



भारत सरकार  
केन्द्रीय लोक निर्माण विभाग



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No. 25(31)/DB/HCED II/2017/ 1270

Dated : 02 /09/2017

**CORRIGENDUM-2**

Name of Work: Providing E & M infrastructure for Data Centre including providing passive networking components for first floor DC and allied Civil works in the existing building including operation and AMC for 6 years including dismantling certain old equipment at NIC, Hyderabad.

NIT No. 69/EE(E)/HCED-II/2017-18 (CE"s NIT No.2/NIT/CE/SZ-II/CPWD/2017-18)

The updated NIT has been uploaded is hereby uploaded on the e-tendering portal, all bidders are requested to refer only the updated NIT document.

The major corrections made in the NIT are as under:

S.No.	NIT Page No.	Reference	Existing	To be read as
1	On various pages at relevant places.	Estimated Cost Put to Tender, E&M Works (Major Component) , Civil Work (Minor Component) and Earnest Money.	Estimated Cost put to Tender: Rs. 37,61,44,035/- Electrical & Mechanical Services Rs. 22,08,04,277/- ; Civil: Rs.1,01,83,186/- & Maintenance & Operation: Rs. 14,51,56,572/- EMD Rs. 47,61,440/-	Estimated Cost put to Tender: Rs. <b>37,69,85,428/-</b> Electrical & Mechanical Services Rs. <b>22,09,32,974/-</b> ; Civil: Rs. <b>1,08,95,882/-</b> & Maintenance & Operation: Rs. <b>14,51,56,572/-</b>  EMD Rs. <b>47,69,854/-</b>
2	5	Last date and time of submission of bids Online	Date & Time: 29.08.2017 up to 15:00 hours	Date & Time: <b>13.09.2017</b> up to 15:00 hours
3	On various pages at relevant places.	Turnover & Solvency	Average annual financial turnover (Gross) of at least Rs. 11.55 crores Solvency for a minimum of Rs. 9.24 crore	Average annual financial turnover (Gross) of at least Rs. 11.59 crore Solvency for a minimum of Rs. 9.27 crore
4	9	New Addition under List Of Documents ...11	.....	<b>Manufacturer Undertaking/ Authorization Certificate as per proforma at page No. 29 for UPS &amp; Batteries, Transformers, DG sets, MV &amp; HV panels, PACs, Isolation Transformers, PDUs, BMS.</b>
5	17	20.1.8	Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works.	Security Deposit will be worked out separately for each component corresponding to the <b>work done</b> of the respective component of works.

6	54	Milestones	Approval from explosive department for UG Diesel tank - 30 days	Approval from explosive department for UG Diesel tank - <b>45 days</b>
7	58	Under clause 36 (i) -New addition	.....	<b>Out of the required technical representatives for major components as per clause 36 (i) at serial no. 1, 2 or 3 (Graduate Engineers only) above, one person shall be “ Certified Data Center Professional” having atleast five years experience.</b>
8	62	Para 2.2, Sl. No. ix)	8 Nos. isolation transformers at the 1st floor to contain....	8 Nos. isolation transformers at the <b>Ground floor</b> to contain....
9	62	2.2 (a) viii	...30TR PACs (bottom discharge type), 4 nos. 22TR PACs ....	...30TR PACs (bottom discharge type), <b>7 nos.</b> 22TR PACs ....
10	79	1.9 ( new clause )	.....	d) Out of the required technical representatives for major components as per clause 36 (i) at serial no. 1, 2 or 3 (Graduate Engineers only) above, one person shall be “Certified Data Center Professional” having atleast five years experience. Details of the ‘technical representatives’ skills/experience in various domains of Data Centre establishment like Air-Conditioning, Electrical, BMS to be provided by the successful bidder.
			.....	e) The bidder or OEM of Data Centre cables shall have atleast RCDD professional for designing of layout of raceways/ path of cables and its implementation as per relevant standards. The certificate and other details of the professional is to be submitted to the Engineer-in-charge alongwith drawing for approval.
			.....	f) The successful bidder shall submit valid Electrical Licence before start of work
11	107, 109	Para 4.4.3, para 4.10	Efficiency at full kW load: >99%	Efficiency at full kW load: <b>&gt;98%</b>
12	109	Para 4.10	Ventilation: Natural Air Cooled	Ventilation: Natural Air Cooled/ <b>Forced air cooled.</b>

13	109	Para 4.10	The proposed system shall have the following features: a.... b..... ..... ..... f. Total electrical isolation and total electrostatic isolation.	The proposed system shall have the following features: a.... b..... ..... f. Total electrical isolation and total electrostatic isolation. <b>g.Forced air cooled with proper cfm calculation.The fan has to run only when the temperature of the coil reaches 80 deg. centigrade which reduces the wear and tear of the fan.</b>
14	114	<b>Isolation transformer specifications</b>	.....	<b>38. Isolation Transformer Testing:- To be done in transformer to meet IS 2026/IEC 60076 standard.</b>
15	114	Para 19	Efficiency: Nor less than 99.5% @ 100 % loading (Full load Test should be done with loads )	Efficiency: Nor less than <b>98%</b> @ 100 % loading (Full load Test should be done with loads )
16	114	Para 25	Noise Level :<50DB	Noise Level :<50DB <b>at 1m distance.</b>
17	138 to 140	New Insertion – Specifications are added	.....	Specifications of LCD Display Wall and Laptops as per insertion
18	141	Air conditioning Para 8.0.1	The Bidder .... IT load of 500KW with N+2 .....	The Bidder.... IT load of <b>600KW</b> with N+2 .....
19	141	8.2.4	To have high sensible heat ratios of about 95% to 98% so as to match it with the heat load pattern of the data center.	To have high sensible heat ratios of about 95% to 98% so as to match it with the heat load pattern of the data center. <b>The capacity of PAC shall take care of the sensible heat of racks as well as surrounding space heat (nominal latent and sensible)</b>
20	145	8.10.2	The sealed, hermetic Tandem/ Digital/ Invertor scroll compressor/s should be housed in the lower portion of casing. Each compressor shall be mounted on vibration isolator. Each compressor shall have crank case heater. For 20 Tr capacity and above minimum four compressors shall be used in unit with double refrigerant circuit connected to minimum two condenser should be provided for operation of the compressors for high part load efficiency.	The sealed, hermetic Tandem/ Digital/ Invertor scroll compressor/s should be housed in the lower portion of casing. <b>All the compressors in a unit shall be either of Digital Scroll or Inverter Scroll or Tandem Scroll. No combination is allowed. Fixed scroll is not acceptable. Each compressor shall be mounted on vibration isolator.</b> Each compressor shall have crank case heater. For 20 Tr capacity and above <b>multiple</b> compressors shall be used in unit with double refrigerant circuit connected to minimum two condenser shall be provided for operation of the compressors for high part load efficiency.

21	148	8.12.2	CMM required for Pressurisation of lifts lobby, lift shaft, stair case shaft shall be calculated from closed door as well as opened door area as ..... / duct leakage etc., which will give CMM required.	<b>Deleted</b>
22	149	UPS SYSTEM WITH BATTERY BANK, para 9.1.9	Markings: CE, C-Tick, UL	Markings: CE, C-Tick, <b>IEC 62040-2</b>
23	150	Line 4-6	The system will provide hot swappable, with 100% seamless, power modules thus doing away with the requirement to shut down the equipment to increase capacity or replace a faulty module.	<b>Deleted</b>
24	150	9.1.10 A	.....Power factor 0.99 at 100% load and shall be capable of being configured for N+N redundant operation (1200 KVA) at the rated system load. In systems operating at a load where the system is N+1 or greater, the UPS shall facilitate the replacement of UPS modules while the overall UPS system remains in normal operation, without the requirement to transfer to bypass and switching off the output. Each UPS Module shall be 100KVA to 300KVA rated at 0.99 load power factor as suitable.	.....power factor <b>1.00</b> at 100% load and shall be capable of being configured for N+N redundant operation (1200 KVA) at the rated system load. <b>Each UPS Module shall be 200 KVA to 300KVA rated at 1.00 load power factor as suitable.</b>
25	150	9.1.10 A	Pure Lead Tin ( PLT ) modules of suitable AH as per design. It should possible to replace UPS module without switching the UPS to bypass mode. UPS module fault should be shown in the display. UPS should be hot swappable without switching off the UPS output panel and 100% seamless for transfer from UPS mode to bypass modes.	<b>Pure Lead Tin ( PLT ) modules of suitable AH as per design. UPS module fault should be shown in the display.</b>
26	151, Para	9.1.10, pt.1	Design Requirements - Battery: The UPS shall incorporate a battery management system to continuously monitor the battery bank health.	Design Requirements - Battery: The UPS shall incorporate a battery management system to continuously monitor the battery bank health. It shall monitor battery parameters including voltage, current,

				temperature state of charge of batteries and alarm conditions with date/time stamp.
27	155	UPS SYSTEM WITH BATTERY BANK, Technical Specification for UPS.	Capacity of UPS:- 1200 kVA in steps of 25KVA to 100kVA modular construction UPS modules	Capacity of UPS:- 1200 kVA in steps of <b>200KVA to 300kVA modular construction UPS modules having sub module from 25KVA to 100KVA with each UPS module.</b>
28	157	Pt. No. (ix)	Life cycle monitoring of critical components such as AC/DC Capacitors, Battery bank, cooling fans.	Life cycle monitoring of critical components such as AC/DC Capacitors, Battery bank, cooling fans. Life Cycle Monitoring will be done with the help of actual measurement during periodic Maintenance.
29	159	3rd line	Battery Recharge Time : 30 minutes to 90 minutes	Battery Recharge Time: <b>8-10 hours for fully discharged.</b>
30	165	11.2 (6)	.....	<b>The bidder or OEM of Data Centre cables shall have atleast one RCDD professional for designing of layout of raceways/ path of cables and its implementation as per relevant standards. The certificate and other details of the professional is to be submitted to the Engineer-in-charge alongwith drawing for approval.</b>
31	213	PAC Inspection	.....	<b>Tests shall be carried out on 1 unit of each type at Manufacturers premises as per OEM standard.</b>
32	214	11. CONTACTOR	SIMENS(3RT)/ ABB(AF)/ SCHNEIDER(LC1E)	As per OEM Standard of HT/LT Panel Manufacturers
33	214	17. TIMER	SIEMENS/ ABB/ SCHNEIDER/ L&T	As per OEM Standard of HT/LT Panel Manufacturers
34	214	18. CURRENT TRANSFORMER	KAPPA /NEWTEK/ GILBERT & MAXWELL / PRECISE/ AUTOMATIC ELECTRIC	As per OEM standard of HT and LT panel manufacture
35	214	19. POTENTIAL TRANSFORMER	KAPPA /NEWTEK/ GILBERT & MAXWELL / PRECISE/ AUTOMATIC ELECTRIC	As per OEM standard of HT and LT panel manufacture
36	215	21. INDICATION LAMPS	VAISHNOV/ C&S/ TEKNIC/ SIEMENS/ SCHNEIDER	As per OEM standard of HT and LT panel manufacture
37	215	22. SELECTOR SWITCHES	VAISHNOV /SALZER/KAYCEE	As per OEM standard of HT and LT panel manufacture
38	215	23. HRC FUSES & FUSE SETTINGS	ABB/ SIEMENS/ LITTELFUSE/ COOPER BUSSMANN	As per OEM standard of HT and LT panel manufacture
39	215	34. BUSDUCT/ RISING MAINS (SANDWICH)	SCHNEIDER/L&T/ SIEMENS	SCHNEIDER/L&T/ LEGRAND

40	217	DATA CENTRE CABLING S. No. 73 to 77	LEGRAND/ BELDEN/ SCHNEIDER/ COMMSCOPE	PANDUIT/ BELDEN/ SCHNEIDER/SYSTIMAX (COMMSCOPE)
41	221	152. DDC CONTROLLER / PROTOCOL INTEGRATOR	SCHNEIDER /HONEYWELL / EASY IO / BACKHOFF/ATHENTA	SCHNEIDER /HONEYWELL / EASY IO / BACKHOFF/ATHENTA/SIE MENS
42	221	Note:		<p>1. The particular make and model under Preferred Makes shall be acceptable only if they comply to all the particular specifications, item of work and other conditions of the Contract.</p> <p>2. Either the model shall be got approved or sample shall be submitted for approval by Engineer-in-charge before confirming any order to supplier by the contractor.</p> <p>3. For any item not covered in the above list, the contractor shall get the samples and make approved from the Engineer-in-charge before the supply is made.</p>
43	237	Annexure-A, Scope of Maintenance Work, A. Existing installations	Equipment under SI No:1 of Annexure -B1 i) Low density 20 TR PAC units- 8 Nos.( Stulz make ) ii) High density 2 x 5TR PAC units- 2 Nos.( Stulz make ) iii) Low density 28 TR PAC units- 6 Nos.( Emerson make )	Equipment under SI No:1 of Annexure -B1 i) Low density 20 TR PAC units- <b>7 Nos.</b> ( Stulz make ) ii) High density 2 x 5TR PAC units- 2 Nos.( Stulz make ) iii) Low density 28 TR PAC units- 6 Nos.( Emerson make )
44	252	Annexure-C (Exclusions) Sl. No. 13	Diesel Generating sets: Major repairs, D-check kit	Diesel Generating sets: D-check kit, <b>HSD for running of DG sets.</b>
45	295	BOQ, SH-V ( Modular UPS & Battery bank ) item No.1	Supply, Installation, testing and commissioning of 1200 KVA UPS ... for base frame of UPS and Battery bank as required. UPS shall be capable of allowing on line parallel provision without shutdown/restart during adding/removing of UPS ( hot swappable ) from the existing parallel bus including provision for Battery Monitoring System....synchronizing card/ module for 200 kVA UPSs, with necessary.....	Supply, Installation, testing and commissioning of 1200 KVA UPS ... for base frame of UPS and <b>Battery bank as required, including provision for Battery Monitoring</b> System....synchronizing card/ module for <b>200KVA to 300KVA</b> UPSs, with necessary.....
46	295	1 (i)	i) 200 KVA to 300KVA UPS shall be with hot swappable type sub power modules ranging for 25 kVA to 50 kVA each, pluggable type	i) 200 KVA to 300KVA UPS shall be with <b>sub power modules</b> ranging for 25KVA to 100KVA each, pluggable type rectifier & pluggable type static switch modules.

			rectifier & pluggable type static switch modules. UPS module fault should be shown in the display.	UPS module fault should be shown in the display.
47	303	BOQ, SH-VI (Networking racks + IPDUs ) item No.2, Server rack enclosure.	Supply, Installation, Testing and Commissioning of Server Racks Size - Minimum. 600 mm (W) x 1000 mm (D) Height - 42 U Rack.... Qty- 60 Nos.	Supply, Installation, Testing and Commissioning of Server Racks Size - Minimum. 600 mm (W) x <b>1200 mm (D)</b> Height - 42 U Rack.... Qty - <b>66 Nos.</b>
48	303	BOQ, SH-VI (Networking racks + IPDUs) item No.3, Networking rack enclosure.	Supply, Installation, Testing and Commissioning of Server Racks Size - Minimum. 800 mm (W) x 1000 mm (D) Height - 42 U Rack...	Supply, Installation, Testing and Commissioning of Server Racks Size - Minimum. 800 mm (W) x <b>1200 mm (D)</b> Height - 42 U Rack...
49	304	BOQ, SH-VI ( Networking racks + IPDUs ) item No.7, Intelligent PDUs	IPDUs should support entry-level networking equipment and also should support blade environment and preferably should have 24 C13 and 6 C19 outlets	IPDUs should support entry-level networking equipment and also should support blade environment and preferably should have <b>10 Nos. of C13 and 6 C19 outlets</b>
50	304	Item No. 5	2 Nos. Temperature Sensors per each Rack to be integrated with Rack PDU and to BMS	<b>SITC of 2 Nos.</b> Temperature Sensors per each Rack to be integrated with Rack PDU and to BMS
51	304	Item No. 6	One Temperature & Humidity Sensor per every 2 Racks to be integrated with BMS	<b>SITC of One Temperature &amp; Humidity Sensor</b> per every 2 Racks to be integrated with BMS
52	305	BOQ, S.H-VIII, Aspiration Smoke Detection System, Item No. 5.2	8.1 Total of 6 sensors per rack,.... temperature index- Qty 280 Nos. 8.2 Wirefree combo (temperature+Humidity) sensors Qty- 140	Total of 6 sensors per rack,.... temperature index <b>8.1 – Wire free temperature sensors- Qty 280 Nos.</b> <b>8.2 Wire free combo (temperature+Humidity) sensors Qty- 140</b>
53	307	BOQ, S.H-VII, Data Centre Cabling, Item No. 4	Supply, Installation, Testing and commissioning of OM4 Pre-terminated Cable.... Polarité A. The factory....	Supply, Installation, Testing and commissioning of OM4 Pre-terminated Cable.... <b>Method "A/B"</b> . The factory....
54	307	BOQ, S.H-VII, Data Centre Cabling, Item No. 5	Supply, Installation, Testing and commissioning of MTP Elite Cassette (MPO Compatible) 24 LC Fibres OM4 Type A/C	Supply, Installation, Testing and commissioning of MTP <b>Cassette</b> (MPO Compatible) 24 LC Fibres OM4 Type A/C
55	308	BOQ, S.H-VII, Data Centre Cabling, Item No. 7	Supply, Installation, Testing and commissioning of High Density Modular Optic drawer - takes upto 5 cassette - 120 LC Connector - 1U	Supply, Installation, Testing and commissioning of High Density Modular Optic drawer - takes upto <b>4</b> cassette - <b>96</b> LC Connector - 1U
56	311	BOQ, S.H-VIII, Access Control system, Item No. 1.8	Qty- 2 Nos.	Qty- <b>3 Nos.</b>

57	311	Item No. 1.18	Time, attendance and visitor Management Software for Access Control with seamless integration with Visitor Management Module and time and attendance module	<b>Deleted</b>
58	311	BOQ, S.H-VIII, CCTV, Item No. 2.1	1/ 2.7 or 1/3" progressive scan Exmor CMOS, 1 MPx IP IR Indoor Dome Camera...	1/ 2.7 or 1/3" progressive scan Exmor CMOS, <b>5 MPx</b> IP IR Indoor Dome Camera...
59	312	BOQ, S.H-VIII, CCTV, Item No. 2.2	1/2.7 or 1/3" progressive scan Exmor CMOS, 1 MPx IP IR Indoor Bullet Camera,...	1/2.7 or 1/3" progressive scan Exmor CMOS, <b>5 MPx</b> IP IR Indoor Bullet Camera,...
60	313	BOQ, S.H-VIII, CCTV, Item No. 2.7	Qty- 15 Nos, Rate - Rs. 6203/-	Qty- <b>1No.</b> Rate - Rs. <b>93,045/-</b>
61	318	BOQ, S.H-VIII, Aspiration Smoke Detection System, Item No. 5.1	SITC of short wavelength laser... connectivity using RS485 & TCP/IP, Wi-Fi support for.....	SITC of short wavelength laser... connectivity using RS485 & TCP/IP, <b>Preferably with</b> Wi-Fi support for.....
62	349 / 17.1	Guarantee Bond:	Guarantee Bond: All aluminum work shall carry two years guarantee.....	Guarantee Bond: All aluminum work shall carry <b>five years</b> guarantee to be reckoned from the date after the <b>1 year defect liability period</b> prescribed in the contract against water leakage, unsound material and workmanship and defective anodizing/ <b>powder coating</b> as per guarantee bond. <b>Five years</b> guarantee in prescribed proforma attached at " <b>Annexure L</b> " must be given by the specialized firm, which shall be counter signed by the contractor, in token of his overall responsibility. In addition 10% (Ten percent) of the cost of these items <b>including panelling materials</b> would be retained as guarantee to watch the performance of the work done. If any defect is noticed during the guarantee period it should be rectified by the contractor within seven days, and if not attended to, the same will be got done <b>from</b> another agency at the risk and cost of contractor. However, this security deposit can be released in full if bank guarantee of equivalent amount for <b>five years</b> is produced and deposited with the department.
63	349/16 line 9		Of maintenance	<b>1 year defect liability</b>



64	349/18		However, the cost of tests for the following materials/tests shall be borne by the <b>Department</b> if the test results <b>conform</b> to CPWD Specifications <b>or</b> by the <b>Contractor</b> if the test results <b>do not conform</b> to CPWD Specifications/relevant..... ..... The cost of sample material required for testing including all other incidental expenditure required such as taking the samples, conveyance, packing etc. shall also be borne by the contractor himself	<b>Deleted</b>
65	351/ Para 9 line 4		28-09-2015	26-09-2015
66	354/f		Wet curing period shall be enhanced to a minimum of 10 days or its equivalent. In hot & arid regions, the minimum curing period shall be 14 days or its equivalent.	Wet curing period shall be enhanced to a minimum of 10 days or its equivalent. In hot & arid regions, the minimum curing period shall be 14 days or its equivalent. <b>In repair / patch works curing compound shall be used for which nothing extra shall be payable.</b>
67	361/c		Access Floor Panels: Access Floor panel of 600x600x32 mm medium grade Filled Steel anti static high pressure Lamination of 800H grade(FS800H).	Access Floor Panels: Access Floor panel of <b>600x600 mm and minimum 30 mm thick</b> medium grade Filled Steel anti static high pressure Lamination of 800H grade(FS800H).
68	369		<b>GUARANTEE FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS.</b> The agreement made this ___ day of ___ two thousand and ___ between ___ son of ___ of ___ (hereinafter..	<b><u>Annexure-K</u></b> <b>GUARANTEE FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS.</b> <b>As per modified proforma on page No. 369.</b>
69	370		<b>GUARANTEE FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF STRUCTURAL GLAZING WORK</b> The agreement made this ___ day of _ two thousand ___ between.....	<b><u>Annexure-L</u></b> <b>GUARANTEE FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF STRUCTURAL GLAZING WORK/ALUMINIUM PARTITION WORK</b> <b>As per modified proforma on page No. 370.</b>
70	394/9.7		Providing an fixing access floor panel of 600X600X32mm.	Providing an fixing access floor panel of <b>600x600 mm and minimum 30 mm thick.</b>

71	410/19.19 (New Item)			<b>Providing and fixing M.S Powder coated directional Air flow grills of size 600x600mm with minimum Top plate thickness 1.5mm, Bottom plate 1.2mm thick and reinforcement thickness 2.0mm and Height 39mm having 55% openings with volume control damper (made of 1.5mm thick aluminium sheets). Grill should have maximum concentrated load bearing capacity of 540kg and maximum uniform distributed load bearing capacity 1620kg/sqm. - 80 Sq. mtr @ Rs. 8908.70 ps = 712696.00</b>
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Note:

1. The revised updated NIT after incorporating the above corrections, adding pass boxes item and revised price bid proforma has been uploaded on the website [www.tenderwizard.com/CPWD](http://www.tenderwizard.com/CPWD)
2. Those bidders who have already submitted the tender online are requested to resubmit the tender as per the revised price bid proforma and updated NIT.

Other terms and Conditions shall remain same. This corrigendum shall form the part of the NIT and agreement.

Sd/-  
(G. Naga Prasad)  
Executive Engineer (E)

Coy to for information please:

1. The DDG- Head NIU, NIC, A- Wing, BRKR Building, Hyderabad
2. The Chief Engineer, SZ-II, CPWD, Hyderabad
3. Superintending Engineer, HCC-I, CPWD, Hyderabad.
4. Superintending Engineer (E), HCEC, CPWD, Hyderabad.
5. Executive Engineer, HCD-III, CPWD, Hyderabad.
6. Assistant Engineer (E), HCESD-VII, CPWD, AG Office, Hyderabad
7. File No. 23(64)

Executive Engineer (E)