TENDER No. IITT/EU/2022-23/30

CORRIGENDUM CUM ADDENDUM No. 1

NOTICE INVITING TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF HIGH PERFORMANCE PARALLEL REDUNDANT UPS SYSTEMS WITH BUILT-IN/EXTERNAL GALVANIC ISOLATION TRANSFORMERS

SI.No.	Tender Clause No.	Exisiting clause	Clause added/amended as
1	Clause No. 4 Page 5 of 80	The total voltage harmonic distortion at 100% non-linear load shall be less than 3% and the THD for 100% linear load shall be less than 2%.	The total voltage harmonic distortion at 100% non-linear load shall be less than 5% and the THD for 100% linear load shall be less than 3%.
2	Annexure -1 Input voltage range	400 <u>+</u> 10% 320V-480V	400V, - 20% +15% 320V-465V
3	Annexure -1 Sl.21a	Output Voltage Distortion (%) with linear Load <2%	Output Voltage Distortion (%) with linear Load <3%
4	Annexure -1 SI.21b	Output Voltage Distortion (%) with non-linear Load <3%	Output Voltage Distortion (%) with non-linear Load <5%
5	clause 12, page 8 of 80	Three Phase Voltage : 400 V ± 20%	Three Phase Voltage: 400V, - 20% +15%
6	Clause No. 4 Page 29 of 80	The total voltage harmonic distortion at 100% non-linear load shall be less than 3% and the THD for 100% linear load shall be less than 2%.	The total voltage harmonic distortion at 100% non-linear load shall be less than 5% and the THD for 100% linear load shall be less than 3%.
7	Item - 2 clause 9 page 31 of 80	In UPS parallel redundant mode, when one of the UPS fails, both the battery back should work parallel and cater to the entire 120kVA/120kW load with a backup time of minimum 20 minutes on 250kVA/250kW through the second UPS.	both the battery back should work parallel and cater to the
8	Item - 2 clause 12, page 32 of 80	Three Phase Voltage : 400 V <u>+</u> 20%	Three Phase Voltage : 400V, - 20% +15%
9	Annexure -5 Input voltage range	400 <u>+</u> 10% 320V-480V	400V, - 20% +15% 320V-465V
10	Annexure -5 Sl.21a	Output Voltage Distortion (%) with linear Load <2%	Output Voltage Distortion (%) with linear Load <3%
11	Annexure -5 Sl.21b	Output Voltage Distortion (%) with non-linear Load <3%	Output Voltage Distortion (%) with non-linear Load <5%

12	Clause 13 System. Page 04 of 80	IGalvanic Cast Resin Dry Type Isolation transformer	Galvanic Cast Resin Dry Type Isolation transformer shall be k13 rated.
13	Annexure-1 , Sr.No. 12	Power Walk-in : 0-120 Sec(settable)	Power Walk-in : 0-120 Sec
14	General	Price bid BoQ in Excel	It is not possible to modify the BoQ at this stage. We have asked to quote the applicable GST amount in BoQ (column No. 9). Bidder can calculate the overall GST rates for UPS and Batteries and can mention the final figure in the BoQ column No.9. The applicable GST percentage shall be notified in the Technical bid for more clarity

The replies for the queries received from the bidders are as follows:

Sl.No.	Tender Clause No	Bidder(s) queries	IIT Tirupati Reply
1	ITEM 1: Annexure 1, pg no. 13	System efficiency including galvanic Cast Resin Dry Type isolation transformer. Query: Normally for inbuilt IT cases, mostly VPI type dry transformers used. Cast resin type not used for inbuilt cases.	VPI Type dry transformer also acceptable.
2	SI No.5 Annexure 3, pg no. 22		False flooring is not available inside the UPS & Battery room. Cable entry shall be from the top or separate equipment raised supporting structural steel of the same color of UPS to be provided by the bidder for terminating the cable in case of bottom entry bottom.
3	SI No.13, Annexure 2, pg no. 19	Battery Ah Calculation Sheet to support 250KVA/250KW for 20 min Query: Need to confirm whether battery sizing to be matched with VAH or 20 min backup.	Need to match with 20 min. battery backup and min. VAH as mentioned in the tender document.

4	SI No.4, Annexure 3 pg no. 21	Maintenance Free VR Lead Acid Battery bank along with battery racks, battery interconnection links, DC Cable of 10-meter distance, battery breaker with individual battery bank including battery stand (2 Banks connected in parallel for a total of 20 minutes backup time). Makes: Amara Raja / Exide or equivalent subject to the prior approval from the Institute after placing order. Query: Neoprene/Glass wool insulated UPS to battery cable. We can go with nyanvin cable.	Noted & Acceptable.
5	ANNEXURE – 7 The scope shall include the complete design, engineering, supply, installation, commissioning & testing of 120KVA (2x120KVA) parallel redundant Uninterruptable Power Supply (UPS) systems as follows page 46 of 80	Neoprene/Glass wool insulated battery grade copper Cable(s) between UPS and Battery Bank(s) to be laid in flexible corrugated wire re-inforced PVC flexible pipes. Cross-section area of the cable to be designed as per the full DC current capacity rating. (Approximately Battery banks will be located 10 mtrs. away from UPS Systems) Query: Neoprene/Glass wool insulated UPS to battery cable. We can go with nyanvin cable.	Noted & Acceptable.
6	MSME Page No: 51	We need some clarity on MSME, The MSME Registered Traders are eligible to Submit the Bid without EMD Amount or not?	MSME Traders are excluded from the purview of MSE Procurement Policy. Howerver, there is no EMD for this tender
7	9. Batteries Page No: 31	120kVA/120kW through the second UPS	Noted, please read as 120kVA/120kW
8	4.2. Statutory Documents. Page No: 52 Point No: (III) Page No: 72 Point No: 4.2.(III)	OEM/Bidder need to submit documentary evidence (purchase order copies, installation report, performance report from the client) and declaration towards the above point as per annexure-12.c	No changes to tender specification.
9	Annexure-1, Page No: 13 Point No:1 ≥ 95% at 50% to 100% load	>93%	No changes to tender specification.

10	Annexure-1, Point No:5, Page No: 13 Input Voltage: 400 + 10% (320V- 480V)	(320V - 465V) And Typing Error as per 8th Page	320-465V is acceptable
11	Annexure-1, Page No: 13. Point No: 12, Power Walk-in: 0-120 Sec(settable)	5-30 sec	0-120 Sec. Word Selectable is deleted, refer corrigendum.
12	Annexure-1, Page No:14 Point No: 21b. Output Voltage Distortion (%) with nonlinear Load: <3%	<5%	<3% for linear loads <5% for non-linear loads.
13	Annexure – I, Page No: 14 Point No: 22.	110% for – 10 Mins, 125% for – 10 Mins, 150% for – 30 Seconds.	No changes to tender specification.
14	Annexure-1 Page No:14 Point No:27.	Isolation Transformer (1:1) should be connected at UPS out Put after Inverter & Bypass Switch.	Inbuilt isolation transformer at inverter output as per the SLD is preferable. If anyone wish to offer Isolation transformer (1:1) at UPS output with inbuilt to UPS/external to UPS is also acceptable, but the transformer needs to meet all the technical specification highlighted in the tender documents.
15	Annexure- 5, Point No:1 Page No: 37 '≥ 95% at 50% to 100% load. > 94% even at 25% load	>93%	No changes to tender specification.
16	Annexure-5, Point No:5, Page No: 37 Input Voltage: 400 + 10% (320V- 480V)	(320V - 465V)	320V - 465V is accpetable.
17	Annexure-5, Point No: 12, Page No: 37 Power Walk-in: 0-120 Sec(settable)	5-30 sec	No changes to tender specification.
18	Annexure-5, Point No:21b. Page No:38 Output Voltage Distortion (%) with nonlinear Load: <3%	<5%	<3% for linear loads <5% for non-linear loads.

19	Annexure-5, Point No: 22. Page No: 38	110% for – 10 Mins, 125% for – 10 Mins, 150% for – 30 Seconds. 150% - 1 Mins.	No changes to tender specification.
20	Annexure-5, Point No:27. Page No:38	Isolation Transformer (1:1) should be connected at UPS out Put after Inverter & Bypass Switch.	Inbuilt isolation transformer at inverter output as per the SLD is preferable. If anyone wish to offer Isolation transformer (1:1) at UPS output with inbuilt to UPS/external to UPS is also acceptable, but the transformer needs to meet all the technical specification highlighted in the tender documents.
21	page 60 clause Delivery: FOR IIT Tirupati, Item-1: 2 Sets out of 4 sets	As per RFP, bidder has to intimate the readiness of UPS systems for conducting FAT within 2 months. As there is global paucity of semiconductors & electronic parts, the delivery lead time is much longer these days. So please change this clause to "Shall intimate the readiness of UPS systems for conducting Factory Acceptance Test (FAT) within 3 months from the date of release of PO".	No changes to tender document
1 //	page 59 clause 12. PAYMENT TERMS, page 73 point 12	As per RFP, payment terms are within 30 days after SITC. As these are quite stringent, kindly change the payment terms to "70% against Supply & Inspection, 20% after Installation and 10% after Commissioning & Acceptance	Our payment terms are strictly as per the tender
1 73		If site is not ready for installation for more than 30 days after delivery, the payment against Installation & Commissioning should be released. However bidder will complete installation & commissioning when the site is ready.	Our payment terms are strictly as per the tender
24	page 21 Annex-3. BOQ items	Kindly Confirm Earthing Pit for 2x250 KVA UPS in bidder Scope.	Institute will show the earth pits for body & neutral earthing for UPS. Bidder to lay earth flat from respective earth pit till the UPS. Also, please read tender specification clause No. 14 page 9 of 80
25	page 21 Annex-7. BOQ items	Kindly Confirm Earthing Pit for 2x120 KVA UPS in bidder Scope.	Institute will show the earth pits for body & neutral earthing for UPS. Bidder to lay earth flat from respective earth pit till the UPS. Also, please read tender specification clause No. 14 page 9 of 80
26	General	UPS & battery Room Dimension & Layout Required for better alingment.	Typical UPS room Diemsions : 5.2mtrsx3.2mtrsx3.5mtrs (L xBxH) Typical battery room Diemsions : 5.2mtrsx3.2mtrsx3.5mtrs (L xBxH)

27	Annexure – I, Point No:1 Page No: 13	System efficiency including galvanic Cast Resin Dry Type Isolation transformer. ≥ 95% at 50% to 100% load. > 94% even at 25% load Query: Only one Vendor can put this others can't because it is Old technology most ups comes with Isolation Transformer (1:1)	As per tender, no change. Inbuilt isolation transformer at inverter output as per the SLD is preferable. If anyone wish to offer Isolation transformer (1:1) at UPS output with inbuilt to UPS/external to UPS is also acceptable, but the transformer needs to meet all the technical specification highlighted in the tender documents.
28	Annexure – I, Point No:5, Page No: 13	Input Voltage: 400 + 10% (320V- 480V) Query: The Voltage Range will vary depending upon the Site Conditions. It may vary from vendor to vendor. Most of the Vendor will compile lower Voltage profile. Kindly clarify	320V - 465V is accpetable.
29	14	Overload Capability: 110% for – 60 Mins, 125% for – 10 Mins, 150% - 1 Mins. Query: If Load exceeds more than 120KW (say 150% - 180kW) it might affect the Load & 60 Minutes & 60 Seconds will be long duration. As the UPS connecting in PRS configuration there less chances for Overload. Need your feed back	No changes to tender specification.
3()	Annexure – I, Point No: 21b. Page No:14	Output Voltage Distortion (%) with nonlinear Load: <3% Query: IEC EN 62040-3 Output THD <5% is acceptable. Kindly accept it as 5%	<3% for linear loads <5% for non-linear loads.
31	Annexure – I Point No:27.Page No:14	Isolation: Built-in / external Galvanic Isolation at inverter output shall be available with clear isolation of Input Neutral from Output Neutral Query: Need to put Isolation Transformer (1:1) @ Input side or Output side of the UPS (After Static Bypass Switch) because if transformer placed before static switch then Input Neutral will be used through Bypass of the UPS. As there is no separation of neutral at the Output during bypass mode. So, preferable if we put 1:1 Isolation transformer at Output (Static Bypass) of the UPS.	Inbuilt isolation transformer at inverter output as per the SLD is preferable. If anyone wish to offer Isolation transformer (1:1) at UPS output with inbuilt to UPS/external to UPS is also acceptable, but the transformer needs to meet all the technical specification highlighted in the tender documents.
32	Annexure: I, Point No: 12, Page No: 13.	Power Walk-in: 0-120 Sec(settable) Query: As per IEC 62040 -1 For General Safety $5-30$ Sec acceptable. So, Kindly accept it as $5-30$ Sec.	0-120 Sec. Word Selectable is deleted, refer corrigendum.

33	Annexure – 5, Point No:1 Page No: 37	System efficiency including galvanic Cast Resin Dry Type Isolation transformer. ≥ 95% at 50% to 100% load. > 94% even at 25% load Query: Only one Vendor can put this others can't because it is Old technology most ups comes with Isolation Transformer (1:1)	As per tender, no change. Inbuilt isolation transformer at inverter output as per the SLD is preferable. If anyone wish to offer Isolation transformer (1:1) at UPS output with inbuilt to UPS/external to UPS is also acceptable, but the transformer needs to meet all the technical specification highlighted in the tender documents.
34	Annexure – 5, Point No:5, Page No: 37	Input Voltage: 400 + 10% (320V-480V) Query: The Voltage Range will vary depending upon the Site Conditions. It may vary from vendor to vendor. Most of the Vendor will compile lower Voltage profile. Kindly clarify	320V - 465V is accpetable.
35	Annexure – 5, Point No: 22. Page No: 38	Overload Capability: 110% for – 60 Mins, 125% for – 10 Mins, 150% - 1 Mins. Query: If Load exceeds more than 120KW (say 150% - 180kW) it might affect the Load & 60 Minutes & 60 Seconds will be long duration. As the UPS connecting in PRS configuration there less chances for Overload. Need your feed back.	No changes to tender specification.
1 36	Annexure – 5, Point No: 21b. Page No:38	Output Voltage Distortion (%) with nonlinear Load: <3% Query: IEC EN 62040-3 Output THD <5% is acceptable. Kindly accept it as 5%	<3% for linear loads <5% for non-linear loads.
37	Annexure – 5, Point No:27.Page No:38	Isolation: Built-in / external Galvanic Isolation at inverter output shall be available with clear isolation of Input Neutral from Output Neutral Query: Need to put Isolation Transformer (1:1) @ Input side or Output side of the UPS (After Static Bypass Switch) because if transformer placed before static switch then Input Neutral will be used through Bypass of the UPS. As there is no separation of neutral at the Output during bypass mode. So, preferable if we put 1:1 Isolation transformer at Output (Static Bypass) of the UPS.	Inbuilt isolation transformer at inverter output as per the SLD is preferable. If anyone wish to offer Isolation transformer (1:1) at UPS output with inbuilt to UPS/external to UPS is also acceptable, but the transformer needs to meet all the technical specification highlighted in the tender documents.

38	Annexure – 5, Point No: 12, Page No: 37	Power Walk-in: 0-120 Sec(settable) Query: As per IEC 62040 -1 For General Safety 5 – 30 Sec acceptable. So, Kindly accept it as 5 – 30 Sec.	0-120 Sec. Word Selectable is deleted, refer corrigendum.
39	Annexure -6	As per annexure 6 it is asked FR grade SMF battery, while at other places in it mentioned only SMF batteries. Pls. confirm whether we need to quote FR Grade SMF batteries or without FR Grade SMF Batteries.	FR Grade SMF batteries to be considered.
40	Annexure -6	In case if you need FR Grade SMF batteries, do we need to submit any declaration/letter from manufacturer that the supplier batteries with S.No. of batteries are FR Grade or not?(during the material delivery).	Yes, it is essential to submit declaration from the manufacturers, with manufacturing date, Serial No. contact details along with email id and FR grade SMF batteries confirmation.
41	Clause No. 9 page 7/80	As per tender it is asked 20 min. common battery backup on 250 KVA load everywhere including BOQ, while in this clause it is mentioned 10 min. backup on each UPS which is contradictory. Pls. clarify the same	Both (2Nos) Battery banks shall be connected in parallel. Each Battery Bank should be sized for a backup time of minimum 10 minutes on a 250kVA/250kW load. When the Battery banks are working in parallel, sizing should be done to achieve a backup time of minimum 20 minutes on 250kVA/250kW load.
42	Clause No. 9 page 31/80	As per tender it is asked 20 min. common battery backup on 120 KVA load everywhere including BOQ, while in this clause it is mentioned 10 min. backup on each UPS which is contradictory. Pls. clarify the same	Both (2Nos) Battery banks shall be connected in parallel. Each Battery Bank should be sized for a backup time of minimum 10 minutes on a 120kVA/120kW load. When the Battery banks are working in parallel, sizing should be done to achieve a backup time of minimum 20 minutes on 120kVA/120kW load.
43	Clause 15, page 10 /80	As per tender you have asked security deposit @3% of the total order value for 63 months. As per tender you have asked UPS warranty 60 months & battery warranty 24 months, hence we will initially submit the PBG @3% of total order value for 24 months & then @3% of UPS value excluding batteries for next three years. Pls. accept the same	Our Securit deposit is strictly as per the tender
44	BOQ	As per price bid format we can submit UPS & battery prices clubbed in one column. We would like to inform you that UPS & batteries have different HSN code, hence apply different GST rate. We request you to amend the BOQ and add one more column for batteries apart from existing column in which we can fill UPS prices.	It is not possible to modify the BoQ at this stage.We have asked to quote the applicable GST amount in BoQ (column No. 9). Bidder can calculate the overall GST rates for UPS and Batteries and can mention the final figure in the BoQ column No.9. The applicable GST percentage shall be notified in the Technical bid for more clarity

		As per tender payment terms are 30 days from the date of	
		Installation. We request you to pls. amend the payment terms	
45	Payment terms	as 90% against delivery of materials & balance 10% against	Our payment terms are strictly as per the tender
		installation, commissioning & handing over and submission of	
		PBG.	

Sd/-Deputy Registrar