CORRIGENDUM-1

This Corrigendum No. 1 dated 18.11.2025 to IFB No. **CDI0599P26** for "**NDR Data Center Augmentation and Facility Management Services**" is issued to notify the following:

(1) **Annexure-X to SoW** has been attached. The same is also available in the OIL's E-tender portal.

The amendment mentioned herein shall prevail over the contradictory clauses in the NIT. All others terms and conditions of the Bid Document remain unchanged. Details can be viewed at www.oil-india.com.

Sd/-
MANAGER – CONTRACTS (S)

SPECIFICATIONS & COMPLIANCE

Clause Number	Scope Of Work	Bidder's Response(Noted, Complied, Not Complied)	Cross Reference
1	Broad Scope of Work		
2	Augmentation including Supply, Installation, Testing and Commissioning		
3	Project Execution		
4	Datacenter Facility Management		
5	Manpower Requirement		

Sl. No.	Item Name	Description	Bidder's Response(Noted, Complied, Not Complied)	Reference to relevant section/Page No. in the technical bid /documentation / Brochure / Catalogue / OEM Website, wherever applicable
A		**CIVIL & INTERIORS**		
1		**FURNITURE**		
1.1	**Computer Workstation Tables**	Shifting of existing computer tables from the existing BMS room to the new BMS room, as per layout, including UPS power, data and voice connectivity. Make: Godrej ; Qty : 07		
1.2	**Overhead storage units**	Shifting of existing overhead storage units from the existing BMS room to the new BMS room, as per layout, including UPS power, data and voice connectivity. Make: Godrej ; Qty : 07		
1.3	**Office Chair**	Supply of office chair for computer tables in BMS Room, as per minimum specifications below. Required features: a. Mid back revolving chair with ergonomic design. b. The backrest and seat with thick high resilience polyurethane moulded foam. c. Ergonomic armrests. d. Pushback with locking mechanism. e. 5-pronged SS legs with caster wheels. f. Seat and back fabric finish, as per approved color. Make : Godrej / Featherlite / BP Ergo / Durian		

1.4	**Carpet Flooring**	Carpet Flooring for new BMS room as per proposed drawing. Floor finishes shall be of a heavy contract grade carpet and pass the castor chair test. Carpet tiles shall have a reflectance value between 0.2 and 0.3. [Approximately]. Finishes shall meet the minimum standards for vertical electrical resistance at 30% humidity and should have an anti-microbial agent to inhibit contamination. Workplace (Health, Safety and Welfare) Carpet tiles should have a small random pattern or 'fleck' to minimize the effects of soiling.		
1.5	**Door mat**	Supply of door mat with following minimum specification: a. Material type: Coir. b. Colour: Brown. c. Minimum Dimension: 1000 mm x 400 mm x 20 mm thick.		
2		**GLASS DOORS**		
2.1	**Glass door**	Frameless glass door, minimum 1000 x 2100 mm, single leaf with 10 to 12mm clear toughened glass including SS door handles on both sides, heavy duty door closer and rubber linings to prevent air leakage. Door marked as "ALD" in drawing.		
3		**FIRE RATED DOOR**		

3.1	**Door Frame:**	Providing and fixing fire resistant door frame having following minimum specification: Profile shall be double rebate KERF frame 143mm x 58mm made out of 1.6 mm thick G.I. sheet (zinc coating not less than 120 gm/sqm). The infill material shall be resin bonded honeycomb core. The frame is fitted with intumescent fire seal strip of size 10x4 mm (minimum) around the frame and fixing with dash fastener of approved size and make, including applying a coat of approved brand fire resistant primer etc. complete.		
3.2		Frames should be provided with back plate bracket and anchor fasteners for installation on a finished plastered masonry wall opening. Once frame installed should be grouted with cement & sand slurry necessary for fire doors on the clear masonry opening.		
3.3	**Door Shutter**	Door shutter shall be minimum 46mm thick fully flush double skin door with vision lite. Door shutter shall be manufactured from 1.6 MM minimum thick G.I. sheet (zinc coating not less than 120 gm/m2). The internal construction of the door should be rigid reinforcement pads for receiving appropriate hardware. The infill material shall be resin bonded honeycomb core. All doors shall be factory prepped for receiving appropriate hardware. Door shutter shall be fixed with SS (304 Grade) ball bearing butt hinges, mortice lock, Heavy duty door closer, D type pull handle with rose (250x 19mm) and necessary screws all complete.		
3.4		Vision panel shall be provided with necessary beading and screws. The size of vision panel shall be minimum 200mm x 300mm with fire rated glass minimum 15 mm thick.		
3.5		All doors and frames shall be finished with polyurethane alphatic grade paint of approved colour. The door leaf and frame shall have passed minimum 250 hours of salt spray test.		

3.6		Panic bar / latch (Double point) fitted with a single body, Trim Latch & Lock on back side of the Panic Latch of reputed brand and manufacture. all complete to be installed on Emergency Exit. (Door as marked in drawing).		
3.7		The complete door system including vision panel shall be tested as CBRI or ARAI for 120 minutes of fire resistance. Test certificates should be available for vision lites /panels as part of the fire door assembly. **Door marked as "FRD" in Server Room 2 as per proposed drawing.**		
4		**PARTITION SEPARATING SERVER ROOM 1 AND SERVER ROOM 2**		
4.1	**Fire Rated Partition**	Providing & fixing full height partition wall using double fireline gypboard 12.5 mm thick on both sides with GI steel metal vertical stud frame fixed in the floor and ceiling to provide a strong partition. Glass wool insulation inside shall be provided as required. Fixing is by self-tapping screw with vertical studs being at 610 mm intervals. The same should be inclusive of making cutouts for switch board, sockets, grill etc.		
4.2	**Glass partition**	Glass partition between Server Room 1 and 2 made with 10 ~ 12mm thick toughened glass. The top and bottom sections to me made out of fireline gypboard supported on metal studs with provision of cutouts for passage of cable trays and cables. **Glass partition as marked in the drawing.**		
5		**FALSE CEILING FOR SERVER ROOM 2**		
5.1		Plain gypsum false ceiling with approved G.I Frame work and hangers including openings for lights and air conditioning grilles to be framed with G.I. members. Area includes all horizontal, vertical and curved surfaces.		

5.2		Mineral Fibre board, 600 mm x 600 mm in true horizontal level suspended on locking grid system made of hot dip galvanized steel section powder coated including making opening for electrical & air conditioning fitting complete as directed. The tiles are to be installed on 15 mm grid system. **Make : Armstrong / ANF/ RK**		
6		**RAISED ACCESS FLOORING FOR SERVER ROOM 2**		
6.1	**RAISED ACCESS FLOORING**	Providing and fixing raised access flooring system with the following minimum specification: Access Floor panel of size 600 x 600 mm, all steel welded construction with an enclosed bottom pan of hemispherical cones and the top plain sheet is fuse-welded at 144 locations to form a panel.		
6.2		Access floor steel panel shall have a cementious core, HPL pre-fixed, PVC beads with edge support rigid grid under-structure system. Panel core thickness - 35 mm and panel weight not exceeding 16.5 kgs.		
6.3		The tiles shall have antistatic laminate. The floor shall provide protection from electro-magnetic interference.		
6.4		Access floor system to be installed shall provide a minimum finished floor height of 450 mm from the existing floor level.		
6.5		The system shall provide for suitable floor tiles, pedestals and stringers designed to withstand various static and rolling loads.		
6.6		Access floor tiles shall provide for adequate fire properties, acoustic barrier and air leakage resistance.		
6.7		The minimum UDL bearing capacity of the system shall be 2450 Kgs/Sqm and minimum point load bearing capacity shall be 567 kgs.		
6.8		Fire rating : Class O & Class 1, as per BS 476 Part 6 & 7, And also ASTM E84 1998 (Flammability) and ASTM E136 (Combustibility)		

7		**Toughened laminated glass panels for raised flooring**		
7.1	**Toughened laminated glass panels**	Toughened laminated glass panels of size size 600 x 600 mm shall be installed in designated sections of the raised access floors in Server Room 1 and 2 and certain other areas of the datacenter.		
7.2		The view area shall be designed for normal human walking load and must be capable of bearing a concentrated load of at least 110 kg.		
7.3		The glass panels shall be Tampered glass/scratch resistant.		
8		**WALL TREATMENT FOR SERVER ROOM 2, BMS ROOM AND WHEREEVER NECESSARY DUE TO DISMANTLING**		
8.1	**Acrylic Emulsion paint**	Wall painting with acrylic emulsion paint to give an even shade : Two or more coats on new work. **Makes : Berger / Asian / Dulux**		
8.2	**Wall putty over Cement Plaster**	Providing and applying white putty of average thickness-1 mm, over the plastered wall surface to prepare the surface even and smooth complete. **Makes : Birla /JK**		
8.3	**Epoxy Paint**	Finishing with epoxy paint at required floor locations including appropriate priming coat, preparation of surface, etc. complete.		
8.4	**Aluminium foiled faced insulation. (To be considered for only Server Room 2)**	Insulation material shall be minimum 13mm thick, Closed Cell Elastomeric Nitrile Rubber with aluminium foil laminated on one side. The junction between the insulator and fixtures has to be watertight and airtight. Thermal conductivity of insulation material shall not exceed 0.035 W/(m.K) at mean temperature of 0 deg C as per EN 12667.		
9		**OTHERS**		
9.1	**PAC ODU mounting platform**	Construction of PAC ODU mounting platform shall be as carried out with brickwork finished with 12mm thick plaster. Necessary steel platform (Mild steel) to be placed over the brick pedestal. Minimum spacing shall be 1.00 M when measured center to center. Minimum size of one such pedestal shall be 300 mm(H) x 900 mm(L) x 250 mm(W). The work is to be carried out at roof level of the building with necessary arrangement.		

9.2	**Signage and Display**	Supply and fixing signage of standard size as per conventional design/ colour code on 3 mm thick aluminium/acrylic panel. The signage shall be glow type and to be fixed on location as directed by engineer –in-charge on wall or hang from false ceiling with the help of necessary chain and screws etc.		
		Repairing of the existing main entry lobby wall signage with Stainless Steel letters, as per existing signage design and letter font / size. OIL logo to be changed as per latest design.		

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B	**ELECTRICAL DISTRIBUTION SYSTEM**			
	NOTES:	The main LT panel, UPS O/P panel and the AC panel have to be upgraded at site with higher rating switchgears and associated accessories as per the attached peak load calculation for the augmented data center. Existing LT/PAC/UPS panel components with rating may be referred to in Existing_SLD and annexure_existing_items. Bidders have to submit detailed single line diagram (SLD) of each panel mentioning switchgear ratings and upgradation plan with implementation timelines & shutdowns required, along with the technical bid. Considering the nature of the work, ACBs, MCCBs, etc. that are to be installed in the existing electrical switchgears panels should be of same make as the existing ones. For the new items make list for electrical items to be referred. **Upgradation work have to be completed with minimum total datacentre shutdown.**		
1		**Main LT Panel**		
1.1	**Main LT Panel**	The existing LT Panel shall have to be upgraded at the site using suitable switchgears,CTs, cables, connectors and required accessories as per below specifications and site requirement. Detailed electrical SLD to be submitted by the bidder.		
		The main LT panel must have 2 nos of incomers with ACB of 800 A and one bus coupler ACB of 800 A. Bus bar of LT panel shall be 1250 A (min). Outgoing of LT panel: As per site requirement.		
		• All the components shall be mounted on separate steel plate with necessary stiffeners or suitable channels so that all the components can be checked and replaced from front side after opening the door.		
		• Labelling using riveted engraved metallic labels.		
		•LT Panel should have adequate protection against high & low voltages.		
		• All panel doors shall be earthed.		
		• No bimetallic joints shall be permitted in the links of connections.		
		• Sufficient space should be provided for proper glanding, dressing, connecting up and maintenance of all cables. Sufficient nos. of cable entry holes shall be provided in the bottom plate.		
		• All items of the Panel must conform to relevant IS or IEC (with latest amendments) for performance and safety. Power supply to multifunction meter shall be 230 VAC, and through dedicated circuit, protected by suitably rated MCB.		
		Incoming cable entries: Suitable for terminating upto 3 nos of 3.5C × 240 sqmm XLPE aluminium armoured cable.		
		• All cable entries shall be done from bottom side. Separate detachable type gland plates shall be provided for all cables.		
		Shutdown plan for upgradation of the LT Panel have to be submitted by the bidder alongwith the technical bid.		
1.2	**AIR CIRCUIT BREAKERS**	Each Air Circuit breaker shall incorporate the following: • In = 800 Amps • 4 Poles • Shunt Trip • Undervoltage trip @ 80% of rated voltage • Breaking capacity – Icu = 50 kA • Spring charging – Electrical and manual • Closing – Electrical and manual • Tripping – Electrical (shunt coil) and manual trip button		

	MCCB	Each MCCB shall incorporate the following: • Rating as per erquiremnt • 4 Poles • Breaking capacity – Icu = 36 kA or above • Micro processor Based • LSIgN protection • Ics = 100% Icu as per IEC 60947-2		
1.3	**PANEL BUSBAR**	The bus-bar shall be insulated with heat shrinkable PVC sleeves, and shall be supported at required intervals with non-hygroscopic, non-deteriorating, and non inflammable SMC / FRP supports having adequate mechanical strength and a high tracking resistance, to withstand short circuit fault levels up to 50 kA for 1 sec.		
		All risers and connections from bus bar shall be carried out with same material as the main bus bars of current rating as per rating of individual cubicle switch.		
		Adequate non-hygroscopic insulating sheet barriers between the bus chambers and feeders shall be provided.		
2		**Main UPS Output Panel (for Rack Load)**		
2.1	**UPS Output Panel**	The existing UPS Output Panel shall have to be upgraded at the site using suitable switchgears, cables, connectors and required accessories as per site requirement. Revised electrical SLD to be submitted by the bidder.		
2.2		Provision to cater to a maximum IT load of 55 kW +/- 10% for Server Room-1 (max 14 racks) and a maximum IT load of 28 kW +/- 10% for Server Room-2 (max 08 racks).		
2.3		Shutdown plan for upgradation of the UPS Output Panel have to be submitted by the bidder along with the technical bid.		
3		**Main DB**		
3.1	**Main DB**	The existing Main DB shall have to be upgraded at the site using suitable switchgears, cables, connectors and required accessories as per site requirement.		
4		**CAC DB**		
4.1	**CAC DB**	The existing CAC DB shall have to be upgraded at the site using suitable switchgears, cables, connectors and required accessories as per site requirement. Supply to CAC DB shall be taken from main DB.		
5		**Lighting / Convenience DBs**		
5.1	**Lighting / Convenience DBs**	Upgradation of LDB's / CDB's for distribution to individual switches, sockets etc.		
6		**Illumination (Lighting) system**		
6.1	**Light fixtures**	All fixtures shall be LED type and recessed mounted on the false ceiling, as specifications given below. Wattage : 36 Watts Efficacy: 120% or more Rated voltage : 220 - 240 V Dimension : 595 x 595 mm		
7		**PAC Panel**		
7.1	**PAC Panel**	The existing PAC Panel shall have to be upgraded at the site using suitable switchgears, cables, connectors and required accessories as per site requirement. Revised electrical SLD to be submitted by the bidder.		
8		**Bus bar Trunking (BBT) system**		
8.1	**Bus bar Trunking (BBT) system**	Make: Vendor must specify Model: Vendor must specify		
8.2		Compact Air Copper Bus Trunking system suitable for Server Room application.		
8.3		Busbar Rating : Not exceeding 125 Amps		
8.4		Rated Operational Voltage : 1000 volt AC		
8.5		Rated Insulation Voltage : 1000 volt AC		
8.6		Rated Frequency : 50 Hz		
8.7		Busbar material : Copper, 99.9% pure ETP grade		
8.8		Degree of protection : IP 54 or better		
8.9		Fire rating : 120 min or better		
8.10		Seismic compliance: Zone 5 as per IS: 1893/ IEEE 693		
8.11		Plug-in-box : 32A / 63A to be provided as per rack load. 32A plug-in box - 16 Nos. 63A plug-in box - 8 Nos. Additional 4 Nos. of 32A and 4 Nos. of 63A plug-in box must be kept for future use.		
8.12		Compliance: IEC 61439-1 & 6		
8.13		Weight of bus trunking : Should not exceed 8 kgs per meter.		
8.14		**Preferred Makes : Legrand / C&S / Schneider**		
9		**Earthing System**		

9.1	**Earthing System**	Earthing system as IS: 3043 and as per site requirement. The earthing system shall consist of chemical earth electrodes, spaced 4-6 meters apart from each other and 2 m away from building walls, as per available space and interconnected by 50mm GI straps to form a earthing network. The earth network shall have a max resistance of 3 ohms. All earth electrodes shall be enclosed and capped by cemented earth-pit covers.		
10	**Power Cable**	Approximately 300 meters of LT power cable of following specification to be supplied and laid in ground/ wall. These cables are to be drawn from existing 500KVA 11/0.415VKV transformer and 500KVA DG set. 1100V 3.5Cx240 PVC Aluminium armoured cable Cable, 3.5C x 240 sqmm, 1100V, PVCA Alu armoured cable. Voltage Grade: 1100V Color: Black Conductor Material: Stranded compact circular/shaped Aluminum Shape: Complete round on outer side Insulation: PVC, Type A Filler & Inner Sheath: Unvulcanized rubber/ Thermoplastic materials/ Proofed tape (for inner sheath only). Outer Sheath: PVC, Type ST 1 Armour: Galvanized Steel strip/Wire Applicable Standard: IS-1554 (part-1)-1988 (with latest amendments if any) Marking: a) Manufacture's name, voltage grade, sequential length (in meters), size of cable, year of manufacture and the letters 'ELECTRIC' shall be printed, indented or embossed on the sheath of the cable throughout the length. The distance between any two consecutive printings, indentations or embossing shall be not more than 1 m. xvi. Submittals: a. GTP and TDS to be submitted for approval prior to supply of the item. b. With the supply: Routine test certificate, warranty certificate. Laying of cable: i. The trenches shall be excavated in reasonably straight lines, wherever there is a change in the direction, a suitable curvature shall be adopted complying with the requirements of above. ii. Where gradients and changes in depth are unavoidable, these shall be gradual. iii. The excavation should be done by suitable means, i.e., manual or mechanical. The excavated soil shall be stacked firmly by the side of the trench such that it may not fall back into the trench.		

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C	**DIESEL GENERATOR**			
1	**GENSET**			
1.1	500 KVA DG set with AMF Panel	Make: Vendor must specify Model: Vendor must specify		
1.2	Compliance	IS/ISO 8528 (Part 1 to 12, Latest Version) Standard		
1.2	Power Rating (KVA / KW)	500/400		
1.3	Voltage (V)	415		
1.4	Frequency (Hz)	50		
1.5	Electrical starting system (DC)	24V DC		
1.6	No. of Phases	3Phase - 4 Wire		
1.7	Power Factor	0.8 pf (Lag)		
1.8	Integral Fuel Tank Capacity (Ltrs)(Inbuilt)	Maximum 990 Ltrs. The fuel should be sufficient to operate the DG at 100% load for 06 (six) hours		
1.9	DG set Noise level as per CPCB norms	<75 dB(A) at 1 metres from the enclosure surface under free field condition		
2	**ENGINE**			
2.1	Engine Rated output (Min) KW(HP)	Bidder to provide calculation details of the selected engine		
2.2	No. of Cylinders	Bidder to specify no. of cylinders and configuration		
2.3	RPM (Max)	1500		
2.4	Fuel consumption at 50% load (max) Ltr/Hr	To be specified by the bidder		
2.5	Cooling	Liquid Cooled		
2.6	Governing	Electronic		
2.7	Governor Class	G3 as per ISO 8528 Part – V		
3	**ALTERNATOR & CONTROL PANEL**			
3.1	Alternator	Screen protected revolving field self excited alternator conforming to IS/IEC 60034-1.		
3.2	Alternator Voltage (V)	415		
3.3	Frequency (Hz)	50		
3.4	Power Factor	0.8 pf (Lag)		
3.5	Voltage +/- 1% Regulation	± 1%		
3.6	Enclosure	IP 23		

3.7	Control Panel	PS0602 Controller or similar with indicating lamps for "LOAD ON' and "Set Running" instrument fuses duly wired and furreled, busbar with suitable capacity with incoming and outgoing terminals, MCCB with suitable rating with short circuit protection, AC/Dc seperation inside control panel for safety.		
3.8	Excitation	Brushless		
4	**EXHAUST SYSTEM**			
4.1	Silencer type	Residential		
4.2	No of Silencer	Bidder to specify		
5	**EARTHING**			
5.1	Earthing scheme	Earthing system as IS: 3043 and as per site requirement. The earthing system shall consist of chemical earth electrodes, spaced 4-6 meters apart from each other and 2 m away from building walls, as per available space and interconnected by 50mmx6 mm GI straps to form a earthing network. The earth network shall have a max resistance of 3 ohms. All earth electrodes shall be enclosed and capped by cemented earth-pit covers.		
6	**AMF PANEL**			

6.1	Design	Suitable rated (rating should be higher than that of the DG full load current) AMF panel shall be provided with the genset for starting the genset and connecting its output to the load on main power failure. The panel shall have provision for monitoring power from two mains. The genset shall start in the event of failure of supply from either or both the mains. During failure of any or both the mains there shall be a waiting time of 5 sec (Adjustable timer 0- 10 sec) before starting the engine. After the engine starts and the voltage buildup and all operating parameters of the genset are in the normal operating range, the spring charging mechanism of MCCB shall charge the spring and close the MCCB. • On restoration power at both the mains only, MCCB shall trip and there shall be a waiting time of 10 sec or as required for proper shutdown, before the engine stops.		
6.2	Automatic Mode	In the automatic mode, in case of mains failure the DG set shall be started automatically through the AMF facility built in of the Engine control through a mains voltage monitoring relay to be provided on the control panel. The panel shall be provided with a built in facility for 3 consecutive starts on receipt of the signal for starting. In case the DG set fails to start, the logic should be built in such a way that the starting command to the engine both in manual/ automatic mode is locked out and hooter alarm is there to alert the operator. Diesel Engine shall continue to operate off load for a preset time in order to cool down the engine lock and bring the temperature to a uniform level to avoid thermal shocks.		
6.3	Manual Mode	In case of mains failure the DG set can be started manually through DG start push button provided on the control panel. In the event of return of the mains supply, by pushing the Mains supply Push button on the panel, power should be transferred to mains supply.		
7	**OTHERS**			
7.1	Emergency stop	Yes		

7.2	Internal light	LED Lamp		
7.3	External fuel tank	The DG to be installed with an external fuel tank of 990 litres and associated fuel pumping system.		
7.4	Rain Cap	There should be provision of Rain Cap for vertical Exhaust Emission		
7.5	Skid	Engine and Alternator shall be directly coupled or coupled by means of flexoplate/flexible coupling as per manufacturer standard design and both units shall be mounted on a suitable designed common bed plate together with all auxiliaries to ensure perfect alignment of engine and alternator with minimum vibrations. The bed plate shall be suitable for installation on suitable anti-vibration mounting system.		
7.6	Emission and Noise compliance	The generating set shall meet the latest CPCB norms as per Government of India notifications for Genset run on diesel.		
8	**OEM**			
8.1	Presence	The OEM shall have service center in the State of Assam.		
8.2	Make	Bidder to specify		

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D	**UPS SYSTEM (Main)**			
1	**Hi-Performance Modular On Line UPS system, 02 x 90 KVA**	Existing main online modular UPS have to be scaled up to 120 KVA by adding 30 KVA power modules.		
2	**Backup power modules**	UPS system should have at least two (02) backup power modules in case of module replacement within the contract period.		
		Power modules should be exactly of same rating and make as that of the existing modules. (Bidder to mention make & rating of power modules)		
3	**Input: 3 Phases + Neutral + Ground**	• Rated AC Input Voltage: 415 (three-phase and sharing neutral with the bypass input) • Rated Frequency: 50 Hz • Input voltage range: 304~478Vac (Line-Line), full load 228V~304Vac (Line-Line), load decrease linearly according to the min phase voltage • Input Frequency range: 40~70 • Input Power factor: > 0.99 • THDI: < 3% (full Linear Load)		

4	**Battery**	12V VRLA SMF Batteries for a minimum of 30 minutes back-up time.		
		Each UPS should have individual battery bank.		
7	**Output**	• Rated capacity (KVA): as stated, Scalable upwards • Rated AC voltage: 380/400/415 • Rated Frequency: 50/60 • Frequency Regulation: 50/60 Hz ± 0.1 % • Voltage precision: ± 1.5 (0 ~ 100 % load)		
		• Overload: i) 110% for 60 min; ii) 125% for 10min; iii) 150% for 1min; iv) >150% for 200ms		
6	**Battery Circuit Breaker**	Should be as per UPS battery bank.		
7	**Isolation transformer**	Individual input isolation transformer for UPS.		
8	**Parallel operation**	UPS should have Hot Sync Paralleling Card		
9	**Monitoring**	UPS should have SNMP Card for remote monitoring.		

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E	**PRECISION AIR CONDITIONERS**			
1	**Precision AC, 34.2 kW, gross cooling capacity for Server Room 1.**	Make: To be same as the existing PACs Model: Vendor must specify		
	Precision AC, 44.6 kW, gross cooling capacity for Server Room 2.	Make: Vendor must specify Model: Vendor must specify		
2	**General**	The microprocessor controlled precision AC Units should have high sensible heat ratios, to match high sensible loads of Computer / Server Rooms.		
3		The Indoor unit shall comprise of Digital Scroll Compressor in independent, corrosion resistant EC fans, Evaporator DX Cooling Coil with hydrophilic coating, Microprocessor controllers, Expansion valves, Driers, G4 Filter, Suction and Discharge piping, Internal power and Control wiring, Crankcase heaters, Infrared Humidifier, Heaters, HP/LP Cutouts, Power and Control contactors, water leak detectors and Other Electrical accessories.		
4		Systems should mandatorily be having variable capacity compressors. Fixed capacity compressor technology like multiple scrolls or fixed capacity tandem scrolls are strictly not allowed.		
5	**Unit return air temperature**	24 ± 1 Degree C		

6	**Ambient air design temperature**	38 Deg C		
7	**Relative Humidity**	50 % ± 5%		
8	**Air Flow Direction**	Downthrow discharge and top return		
9	**Indoor unit depth** **Indoor unit height**	Not exceeding 900 mm Not exceeding 2000 mm		
10	**Indoor to Outdoor unit distance**	Unit must be capable of functioning upto 100 metre of Copper piping between Indoor & Outdoor units.		
11	**Design**	Unit shall be floor mounted designed specifically for service from the front. The system shall be designed to draw-through air arrangement to insure even air distribution to the entire face area of the coil. The unit shall modulate cooling capacity and airflow based on site requirements.		
12		Bidder must submit software selection outputs of the proposed units.		
13	**Cabinet**	The cabinet to be manufactured from CRCA externally painted with RAL 7021 colour epoxy-polyester powder paint and assembled. Double-skinned fan section and side panels with glasswool insulation of 10-25 mm thickness with 30-40 kg/m3 of density.		
14	**Cooling circuit**	Single refrigeration circuit, incorporating high efficiency, fully hermetic Digital Scroll compressor with crankcase heater, air-cooled condenser with outlet service valve, safety valve, filter drier, moisture indicating sight glass, liquid line solenoid valve and an expansion valve directly controlled by the unit microprocessor to allow the highest energy saving.		
15	**Evaporator coil**	The inclined evaporator coil to be manufactured from copper tubes, mechanically bonded to hydrophilic painted aluminium fins, with a stainless steel condensate drain pan.		
16	**Fan section**	The unit to be fitted with a direct-driven, high efficiency, single inlet, backward curved, centrifugal 'plug' type innovating EC fan. The fan to have an impeller with curved blades made of corrosion resistant fibreglass plastic.		

17	**Fan section**	The fan motors should be electronically commutated, IP54, with internal protections, continuous speed regulation via controller signal. The motor should be three-phase with IP54 protection; provided with internal thermal protection.		
18	**Humidifier**	The electronic controlled humidifier unit to be fitted with an infrared humidifier suitable for use with water of varying degrees of hardness.		
19	**Heating / reheating**	The heating resistors are of a rigid design for extended operational life and are normally utilised to maintain room dry-bulb conditions during a system call for dehumidification.		
20		Stage heaters to be made of finned armoured stainless steel ANSI 304 to maintain low surface power density.		
21		Heating control to be ON-OFF type. The heaters should be phase balanced and provided with a manual reset safety thermostat to disable them in the event of a high temperature.		
22	**Air filtration**	Standard filtration grade of G4 (95% down to 5 microns)		
23		The unit to provide 'Filter Clogged' warning indication.		
24	**Monitoring**	The unit to be supplied with suitable card for both SNMP & modbus connectivity.		
25	**Microprocessor controller**	The controller should be microprocessor based, 32 bit RISC.		
26		The controller allows setting and monitoring of the following parameters via a 3- button keypad: • Air Temperature • Temperature set-point • Temperature band • Humidity • Humidity set-point • Humidity band		
27		The parameters are to be indicated using symbols and text on a backlit, liquid crystal display.		
28		The controller shall provide unit to unit ethernet connection to operate with multiple units, run/stand-by rotation, automatic changeover and parameter sharing functions, external communications through BMS, sequential auto restart timer, with adjustable time delays to be applied to unit restart after a power loss.		

29		The following warnings / alarms are to be included: • High temperature • Low temperature • High relative humidity • Low relative humidity • Humidifier failure • Fan failure • Electrical heater high temperature (when applicable) • Sensor failure • Controller errors		
30		Unit memory shall hold the 200 most recent alarms with time and date stamp for each alarm.		
31	**Type of load**	High sensible heat load (SH factor > 0.95)		
32	**Power Supply**	Unit should be able to work on 415 VAC, 50 Hz, 3-phase, 4 wire supply, with normal voltage and frequency fluctuations.		
33	**Safety interlocks**	Fire detection signal from fire detector system shall be able to switch off the unit operation in the event of fire in conditioned space.		
34	**Refrigerant piping**	Refrigerant circuit shall be suitable for operation on R-407C / R410a and shall include the following items: a) Expansion valve with pressure equalization; b) Removable liquid line drier / filter. c) Liquid line sight glass with moisture indicator. d) Hand shut off valves.		
35	**OEM qualification criteria**	OEM should be minimum ISO 9001, ISO 14001 certified.		
36		OEM should have fully equipped service center (for Precision AC units) within the State of Assam to give prompt & efficient service. Service center address details with documentary evidence must be provided by the bidder.		

Sl. No.	Item	Description	Bidder's Response(Noted, Complied, Not Complied)	Reference to relevant section/Page No. in the technical bid /documentation / Brochure / Catalogue / OEM Website, wherever applicable
F	**COMFORT /SPLIT AIR-CONDITIONER SPECIFICATIONS**			
	NOTES:	Existing comfort AC's to be replaced with 2.0 /1.5 Ton inverter type split AC's.		
1	Nominal Cooling Capacity (Tonnage)	2		
2	Star Rating	Minimum 3 Star		
3	Cooling Capacity (Watt)	6350		
4	(Rated) Voltage/ Frequency/ Phase	230 V / 50Hz / Single		
5	ISEER	3.9		
6	Country of Origin	India		
7	Air Conditioner Technology	Inverter		
8	Cooling Capacity (BTU/hr)	21666		
9	Moisture Removal (Litres/Hour)	1.8		
10	Compressor Type	Inverter Rotary		
11	Night Glow Function on Remote Buttons	Yes		
12	Refrigerant	R32		
13	Condenser Type	100% Copper		
14	Installation	Standard Installation		
15	ODU location	Roof top		
16	Operation	Split AC's to be operated through sequential controllers without any manual intervention.		

Sl. No.	Item	Description	Bidder's Response(Noted, Complied, Not Complied)	Reference to relevant section/Page No. in the technical bid /documentation / Brochure / Catalogue / OEM Website, wherever applicable
G	**ADDRESSABLE FIRE DETECTION & ALARM**			
	NOTES:	The existing fire detection & alarm system to be upgraded / expanded to accommodate the new areas, as per minimum specifications below.		
1	FIRE DETECTION & ALARM SYSTEM	Addressable multi-criteria type smoke detector with twin LED.		
2		Response indicator with LED.		
3		Addressable control modules		
4		Addressable monitoring modules		
5		Fault Isolator modules (inbuilt or separate) as per Class-X wiring.		
6		Manual Pull Station.		
7		Electronic Strobe cum Hooter		
8		Existing control panel to be integrated with all devices including the building management system.		
9		The system modules shall communicate with an RS 485 network communications protocol.		
10		Manual Call Points shall be 'PULL' type, addressable, and installed with proper fire signage.		
11		Electronic sounders shall be fitted with synchronized flashing lights and adjustable sound outputs.		
H	**HIGH SENSITIVITY SMOKE DETECTION**			
	NOTES:	A new high sensitivity smoke detection system to be supplied, installed and commissioned for Server Room-2, as per minimum specifications below and as per NFPA standards.		
1	HIGH SENSITIVITY SMOKE DETECTION	Make: Vendor must specify Model: Vendor must specify		
		Laser based VESDA control Panel		
		Power Supply Unit		

2	DETECTION	Aspiration Tubes, Capillary Tubes, Nozzles, accessories, etc.		
		25mm PVC Conduit		
I	**FIRE SUPPRESSION SYSTEM FOR SERVER ROOM-2**			
	NOTES:	A new fire suppression system to be supplied, installed and commissioned for Server Room 2, as per minimum specifications below and as per NFPA standards.		
1	FIRE SUPPRESSION SYSTEM	Make: Vendor must specify Model: Vendor must specify		
2		FK-5-1-12 based Fire Suppression System.		
3		Fire suppression with total room flooding.		
4		Fire suppression agent should have zero ozone depletion potential.		
5		Fire suppression agent should have global warming potential than 1.		
6		Fire suppression agent shall have minimum atmospheric lifespan of less than 5 days.		
7		The fire suppression agent should be electrically non-conducting in both liquid and gas states.		
8		Seamless PESO approved cylinder.		
9		Backup cylinder to be considered.		
J	**PORTABLE FIRE EXTINGUISHERS**			
1	PORTABLE FIRE EXTINGUISHERS - OTHER AREA	Additionally, ensure that six (06) nos. of 4Kg clean agent portable firefighting extinguishers filled with FE-36 clean agent shall also be provided at strategic locations within the protected area.		

Sl. No.	Item	Description	Bidder's Response(Noted, Complied, Not Complied)	Reference to relevant section/Page No. in the technical bid /documentation / Brochure / Catalogue / OEM Website, wherever applicable
K	**ACCESS CONTROL SYSTEM**			
	NOTES:	Existing access control system have to be upgraded / expanded to accommodate additional doors along with associated devices.		
1	ACCESS CONTROL SYSTEM	Biometric Finger Print cum Smart Card Reader.		
2		Smart card based readers for other doors.		
3		Exit switch for exit.		
4		Door status to be integrated to the building management software.		
5		Contactless Smart Cards, 13.56 MHz		
6		All readers to be integrated to the existing control panel.		
7		Electromagnetic Locks (600 Ibs) with Magnetic Contact UL listed for single leaf doors.		
8		Electromagnetic Locks for Double Doors (2x600 Ibs) with Magnetic Contact UL listed.		
9		Emergency Door Release (Break Glass Type).		
10		The biometric finger print and proximity / smart card reader should have transaction storage capacity.		
11		All access control doors should be automatically de-activated in the event of fire alarms.		
12		Access control software license should be perpetual.		
13		All additional software licenses, if any, for database etc. for the period of the contract must be provided.		
14		Visitor Management software to be supplied & installed.		
15		Capable of visitors registration.		
16		Be able to perform online requests for appointment.		

17	Visitor Management software	Be able to handle appointment, approvals and rejections.		
18		Should be able to send and receive Email/SMS/Mobile App notifications on requests, approvals, and rejections.		
19		Should produce current date's (today's) appointments and expected visitors.		
20		Capable of accepting Barcode scanning for quick registrations.		
21		Provide visitor history tracking & visitor blacklisting.		
22		It should be able to record items carried in / out post scanning.		
23		System should allow integration of MS Exchange / MS Outlook for appointments calendar.		
24		System shall allow Email/SMS/Mobile App notifications on visitor arrival and sign-out.		
25		Should have option of central implementation to monitor sites across geographies.		
26		System shall allow integration IOS & Android mobile app for Visitor Pre-registration and Meeting Approvals		
27		It should be able to show visitor overstay alerts to security and host.		
28		It should be able to send evacuation / security alerts to visitors during emergency situations.		
29		System should provide visitor movement dashboards, statistics and reports.		
30		Software should be 'on-premises' type with perpetual license and no data should be stored on any third-party cloud.		
L	**PUBLIC ADDRESS SYSTEM**			
	NOTES:	Existing public address system have to be upgraded / expanded to accommodate additional speakers for new / expansion areas.		
1		All areas of the datacenter should be audible through the PA system.		
2		Ceiling Mount Speaker- 6 W to be connected to existing controller.		

3	PUBLIC ADDRESS SYSTEM	PA zones to be defined and accordingly integrated with the call station.		
4		PA system to be integrated with the fire alarm system for running automated voice messages in case of fire alarm.		
M	**WATER LEAK DETECTION SYSTEM FOR SERVER ROOM-2**			
	NOTES:	A new water leak detection system to be supplied, installed and commissioned for Server Room 2, as per minimum specifications below.		
1	WATER LEAK DETECTION SYSTEM	Water Leak detection Panel with LCD display.		
2		Water leak detection cable		
3		Sounder		
4		2 core 1.5 sq.mm PVC Insulated copper conductor Cable		
5		25mm PVC Conduit		
N	**RODENT REPELLENT SYSTEM FOR BMS & SERVER ROOM-2**			
1	RODENT REPELLENT SYSTEM	Ultrasound based digital technology		
2		Networkable on RS-485		
3		Auto & Manual mode of operation		
4		Maximum Power Consumption: 15 Watt		
5		Minimum Area coverage per transducers: 150 Sqft above false ceiling, 300 Sqft below false ceiling & 150 Sqft below false floor.		
6		Transducers Sound Output: 50 to 110 dB (Verifiable)		
7		Transducers Power Output: 800 mW		
8		All control panels to be stacked and installed on wall mount racks in one location inside the BMS room.		
O	**IP CCTV SURVELLIANCE SYSTEM**			
1	**Fixed Dome Camera**	Make: Bidder to specify.		
		Model: Bidder to specify.		
1.1	Image Sensor	1/2.8” Progressive Scan CMOS Sensor		
1.2	Effective Resolution	4 MP		
1.3	Minimum Illumination	Color: 0.005 Lux; 0 Lux with IR		
1.4	IR Range	30 meters with Smart IR		
1.5	Video Compression	H.265 / H.264		
1.6	Audio	Built-in mic		
1.7	SD Card Slot	Supported, with 128 GB storage capacity		
1.8	Wide Dynamic Range (WDR)	120 dB or better		
1.9	Signal to Noise Ratio (SNR)	50 dB or better		
1.10	Power Supply	PoE		
1.11	ONVIF Compliance	Profile S, G, and T		

1.12	Environmental Protection	IP67 (Ingress Protection), IK10 (Vandal Resistance)		
1.13	Certifications	NDAA Compliant, BIS Certified (IS:13252), STQC Certified as per MeitY Essential Requirements Guidelines		
2	**PTZ Camera**	Make: Bidder to specify.		
		Model: Bidder to specify.		
2.1	Image Sensor	1/2.8" Progressive Scan CMOS Sensor		
2.2	Effective Resolution	4 MP		
2.3	Minimum Illumination	Color: 0.005 Lux; 0 Lux with IR		
2.4	IR Range	Up to 180 meters or better with Smart IR		
2.5	Video Compression	H.265 / H.264		
2.6	Audio	Built-in mic		
2.7	SD Card Slot	Supported, with 512 GB storage capacity		
2.8	Optical Zoom	32x		
2.9	Digital Zoom	16x		
2.1	Pan Range & Speed	0° to 360°, speed 0.1° to 300°/sec		
2.11	Tilt Range & Speed	-15° to +90°, speed 0.1° to 200°/sec		
2.12	Wide Dynamic Range (WDR)	120 dB or better		
2.13	Signal to Noise Ratio (SNR)	50 dB or better		
2.14	Power Supply	PoE+ (IEEE 802.3at)		
2.15	ONVIF Compliance	Profile S, G, and T		
2.16	Environmental Protection	IP67 (Ingress Protection), IK10 (Vandal Resistance)		
2.17	Certifications	NDAA Compliant, BIS Certified (IS:13252), STQC Certified as per MeitY Essential Requirements Guidelines		
3	**32 Channel Network Video Recorder**	Make: Bidder to specify.		
		Model: Bidder to specify.		
3.1	Video Channels	32 Channels		
3.2	Video Compression	H.265 / S+265		
3.3	Recording Resolution	Up to 12 MP		
3.4	HDD Support	8 × SATA HDD slots		
3.5	HDD Capacity per Slot	Minimum 6 TB per slot		
3.6	Bandwidth (Throughput)	Minimum 320 Mbps Incoming & 320 Mbps Outgoing		
3.7	ONVIF Compliance	ONVIF Profile S or higher		
3.8	Network Interface	1 × RJ-45 (10/100/1000 Mbps)		
3.9	USB Ports	2 × USB 2.0, 1 × USB 3.0 or better		
3.1	Intelligent Analysis	Supports 64-channel Intelligent Analysis Processing		
3.11	Smart Functions	Smart Search & Smart Recording		

3.12	ANR Support	Yes (Automatic Network Replenishment)		
3.13	Cloud Support	Cloud upgrade and IPC (camera) cloud upgrade		
3.14	Browser Compatibility	Supports all major browsers: IE, Safari, Chrome, Edge		
4	**PoE Switch-24 Port**	Make: Bidder to specify.		
		Model: Bidder to specify.		
4.1	Transmission Distance	Minimum 200 meters		
4.2	Transmission Rate	2000 Mbps Full Duplex		
4.3	Power Input	AC 180~240 V		
4.4	Bandwidth	12.8 Gbps		
5	**Others**	All necessary accessories for fixing of camera to Wall / Ceiling must be supplied.		
P	**Building Management System**			
1	**Building Management System**	Existing Building Management System (BMS) to be upgraded to integrate the existing devices as well as the new devices added.		
2	**BMS Software**	BMS software should be upgraded to the latest version having support for the entire contract period.		
3		BMS software licenses for the additional items shall be supplied.		
10	**Integration & Monitoring**	Following to be integrated to the BMS system: •Electrical feeders •UPS •PAC •DG •Rack PDU •Fire detection & alarm •Access control system •Water leak detection		
11		BMS should be able to monitor access control door status.		
12		BMS should be able to communicate with the fire detection system.		
13		BMS should be able to generate fault logs.		
14	**Others**	TCP/IP based freely programmable native BACnet 32-bit network controller.		
15		BACnet MSTP based freely programmable 32-bit DDC Controllers		
16		Wall / ceiling mount temperature cum humidity sensors (+/- 3% accuracy)		

17		Communication Cabling (Shielded copper conductor cable)		
18		Signal Cabling (Flexible Copper conductor cable)		
Q	**WALL MOUNT LED DISPLAY/TV**			
1	Wall Mount LED Display	Make : Bidder to specify Model : Bidder to specify		
2	Screen Size	55"		
3	Native Resolution	3,840 x 2,160 (4K UHD)		
4	Sensors	Built-in Wi-Fi		
5	Speakers	Built-in Speaker		
6	Ports	HDMI In, RJ45 (LAN), USB		
7	OEM	SONY/SAMSUNG/LG		
R	**IT RACKS (MEDIUM DENSITY), 42U, 800 x 1000 MM WITH IPDU**			
1	Rack Size	42U		
2	Dimension	800 x 1000 mm, overall height should not exceed 2120 mm.		
3	Rack Design	Steel sheet punched, welded and powder coated.		
4		To be mounted on the floor with castor wheels and brakes (set of 4 per rack).		
5		Numbered U- positions.		
6		Four 90 CFM fans on top.		
7		Fixed shelf, 715 mm depth.		
8		Keyboard shelf, 715 mm depth.		
9		Vertical and horizontal cable managers.		
10		Provision for cable entry & exit from both top & bottom.		
11		Mounting hardware, pack of 20.		
12		Adapter kit		
13	Doors / side panel	Front single perforated door and dual perforated doors at rear.		
14		Removable side panels with slam latch and lock.		
15	Rack lock	Swing handle lock with mechatronic 2-door keypad standalone 1Point + 3Point		
16	IP PDU	Dual vertical PDU in each rack with different colors		
17	Input Plug	IEC 60309 2P+E 6h 32A		
18	Cord Length	3 Meters		
19	Max Input Current	32A		
20	Rated Input Voltage	200 - 240V		
21	Input Frequency	50/60Hz		

22	Power Capacity	6.4kVA at 200V, 7.7kVA at 240V		
23	Sockets	24 x C13/10A and 6 x C19/16A		
24	Secure lock support	Yes		
25	Controller	Field replaceable controller.		
26	Energy Metering	Voltage (V), Current (A), Active Power (kW), Real Power (kVA), Energy (kWh), Power Factor		
27	Sensors	Compatible temperature and humidity sensors.		
28	Display	Color, matrix LCD display with auto-flip orientation		
29	Embedded Processor	Yes with minimum 64MB SDRAM		
30	Protection	Circuit breaker in closed housing to prevent accidental tripping.		
31	Remote Access	Yes		
32	Regulatory Approvals	CE, FCC, RoHS compliant		
S	**IT RACKS (HIGH DENSITY), 42U, 800 x 1200 MM WITH IPDU**			
1	Rack Size	42U		
2	Dimension	800 x 1200 mm, overall height should not exceed 2120 mm.		
3	Rack Design	Steel sheet punched, welded and powder coated.		
4		To be mounted on the floor with castor wheels and brakes (set of 4 per rack).		
5		Numbered U- positions.		
6		Four 90 CFM fans on top.		
7		Fixed shelf, 715 mm depth.		
8		Keyboard shelf, 715 mm depth.		
9		Vertical and horizontal cable managers.		
10		Provision for cable entry & exit from both top & bottom.		
11		Mounting hardware, pack of 20.		
12		Adapter Kit.		
13	Doors / side panel	Front single perforated door and dual perforated doors at rear.		
14		Removable side panels with slam latch and lock.		
15	Rack lock	Swing handle lock with mechatronic 2-door keypad standalone 1Point + 3Point		
16	IP PDU	Dual vertical PDU in each rack with different colors		
17	Input Plug	IEC 60309 2P+E 6h 63A		
18	Cord Length	3 Meters		
19	Max Input Current	63A		
20	Rated Input Voltage	200 - 240V		

21	Input Frequency	50/60Hz		
22	Power Capacity	12.6kVA at 200V, 15.1kVA at 240V		
23	Sockets	24 x C13/10A and 12 x C19/16A		
24	Secure lock support	Yes		
25	Controller	Field replaceable controller.		
26	Energy Metering	Voltage (V), Current (A), Active Power (kW), Real Power (kVA), Energy (kWh), Power Factor		
27	Sensors	Compatible temperature and humidity sensors.		
28	Display	Color, matrix LCD display with auto-flip orientation		
29	Embedded Processor	Yes with minimum 64MB DDR2 RAM		
30	Protection	Circuit breaker should be in a closed housing to prevent accidental tripping.		
31	Remote Access	Yes		
32	Regulatory Approvals	CE, FCC, RoHS compliant		
T	**PASSIVE NETWORKING**			
1	Horizontal UTP Components	Cat6A STP Patch Cord, 2 Mts.		
2	Horizontal Fiber Optic Components	a) Necessary 12F MTP-MTP Cable Assembly Fiber Optic OM4 of various sizes based on the server farm design. b) 12F OM4 MTP-LC Fiber Optic Cassettes c) Necessary Rack mount Fiber Optic Enclosure to take 4 Cassettes, d) 1U and necessary blank modules. e) LC-LC OM4 Duplex Patch Cord, 5 Mts		
3	DC Support Area UTP Components	All the necessary UTP components including following: a) Cat6 UTP Cable, 23 AWG, of 305 Mts. Box b) 24 Port Unloaded Modular Jack Panel, 1U c) Cat6 UTP Jack d) Dual Face Plate e) Cat6 UTP Patch Cord, 1 Mt. f) Cat6 UTP Patch Cord, 2 Mts.		

4	Uplink Fiber Optic Components	All the necessary fibre optic components including following: a) 6 Core SM Outdoor Armored Cable b) Fiber Optic Rackmount LIU, unloaded c) 12 Fiber Adopter Plate d) Blank Plate e) Splice Tray f) 1.5 Mts. SM SC Pigtail g) SM SC-LC Duplex Patch Cord.		
5	Voice Networking	All the necessary components for voice networking for minimum 6 telephone connection in NOC room including following: a) Cat6 UTP Cable, 23 AWG, of 305 Mts. Box b) 24 Port Unloaded Modular Jack Panel, 1U c) Cat6 UTP Jack d) Single Face Plate e) Cat6 UTP Patch Cord, 2 Mts. f) PVC back Box g) Distribution Box 20 Pair, Unloaded h) 10 Pair Disconnect Module i) EPABX System with all accessories j) Table Top analog Telephone Handset k) Wall hanging analog Telephone Handset		
6	Cable Pathways	300mm width Wire Mesh Cable Tray with fitting accessories, 1" PVC Conduit and HDPE Pipe (Preferred Make:Legrand / Molex / Belden)		

Annexure-X to SoW

Sl. No.	Documents to be submitted	Whether submitted along with the bid(Yes/No)
1	**CIVIL**	
1.1	CBRI or ARAI test report or certificate for Fire Rated Door (FRD)	
1.2	CBRI or ARAI test report or certificate for fire rated partition (FRP)	
2	**DG**	
2.1	**The following Documents / drawings shall be submitted with the offer** • GA drawing • Technical literature of alternator. • Datasheet as mentioned in SOW. • Test certificates towards compliance of noise and emission norms as per the latest CPCB guidelines for gas engine and generator.	
3	**Electrical**	
3.1	* Proposed SLD of The entire Electrical System Panel. * GA drawing of the LT Panel showing dimensional details. * Type Test certificates (Short Circuit/IP etc.) for the LT Panel * Shutdown plan for upgradation of the LT Panel	
3.2	**For Comfort/Split Air-Conditioner** * Catalogue containing the features of offered make and model.	
3.3	**For Precision AC** * Detail calculations considering heat load, ambient temp, desired room temp & humidity & redundancy * Technical data of units offered	
4	**Annexures**	
4.1	Signed SLA (Annexure_SLA)	
4.2	Signed NDA (Annexure_NDA)	
4.3	General Layout including equipment of Data center	
5	**Documents as per BEC/BRC**	
5.1	MAF -for PACs to be supplied (as per format Annexure_MAF)	
5.2	MAF -DG (as per format Annexure_MAF)	
5.3	MAF -for Busbar Trunking system to be supplied (as per format Annexure_MAF)	
5.4	MAF -Fire Detection and Suppression system (as per format Annexure_MAF)	
5.5	MAF -CCTV (as per format Annexure_MAF)	
5.6	MAF -IT Racks & PDU (as per format Annexure_MAF)	
5.7	Certificates of personnel along with payroll evidence	
5.8	ISO certificate of the bidder	