automatic and Manual			
- Efficiency: (TUV <u>SUV Tested</u> <u>or other Certifications issued by internationally recognized certifying organization</u> )			
➤ Online mode: 96% at nominal load			
➤ ECO MODE: Up to 98% (optional)			
➤ Certification: TUV <u>or other Certifications issued by internationally recognized certifying organization</u>			
- Battery System:			
➤ Back-up time: at least 1-hour			
➤ Charging type: Floating/intermittent			
➤ Temperature: Standard			
➤ Compensating: Charger			
➤ Battery Charger: Independent			
➤ Battery Charging Current: 15A – 25A <u>or appropriate to the battery installed.</u>			
➤ Flywheel Compatible, <u>(optional)</u>			
- Controls and Indicators:			
➤ Microprocessor controlled circuitry: Fully automatic operation of the UPS shall be provided through the use of			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
microprocessor controlled logic			
<ul style="list-style-type: none"> <li>➤ Control Panel Indicator: The UPS control panel shall consist of Monitoring panel in LCD display for the UPS System data, status, messages, alarm messages settings and other important parameters</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Minimum requirements for control panel indicator in LCD shall consist but not limited to the following:</li> </ul>			
1. UPS status			
2. Alarm messages			
3. Input voltages and its condition			
4. Output voltages			
5. Frequency (input and output)			
6. Autonomy time/ back-up time of the battery			
7. Power delivered by the UPS			
8. Battery Voltages			
9. Bypass enable/disable			
10. Other standard control panel in LCD display			
11. User friendly operation buttons			
- Mechanical Design:			
<ul style="list-style-type: none"> <li>➤ Enclosures: The UPS and any extended battery cabinets shall be designed for office or computer room applications. The cabinets shall be lined up and match in style and appearance and taking</li> </ul>			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
also into consideration the space to be occupied.			
➤ Ventilation: Forced air cooling			
- Environmental Requirements:			
➤ Operating Condition: 0-95% non-condensing humidity, 0-40°C or In accordance with the US, European, Japan & Philippine Standard.			
➤ Storage Condition: 0-95% non-condensing humidity, -20 to 40°C or in accordance with the US, European, Japan & Philippine Standard.			
- Communication and Management:			
➤ Interface Port: USB, RS232 / RS485; embedded LAN interface and dry contact for SCADA interface communication ports; ➤ <b>Protocol:</b> MODBUS TCP/ JBUS RTU interface			
- Standards:			
➤ Safety: EN 62040-1 (TUV SUD certified, EN 60950-1-1) <b><u>or other Certifications issued by internationally recognized certifying organization</u></b>			
➤ Performance and Topology: EN 62040-3 (VFI-SS-111) <b><u>or other Certifications issued by internationally recognized certifying organization</u></b>			
➤ EMC Standard: EN 62040-2 <b><u>or other Certifications issued by internationally recognized certifying</u></b>			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
<u>organization</u>			
➤ <u>Product Certification: CE or other Certifications issued by internationally recognized certifying organization</u>			
- Stand alone back-up operation			
- Downloadable data/ history logs for all parameters (Voltage, Ampere, PF, etc.)			
<b>2. <u>Uninterruptible Power Supply (UPS) – One (1) unit</u></b>	Brand/Model:	Brand/Model:	
- 80 KVA / 80 KW, 3φ, 480 Vac/230Vac, 60 Hz			
- <b><u>With Battery Bank VRLA – Two (2) units</u></b>	Brand/Model:	Brand/Model:	
➤ <b><u>Voltage Rating: 12 volts</u></b>			
➤ <b><u>Capacity: 100Ah (minimum)</u></b>			
➤ <b><u>Constant Voltage: 13.6 – 13.8V Charge for Standby use</u></b>			
➤ <b><u>Self-discharge at 20°C &lt;2%/month</u></b>			
- 1 hour back-up time at 60% load			
- Continues duty, on-line double conversion			
- IGBT Technology (consists of but not limited to the following components):			
➤ Rectifier			
➤ Inverter			
➤ Static Switch			
➤ Static bypass			
➤ Batteries			
➤ Manual bypass			
➤ Monitoring and control panel			
➤ Battery management system			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
1. Real time calculation of the remaining back-up time			
2. Real time measure battery voltage, current and capacity			
3. Periodical battery test for monitoring battery efficiency and for programming preventive or curative maintenance in case of abnormal situations			
4. Manages battery charger that responds to the networking temperature to maximize battery lifetime			
5. With adaptive algorithm that automatically selects the recharging method according to the environmental and battery conditions.			
➤ Capable for parallel and/or N+1 configuration			
- Standard Communication and Management Kit:			
➤ RS232/ RS485 interface ports and manufacturer's standard			
- Standard Electrical Kit:			
➤ Integrated maintenance by-pass			
➤ Double input network (optional separate auxiliary mains)			
➤ Integrated back feed protection			
➤ Smart batteries recharge temperature dependent			



AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
➤ Output synchronization			
- Standard Mechanical and Environmental Kit:			
➤ IP 20			
➤ Battery temperature sensor			
- Input Parameters:			
➤ Voltage 480Vac line to line with ground (used input isolation transformer if necessary)			
➤ Voltage Tolerance: <b>At least 10%</b> of nominal voltage			
➤ Frequency Tolerance: 60 Hz ( <b>at least ±10%</b> )			
➤ Power Factor: <b>1.0 or unity</b>			
➤ THDI: <b>maximum of 5%</b> without any external filter while operating at Full Load Condition.			
- Output Parameters:			
➤ Voltage: 230Vac line to line with ground (used output transformer if necessary)			
➤ Voltage Regulation Static: ±1%			
➤ Dynamic: VF-SS-111 (EN62040-3) compliant			
➤ Frequency Regulation: ±2%Hz			
➤ Power Factor: <b>1.0 or unity</b>			
➤ Crest Factor: 3:1			
➤ Harmonic Distortion: <1% doe linear loads, 6% for non-linear loads			
➤ Overload: 110% continuous, 125% for 10 minutes, 150% for 60 seconds			
➤ Inverter Shortcut Circuit: <b>3.2Ampere</b> in 40ms capability			
➤ Bypass: Automatic and			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
Manual			
<ul style="list-style-type: none"> <li>- Efficiency: (TUV SUV Tested <u>or</u> other <b><u>Certifications issued by internationally recognized certifying organization</u></b>)</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Online mode: 96% at nominal load</li> </ul>			
<ul style="list-style-type: none"> <li>➤ ECO MODE: Up to 98% (optional)</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Certification: TUV <u>or other Certifications issued by internationally recognized certifying organization</u></li> </ul>			
<ul style="list-style-type: none"> <li>- Battery System:</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Back-up time: at least 1-hour</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Charging type: Floating/intermittent</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Temperature: Standard</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Compensating: Charger</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Battery Charger: Independent</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Battery Charging Current: <b>15A – 25A <u>or appropriate to the battery installed.</u></b></li> </ul>			
<ul style="list-style-type: none"> <li>➤ Flywheel compatible (optional)</li> </ul>			
<ul style="list-style-type: none"> <li>- Controls and Indicators:</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Microprocessor controlled circuitry: Fully automatic operation of the UPS shall be provided through the use of microprocessor controlled logic</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Control Panel Indicator: The UPS control panel shall consist of Monitoring panel in LCD display for the UPS System data, status, messages, alarm</li> </ul>			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
messages settings and other important parameters			
<ul style="list-style-type: none"> <li>➤ Minimum requirements for control panel indicator in LCD shall consist but not limited to the following:</li> </ul>			
1. UPS status			
2. Alarm messages			
3. Input voltages and its condition			
4. Output voltages			
5. Frequency (input and output)			
6. Autonomy time/ back-up time of the battery			
7. Power delivered by the UPS			
8. Battery Voltages			
9. Bypass enable/disable			
10. Other standard control panel in LCD display			
11. User friendly operation buttons			
- Mechanical Design:			
<ul style="list-style-type: none"> <li>➤ Enclosures: The UPS and any extended battery cabinets shall be designed for office or computer room applications. The cabinets shall be lined up and match in style and appearance and taking also into consideration the space to be occupied.</li> </ul>			
<ul style="list-style-type: none"> <li>➤ Ventilation: Forced air cooling</li> </ul>			
- Environmental Requirements:			
<ul style="list-style-type: none"> <li>➤ Operating Condition: 0-95% non-condensing humidity, 0-40°C or In</li> </ul>			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
accordance with the US, European, Japan & Philippine Standard.			
<ul style="list-style-type: none"> <li>➤ Storage Condition: 0-95% non-condensing humidity, -20 to 40°C or in accordance with the US, European, Japan &amp; Philippine Standard.</li> </ul>			
- Communication and Management:			
<ul style="list-style-type: none"> <li>➤ Interface Port: USB, RS232 / RS485; embedded LAN interface and dry contact for SCADA interface communication ports;</li> <li>➤ <b>Protocol:</b> MODBUS TCP/ JBUS RTU interface</li> </ul>			
- Standards:			
<ul style="list-style-type: none"> <li>➤ Safety: EN 62040-1 (TUV SUD certified, EN 60950-1-1) <u>or other Certifications issued by internationally recognized certifying organization</u></li> </ul>			
<ul style="list-style-type: none"> <li>➤ Performance and Topology: EN 62040-3 (VFI-SS-111) <u>or other Certifications issued by internationally recognized certifying organization</u></li> </ul>			
<ul style="list-style-type: none"> <li>➤ EMC Standard: EN 62040-2 <u>or other Certifications issued by internationally recognized certifying organization</u></li> </ul>			
<ul style="list-style-type: none"> <li>➤ Product Certification: CE <u>or other Certifications issued by internationally recognized certifying organization</u></li> </ul>			
- Stand alone back-up operation			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
Downloadable data/ history logs for all parameters (Voltage, Ampere, PF, etc.)			
<b>3. Battery Tester - One (1) unit</b>	Brand/Model:	Brand/Model:	
<ul style="list-style-type: none"> <li>Resistance Range: 3.000m/ 30.00m/ 300.0m/ 3.000Ω</li> </ul>			
<ul style="list-style-type: none"> <li>Resistance Accuracy: ±0.8% reading, ±6 digit, 3.000 mΩ, ±1.0% reading, ±1.0% digit</li> </ul>			
<ul style="list-style-type: none"> <li>Voltage Range: ±6.000V/ 60.00V</li> </ul>			
<ul style="list-style-type: none"> <li>Voltage Accuracy: ±0.08% reading, ±6 digit</li> </ul>			
<ul style="list-style-type: none"> <li>Temperature Measurement Range: -10.00°C ~60.0°C</li> </ul>			
<ul style="list-style-type: none"> <li>Temperature Accuracy: ±1°C</li> </ul>			
<ul style="list-style-type: none"> <li>Measurement Frequency: 1KHz ±30Hz</li> </ul>			
<ul style="list-style-type: none"> <li>Measurement Current (Range): 150 mA (3m/ 30 mΩ), 15mA (300 mΩ), 1.5 mA (3Ω), open terminal voltage: 5V max.</li> </ul>			
<ul style="list-style-type: none"> <li>Max allowable Voltage: DC 60V</li> </ul>			
<ul style="list-style-type: none"> <li>Comparator: Primary and Secondary resistance levels, minimum voltage limit</li> </ul>			
<ul style="list-style-type: none"> <li>No. of comparator Settings: 200</li> </ul>			
<ul style="list-style-type: none"> <li>Data Storage: 4800 sets (date &amp; time, resistance, voltage, temperature, comparator value, comparator decision)</li> </ul>			
<ul style="list-style-type: none"> <li>PC interface: USB ( with bundled software for data transfer to PC)</li> </ul>			
<ul style="list-style-type: none"> <li>Power Supply: Battery operated</li> </ul>			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
<ul style="list-style-type: none"> <li>• The units shall be delivered with the following accessories:</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Pin type lead, one USB cable, Data management PC software, Rigid carrying case, Zero adjustment board, Spare batteries, and one spare fuse</li> </ul>			
<b>4. Power/ Quality Analyzer - One (1) unit</b>	Brand/Model:	Brand/Model:	
<ul style="list-style-type: none"> <li>• Shall include the following:</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Energy loss calculator for active and reactive power measurements, unbalance and harmonic power;</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Power inverter efficiency for simultaneously measurement of AC power and DC input power;</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Power wave data capture of fast RMS data, half-cycle and waveforms;</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Waveform capture;</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Capable of capturing inrush, flicker, and transients</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Automatic transient mode capable of capturing 200 kHz waveform data in all phases simultaneously up to 6 kV</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Fully Class-A IEC 61000-4-30 compliant</li> </ul>			
<ul style="list-style-type: none"> <li>➢ Mains signaling for measuring interference from ripple control signals</li> </ul>			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
at specific frequencies			
➤ 400 Hz measurement			
➤ 600 V CAT IV/ 1000 V CAT III safety rating for service entrance			
➤ Capable of measuring all three phases and neutral			
➤ Automatic trending			
➤ Shall include analysis software;			
➤ 32GB memory card			
➤ Hard case enclosure			
➤ Unit must come with the standard accessories that shall include, but not limited to batteries, power adapter, USB cable, etc.			
<b>5. Infrared Thermometer - One (1) unit</b>	Brand/Model:	Brand/Model:	
• Measure -30°C to 900°C (-22°F to 1652°F)			
• 60:1 distance to spot ratio with dual laser sighting for fast, accurate targeting			
• Multi-language interface (user select)			
• Current Temperature plus MAX, MIN, DIF, AVG temperature displays			
• Compatible with standard mini-connector K-type thermocouples, including ones you already own and have installed			
• Adjustable emissivity and predefined emissivity table			

AGENCY'S SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE	BIDDER'S ACTUAL OFFER	REFERENCE(S)
<ul style="list-style-type: none"> <li>Infrared and thermocouple temperature on backlit display</li> </ul>			
<ul style="list-style-type: none"> <li>Last reading Hold (20 seconds)</li> </ul>			
<ul style="list-style-type: none"> <li>High and low temperature alarm</li> </ul>			
<ul style="list-style-type: none"> <li>Data storage and review (99 data sets)</li> </ul>			
<b>WARRANTY: 2 years on parts and service including battery</b>			
<i>Note: All other requirements stated in the TOR that are not included in the Technical Specifications shall form part of the same.</i>			

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

---

Name of Company
Signature Over Printed Name of Authorized Representative
Date



## Bid Form

Date: \_\_\_\_\_

Invitation to Bid N<sup>o</sup>: PB NO. 19-045-2

To: *The DBM-PS BAC Chairman*  
*Procurement Service*  
*PS Complex, RR Road*  
*Cristobal St., Paco, Manila*

Gentlemen and/or Ladies:

Having examined the Bidding Documents including Bid Bulletin Numbers [\_\_\_\_], the receipt of which is hereby duly acknowledged, we, the undersigned, offer to ***Supply, Deliver, Install, Test, and Commission Uninterruptible Power Supply (UPS) System for the Light Rail Transit Authority***, in conformity with the said Bidding Documents.

Lot No.	Item No.	Qty.	Item/Description	Unit Price	Amount
1	1	5 units	Uninterruptible Power Supply (UPS) 60 KVA, with Five (5) units Battery Bank, VRLA		
	2	1 unit	Uninterruptible Power Supply (UPS) 80 KVA, with Two (2) units Battery Bank, VRLA		
	3	1 unit	Battery Tester		
	4	1 unit	Power/ Quality Analyzer		
	5	1 unit	Infrared Thermometer		
	6	1 Lot	De-Commissioning/ Dismantling Service(s)		
	7	1 Lot	Installation, Testing and Commissioning		
		<b>TOTAL LOT BID PRICE:</b>			

**TOTAL PRICE IN WORDS:**

Lot 1: \_\_\_\_\_

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Section VI. Schedule of Requirements.

If our Bid is accepted, we undertake to provide a performance security in the form, amounts, and within the times specified in the Bidding Documents.

We agree to abide by this Bid for the Bid Validity Period specified in **BDS** provision for **ITB Clause Error! Reference source not found.** and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements as per **ITB Clause Error! Reference source not found.** of the Bidding Documents.

**We likewise certify/confirm that the undersigned, [for sole proprietorships, insert: as the owner and sole proprietor or authorized representative of Name of Bidder, has the full power and authority to participate, submit the bid, and to sign and execute the ensuing contract, on the latter's behalf for the Supply, Delivery, Installation, Testing and Commissioning of Uninterruptible Power Supply (UPS) System for the Light Rail Transit Authority.**

**We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.**

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

\_\_\_\_\_  
[signature]

\_\_\_\_\_  
[in the capacity of]

Duly authorized to sign Bid for and on behalf of \_\_\_\_\_

**STATEMENT OF SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID**

This is to certify that \_\_\_\_\_ (company) \_\_\_\_\_ has the following completed contracts for the period covering 10 years up to the opening of bids.

Date of the Contract	Contracting Party	Name of Contract	Kind of Goods Sold	Amount of Contract	Date of Delivery/ End-user's Acceptance	Date of Official Receipt	Bidder is A) Manufacturer B) Supplier C) Distributor

\_\_\_\_\_  
Name and Signature of  
Authorized Representative

\_\_\_\_\_  
Date

- \*Instructions:
- a) Cut-off date as of:
    - (i) Up to the day before the deadline of submission of bids.
  - b) In the column under "Dates", indicate the dates of Delivery/ End-user's Acceptance and Official Receipt.
  - c) "Name of Contract". Indicate here the Nature/ Scope of the Contract for the Procuring Entity to determine the relevance of the entry with the Procurement at hand. Example: "Supply and Delivery of Generator Set"