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REQUEST FOR QUOTATION

Lot-2

Request for Quotation for Selection of Bidder for Establishing Tier-III Data
Centre Passive Infrastructure

“Electrical & Containment (Generate, DB Box, Electrical Cable -Substation &
Data Center, Rack, PDU, Containment, UPS, Cooling, DCIM & Structure
Cabling, Earthing Works)”

December 7, 2025

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Disclaimer

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The RFQ is intended solely to assist bidders and may be updated, revised, or amended at GC's discretion. Bidders are responsible for conducting their own investigations, analysis, and due diligence regarding the project, applicable regulations, and related matters. Statements, estimates, or forecasts contained in this RFQ are based on assumptions that may or may not prove accurate, and no reliance should be placed on them as guarantees or promises.

By participating in this RFQ, bidders acknowledge that GC accepts no liability for any loss or damage arising from the use of, or reliance on, the information provided.

Lot-2: Technical Specification, BOQ, Compliance, Technical and Financial Process

Table of Content: Lot-2

Lot-2: Technical Specification, BOQ, Compliance, Technical and Financial Process 3

1. Bidder’s Eligibility 4

2. Evaluation of Technical Bids..... 6

3. Evaluation of Financial Bids 9

 3.1 Summary of Costs:9

 3.2 Payment Milestone:.....9

4. Warranty with Service Support of the Product..... 11

5. Scope of Work..... 12

 5.1. High level scope of work and deliverables for DC.....12

 5.2. Brief of the Scope of Work.....13

6. Technical Specification:..... 15

 1. Item Name: Contained Aisle & Structure.....15

 2. Item Name: Power Equipment34

 3. Item Name: Cooling System.....73

 4. Item Name: Data Center Infrastructure Management (DCIM)79

 5. Item Name: Ladder91

 6. Item Name: Structure Cabling.....99

 7. Item Name: Product Training.....107

1. Bidder's Eligibility

Sl.	Eligibility Criteria	Document Proof	Severity	Bidder response with relevant Proof of document
1.	The Bidder should be a legal entity and a registered company that have not been prohibited by Bangladeshi or international court(s) to enter contracts.	1. Certificate of Incorporation (in name change cases, copy of Certificate of Incorporation and all subsequent certificate of name change are to be provided) duly signed by the authorised signatory. 2. Updated Trade License 3. TIN and last year TAX return Certificate or Acknowledgement receipt 4. VAT Registration Certificate	Major	
2.	The Bidder should have at least 08 (Eight) years' overall experience in IT/ITES Infrastructure solution	1. General Experience Certificates of 08 Years of work (Work Order/Work Completion Certificate) should be submit with this bid Documents	Major	
3.	ABC Electrical Contractor License	The Bidder should have Electrical Contractor License i.e. ABC License for Company name. Certificate should be submitting with the bid documents	Critical	
4.	The Bidder should submit Audited Financials report for the last three financial years	Audited Financial Statements or Report for the last three financial years	Major	
5.	Specific Experience on Data Centre Products supply, installation and commissioning at 1 (one) Tier-III Certified Data Centre in any Government/Financial Institute/Bank/Telco/Corporate sector in last 3 (Three) years.	Completion Certification must submit with the bid documents	Critical	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl.	Eligibility Criteria	Document Proof	Severity	Bidder response with relevant Proof of document
6.	The Bidder must have at least 4 (Four) Data Centre installation and commissioning experience in last 8 (Eight) Years in any Government/Financial Institute/Bank/Telco/Corporate/Private sector Years counting backward from the date of publication of the RFQ	Completion Certification must submit with the bid documents	Critical	
7.	The Bidder must have completion experience in last 4 years at least 2 (Two) Complete Data Centre including 16 Racks with cold aisle containment, Modular UPS, Precision AC, AVR, Intelligent PDU, DCIM, Auto Fire detection and suppression system etc.	Completion Certification must submit with the bid documents	Critical	
8.	Confirmation from the Bidder that there are no ongoing or settled cases of arbitration or legal dispute with any entity that will have an impact on the contract with GC	Bidder must submit the Self-undertaking duly signed by authorised representative with the bid documents	Critical	

2. Evaluation of Technical Bids

Technical Evaluation Criteria Table:

1	General Criteria
1.1	The Bidder should have at least 08 (Eight) years' overall experience in IT/ITES Infrastructure solution
1.2	The Bidder must have at least 4 (Four) Data Centre installation and commissioning experience in last 8 (Eight) Years in any Government/Financial Institute/ Bank/ Telco/ Corporate/Private sector Years counting backward from the date of publication of the RFQ
1.3	The Bidder should submit Audited Financial report for the last three financial years
2	Specific Experience
2.1	Specific Experience on Data Centre Products supply, installation and commissioning at 1 (one) Tier-III Certified Data Centre in any Government/Financial Institute/ Bank/ Telco/ Corporate sector in last 3 (Three) years.
2.2	The bidder should have Specific Experience At least Tk. 9.0 Crore (Nine Crore) in supply, installation and commissioning of Data Centre in a single contract for any Government/Financial Institute/Bank/Telco/Corporate/Private sector in last 2 years. Years counting backward from the date of publication of the RFQ (Enclose Experience Certificate for verification).
2.3	The Bidder must have completion experience in last 4 years at least 2 (Two) Complete Data Centre including 16 Racks with cold aisle containment, Modular UPS, Precision AC, AVR, Intelligent PDU, DCIM, Auto Fire detection and suppression system etc.
2.4	The bidder must have Valid ISO 9001:2015 Certificate (Quality Management System), The ISO 9001:2015 should be accredited from UAF or IAF. The Certificate should be verifiable from online.
3	Compliance with the Technical Specification
3.1	Bidder must provide all products and technical documents as per compliance of Tier - III (Uptime Institute)
3.2	Bidder shall take responsibility if Tier III Certification is denied and Bidder will bear all cost to resolve observations and feedback that needs to be addressed for Certification re-evaluation. So, before selection of the product or brand, please chooses the standard product.
3.3	Bidder must provide all kinds of certification related document (i.e.; proper brochure, efficiency loss transformer loss, skin loss, heat dissipation capacity, charging loss, logic diagram, functional procedure etc.) to the concern team/Consultant
3.4	All critical and major items and features must be Complied with Technical reference and evidence should be submitted based on the compliance checklist
3.5	Bidder must write response in details in bidder response column in technical specifications checklist. Don't write only 'complied'.
3.6	Bidder shall be provided relevant answer and reference value to use instead of written compliance in technical compliance checklist.
3.7	Bidder will provide necessary solution with details information if have any gap/missing in given technical specifications for any kinds of product/solution.
3.8	Bidder shall be followed Fire safety standards (NFPA 75, NFPA 76)

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

3.9	Bidder shall be followed Electrical standards (IEC, IEEE)
3.10	Bidder shall be followed Structure Cabling standards (TIA/EIA)
3.11	Bidder shall be followed Structure Cabling standards (TIA/EIA)
3.12	Bidder shall provide details specification for all products, even if they are not included in the RFQ
3.13	Bidder shall provide all products and goods warranty and 24x7 services support for 3 years after successful handover the project.
3.14	Bidder shall provide SOP during PAT/FAT.
3.15	Bidder must work in coordination with everyone / stakeholder (Lot-1,2,3 & consultancy firm for DC certification) and obtain the necessary approvals from GC team and project consultant.
3.16	Bidder must be following the guidance of GC team and project consultant in each step.
4	Proposed Project Plan: The bidder should submit an overall project plan. The bidder should complete the project within 150 Days from the Contract signing date.
4.1	<p>Solution Proposal should contain below information</p> <ol style="list-style-type: none"> 1. Project Plan with GANTT Chart, delivery/ project execution plan /shipment plan. 2. Resource Deployment Plan 3. Problem escalation matrix 4. Problem escalation time 5. Proposed Design (Design should be Tier-III Certifiable.) 6. Proposed Electrical Single Line Diagram design both substation and power connectivity diagram in detail for the data center (Design should be Tier-III Certifiable.)
4.2	<p>Bidder shall be provided the following documents during implementation period</p> <ul style="list-style-type: none"> • Weekly progress report • Risk register • Issue log • Change request form • Design submission format
5	Resource Profile: The Bidder must submit the resources CV
5.1	Bidder must have at least two ATD Certified engineer in house resource. Who has 10+ years working experience in the Data Centre field.
5.2	<p>Data Centre Expert#1: Experience of the bidder in managing the installation and commissioning of large Data Center.</p> <ol style="list-style-type: none"> a. 10+ years' experience in relevant field. b. Education: Bachelor in Computer Science & Engineering (CSE) / in Electrical & Electronics Engineering (EEE)/ in Electronics & Communications (ECE) / Applied Physics & Electronics (APE) / Physics / Mathematics c. ATD Certification from Uptime Institute. d. Overall experience: Minimum 10 (Ten) years with 5 Years of managerial experience in Government/ Corporate/ Financial/ Health Care/ Telco sector/Large IT System Integrator. e. Data Center Experience: At least 3 Data Center implementation/ management. f. OEM Certification for Cooling and Power Sector g. Electrical License at least BC category
5.3	Data Centre Expert#2

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	<ul style="list-style-type: none"> a. 10+ years' experience in relevant field. b. Education: Bachelor in Computer Science & Engineering (CSE) / in Electrical & Electronics Engineering (EEE)/ in Electronics & Communications (ECE) / Applied Physics & Electronics (APE) / Physics / Mathematics c. ATD Certification from Uptime Institute. d. CDCP Certification from EPI e. Overall experience: Minimum 10 (Ten) years with 5 Years of managerial experience in Government/ Corporate/ Financial/ Health Care/ Telco sector/Large IT System Integrator. f. Data Center Experience: At least 3 Data Center implementation/ management. g. OEM Certification for Cooling and Power, overall Data Center Sector
5.4	The bidder must have a minimum of six (06) In-house engineers, with at least two (02) personnel from each of the following disciplines: Electrical, Mechanical and IT engineers.
5.5	The bidder must have sufficient experienced technician In-house and must submit CV and others experience document in this tender
6	Other Criteria
6.1	<ul style="list-style-type: none"> a. Major offered products (Contained Aisle structure, structure cabling, DCIM, UPS & Precision AC) OEM should have presence for last 5 years in local market. b. The OEM should have experience to supply of 5 Containment implementation record in the local market with any Government/ Corporate/ Financial/Bank/ Health Care/ Telco/ Private sector in Bangladesh during last 5 years. Site reference list should be submitted by the OEM
6.2	The proposed OEM Major offered products (Contained Aisle structure, structure cabling, DCIM, UPS & Precision AC) should be Tier III/Tier IV compatible. The OEM should submit a declaration to conformity of this requirement.

3. Evaluation of Financial Bids

1. The Financial Bids of only the technically qualified bidders will be eligible for financial evaluation.
2. Any conditional bid may lead to disqualification.
3. **Total Contract Value or Total Project Price** will consist of supply of Hardware Cost, Implementation & commissioning Cost, 24X7 support Cost for 3 years within the warranty period with service support.
4. The bid price will include all taxes, VATs and levies and shall be in Bangladesh Taka.

3.1 Summary of Costs:

SI	Description	UoM	Qty.	Unit Price with TAX	Total Price
1.	Item Name: Contained Aisle and Structure.....				
	1.1. Cold Aisle containment.....				
	1.2. In-Row Cooling system				
	1.3. Rack Intelligent PDU.....				
	1.4. IP KVM with Console....				
2.	Item Name: Power Equipment				
	2.1. Generator-650KVA				
	2.2. ---				
	2.3. ---				
3.	---				
	3.1. ---				
	3.2. ---				
	3.3. ---				
Total Price (Including TAX)					
VAT					
Grand Total					

Note:

- ✓ Bidder should submit the commercial offer including supply and installation.
- ✓ Bidder should submit price breakdown in each section

3.2 Payment Milestone:

Infrastructure supply & Implementation Payment Milestone:

1. Bill will be paid as per follows:

Supply and installation payments will be made in multiple milestones, with a 3% deduction as Earnest Money for the 3-year warranty period. Each milestone payment will be disbursed upon submission of an equivalent-value bank guarantee or post-dated cheque, along with the corresponding invoice. Bidder will claim 1% earnest money after completion of successfully completed the warranty period

- (i) On Contract Signing: 20% Advance after issuing the Work Order
- (ii) On Delivery of major Products: 25% of the Total Contract Price
- (iii) On Delivery of rest of the Products: 15% of the Total Contract Price
- (iv) On Completion of installation & PAT: 15% of the Total Contract Price
- (v) On Completion of FAT: 10% of the Total Contract Price
- (vi) On Completion of TCCF Report/Project Closing Report: 10% of the Total Contract Price.
- (vii) Upon completion of six months of stable operation, 5% of the Total Contract Price will be released. Alternatively, the Contractor may receive this amount at the beginning by submitting a Bank Guarantee of the same value, with a validity of six months.

2. All payments should be A/C Payee cheque in favour of Company.

3. After confirmation through PO and advance need at least 10 days for preparation.

4. Any Changes and additional requirement will be changes separately and pre-approval is required for any additional expenses.

6. Bank Guaranty: The Contractor must provide a Bank Guarantee (BG) of an equivalent amount when submitting the milestone-based invoice. The BG will be returned upon completion of the corresponding work.

7. Liquidity Damange (LD); Mutual understanding by bothe parties.

8. The final bill of the project shall be based at actual basis, subject to verification and approval by the client after completion of all deliverable.

9. All payments will be made in Bangladeshi Taka (BDT) through account payee cheque as per agreed milestones and upon submission of proper invoices.

Taxes, Duties and VAT:

Tax & VAT deductible at source (if any) at the time of release of payments, shall be deducted at source as per then prevailing rates while making any payment.

Note:

- ✓ Partial/Part Delivery of the products is allowed, payment of that Partial/Part delivery products also allowed.
- ✓ If bidder is unable to support the client will impose penalty which will be decided during contract signing period.

4. Warranty with Service Support of the Product

Warranty with 24x7 service support after FAT First 3 Year

Sl		Description	Warranty with 24x7 service support after FAT First 3 Year
1	Item Name: Contained Aisle & Structure		
	1.1	Cold Aisle Containment and Structure.....	✓
	1.2	In-Row Cooling System	✓
	1.3	Rack Intelligent PDU for each IT Rack.	✓
	1.4	IP KVM with Console	✓
2	Item Name: Power Equipment		
	2.1	Generator-650KVA	
	2.2	Automatic Voltage Stabilizer/Regulator (AVR)-400KVA	✓
	2.3	Online UPS	✓
	2.4	Electrical Distribution Box	✓
	2.5	Electrical Cabling	✓
	2.6	Electrical Switch, Socket & Accessories	✓
	2.7	Grounding (IT + Non-IT)	✓
	2.8	Surge Protection Device (SPD) for Main DB and Sub DB	✓
	2.9	STS (for single power equipment)	✓
3	Item Name: Cooling System		
	3.1	Comfort Air Con Critical and Non-Critical area	✓
	3.2	Dehumidifier	✓
4	Item Name: Data Center Infrastructure Management (DCIM)		
	4.1	DCIM	✓
5	Item Name: Ladder		
	5.1	Wire Mesh Basket type	✓
	5.2	Metal Electrical Ladder	✓
	5.3	Metal Ladder for Electrical (Sub-station, DC power room)	✓
	5.4	Metal Ladder.....	✓
	5.5	PVC Pipe, Channel, Metal Flexible...	✓
6	Item Name: Structure Cabling		
	6.1	Copper Cabling	✓
	6.2	Fiber Cabling	✓
	6.3	Fiber Raceway	✓
7	Item Name: Product Training		
	7.1	Relevant Product Training and SOP	NA

5. Scope of Work

5.1. High level scope of work and deliverables for DC

Sl.	Technical Description	Deliverables	Bidder's response
1.	High-Level Scope of Work (SOW)		
1.1.	Detail scope assessment of the DC passive infrastructure in line with Uptime Tier-III Certification (TCDD & TCCF) in GC own premises	Bidder will provide as specified product which will comply Tier-III certificate	
1.2.	Supply all kinds of DC product Tier-III standard according to technical specification & setting up the DC Tier-III compliance at GC Own premises	1.Product should be supply and Installation as per Tier-III standard & Closely work with GC team and Consultant. 2. Ensure all kinds of Test equipment with dummy load, fuel and testing & commissioning before TCCF and during final test.	
	Supplier will arrange the following test equipment's during Mock-up/dummy test period and Inspection & Audit period of TCCF: <ul style="list-style-type: none"> • Thermal Scanner • Digital Clamp Meter • Temperature Meter • Humidity Meter • Walkie-talkie or communication devices • Electric Tester • Others if any item suggested by Uptime 		
	Ensure multiple tests with dummy load IT (at least 120-150 KW), thermal (120-150 KW) and others during implementation period and final acceptance of TCCF		
1.3.	Follow the development work both product supply and installation of complying the requirement (but not limited to) of Data Center Guideline 2020 Government of the People's Republic of Bangladesh or International Standard like:	Follow national and international guideline	
	Ensuring the use of approved design and layout during implementation period, informed to GC consultant or team if facing any difficulties or modification requirement.	1.Day to Day update the design follow-up and share report accordingly 2. Follow international and national guideline and working procedure	
1.4.	Storing product brochure, data sheet and other relevant documents (if any) in a centralized manner following specific criteria.	Storing product brochure, data sheet and other relevant documents (if any)	
1.5.	Must ensure that the products supplied for the Data centre are 24 x 7 operational and functional.	Follow the technical specification sincerely	
1.6.	Ensure asset ID with warranty date in each and every product as per GC approved	Detail document required	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl.	Technical Description	Deliverables	Bidder's response
	format and attached in every item and also share a soft copy.		
1.7.	Ensure printed labeling complying with international standard. Sample format shall be supplied before using labeling.	Ensure all relevant format before supply	
1.8.	Ensure L1, L2 and L3 support from System Integrator during warranty	Detail document required	
1.9.	Ensure 24 x 7 Service support as well as routine maintenance both preventive and corrective during warranty period	Must provide support and rectification modality as well as maintenance	
1.10.	Supplier shall provide all kinds of installation product to complete the implementation job smoothly.	Requesting to add missing item, which are not included in the technical specification as well as BOM and ensure the implementation job smoothly.	
1.11.	Ensure that the supply, installation, and testing and certification of this project should be completed within 9 (nine) Months from the date of Contract signing.	Detail plan must be provided	
1.12.	Supplier will be responsible for the failure of any component during the tests and shall bear any additional cost that might incur for retest.	Make sure and confirm	
1.13.	Bidder shall make sure that their implemented infrastructure shall meet the Tier-III TCDD & TCCF standard.	Make sure and confirm	
1.14.	Provide Standard Operating Procedure (SOP) and testing documents for DC with all kinds of critical and non-critical equipment testing procedure separately.	Provide Each and every facility (Critical & Non-critical) SOP before PAT and TCCF	
1.15.	The bidder must conduct the necessary Fluke testing as required and provide the corresponding test reports.	Provide all required report	
1.16.	Prepare an acceptance plan (PAT, FAT) and transition plan and acceptance checklist.	Make sure and confirm	
1.17.	GC-DHAKA-DC: Design Document	Provide a design document in major vertical (Structural, Electrical, Fire etc.)	

5.2. Brief of the Scope of Work

Sl.	Description	
1	Item Name: Contained Aisle & Structure	
	1.1	Cold Aisle Containment and Structure.....
	1.2	In-Row Cooling System
	1.3	Rack Intelligent PDU for each IT Rack.

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl.	Description	
	1.4	IP KVM with Console
2	Item Name: Power Equipment	
	2.1	Generator-650KVA
	2.2	Automatic Voltage Stabilizer/Regulator (AVR)-400KVA
	2.3	Online UPS
	2.4	Electrical Distribution Box
	2.5	Electrical Cabling
	2.6	Electrical Switch, Socket & Accessories
	2.7	Grounding (IT + Non-IT)
	2.8	Surge Protection Device (SPD) for Main DB and Sub DB
	2.9	STS (for single power equipment)
3	Item Name: Cooling System	
	3.1	Comfort Air Con Critical and Non-Critical area
	3.2	Dehumidifier
4	Item Name: Data Center Infrastructure Management (DCIM)	
	4.1	DCIM
5	Item Name: Ladder	
	5.1	Wire Mesh Basket type
	5.2	Metal Electrical Ladder
	5.3	Metal Ladder for Electrical (Sub-station, DC power room)
	5.4	Metal Ladder.....
	5.5	PVC Pipe, Channel, Metal Flexible...
6	Item Name: Structure Cabling	
	6.1	Copper Cabling
	6.2	Fiber Cabling
	6.3	Fiber Raceway
7	Item Name: Product Training	
	7.1	Relevant Product Training and SOP

6. Technical Specification:

1. Item Name: Contained Aisle & Structure

1.1 Cold Aisle Containment and Structure with 20 Racks

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Integrated Server Room Passive Infrastructure					
	General	Bidder should consider all required items to complete this Cold Aisle Containment with racks and cooling units. All items should be same height. Products should be come as per approve design by the customer	Critical			
	Brand	UPS, Rack, Rack PDU, Containment, cooling (In row), Temp Monitoring, DCIM software, KVM should be of same OEM/Brand for smooth integration of the solution and post-sales support. That OEM should have OEM Qualification: - ISO9001, ISO 14001, ISO27001:2013,ISO45001:2018,ISO 50001	Critical			
	Model	To be mentioned by bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacturer	Renowned country over the world	Critical			
	Homogeneous Configuration	UPS, Rack, Rack PDU, Containment, cooling (In row), Temp Monitoring, DCIM software, KVM should be of same OEM/Brand for smooth integration of the solution and post-sales support. Implementation should be Homogeneous	Critical			
	Qty	Contained Aisle & full structure with 26 No's Rack (600x1200= 20 No's For Server rack & 600 X 1200=6 nos In-row Cooling)	Critical	Set	1	
	Qualification Requirements	The manufacturer must be ISO 9001, ISO 14001, and ISO 27001. Must provide proof of documents	Critical			
		Must provide proof of documents	Critical			
		The manufacturer must comply with the following:	Critical			

	RoHS or equivalent certificate	Critical			
	REACH or equivalent certificate	Critical			
	WEEE statement or equivalent certificate	Critical			
	Manufacturer must have CE certification for PAC unit. It ensures electrical compatibility and safety design requirements.	Major			
	Uptime TIER-III compliance product preferable	Critical			
Application Condition					
Ambient Temperature and Humidity	Ambient temperature: -20°C to +50°C; humidity: 5%–95% RH (non-condensing)	Critical			
Installation Method	To be mentioned by bidder	Major			
Physical Architecture					
Cold Aisle Containment Requirement	Two-row cold Aisle Containment	Critical			
	The Precision Air Conditioner cabinet should be deployed separately in each row in such that it can cover the concealed environment to support all the equipment in the IT Racks.	Critical			
	<p>The Cold aisle zone is the space between two IT Rack rows, where Cold Air from PAC inrow will be supplied.</p> <p>The supply air from PAC will be collected inside of the CACS. The exhausted hot air is cooled and conveyed to CACS (by in row PAC) where it is made available to IT equipment inlet air intakes. The CACS should be available with ceiling panel.</p> <p>CACS UL Listing: All system components shall be certified as suitable for this data center environment by documentation supporting UL Listings: UL484, CSA C22.2 No.236 and UL723S.</p>				
Contained Aisle and Structure					
Aisle Type	A contained cold aisle consists of front & end doors and cabinets.	Critical			
CEILING PANELS	A. Ceiling panels shall be 6.0 mm thick Lexan clear ribbed panels or 2.36 mm thick V0 clear panels with aluminum framing.	Critical			

	<p>B. Flame spread rates: Smoke development index "0 65" and flame spread index "0" in accordance with UL723 or ASTM84. Nominal thickness: 2.36 mm (V0 clear) or Smoke development index "20" and flame spread index "0" in accordance with UL723 or ASTM84. Nominal thickness: 6.0 mm (Lexan)</p> <p>C. Minimum Light Transmission per ASTM D1003 equal to 82% or greater.</p> <p>D. The ceiling system shall be designed to permit removal of the ceiling panel from within the contained zone without the use of tools for service access to the space above.</p>				
Sealing Skylights /Equivalent	Sealing skylights are mainly used for modular aisle sealing	Major			
	The skylights or equivalent should use toughened glass, of which the area is greater than or equal to 75%. The thickness should ≥ 5 mm. The materials should meet the requirements of fire prevention in the machine room.	Major			
Cabling Requirements	The containment should have separate power cable and signal cable ready for routing cables, and should be expandable from cabinet by cabinet.	Major			
	Cable routing inside cabinets: The cabinet should be equipped with vertical cable management units.	Major			
Containment Front Door (Sliding)	Double / Single	Critical			
Containment Rear Door (Sliding)	Double / Single	Critical			
DOOR FRAMES AND DOOR:	<p>A. Metal door frames and doors shall be provided to establish air containment at the end of two rows of racks or Rack row and wall. The door frame system shall match the height of the rack based equipment, and match the design width of the contained aisle.</p> <p>B. Doors shall be hinged or sliding, to permit access into the contained aisle for maintenance or</p>	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	servicing. Standard door operation shall not interfere with access or service on any rack or rack based equipment. C. Doors shall be provided with a window, handles and latches. The following options are available and should be provided if specified: 1.Door locks and three matching keys per door 2.Two proximity switches provided per door for open/closed status 3.Automatic door closure system for sliding door 4. In case of emergency the same sliding door of CACS should become swing door				
LED lighting	There should be continuous LED lighting inside containment coming from same OEM of Containment	Critical			
Aisle Width	1200mm	Critical			
Aisle Height	2000mm	Critical			
Rack (Cabinet) System					
Provision (26 Racks for the whole system)	Number of Racks (600mm x 1200 mm)	Critical	Set	20	
	06 units of in row Cooling (3 Nos will be at present use & rest 3 Nos Will be deploy in future. Dummy Panel/Rack should be Provide to fill the empty area For In-row Precision Air Conditioners	Critical	Set	1	
Rack Model	Please specify	Critical			
Standard	Comply to EIA 310, DIN 41494 and IEC297 standards. Rack Should be UL certified	Critical			
Standards requirement	Cabinet complies with the IEC 60297-1. Rack should have Approvals like UL 2416 UL 60950-1, EIA-310E , OEM document showing sustainability feature of product	Critical			
Rack Door Type	Front door should be perforated and it should be single door. Front door should have curve surface to get maximum airflow and perforation pattern should be circular. Rear doors should be perforated and should be split doors	Critical			
Rack Material Details	Gauge Ratings of rack material is as below Vertical Posts - 16 gauge or better	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

		Front Door - 16 gauge or better Rear Door - 18 gauge or better Roof - 18 gauge or better EIA Mounting Rails - 14 gauge or better Side Panels - 18 gauge or better				
	Side Panel	For easy access require Split type Side Panel with single point locking with quick release latches	Major			
	Rack Door Lock	There should be lock & key facility for both - front & back doors.	Major			
	Static Load	Minimum 1700 Kg	Critical			
	Anti-seismic requirements	The IT cabinet should pass intensity 8 and 9 anti-seismic tests, which meet the requirements of the International Standard or suitable seismic brackets to be supplied along with the rack.	Major			
	Power density requirement	Minimum 12 KW (For 8 Nos Rack) & 8 KW (For 12 Nos Rack) for each rack	Critical			
	Rack Height	42U	Critical			
	Rack Dimension (W x D x H)-mm	600 x 1200 x 2000	Critical			
	Ventilation Rate of Front and Rear Door	Rack door should be Min. 69% perforation of the door	Critical			
	Protection Grade	IP20	Major			
	1U blank Panel	Bidder shall confirm blanking panel in each rack	Critical			
	B Installation with Installation material					
1	Installation Material	The bidder should provide all necessary installation related all accessories.	Critical	Lot	1	
	Installation	Installation, Testing, and Commissioning with the necessary installation Material	Critical	Job	1	
	C Instruction & Other Activities					
1	Sample	Sample/Design/Image for the necessary item should be approved by GC before implementation.	Major	Job	1	
2	As built design	The bidder should provide the built design with details during the implementation and PAT period	Critical	Job	1	
3	Others	The bidder should accommodate additional items if required during the implementation period.	Major	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

4	Labelling	Printed labeling is enclosed with each applicable item	Critical	Lot	1	
	BOM	Bidder Should submit details BOM	Critical			
D	Warranty & Service Support					
	03 (Three) Years from the date of PAT		Critical			
1	The bidder should ensure 24x7 service support with spare parts within the warranty period.		Critical			

1.2 In-Row Cooling System

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Precision Air Conditioner					
1	Brand	UPS, Rack, Rack PDU, Containment, Cooling (in Row), Temp Monitoring, DCIM software, KVM should be of same OEM/Brand for smooth integration of the solution and post sales support. That OEM should have OEM Qualification: - ISO9001, ISO 14001, ISO 27001:2013, ISO45001:2018, ISO 50001. Implementation should be Homogeneous	Critical			
	Model	To be mentioned by the bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacturer	Renowned country over the world	Critical			
		The bidder must offer a renowned brand product which local market reputation and local market presence must be available. The Offered Brand must have minimum 10 years' experience in the Bangladesh market, must be submitted proper evidence with the bid documents.				
	Qty	In-row air conditioner	Critical	Set	3	
	Net Sensible Cooling Capacity	In-row air conditioner, each unit Net Sensible Cooling capacity min. 39.6 kW	Critical			

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	In row structure	<p>The structure of the unit shall be constructed by a metal framework and internal parts made from hot zinc plated sheet steel. The panel shall be 1.2 mm thick powder coated CRCA sheet outer skin +15 mm PU foam. These profiles shall be connected by structural rivets designed to ensure sturdy assembly to withstand severe transport and handling conditions reduction in the noise transmitted through the panelling The external panels shall be coated with RAL9003 epoxy-polyester paint which guarantees long-term durability of the original features. The front panels shall be attached to the framework by means of rapid coupling fasteners. The standard panels shall internally be lined with heat and sound proofing insulating material made of melamine covered by a protective film 20mm deep, density 10 kg/m³. Melamine is an exceptionally high-quality product, featuring a high fire resistance (class B1 according</p>	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		to DIN 4102, BS 476 part 7, VO according to UL94, ASTM E84, class M1 according to NFP92-501) and excellent sound-insulation properties.				
WORKING CONDITIONS						
	Room Temperature	The temperature of the room shall be maintained at 22 ±1°C at all time.	Critical			
	Dry bulb temperature	The cooling unit design Inlet Air temperature should be 37°C	Critical			
	Altitude a.s.l.	Minimum 11 m	Major			
	External static pressure	0 Pa	Major			
	InRow unit air flow	Minimum 7500 cmh	Critical			
	Ambient Outside air temperature	The Precision Air-conditioner should be designing as per 2021 ASHRAE Handbook - Fundamentals (SI) "Extreme Annual Design Conditions" Dry Bulb : Minimum 41.8 °C (n=20 years)	Critical			
PERFORMANCE / FEATURES						
	Total Gross Cooling Capacity	Minimum 41.5 kW	Critical			
	Sensible Gross Cooling Capacity	Minimum 41.5 kW	Critical			
	Net sensible cooling capacity	Minimum 39.6 kW	Critical			
	SHR	100% or 1	Critical			
	Room unit absorbed power	To be mentioned by bidder	Critical			
	InRow Unit EER	Minimum 3.3 kW/kW	Critical			
	SCOP	Minimum 3.2 kW/kW	Major			
	Discharge air relative humidity	47.60%	Major			
	Fan(s) absorbed power	To be mentioned by bidder	Critical			
	Compressor absorbed power	To be mentioned by bidder	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Compressor COP	3.9 kW/kW	Major			
	Condenser Fan(s) Power	To be mentioned by bidder	Critical			
	Condenser Air Flow Rate	Minimum 27000 m3/h	Critical			
	Inner Unit Sound pressure level @ 1.8 m	Maximum 83.3 dB(A)	Major			
	Filter Grade	Unit should have internal condensate Pump & filters should be G4 efficient. The filter should be replaceable from the rear of the unit.	Critical			
	Number of Condenser	1 Set per Unit	Critical			
	Compressor type	Inverter Scroll Compressor. The compressor should achieve the capacity modulation by adjusting speed of the compressor to achieve the better efficiency in part load & unit should have EEV.	Critical			
	Fan	EC fan, hot swappable maintenance preferable	Critical			
		The units shall be equipped with the latest generation EC (Electronically Commutated) fans. This type of fan shall have blades made high-tech compound material with optimized flow control and high-efficiency GreenTech EC motors with a low moment of inertia. <ul style="list-style-type: none"> • Three-phase motor with external rotor and IP54 protection grade • Speed regulation by the Modbus communication that shall collect feedback and alarms from fans. • Statically and dynamically balanced impeller with lifelong lubrication • Mounted on a low-vibration fan support 	Critical			

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		<ul style="list-style-type: none"> Every fan shall be designed to have easier serviceability with quick removability kit 				
	Power Frequency	50Hz	Critical			
	Air Supply Model	Horizontal air supply mode	Critical			
	Light Load Dehumidification	Dehumidification is supported if only the IT load capacity reaches 10%.	Critical			
	Air Conditioner Configuration	N+1 Mode	Critical			
	Indoor Unit mm (H x W x D)	Not more than 2000mm x 600mm x 1200mm	Critical			
	Humidifier Type	Wet film humidifier or equivalent	Critical			
	Humidifier Capacity (kg/h)	Min.3kg/h	Critical			
	Refrigerant	R410A	Critical			
	Variable frequency design	10%-100% step-less cooling capacity regulation, higher efficiency	Major			
	Wet-film humidifier	Saves energy by 95%+compared with electrode humidifier	Major			
	Intelligent Cooling algorithm	Intelligently optimizes operation status, reduces power consumption by 8%+	Major			
	On-line maintain	Indoor fan can be maintained on-line and replaced without shutdown	Major			
	EEV shut automatically	Expansion valve will shut automatically after unexpected power cut, eliminate liquid return which may hit compressor	Critical			
	Refrigerant detection	Intelligent algorithm detects the refrigerant content, generating charging prompt when the refrigerant is insufficient	Major			
	Intelligent display	7" true color screen, display cooling capacity, air volume real-time, easy O&M	Major			
	Fault self-diagnosis	Remove irrelevant reason intelligently, guiding O&M engineer maintain quickly	Major			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Condenser/ Outdoor Power connection	To be mentioned by bidder	Major			
	Net Weight	To be mentioned by bidder	Major			
	Control System of the Precision AC	Each PAC should have its own internally developed, advanced microprocessor controller.	Major			
		The unit should be with Inbuilt Heater and Humidifier	Major			
		Precision Air Cooling units should in N+1 topology. Width of Each Cooling unit should be 600mm.	Critical			
		The controller should use the 7-inch, true-color LCD touch screen that features good human-machine interaction, with a vivid interface that includes innovative one-step interface switching; simple and flexible operation; and sufficient monitoring points. The screen can graphically display the running status of each PAC component	Critical			
		Data Centre server racks should be cooled with In-row Variable Speed compressor should be able to cool the equipment's uniformly right from 1st U to 42nd U of Rack	Critical			
		The PAC should have a large-capacity memory to store the operation logs, at least 200 operation logs can be stored.	Major			
		The PAC main control module should support front plug-in maintenance, which reduces maintenance time and space.	Major			
B		Installation with Installation material				

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
1	Copper Pipe	Indoor to outdoor all kinds copper pipe with insulation	Critical	Set	3	
	Power Cable	From Source to Indoor Unit and Outdoor power cable	Major	Lot	1	
	Tray/Channel	Bidders have to consider (N+1) over the ceiling, wall and under raised floor channel/Tray with hanger for PAC Indoor to outdoor pipe laying	Major	Lot	1	
	Indoor Base	Indoor unit mounting	Critical	Set	3	
	Outdoor Base	Outdoor unit mounting	Critical	Set	3	
	Humidifier supply water line	Humidifier supply water line for all units	Major	Lot	1	
	Drainage line	Drainage line for all Units	Major	Lot	1	
	Installation Material	Bidder should provide all necessary installation material (i.e. PVC channel, PVC pipe, Spiral Insulation, Cable tie, Electric Tape, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Lot	1	
	Installation	Installation, Testing and Commissioning with necessary installation Material	Critical	Job	3	
Bidder should accommodate additional items if required during implementation period.		Critical	Lot	3		
C	Instruction & Other Activities					
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	Bidder should provide as built design with details during the implementation and PAT period	Critical	Job	1	
3	Others	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
4	Labelling	Printed labeling enclosed with each applicable item	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	BOM	Bidder should submit details BOM	Critical			
D	Warranty & Service Support					
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical			
		Bidder should ensure 24x7 service support with spare parts within the warranty period	Critical			

1.3 Rack Intelligent PDU for each IT Rack.

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	rPDU-1P					
1	Brand	UPS, Rack, Rack PDU, Containment, Cooling (in Row), Temp Monitoring, DCIM software, KVM should be of same OEM/Brand for smooth integration of the solution and post-sales support. That OEM should have OEM Qualification: - ISO9001, ISO 14001, ISO 27001:2013, ISO45001:2018, ISO 50001. Implementation should be Homogeneous	Critical			
	Model	To be mentioned by the bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacturer	Renowned country over the world	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	General Description	Rack PDU of 32A, 1Ph for Server Racks	Critical	No's	10	
		Rack PDU should be with input cable length of minimum 3 meters IEC 60309 32 A 2P + E power extension cable.	Critical			
		Metered Rack PDU, 0U, 1PH, 230V 32A, 36 C13 and 6 C19 outlets, IEC 309 2P+E cord	Critical			
	Acceptable input voltage:	220–240 VAC;	Critical			
	Input Frequency:	50/60 Hz	Critical			
	Input Plug Type:	IEC 309, 32A, 2P+E	Critical			
	Maximum Input Current:	32A	Critical			
	Output Connections:	36 × IEC C13, 6 × IEC C19	Critical			
	Maximum Output Current:	C13: 10A; - C19: 16A	Major			
	Overload Protection:	2 × 16A hydraulic-magnetic circuit breakers	Major			
	Load Capacity:	7.4 kVA	Critical			
	Form Factor:	Zero U (vertical mount)	Major			
	Dimensions (HxWxD):	1791 × 56 × 44 mm	Major			
	Cord Length:	3.0 m	Major			
	Mounting:	Tool less vertical mounting	Major			
	Maximum input current (phase) :	32 A VDE;	Major			
	Operating Temp:	5–45°C	Major			
	Humidity:	5–95% RH (non-condensing)	Major			
	Operating Altitude:	0–3000 m	Major			
	Metered Monitoring:	Local digital display for current draw	Critical			
	Remote Access:	Web, SNMP, Telnet, SSH	Critical			
	Temperature and Humidity combo sensor	Temperature and Humidity combo sensor should be supply with each	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		PDU. Details mentioned in DCIM section				
	Alarm Thresholds:	User-defined for overload protection	Critical			
	Environmental Sensor Port:	For temperature and humidity monitoring	Major			
	Locking Outlets:	locking cords should be support	Major			
	Compliance:	UL/CE, VDE, RoHS, EN 55022 Class A, EN 61000-3-2/3	Major			
B	rPDU-3P					
1	Brand	UPS, Rack, Rack PDU, Containment, Cooling (in Row), Temp Monitoring, DCIM software, KVM should be of same OEM/Brand for smooth integration of the solution and post-sales support. That OEM should have OEM Qualification: - ISO9001, ISO 14001, ISO 27001:2013, ISO45001:2018, ISO 50001. Implementation should be Homogeneous	Critical			
	Model	To be mentioned by the bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacturer	Renowned country over the world				
	General Description	Rack PDU of 32A, 3Ph for Server Racks	Critical	No's	10	
		Rack PDU should be with input cable length of minimum 3 meters IEC 60309 32 A 3P +1-N+ E power extension cable.	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Easy PDU Metered Zero U 22 kW 230V (18) C13 (6) C19 IEC309	Critical			
	Main					
	Colour	Black	Major			
	PDU type	Metered	Critical			
	Number of cables	1	Critical			
	Input Voltage	400 V 3 phases	Critical			
	Height	1650 mm	Major			
	Width	56 mm	Major			
	Output Voltage	230 V	Critical			
	Depth	56 mm	Major			
	Net weight	4.85 kg	Major			
	Mounting location	Side	Major			
	Input Plug Type	IEC 60309 32 A 3P + N + PE	Critical			
	Mounting mode	Rack-mounted	Major			
	Rack units	0U	Major			
	Mounting position	Vertical	Major			
	Input current limits	32 A	Critical			
	Load capacity	22080 VA	Critical			
	Network frequency	50/60 Hz	Critical			
	Outlet type and quantity	18 IEC 60320 C13	Critical			
	Operating Temp:	5–45°C	Major			
	Humidity:	5–95% RH (non-condensing)	Major			
	Operating Altitude:	0–3000 m	Major			
	Metered Monitoring:	Local digital display for current draw	Major			
	Remote Access:	Web, SNMP, Telnet, SSH	Critical			
	Alarm Thresholds:	User-defined for overload protection	Critical			
	Environmental Sensor Port:	For temperature and humidity monitoring	Critical			
	Temperature and Humidity combo sensor	Temperature and Humidity combo sensor should be supply with each PDU. Details	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		mentioned in DCIM section				
	Locking Outlets:	locking cords should be support	Major			
	Compliance:	UL/CE, VDE, RoHS, EN 55022 Class A, EN 61000-3-2/3	Major			
C	Installation with Installation material					
1	Installation Material	Bidder should provide all necessary installation material (i.e. PVC channel, PVC pipe, Spiral Insulation, Cable tie, Electric Tape, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Lot	1	
	Installation	Installation, Testing and Commissioning	Critical	Job	1	
D	Instruction & Other Activities					
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	Bidder should provide as built design with details during the implementation and PAT period	Critical	Job	1	
3	Others	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
4	Labelling	Printed labelling enclosed with each applicable item	Critical	Lot	1	
	BOM	Bidder should submit details BOM	Critical			
E	Warranty & Service Support					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical			
		Bidder should ensure 24x7 service support with spare parts within the warranty period	Critical			

1.4 IP KVM with Console

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	IP KVM with Console					
1	Brand	Renowned Brand which is compatible with Major Product	Critical			
	Model	To be mentioned by the bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacturer	Renowned country over the world	Critical			
	Qty	Rack mountable with necessary mounting kit	Critical	Set	2	
	Specification	Rack LCD Consoles along with KVM should include a keyboard, mouse, 17 inch. LCD console, and 16port digital/IP KVM switch. Solution should be compact design The console is easily installed and minimizes support and maintenance costs, ensuring lower cost of ownership. The ultra-thin LCD screen, touch pad technology, and easy-to-install single user rackmount kit combine to form a high-quality, streamlined solution built for server management. The Rack LCD Consoles can be used in a variety of	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

		IT environments, from computer rooms to large data centers. Solution should also come with Server module cables 16 No. with each 16 Port KVM				
B	Installation with Installation material					
1	Installation Material	Bidder should provide all necessary installation material (i.e. PVC channel, PVC pipe, Spiral Insulation, Cable tie, Electric Tape, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Lot	1	
	Installation	Installation, Testing and Commissioning	Critical	Job	1	
	Others	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
	Labelling	Printed labelling enclosed with each applicable item	Critical	Lot	1	
	BOM	Bidder should submit details BOM	Critical			
C	Warranty & Service Support					
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical			
		Bidder should ensure 24x7 service support with spare parts within the warranty period	Critical			

2. Item Name: Power Equipment

2.1 Generator-650 KVA

S I	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number	
A	Generator(Continuous Run Time)						
1	Brand	Renowned Brand as installed in Local Market	Critical				
	Model	To be mentioned by the bidder	Critical				
	Country of Origin	Renowned country over the world	Critical				
	Country of Manufacturer	Renowned Country over the world	Critical				
	(650 KVA), DCC Rated, Three Phases Generator with Sound Attenuated Acoustically Treated Canopy		Critical	Set	1		
	Body/Bally Tank	Bidder should confirm 12 hours usable fuel body/bally tank	Critical				
	Base with Vibration PAD	Bidder shall be confirmed Base and Vibration PAD	Critical	Set	1		
	General Description	Supply of (650kva) Prime, 400-415V, 3-phase, 4-wire, 50 Hz. radiator cooled, floor-mounted, indoor type.		Critical	Set	1	
		Continuous capacity (Data center Continuous - DCC) rated electric generating set with sound attenuated acoustically treated canopy		Critical			
		Maximum sound level: 85 dBA at 7m distance in the generator room		Major			
		Suitable for a tropicalized country, complete with a stroke, 1500 rpm, diesel engine with all standard accessories viz		Critical			
12/24-volt DC battery & auto battery charger with ammeter, radiator assembly. auto speed governor, air cleaner, fuel		Major					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

S 1	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		& oil tank, level & oil pressure gauge, RPM & hour meter, start & stop switch, exhaust silencer (to keep standard emission level).				
		Mounting pad and vibration Isolator (to keep very minimum vibration in the room).	Major			
		BMS integration (MODBUS or BACNet) for both monitoring & control by BMS. Connection point must be provided by the Vendor to the BMS vendor for full integration	Major			
		Mounting steel base frame, including safety & protection device viz.	Major			
		Auto shut off with indicators for overload, over & under voltage, high temperature, low oil pressure, over speed, low fuel level etc. coupled with brush less, self-excited alternator having control panel	Critical			
		auto voltage regulator, voltmeter & ammeter with selector switch, frequency meter, compatible with standard building management system.	Critical			
		Including one-year service spare, detailed technical catalogues & maintenance manual.	Major			
		The generating set shall be manufactured, assembled & tested as below	Critical			
		Engine Manufactured in: USA/UK/EU/JAPAN	Critical			
		Alternator Manufactured in: USA/UK/EU/JAPAN	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

S 1	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Radiator: Same brand	Critical			
		Generator Assembled in: USA/UK/Japan/EU	Critical			
		Engine Brand: Perkins / Cummins/Mitsubishi / Caterpillar/Scania/Baudouin	Critical			
		Alternator Brand: Stamford / Mecc Alte Spa / Leroy Somer.	Critical			
		Canopy & Exhaust: Local Made	Critical			
		The Engine, Alternator, Radiator, and associated accessories shall be new, unused.	Major			
		All equipment shall be factory-tested prior to shipment.	Critical			
	Special Conditions	<p>1. The Generator shall be assembled by the Engine Manufacturer or its Self-Service Original Equipment Manufacturer (SS-OEM).</p> <p>2. An Authorization Letter from the Engine Manufacturer stating approval of the SS-OEM (if applicable) shall be submitted specifically for this project.</p> <p>3. The Engine, Alternator, Radiator, and associated accessories shall be new, unused, and from the same production batch.</p> <p>4. All equipment shall be factory-tested prior to shipment.</p> <p>5. Full traceability documents (COO, COC, Test Certificates) must be submitted during delivery.</p>	Critical			
B	Central Fuel Tank					
1	Brand	Renowned Brand as installed in Local Market	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

S I	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Model	To be mentioned by the bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacturer	Renowned country over the world	Critical			
	General Description	Supply, installation, testing, and commissioning of a steel fuel storage tank of rectangular type, which shall be installed as per direction of the Consultant.	Critical	Set	2	
		Fabrication for the steel fuel tank should be done with high standard materials and in compliance to rules of BD Governments, BNBC, NFPA etc.	Major			
		Complete with all necessary accessories, including supply of pump, piping, air vent pipe, oil level indicator, and calibration etc.	Major			
		Storage tank/reservoir volume shall be 4000 Ltr. with two water proof standard manhole cover.	Critical			
		Generator Contractor has to coordinate with the Civil Contractor in making shop drawing of the work involved in the fuel reservoir tank in their part.	Major			
Contractor is to provide detail design of their portion of work for the fuel storage tank and that has to be duly vetted by competent authority as per direction of the Consultant.	Major					
MS Pipe for Fuel Storage tank & Day Tank to Gen	Critical					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

S I	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number	
		Set. including Valve & Piping arrangement					
C	Exhaust System						
1	Brand	Renowned Brand as installed in Local Market	Critical				
	Model	To be mentioned by the bidder	Critical				
	Country of Origin	Renowned country over the world	Critical				
	Country of Manufacturer	Renowned country over the world	Critical				
	General Description		Supply, installation, testing & commissioning of Generator Exhaust made of 20 Schedule MS Pipe as per generator manufacture requirement. It will be insulated with Rockwool of minimum density 60 kg/m ³ and thickness min 50 mm. Insulation shall be jacketed with 24 SWG Aluminum sheet. Rockwool procured from Shipyard can be used	Critical			
			Supply & installation of MS long radius bends, elbows, reducers, and flanges for exhaust pipe, including welding, grinding, and leak testing.	Critical			
			Supply & installation of flexible expansion bellow between DG outlet and exhaust pipe to absorb vibration.	Major			
		Supply & installation of heavy-duty exhaust silencer suitable for the DG set, industrial type, horizontal mounting, attenuation ≥ 30 dB(A).	Major				
	Exhaust pipe routing through wall with sleeve, frame, and fire sealant (fire-rated foam/sealant).	Major					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

S I	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
D	Inlet & Outlet Ducting					
1	Brand	Renowned Brand as installed in Local Market	Major			
	Model	To be mentioned by the bidder	Major			
	Country of Origin	Renowned country over the world	Major			
	Country of Manufacturer	Renowned country over the world	Major			
	General Description	Supply, fabrication, and installation of GI sheet ducting (0.8 mm thick for up to 750 mm size, 1.0 mm thick for larger) for fresh air inlet to DG room — complete with flanges, stiffeners, turning vanes, and supports.	Critical	Set	1	
		Supply & installation of weather-proof aluminum louver with bird/insect screen at air inlet opening, including frame, grouting & finishing.				
Supply & installation of acoustic lining (50 mm thick mineral wool, 48 kg/m ³) inside inlet duct near DG room wall, covered with perforated GI sheet for noise attenuation.		Major				
E	ATS for Generator			Set	2	
1	Brand	Renowned Brand as installed in Local Market	Major			
	Country of Origin	Renowned country over the world	Major			
	Country of Manufacturer	Renowned country over the world	Major			
	Panel Features	Supply of 415V, 3-phase, 50 Hz, indoor type ATS Panel of following specification complete with required Multi meter, indicating lamps for ON-OFF status and following components (components such as TP ACB & MCB shall be manufactured	Critical			

S 1	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		<p>according to relevant NEMA/VDE/ IEC/JIS / BS standards and assembled locally in 16 or 18 AWG/SWG sheet steel body. Frame should be made 16 SWG/AWG MS sheet, Panel must be dust & vermin proof, free standing, floor mounting, epoxy resin powder coat painted cabinet as per relevant IEC standards and as per accepted / approved by the Engineer.</p>				
		<p>Incoming: 1 Set-415V, 1250 amp. TPN+50%E hard drawn electrolytic copper bus bar. with all required component to meet the ATS function. 1 Nos 1250A 42KA TP ACB Fixed type for DG incoming 2 Nos. 800A or higher capacity (42KA) TP ACB Chassis Fixed type with Adjustable and store - energy spring charge operating mechanism (Motor Operated) and microprocessor-controlled U/V, O/C, and short-circuit releases and shunt releases with adequate busbar with 3 Nos.-415V, 1250/5 ratio current transformer with suitable accuracy & burden. with Electrical and mechanical interlocking. Circuit Breaker Brand: ABB/Schneider</p>	Critical			
		<p>Outgoing: 1 Nos. 800A or higher capacity 42KA, TP ACB (Chassis Fixed type with Adjustable) with store energy spring charge operating mechanism</p>	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

S I	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		(Motor Operated) and microprocessor-controlled U/V, O/C, and short-circuit releases and shunt releases with adequate bus bar Circuit Breaker Brand: ABB/Schneider				
F	Installation with Installation material					
1	Installation Material	Installation, testing & commissioning of following electric generator on prepared CC pad with the help of necessary skilled labour, technician, Engineer including 2 hrs. / 5-day trial run operation by skilled operator with supply of necessary fuel & lubricant as per manufacturers instruction manual and in accordance with relevant IEC / NEMA / VDE / JIS standards so that vibration transfer rate to foundation shall be almost zero.	Critical	Lot	1	
	Installation	Installation, Testing, and Commissioning with the necessary installation Material	Major	Job	1	
G	Instruction & Other Activities					
1	Sample	Sample/Design/Image for the necessary item should be approved by GC before implementation.	Major	Job	1	
2	As built design	The bidder should provide the built design with details during the implementation and PAT period	Critical	Job	1	
3	Others	The bidder should accommodate additional items if required during the implementation period.	Major	Lot	1	
4	Labelling	Printed labeling is enclosed with each applicable item	Critical	Lot	1	
5	BOM	Bidder should submit the details BOM	Critical			
H	Warranty & Support					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

S I	Items	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
1	Warranty & Service Support	03 (Three) Years from the date of PAT	Critical			
		The bidder should ensure 24x7 service support with spare parts within the warranty period.	Critical			

2.2 AVR-400KVA

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Automatic Voltage Regulator (AVR)			Set	2	
1	Brand	Renowned Brand as installed in Local Market	Critical			
	Model	To be mentioned by the bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of manufacture	Renowned country over the world	Critical			
	Features:					
		Smart Variac System	Critical			
		High Reliability	Critical			
		Selectable Output Voltage	Critical			
		User Friendly LCD Screen	Critical			
		High Regulation Speed	Critical			
		Surge and overload protection	Critical			
		Reverse Current Protection	Critical			
		AVR Type	Tower Type Servo Motor Controlled	Critical		
		Technology	Microprocessor Control Technology	Critical		
		Capacity	400 KVA	Critical		
		Rated Power	400 kW	Critical		
		Power Factor	1	Critical		
	Input Variation Range	±15%	Critical			
	Phase Voltage Regulation Type	Independent phase voltage regulation	Critical			
	Input Volt. Range [V]	340 - 460	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	Max Input Current [A]	650	Major			
	Selectable Output Voltage	380/400/415 VAC	Critical			
	Tolerance	± 1%	Critical			
	Output Volt. ±1% [V]	400	Critical			
	Output Current [A]	577	Major			
	Efficiency	> 94%	Critical			
	Overload Capability	100% ~ 110%: 1 Hr; 110% ~ 150%: 30 min; >150%: 10 min	Critical			
	Cooling	Smart Air Cooling	Major			
	Operating Temperature Range	(-) 10 / (+) 50 °C	Major			
	Relative Humidity	20%-90% non-condensing	Major			
	Communication System	Modbus / BACnet IP/Ethernet	Major			
	Electronic Control Board	Yes	Major			
	Maintenance bypass	external bypass Must	Major			
B	Base Supply					
1	MS Base	As per the raised floor height, the bidder should provide an MS base that is attached directly to the floor	Major	No's	2	
C	Installation with Installation material					
1	Installation Material	The bidder should provide all necessary installation material (i.e. Cable tie, Electric Tape, Royal bolt, screw, Nut, Bolt, Lugs, Heat shrink etc.)	Critical	Lot	1	
	Installation	Supply, Installation & Commissioning Charge	Critical	Job	1	
D	Instruction & Other Activities					
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	The bidder should provide as-built design with details during the implementation and PAT period	Critical	Job	1	
3	Others	The bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

4	Labelling	Printed labelling enclosed with each applicable item	Critical	Lot	1	
	BOM	Bidder should submit details BOM	Critical			
E	Warranty & Service Support					
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical			
		Bidder should ensure 24x7 service support with spare parts within the warranty period	Critical			

2.3 150KVA/150KW and provision to extend max 250KVA/KW capacity Online UPS

Sl	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	150 KVA/150KW and provision to extend max 250KVA/KW					
1	General Requirements	UPS, Rack, Rack PDU, Containment, Cooling (in Row), Temp Monitoring, DCIM software should be of same OEM/Brand for smooth integration of the solution and post-sales support. That OEM should have OEM Qualification: - ISO9001, ISO 14001, ISO 27001:2013, ISO45001:2018, ISO 50001. Implementation should be Homogeneous	Critical			
		Model: To be mentioned by the bidder	Critical			
		Country of Origin: Renowned country over the world	Critical			
		Country of Manufacturer: Renowned country over the world	Critical			
	Original Equipment	No Rebranding or White Branding Products will be allowed	Critical			
	Renowned Brand	The bidder must offer a renowned brand product				

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		which local market reputation and local market presence must be available. The Offered Brand must have minimum 10 years' experience in the Bangladesh market, must be submitted proper evidence with the bid documents.				
	Qty	150 KVA/150KW and provision to extend max 250KVA/KW	Critical	Set	2	
	Type	Modular Type	Critical			
	Required Capacity	The UPS shall utilize a rack-mounted, redundant, scalable array architecture. The system power train shall be comprised of hot swappable / user replaceable 50KVA/KW power modules, which shall operate in parallel. Each 50 KVA/KW power module contains a full-rated input rectifier/boost converter, full-rated output inverter, and battery charging circuit. Transformer less, IGBT Rectifier & IGBT Inverter Modular Scalable Hot Swappable UPS System. Redundant control modules, redundant logic power supplies, and LCD interface display.	Critical			
		The performance, functionality, and design of the Maintenance Bypass, Power Distribution, and connectivity solutions shall operate in conjunction with a primary power supply and an output distribution system to provide quality uninterrupted power for mission-critical electronic equipment load.	Critical			

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Standard	The UPS shall be designed in accordance with the applicable sections of the current revision of the following documents. Where a conflict arises between these documents and statements made herein, the statements in this specification shall govern the following	Critical			
		Safety: IEC 62040-1	Major			
		Performance: IEC 62040-3	Major			
		EMC: IEC 62040-2 cat C3	Major			
		Surge: IEC61000-4-5	Major			
		Approvals: CE, CB Report	Major			
		Environmental: RoHS, REACH, WEEE, Green Premium, PEP	Major			
		Transportation: IEC TR 60721-4-2, Level 2M2	Major			
	Live Swap: Qualified by TÜV Rhineland	Major				
	Design Requirements: -	Transformer less, IGBT Rectifier & IGBT Inverter Modular Scalable Hot Swappable UPS System	Critical			
		Input Voltage 380/400/415(Minimum) VAC, three-phase	Critical			
		Input Voltage Range 380 / 400 / 415 V (-20% to +15%)	Critical			
		Input Frequency and tolerance 40-70 Hz	Critical			
		Input Total Harmonics Distortion ≤ 3% (full linear load)	Critical			
		Input Power factor PF > 0.99	Critical			
Overload capability: 1 minute @ 150%; 10 minute @ 125% at 400 V/40 °C, 60 minutes @ 110% loads		Critical				
Overall UPS efficiency: Up to 96%	Critical					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Output Voltage 380/400/415 (Minimum) VAC, 3 Phase.	Critical			
		Voltage Regulation +/- 1% (symmetrical load); +/- 3% (asymmetrical load)	Critical			
		Output Power Factor: Unity or 1	Critical			
		Rated Frequency: 50 / 60 Hz (+/-0.1% @ free running)	Critical			
		Acoustic Noise (At 1 meter from UPS): 68 dB <= 70% load; 74 dB at full load	Major			
		Output Voltage distortion (THDv) (100% Load): Linear load: 1% @ full load	Critical			
		Non-Linear load: 3% @ full load	Critical			
		Circuit Protection – The UPS should have inbuilt External Input, Output Breakers	Critical			
		Networking Protocol: SNMP, Modbus RS485 or TCP/IP, BACnet. Compatible with DCIM.	Major			
		Operating Temperature: 0 to 40 Deg C	Critical			
		Humidity 0% to 95% non-condensing	Critical			
		The UPS shall measure and recording input/output voltage & current waveforms in the event of any abnormal or alarming situation arises.	Major			
		AC/DC capacitor service life shall be minimum 10 years.	Critical			
	Mechanical	Dust filter & Rodent Mesh shall be provided with each UPS Frame	Major			
		The UPS shall measure kWh consumption at input & output.	Major			
		Conformal Coating: Critical components like PCBs in	Major			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		UPS shall be conformal coated for protection against dust and other environmental harsh conditions.				
		Ingress Protection – IP 20 or Higher	Major			
		Cable Entry: Top Cable Entry Provision shall be provided.	Major			
	Efficiency	Double conversion mode: Up to 96%	Critical			
		ECO mode: Up to 99%	Critical			
	Battery	The UPS battery shall be designed at least 30 minutes backup at 150 kVA load	Critical			
	Battery Type support	External & Compatible with both Lithium-ion and VRLA type	Critical			
	Battery Required					
	Battery Type	Li-ion battery (Lithium Ion Battery with LMO-NMC chemistry)	Critical			
	Power backup time	Min. 30Min at 150 kVA load. Bidder shall be quoted Li-ion battery.	Critical			
	Battery Calculation	The bidder must provide the battery calculation from the UPS OEM	Critical			
	Monitoring	The lithium battery cabinet monitors the cell temperature, voltage, SOH/SOC, battery data, battery cabinet data, and system data.	Major			
		The UPS can monitor the lithium battery cabinet and display the following information: lithium battery system information (analog parameters such as the system cell voltage extremum), rack system information (analog parameters such as the rack cell voltage extremum), and	Major			

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		BMU alarms in each rack of the lithium battery system (the fault is located to the minimum replaceable module).				
	Communications	The signal ports include dry contacts and system parallel ports.	Major			
		The communications ports include FE and RS485.	Major			
		Lithium battery cabinets communicate with UPSs for collaborative control and reliability.	Major			
		The lithium batteries can be separately connected to a third-party Network Monitoring System (NMS) for remote monitoring.	Major			
	Mixed use of old and new batteries	Multiple battery strings can be used to combine old and new batteries and support phased capacity expansion.	Major			
		A single battery string can contain both old and new batteries, and can be replaced if a fault occurs.	Major			
		Provide the technical report or patent certificate issued by a third party for the mixed use of old and new batteries.	Major			
	Maintainability requirements	The batteries adopt modular design and are replaceable. All installation and maintenance operations should be performed in front of the cabinet.	Major			
		If a single battery module in the battery cabinet is faulty, the remaining battery modules can be connected in series and then connected to other battery strings in parallel.	Major			

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Certification	The entire system complies with CE/CB/ROHS/REACH or equivalent certificate. Must be enclosed proof of documents	Major			
		The entire system should meet the fire extinguishing test requirements. Reports from well-known third-party fire extinguishing test, such as TÜV or equivalent, should be provided.	Major			
		The entire system meets the shock proof 8 intensity and provides the shockproof report.	Major			
		The batteries module complies with the UN 38.3 for lithium batteries transportation certification, and IMDG CODE (Amdt39-18)	Major			
		The cells comply with UL1642, IEC62619, UN38.3, UL 9540A and provides the certificate	Critical			
		Provide third-party reports or equivalent certificates	Major			
		The cells have also passed the acupuncture test, with reports from a well-known third party, such as TÜV, provided.	Major			
	Protection	The lithium batteries provide current limiting protection to avoid short circuits, over temperature, overcharge, and over discharge.	Major			

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Each battery string in the lithium battery cabinet has fuses or circuit breakers for protection. Each lithium battery cabinet is configured with BMS/Management system to monitor the voltage and temperature of each battery in the cabinet. When short circuit, over charge, or over discharge occurs, the BMS/Management system can switch off the circuit breaker on the cabinet side.	Critical			
	Heat dissipation	Batteries use natural heat dissipation and do not use fans to prevent single points of failure. In addition, batteries can be installed against walls. The battery and cabinet front and rear diagrams are provided.	Critical			
	Processing technology	Battery cells in a battery module must be connected using high-end laser welding technology. Screws are not allowed to be locked to prevent screw looseness caused by cold shrinkage of thermal barriers and ensure reliability. Provide screenshots of electrochemical cell connections inside the battery module.	Critical			
		The monitoring and sensor cables inside the module must be routed through dedicated cable troughs to avoid damage during installation, transportation, and maintenance. Provide a screenshot of the battery module.	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Environment	Operating Temperature 0°C~ 40°C without derating	Critical			
		Storage Temperature -25 to 55°C	Major			
		Relative Humidity 0%-95%(No-condensing)	Major			
		Maximum Operating Altitude ≤1000m	Major			
		Audible noise < 70dB	Major			
B	Base					
1	Base	Indoor Base for UPS Installation	Critical	Set	2	
		Indoor Base for Battery Rack Installation	Critical	Set	2	
C	Installation with Installation material					
1	Installation Material	Bidder should provide all necessary Accessories including, Lugs, nut, bolt, Heat Shrink, PIB tape, PVC Tape, Cat 6 Communication Cable etc.	Critical	Lot	1	
	Installation	Installation, Testing and Commissioning	Critical	Job	1	
D	Instruction & Other Activities					
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	Bidder should provide as built design with details during the implementation and PAT period	Critical	Job	1	
3	Others	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
4	Labelling	Printed labelling enclosed with each applicable item	Critical	Lot	1	
	BOM	Bidder should submit details BOM	Critical			
E	Warranty & Service Support			LS	1	
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Bidder should ensure 24x7 service support with spare parts within the warranty period.	Critical			

2.4 Distribution Box

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number	
A	Phase Correction Devices (PCD) 630A						
1	Brand	Renowned Brand as installed in Local Market	Critical				
	Country of Origin	Renowned country over the world	Critical				
	Country of Manufacture	Renowned country over the world	Critical				
	Qty	PCD with Complete Solution	Critical	Set	2		
	Specification		16/18 SWG Sheet steel fabricated, floor stand with top and bottom cable entry, Siemens gray/Light power coated painting, Tropicalized design, indoor type electrical distribution panel board with Min 700A hard-drawn copper bus-bar.	Critical			
			The bus-bar and neutral links in distribution board should be shrouded. So, there's no chance of accidental contact with live parts, and no possibility of shock during use.	Critical			
			Input Voltage: 380-415V, 3 Phase Four wire	Critical			
			Input Frequency: 50Hz.	Critical			
	Magnetic Contactor: 2 no's Capacity: 630A or higher	Critical					
	Brand: ABB/Schneider	Critical					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Country of Origin: USA/EU/UK	Critical			
		Required all Indicating Lamp, Timer , Relay, phase failure relay, fuse etc. should be consider by the bidder	Critical			
		Door earthing in the distribution board, which provide the entire panel safety against shock.	Critical			
	Dimension (HXWXD) mm	To be mentioned by bidder	Major			
	Human Interruption	Manual or Human interruption not acceptable	Major			
B	Electrical Distribution Panel					
1	EMDB (Entire Main DB)					
	Brand	Renowned Brand as installed in Local Market	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			
	Qty	EMDB (Connected from ATS source) with Complete Solution	Critical	Set	2	
	Specification	16/18 SWG Sheet steel fabricated, Floor stand with top and bottom cable entry, power coated painting, Tropicalized design, indoor type electrical distribution panel board with Min. TP+N 900A (50% PE) hard-drawn copper bus-bar.	Critical			
		The bus-bar and neutral links in distribution board should be shrouded. So, there's no chance of accidental contact with live parts, and no possibility of shock during use.	Critical			
		Door earthing in the distribution board, which provide the entire panel safety against shock.	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Dimension (HXWXD) mm	To be mentioned by bidder	Critical			
	Specification for Circuit Breaker					
	Circuit Breaker Brand	ABB/Schneider/Siemens	Critical			
	Model	To Be mentioned by bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Breaker Type	ACB & MCCB, Breaker rating Should be Adjustable	Critical			
	Pole	Each Breaker must be 3 poles	Critical			
	Lamp & Metering	1 Nos Multi Meter for metering & 03 Nos 800/5A CT, 03 Nos. Indication Lamp	Critical			
	Tier-III Standard SLD	Items should be considered As Per approve Single Line Diagram (SLD) of Tier-III standard	Critical			
	Input Breaker	1 x 800A TP 42 KA ACB	Critical			
	Output Breaker	2 Nos. 630A 36 KA TP MCCB	Critical			
2	Floor Mount Distribution Panel -MDB					
	Brand	Renowned Brand as installed in Local Market	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			
	Qty	Floor Mount MDB with Complete solution	Critical	Set	2	
1	Specification	16/18 SWG Sheet steel fabricated, wall-mounted with top and bottom cable entry, Siemens gray/Light power coated painting, Tropicalized design, indoor type electrical distribution panel board with Min. TP+N 700A (50% PE) hard-drawn copper bus-bar.	Critical			
		The distribution board should be suitable for floor mounting. Bas bar should be copper	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Dimension (HXWxD) mm	To be mentioned by bidder	Critical			
	Specification for Circuit Breaker					
	Circuit Breaker Brand	ABB/Schneider/Siemens	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			
	Breaker Type	MCCB, Breaker rating Should be Adjustable	Critical			
	Pole	Each Breaker must be 3 poles	Critical			
	Lamp & Metering	1 Nos Multi Meter for metering & 03 Nos 630/5A CT, 03 Nos. Indication Lamp	Critical			
	Tier-III Standard SLD	Items should be considered As Per approve Single Line Diagram (SLD) of Tier-III standard	Critical			
	Input Breaker	2 x 630A 36KA TP MCCB with Mechanical Interlock system	Critical			
	Output Breaker	2 x 400 A 36KA TP MCCB for UPS input & UPS Bypass	Critical			
		2 x 250A 36 KA TP MCCB for Cooling DB & Spare	Critical			
		2 x 32A 25KA TP MCCB, for Utility DB & Spare	Critical			
D	Floor Mount Distribution Panel (Cooling-DB)					
1	Brand	Renowned Brand as installed in Local Market	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			
	Qty	Floor Mount Cooling-DB with Complete solution	Critical	Set	2	
	Specification	16/18 SWG Sheet steel fabricated, wall-mounted with top and bottom cable entry, Siemens gray/Light power coated painting, Tropicalized design, indoor type electrical distribution panel board with	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Min. TP+N 300A (50% PE) hard-drawn copper bus-bar.				
	Dimension (HXWXD) mm	To be mentioned by bidder	Critical			
	Specification for Circuit Breaker					
	Brand	ABB/Schneider/Siemens	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			
	Breaker Type	MCCB, Breaker rating Should be Adjustable and MCB	Critical			
	Pole	3 poles and Single poles	Critical			
	Lamp & Metering	1 Nos Multi Meter for metering & 03 Nos 250/5A CT, 03 Nos. Indication Lamp	Critical			
	Tier-III Standard SLD	Items should be considered As Per approve Single Line Diagram (SLD) of Tier-III standard	Critical			
	Input Breaker	1 x 250A 36KA TP MCCB	Critical			
	Output Breaker	7 x. 63A 25 KA TP MCCB for Inrow PAC	Critical			
		2 x 32A 10KA TP MCB for Power Room CAC	Critical			
		6 x 32A 10KA SP MCB for Different area CAC & other	Critical			
2	ATS for Inrow PAC ensure duel power in the PAC	The ATS should be install internally or externally for the individual inrow PAC. Each ATS capacity should be 63A. The ATS should be made with 63A Magnetic Contract with required all accessories including relay, timer, indication lamp etc.	Critical	set	06	
E	Floor Mount- UPS 1 & 2 Out DB Panel					
1	Brand	Renowned Brand as installed in Local Market	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Qty	Floor Mount UPS-DB with Complete solution	Critical	Set	2	
	Specification	16/18 SWG Sheet steel fabricated, wall-mounted with top and bottom cable entry, Siemens gray/Light power coated painting, Tropicalized design, indoor type electrical distribution panel board with Min. TP+N 500A (50% PE) hard-drawn copper bus-bar.	Critical			
	Dimension (HXWXD) mm	To be mentioned by bidder	Critical			
	Specification for Circuit Breaker					
	Brand	ABB/Schneider/Siemens	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			
	Breaker Type	MCCB, Breaker rating Should be Adjustable	Critical			
	Pole	Each Breaker must be 3 poles	Critical			
	Lamp & Metering	1 Nos Multi Meter for metering & 03 Nos 400/5A CT, 03 Nos. Indication Lamp	Critical			
	Tier-III Standard SLD	Items should be consider As Per approve Single Line Diagram (SLD) of Tier-III standard	Critical			
	Input Breaker	2 x 400A 36KA TP MCCB with Mechanical Interlock	Critical			
	Output Breaker	22 nos.32A TP MCB, 10KA	Critical			
		24 nos.32A DP MCB, 10KA	Critical			
		10 nos. 32A SP MCB, 10KA	Critical			
XX	ATS INCOMING DB for Building ATS Outgoing line					
	Brand	Renowned Brand as installed in Local Market	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			
	DB Panel	16/18 SWG Sheet steel fabricated, wall-mounted with top and bottom cable entry,	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Siemens gray/Light power coated painting, Tropicalized design, indoor type electrical distribution panel board with Min. TP+N 900A (50% PE) hard-drawn copper bus-bar.				
	QTY	Floor Mount ATS INCOMING DB with Complete solution	Critical	Set	1	
	Dimension (HXWXD) mm	To be mentioned by bidder	Critical			
Specification for Circuit Breaker						
	Brand	ABB/Schneider/Siemens	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufacture	Renowned country over the world	Critical			
	Breaker Type	ACB, Breaker rating Should be Adjustable	Critical			
	Pole	Each Breaker must be 3 poles	Critical			
	Lamp & Metering	2 Nos Multi Meter for metering & 06 Nos 800/5A CT, 06 Nos. Indication Lamp	Critical			
	Tier-III Standard SLD	Items should be considered As Per approve Single Line Diagram (SLD) of Tier-III standard	Critical			
	Output Breaker	2 x 800A 42KA TP ACB for ATS-01 & ATS-02	Critical			
H	Installation with Installation material					
1	Installation Material	Bidder should provide all necessary installation material Royal Bolt, Lugs, Heat Shrink, PIB Tape, Nut, Bolt etc.	Critical	Lot	1	
	Installation	Installation, Testing and Commissioning	Critical	Job	1	
I	Instruction & Other Activities					
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	Bidder should provide as built design with details during the	Critical	Job	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		implementation and PAT period				
3	Others	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
4	Labelling	Printed labelling enclosed with each applicable item	Critical	Lot	1	
5	BOM	Bidder should submit details BOM	Critical			
J	Warranty & Service Support					
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical			
		Bidder should ensure 24x7 service support with spare parts within the warranty period.	Critical			

2.5 Grounding (IT + non-IT)

SI	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Earthing System					
1	Cable	BYA Green 150 RM Cable from PIT to the Data Center area	Critical	Mtr	700	
	Brand	BRB/BBS/SQ/Poly	Critical			
	Qty	Grounding with Complete Solution	Critical	No's	6	
	Earthing/ Grounding work	Earthing with a bimetallic cap on the pipe end and to the grounding bus-bar (copper, GI pipe) It must ensure resistance below 1 Ohm in each electric connection point before connected load and Neutral to Ground less than 1.0 Ohm after load connected	Critical			
	Boring work	Bidder should ensure pure Cu Rod and 10 feet GI pipe for getting desired rating as well as boring. 150 Feet boring work.	Critical			
	Copper Strip Wire	4swg wire	Critical			
	Strip Wire Length	Min.150'	Critical			
	Copper Rod	1 meter (end of the Strip)	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Item/Feature	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number	
	Copper BAR	Bidder should connect a BAR into the PIT	Critical	No's	6		
	PIT	Construction of 600X600X600mm earth inspection pit with R.C.C cover as per drawing & instruction of the Engineer-in-charge.	Critical	No's	6		
B	Installation with Installation material						
1	Installation Material	Bidder should provide all necessary installation material (i.e. PVC channel, PVC pipe, Spiral Insulation, Cable tie, Electric Tape, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Lot	1		
	Installation	Standard Functional Testing, installation and commissioning have to be performed under the supervision of certified Engineers.	Critical Critical	Job	1		
C	Instruction & Other Activities						
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1		
2	As built design	Bidder should provide as built design with details during implementation and PAT period	Critical	Job	1		
3	Others	Bidder should be accommodating additional item if required during the implementation period.	Critical	Lot	1		
4	Labelling	Printed labeling enclosed with each applicable item	Critical	Lot	1		
5	BOM	Bidder should submit details BOM	Critical				
D	Warranty & Service Support						
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical				
		Bidder should ensure 24x7 service support with same rating within the warranty period .	Critical				

2.6 TVSS & SPD Type-1 & 2 (65kA & 40kA)

SL	Item/Feature	Required Technical Specification	Severity	UoM	QTY	Bidder's Response and reference document with page number
1	Brand	Any International Reputed Brand		Set		

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Country of Origin	Renowned country over the world				
Country of Manufacture	Renowned country over the world				
Model	To be mention by Bidder				
TVSS (50kA),3Phase	Provide detail specification and Brand ,model	Critical	Set	4	
TVSS (100kA),3 Phase		Critical	Set	2	
65/100 kA SPD	For ATS end	Critical	Set	2	
40 kA SPD	DB Box End	Critical	Set	6	
Features	Grounding system: TN-S,TT				
IEC/EN/UL Category:	Class II, Type -2				
Features	Product or component type : Surge arrester with pluggable cartridge				
	Poles description: 3P + N				
	Surge arrester technology : MOV + GDT				
	Poles description: 3P + N				
	Signal contacts composition: 1 SD (1 C/O)				
	Maximum discharge current 8/20 μ s I _{max} : 40/100 kA or better				
	Maximum continuous operating voltage U _c : 260V/300V N/PE,				
	Maximum Voltage Protection Level Up: 1500/1500V				
	Response Time: < 25ns/< 100 ns				
Environment Standards	EN 61643-11 : 2012, IEC 61643-11 : 2011				
Mounting Mode	DIN Rail				
Degree of Protection	IP 20				
Special Condition	If any other thing required providing the solution, it should be mentioned and quoted.				
BOM	Bidder should submit details BOM	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

D	Warranty & Service Support					
1		03 (Three) Years from the date of PAT	Critical			
2	Warranty & Service support	Bidder should ensure 24x7 service support with same rating within the warranty period .	Critical			

2.7 STS (for single power equipment)

Sl	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Static Transfer Switch-32A					
1	Brand	Renowned Brand as installed in Local Market	Critical			
	Model	To be mentioned by bidder	Critical			
	Origin	Renowned country over the world	Critical			
	Country of Manufacturer	Renowned country over the world	Critical			
	Qty	STS with complete solution	Critical	Set	2	
	Placement	Static Transfer Switch for Network Rack	Critical			
	Type	Automatic switching power redundancy to single corded equipment	Critical			
	Input Voltage	200V,208V,230V	Critical			
	Frequency	50/60 Hz	Critical			
	Dimension	To be mentioned by bidder	Major			
	Output Voltage	230V	Critical			
	Form factor	2U	Major			
	Manageability	Network manageable through TCP/IP	Critical			
	Transfer Time	2 ms	Critical			
	Capacity	32A	Critical			
	Display	LCD display for operating information	Major			
	Output Connection	(16) IEC 320 C13, (2) IEC 320 C19	Critical			
Interface	SNMP and Telnet. Allows users to access, configure, and manage units from remote locations to save valuable time	Major				
Input Cable	N+N	Major				

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
C Installation with Installation material						
1	Installation Material	Bidder should provide all necessary installation material (i.e. PVC channel, PVC pipe, Spiral Insulation, Cable tie, Electric Tape, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Lot	1	
	Installation	Standard Functional Testing, installation and commissioning have to be performed under the supervision of certified Engineers.	Critical	Job	1	
D Instruction & Other Activities						
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	Bidder should provide as built design with details during the implementation and PAT period	Critical	Job	1	
3	Others	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
4	Labelling	Printed labeling enclosed with each applicable item	Critical	Lot	1	
5	BoM	Bidder should submit details BOM	Critical			
E Warranty & Service Support						
1	Warranty	03 (Three) Years from the date of PAT	Critical			
2		Bidder should ensure 24x7 service support with same rating within the warranty period .				

2.8 Electrical Cabling

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Electrical Cable					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Brand:	BRB/BBS/SQ	Critical			
	Country of origin:	Bangladesh	Critical			
	Country of Manufacture:	Bangladesh	Critical			
	Bidder should provide either cable or BBT system with tape of Box as per site requirement according to site visit		Critical			
	Main cable from New DG output to ATS-01	Main Power cable 1C x 300 Rm/mm ² , NYY	Critical	Lot	1	
	Main cable from Building ATS output to ATS INCOMING DB	Main Power cable 1C x 300 Rm/mm ² , NYY	Critical	Lot	1	
	Main cable from ATS INCOMING DB output to ATS-01	Main Power cable 1C x 300 Rm/mm ² , NYY	Critical	Lot	1	
	Main cable from ATS INCOMING DB output to ATS-02	Main Power cable 1C x 300 Rm/mm ² , NYY	Critical	Lot	1	
	Main cable from Building Existing Gen set output to ATS-02	Main Power cable 1C x 300 Rm/mm ² , NYY	Critical	Lot	1	
	Bus tie line from ATS-01 to ATS-02	Main Power cable 1C x 300 Rm/mm ² , NYY	Critical	Lot	1	
	Grounding Cable for ATS-01 & 02	Grounding Cable 1C x 150 Rm/mm ² , BYA Green	Critical	Lot	1	
	Main Cable for ATS-01 to EMDB-01	Main Power Cable 1C x 300 Rm/mm ² , NYY	Critical	Lot	1	
	Main Cable for ATS-02 to EMDB-02	Main Power Cable 1C x 300 Rm/mm ² , NYY	Critical	Lot	1	
	Earthing Cable For EMDB	Earthing Cable 1Cx 150 mm ² , BYA Green	Critical	Lot	1	Bidder to Encourage use the Grounding Cable Termination From the Earth PIT
	Main Cable for EMDB-01 to AVR-01	Main Power Cable 1C x 300 mm ² , NYY	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Main Cable for EMDB-02 to AVR-02	Main Power Cable 1C x 300 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For AVR input	Earthing Cable 1Cx 150 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for AVR-01 to PCD-01	Main Power Cable 1C x 300 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For PCD-01	Earthing Cable 1Cx 150 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for AVR-02 to PCD-02	Main Power Cable 1C x 300 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For PCD-02	Earthing Cable 1Cx 150 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for PCD-01 to MDB-01	Main Power Cable 1C x 300 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For MDB-01	Earthing Cable 1Cx 150 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for PCD-02 to MDB-02	Main Power Cable 1C x 300 mm ² , NYY	Critical	Lot	1	
	Earthing Cable MDB-02	Earthing Cable 1Cx 150 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for EMDB-01 to MDB-01 Bypass line of AVR & PCD	Main Power Cable 1C x 300 mm ² , NYY	Critical	Lot	1	
	Main Cable for EMDB-02 to MDB-02 Bypass line of AVR & PCD	Main Power Cable 1C x 300 mm ² , NYY	Critical	Lot	1	
	Earthing Cable MDB-01 & 02 Bypass line	Earthing Cable 1Cx 150 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for MDB-01 to UPS-1 Input	Main Power Cable 1C x 150 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For UPS-1 Input	Earthing Cable 1Cx 70 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for MDB-02 to UPS-2 Input	Main Power Cable 1C x 150 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For UPS-2 Input	Earthing Cable 1Cx 70 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for UPS-1 To UPS DB Power Room -A	Main Power Cable 1C x 150 mm ² , NYY	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Main Cable for MDB-01 To UPS DB Power Room –A (UPS Bypass Line)	Main Power Cable 1C x 150 mm ² , NYY	Critical	Lot	1	
	Main Cable for UPS DB Power Room -A To RACK 1P PDU & ATS Power	Main Power Cable 3C x 6 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For UPS DB Power Room -A	Earthing Cable 1Cx 70 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for UPS-2 To UPS DB Power Room -B	Main Power Cable 1C x 150 mm ² , NYY	Critical	Lot	1	
	Main Cable for MDB-02 To UPS DB Power Room –B (UPS Bypass Line)	Main Power Cable 1C x 150 mm ² , NYY	Critical	Lot	1	
	Main Cable for UPS DB Power Room -B To RACK 1P PDU & ATS Power	Main Power Cable 3C x 6 mm ² , NYY	Critical	Lot	1	
	Main Cable for UPS DB Power Room -A To RACK 3P PDU & ATS Power	Main Power Cable 4C x 6 mm ² , NYY	Critical	Lot	1	
	Main Cable for UPS DB Power Room -B To RACK 3P PDU & ATS Power	Main Power Cable 4C x 6 mm ² , NYY	Critical	Lot	1	
	Earthing Cable UPS DB Power Room –A & B To RACK 3P PDU & ATS Power	Main Power Cable 1C x 6 mm ² , BYA Green	Critical	Lot	1	
	Earthing Cable For UPS DB Power Room –B	Earthing Cable 1Cx 70 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for MDB-01 to Cooling DB-01	Main Power Cable 1C x 70 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For MDB-01 to Cooling DB	Earthing Cable 1Cx 35 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for MDB-02 to Cooling DB-02	Main Power Cable 1C x 70 mm ² , NYY	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Earthing Cable For MDB-02 to Cooling DB-02	Earthing Cable 1Cx 35 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for MDB-01 to Utility DB-01	Main Power Cable 4C x 16 mm ² , NYY	Critical	Lot	1	
	Main Cable for MDB-02 to Utility DB-02	Main Power Cable 4C x 16 mm ² , NYY	Critical	Lot	1	
	Earthing Cable for Utility DB	1C x 16 mm ² BYA Green	Critical	Lot	1	
	Main Cable for Cooling DB-01 To PAC 01,02,03,04,05 & 06 ATS	Main Power Cable 4C x 16 mm ² , NYY	Critical	Lot	1	
	Main Cable for Cooling DB-02 To PAC 01,02,03,04,05 & 06 ATS	Main Power Cable 4C x 16 mm ² , NYY	Critical	Lot	1	
	Main Cable for ATS To PAC 01,02,03,04,05 & 06	Main Power Cable 4C x 16 mm ² , NYY	Critical	Lot	1	
	Earthing Cable for PAC ATS & PAC	1C x 10 mm ² BYA Green	Critical	Lot	1	
	Main Cable for Cooling DB-01 To Power Room-A CAC	Main Power Cable 4C x 6 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For Power Room-A CAC	Earthing Cable 1Cx 4 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for Cooling DB-02 To Power Room-B CAC	Main Power Cable 4C x 6 mm ² , NYY	Critical	Lot	1	
	Earthing Cable For Power Room-B CAC	Earthing Cable 1Cx 4 mm ² , BYA Green	Critical	Lot	1	
	Main Cable for Cooling DB-01 & 02 To MMR Room-A CAC	Flexible Cord 3x3 mm ²	Critical	Lot	1	
	Main Cable for Cooling DB-01 & 02 To Staging Room and NOC room CAC	Flexible Cord 3x3 mm ²	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Cable for MK socket & Switch	Flexible Cord 3 x 3 mm/mm2	Critical	Lot	1	
	Earth Bonding Cable	Earthing Cable 1Cx 1.5 mm ² , BYA Green	Critical	Lot	1	
	Cable for Light	Flexible Cord 3 x 2.0 mm/mm2	Critical	Lot	1	
	Fire sealant 1 bucket 19 ltr.	Terminal boxes, indoor/outdoor junction boxes and other enclosures. Easy to seal dozens of cables in one opening that is large enough to allow per-terminated cables up to 16 Cables (max 300 rm)	Critical	Bucket	1	
B	Grounding BUS BAR					
1	Grounding BUS BAR (1000A)	4 " x 14 " with insulation and mounting kit. Should have sufficient hole with nut-bolt	Critical	Set	8	
C	LED Panel Light					
	Item	LED Panel Light	Critical			
	Brand	Renowned Brand as installed in Local Market	Critical			
	Country of Origin:	Renowned country over the world	Critical			
1	Country of Manufacture:	Renowned country over the world	Critical			
	Qty	2' x 2' Panel Light with complete mounting kit	Critical	Set	40	
	Specification	LED Light set with Ceiling mounted, Min. 30W	Critical			
D	Emergency Light with Backup					
	Item	Emergency Light	Critical			
	Brand	Renowned Brand as installed in Local Market	Critical			
	Country of Origin:	Renowned country over the world	Critical			
1	Country of Manufacture:	Renowned country over the world	Critical			
	Qty	Emergency Light	Critical	Set	7	
	Backup time	Min. 1hr Backup	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number	
E	Gang switches						
1	Item	4 Gang switches	Critical				
	Brand	Renowned Brand as installed in Local Market	Critical				
	Country of Origin:	Renowned country over the world	Critical				
	Country of Manufacture:	Renowned country over the world	Critical				
	Qty	2/3/4 Gang Switch with MK Box as required	Critical	No's	20		
	Specification	1 way for Lighting	Critical				
F	13A & 15 A -Auxiliary Socket						
1	Item	3-Pin Socket with MK Box	Critical				
	Brand	Renowned Brand as installed in Local Market	Critical				
	Country of Origin:	Renowned country over the world	Critical				
	Country of Manufacture:	Renowned country over the world	Critical				
	Qty		13A Auxiliary Socket with MK Box	Critical	Set	30	
			15A Auxiliary Socket with MK Box	Critical	Set	20	
Specification		Good Quality 3-pin Combo Socket multi type with MK Box.	Critical				
G	Industrial Socket						
1	Item	Industrial Socket-32A	Critical				
	Brand	Schneider/ABB/Legrand	Critical				
	Country of Origin:	Renowned country over the world	Critical				
	Country of Manufacture:	Renowned country over the world	Critical				
	Qty		Industrial Socket	Critical			
	Specification		Industrial Socket- 1 phase 32A 3-Pin with cover set to mount in Floor/Wall/under Raised floor	Critical	Set	26	
Industrial Socket-3 phase 32A 5-Pin with			Critical	Set	20		

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		cover set to mount in Floor/Wall/under Raised floor				
H	Installation Material					
1	PVC Pipe for above work	Good and heavy duty 3/4", 1", 1.25"	Critical	lot	1	
	PVC Channel for above work	Good and heavy duty 1", 1.25"	Critical	lot	1	
	Tray/Channel for Light	If required for light power cable laying	Critical	lot	1	
	MK Box	To be mentioned by bidder	Critical	Nos	80	
	Miscellaneous	Bidder should provide all necessary installation material (i.e. Cable tie, Electric Tape, Spiral Insulation, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Lot	1	
I	Installation, Testing and Commissioning					
1	Power Cable	Installation, Testing and Commissioning	Critical	Job	1	
	Grounding BUS BAR	Installation, Testing and Commissioning	Critical	Job	1	
	LED Light and Emergency light	Installation, Testing and Commissioning	Critical	Job	1	
	Auxiliary Socket & Switch	Installation, Testing and Commissioning	Critical	Job	1	
	Auxiliary Socket, Industrial Socket	Installation, Testing and Commissioning	Critical	Job	1	
	Others if any	Installation, Testing and Commissioning	Critical	Job	1	
J	Instruction & Other Activities					
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
	As built design	Bidder should provide as built design with details during the implementation and PAT period	Critical	Job	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Details Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Others	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
	Labelling	Printed labeling enclosed with each applicable items.	Critical	Lot	1	
	BOM	Bidder should submit details BOM	Critical			
K	Warranty & Service Support					
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical	Job	1	
		Bidder should ensure 24x7 service support with spare parts within the warranty period	Critical			

3. Item Name: Cooling System

3.1 Comfort Air Con Critical and Non-Critical area

SI	Product Features	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Cassette Type Air Conditioner for NOC					
1	Brand	Renowned Brand as installed in Local Market	Critical			
	Model	To be mentioned by bidder	Major			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufactured	Renowned country over the world	Critical			
	Qty	Cassette /Split /Ceiling Type AC	Critical	No's	2	
	Capacity	Min. 24000BTU/Hr	Critical			
	Power Consumption (kW)	To be mentioned by bidder	Critical			
	Total Cooling Capacity (kW)	Min. 7	Critical			
	Net Cooling Capacity (kW)	Min. 7	Critical			
	Refrigerant	R410A/R407C	Major			
	Remote Control	Wireless with Clock	Critical			
	Powerful jet	Yes	Major			
	Power Supply	1 Φ / 220-240 VAC / 50-60Hz	Critical			
	Air Direction Control	Up/Down	Major			
Accessories	Copper pipe, Tray for Copper pipe (N+N) and Drainage System, Indoor and Outdoor base	Critical	Lot	1		
B	Split Type Air Conditioner for Meet Me Room					
1	Brand	Renowned Brand as installed in Local Market	Critical			
	Model	To be mentioned by bidder	Major			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufactured	Renowned country over the world	Critical			
	Qty	Cassette /Split /Ceiling Type AC	Critical	No's	2	
	Capacity (BTU)	Min. 18000BTU/Hr	Critical			
	Power Consumption (kW)	To be mentioned by bidder	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Total Cooling Capacity (kW)	Min. 5.25	Critical			
	Net Cooling Capacity (kW)	Min. 5.25	Critical			
	Refrigerant	R410A/R407C	Major			
	Remote Control	Wireless with Clock	Major			
	Powerful jet	Yes	Major			
	Power Supply	1 Φ / 220-240 VAC / 50-60Hz	Critical			
	Air Direction Control	Up/Down	Major			
	Accessories	Copper pipe, Tray for Copper pipe (N+N) and Drainage System, Indoor and Outdoor base	Critical	Lot	1	
C	Split Type Air Conditioner for Staging Room					
1	Brand	Renowned Brand as installed in Local Market	Critical			
	Model	To be mentioned by bidder	Major			
	Country of Origin	Renowned country over the world	Critical			
	Country of Manufactured	Renowned country over the world	Critical			
	Qty	Cassette /Split /Ceiling Type AC	Critical	No's	2	
	Capacity	24000 BTU/Hr	Critical			
	Power Consumption (kW)	To be mentioned by bidder	Critical			
	Total Cooling Capacity (kW)	Min. 7.0	Critical			
	Net Cooling Capacity (kW)	Min. 7.0	Critical			
	Refrigerant	R410A/R407C	Major			
	Remote Control	Wireless with Clock	Major			
	Powerful jet	Yes	Major			
	Power Supply	1 Φ / 220-240 VAC / 50-60Hz	Critical			
	Air Direction Control	Up/Down	Major			
	Accessories	Copper pipe, Tray for Copper pipe (N+N) and Drainage System, Indoor and Outdoor base	Critical	Lot	1	
D	Ceiling or Split Type Air Conditioner for Power Room					
1	Brand	Renowned Brand as installed in Local Market	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number	
	Model	To be mentioned by bidder	Major				
	Country of Origin	Renowned country over the world	Critical				
	Country of Manufactured	Renowned country over the world	Critical				
	Qty	Cassette /Split /Ceiling Type AC	Critical	No's	4		
	Capacity (BTU)	Min. 60000BTU/Hr	Critical				
	Power Consumption (kW)	To be mentioned by bidder	Critical				
	Total Cooling Capacity (kW)	Min. 17	Critical				
	Net Cooling Capacity (kW)	Min. 16.5	Critical				
	Refrigerant	R410A/R407C	Critical				
	Remote Control	Wireless with Clock	Major				
	Powerful jet	Yes	Major				
	Power Supply	1 Φ / 220-240 VAC / 50-60Hz	Critical				
	Air Direction Control	Up/Down	Major				
	Accessories	Copper pipe, Tray for Copper pipe (N+N) and Drainage System, Indoor and Outdoor base	Critical	Lot	1		
E	Automatic Control Panel for Air Conditioner						
1	Brand	Renowned Brand as installed in Local Market	Critical				
	Model	To be mentioned by bidder	Major				
	Country of Origin	Renowned country over the world	Critical				
	Country of Manufactured	Renowned country over the world	Critical				
	Qty	Automatic Control Panel	Critical	No's	9		
	Feature	Fully Digital Control		Critical			
		Digital High-Low Voltage protection and auto swing on single phase problem.		Major			
		Digital Air-Conditioner Start-up Delay Timer.		Critical			
Digital Air-Conditioner Changeover Timer with Non-Volatile Memory Facility.			Critical				

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Product Features	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Air-Conditioner Fault Detection and auto swing on air-conditioner fail.	Critical			
		Application: Data Center	Critical			
	Phase	Single/Dual/Three	Critical			
	Input Voltage	220V/230V/380V	Critical			
	Frequency	50Hz	Critical			
	Control	Fully Digital Control & Auto /Manual option	Critical			
	Warranty	Should be minimum 03 Years	Critical			
F	Installation with Installation material					
1	Installation Material	Bidder should provide all necessary installation material (i.e.,Copper pipe,tray, Cable tie, PVC channel, PVC pipe, Spiral Insulation, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Set	12	
	Installation	Installation, Testing and Commissioning	Critical	Set	12	
G	Instruction and other Activities					
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	Bidder should provide as built design with details during the implementation and PAT period	Critical	Lot	1	
3	Labelling	Printed labeling enclosed with each applicable item	Critical	Lot	1	
4	Others	Bidder should accommodate additional items if required during the implementation period	Critical	Lot	1	
	BOM	The bidder should submit the details BOM	Critical			
H	Warranty & Service Support					
1		03 (Three) Years from the date of PAT	Critical			
2	Warranty & Service support	The bidder should ensure 24x7 service support with spare parts within the warranty period.	Critical			

3.2 Dehumidifier

Sl	Product Features	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Item	Dehumidifier				
1	Brand	Gree or Equivalent	Critical			
	Model	Should Be mentioned by the bidder	Critical			
	Country of Origin	Renowned country over the world	Critical			
	Country of manufacture	Renowned country over the world	Critical			
	Qty	Dehumidifier with complete solution	Critical	No's	5	
	Feature	Dehumidifier, Air – Purifier and Dryer	Major			
	Moisture Removal	20/30 litter /24 Hour	Critical			
	Power Controls	LCD Display	Major			
	Timer	Automatic Humidity Control	Major			
	Compressor	Power Rotary Compressor	Critical			
	Auto Frost Control	Yes	Critical			
	Warning Signal	Full Water Tank	Critical			
	Continuous Drainage	Yes	Critical			
	Mobility	Easier Mobility with Convenient Wheels	Critical			
	Power	1 Φ / 220VAC / 50Hz	Critical			
	Working Environment	5°-35°C	Critical			
	Bucket Volume	Min. 4 L	Major			
Area coverage	Min. 200 Sft	Critical				
B	Installation with Installation material					
1	Installation Material	Bidder should provide all necessary installation material (i.e., PVC channel, PVC pipe, Spiral Insulation, Cable tie, Electric Tape, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Lot	1	
	Installation	Installation, Testing and Commissioning	Critical	Job	1	
C	Instruction and other Activities					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Product Features	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
1	Sample	Sample/Design/Image for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	Bidder should provide as built design with detail during implementation and PAT period	Critical	Lot	1	
3	Labelling	Printed labeling enclosed with each applicable item	Critical	Lot	1	
4	Others	Bidder should accommodate additional items if required during the implementation period	Critical	Lot	1	
	BOM	The bidder should submit the details BOM	Critical			
D	Warranty & Service Support					
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical			
2		The bidder should ensure 24x7 service support with spare parts within the warranty period.	Critical			

4. Item Name: Data Center Infrastructure Management (DCIM)

4.1 DCIM

Sl	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number	
A	Data Center Infrastructure Management System (DCIM)						
1	Brand	UPS, Rack, Rack PDU, Containment, Cooling, Temp Monitoring, DCIM software, and KVM should be of the same OEM for smooth integration of the solution and post-sales support. That OEM should have OEM Qualification: - ISO9001, ISO 14001, ISO 27001:2013,ISO45001:2018,ISO 50001	Critical				
	Origin	Renowned country over the world	Critical				
	Country of Manufacturer	Renowned country over the world	Critical				
	Model/Part	To be mentioned by the bidder	Critical				
	Qty		Data Center and Campus based on the requirement.	Critical	Lot	1	
			The bidder should provide all necessary items in detail	Critical			
			The bidder should provide the limitations of this system	Critical			
	License	License for 20 Racks and UPS, PDU, In row Cooling, EMS and all applicable SNMP/MODBUS/TCPIP/BacNet base Equipment etc.	Critical				
		A centralized-on premise software to monitor all key equipment's like UPS, Cooling, Rack PDUs etc. System should come as a hardware/server and software with required accessories	Critical				
	Software which works with Perpetual licenses and should have capacity to monitor more than required devices. If required multiple sites should be integrated with same DCIM software by just adding required licenses.	Critical					

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		DCIM must come with node (equipment) License based policy. Licenses should be perpetual.	Critical			
		DCIM should Access historical alerts from several appliances through one central database. Sort alerts by type, date, appliance, and/or device group.	Critical			
		DCIM should Access historical alerts from several appliances through one central database. Sort alerts by type, date, appliance, and/or device group.	Critical			
		Solution should Create, save and schedule user-defined reports for ease of data collection, distribution and analysis	Critical			
		Real-time event notification to minimize response times to critical physical infrastructure situations.	Critical			
		Hardware should have internal storage. Software should be supplied with server / VM server. There should be separate server for monitoring & operation layer.	Critical			
		Multi-vendor support for monitoring networked SNMP devices	Critical			
		Rack should have two temperature and humidity sensor per rack along with Rack mounted control unit to give temperature & Humidity alerts via email. Unit should be connected to Centralized software	Critical			
		DCIM OEM should be well established company providing DCIM Solution to market for last 10 Years continuously till date and should be recognized in IDC kind of third party reports.	Critical			
		If required DCIM should give output data to BMS software for larger building level monitoring via Modbus TCP or equivalent.	Major			

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Rack, Rack PDU, Cooling, UPS, HACS, Temp Monitoring system & DCIM Software should be from same OEM for smooth integration	Critical			
		Change Management, Operations Management, Capacity Management features should be offered as part of DCIM software for phase I Racks	Major			
		Temperature & Humidity Monitoring system: Each Rack should have 2 Temp & Humidity Sensors. Central Monitoring unit should be connected to DCIM	Critical			
		Solution should have rack scalable future	Major			
	Specification	Data Centre Infrastructure Management (DCIM) is a centralized physical infrastructure monitoring system, which is capable of recording historical data, events, and sending event details through email. This shall be provided to monitor & maintain the maximum uptime for all the infrastructure components inside the Data Center.	Major			
		DCIM systems shall be capable of providing a centralized repository for critical power, cooling, and environmental data. Events are normally accessed through browser, which can monitor multiple parameters for Data Center infrastructure devices like uninterrupted power supply units, PACs, power distribution units, rack level PDUs, Environment monitoring units polled through standard Industrial protocols like SNMP, Modbus, BACNET etc.	Critical			
		DCIM shall be an IT-ready, scalable monitoring system which should collect, organize, and distribute critical alerts to selected people anywhere in Client's s LAN / WAN.	Major			

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		The system should allow addition of Infrastructure devices to a centralized DCIM across multiple client locations irrespective of regional boundaries as long the locations and devices are working over a common company network (TCP/IP channel and devices respond to SNMP trap request across locations).	Major			
		This centralized software solution can be accessed by multiple users, from anywhere on the network. It shall be cable of real-time monitoring, generating user-defined reports and graphs, and instant fault notification and escalation, which shall enable quick assessment and resolution of critical issues by CLIENT'S.	Major			
		The solution should enable different levels of access through multi-user login and pre-defined user roles to allow the data related to the critical infrastructure to reach the respective teams / members of the facility & DC operations.	Major			
		SNMP enabled service should be connected this system. Like UPS, PAC, Intelligent PDU, Power Monitoring, Data Center and campus Health Status, Static Transfer switch, EMS etc.	Critical			
	The proposed solution shall be capable of	Device Level Monitoring - Lowest level monitoring of vendor neutral Infrastructure devices, accessed through Network Management Cards or Protocol conversion Gateways by sending I/O point information over SNMP or Modbus TCP to DCIM. Should be connecting all supported equipment both of DC and Campus.	Critical			

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		Data Center Controller: Data Center Controller should be used to monitor the devices and environment in a data center. It should consist of the power module and main control module, which are pluggable	Major			
		Centralized Monitoring – Provide a live & unified view for all the devices captured inside DCIM.	Major			
		Asset Management -The system must have the asset management function and provide a unified asset management interface to manage the entire life cycle of the data center infrastructure and IT devices, such as archiving, shelving, changing, repairing, and returning. The requirements are as follows:	Major			
		1 Provide IT device models library, which shall contain device models.	Major			
		1 Allows users to edit, add, and delete asset attributes.	Major			
		1 Provides the asset account function. The account should contain information about all IT devices and infrastructure devices in the data center and support the import, export, and query of asset information.	Major			
		1 The system can automatically count the online status, positive, and negative inventory losses of IT equipment assets.	Major			
		1 The warehouse management function is provided to trace and manage the data hall maintenance tools and spare parts.	Major			
		Capacity Management -The system should provide the capacity management function. The capacity application information can be displayed on the 2D and 3D pages based on the capacity application status of the IT data	Major			

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		hall in the data center, and the capacity can be warned. The requirements are as follows:				
		1 Provides capacity usage statistics, including the current usage and historical usage of data centers. Capacity information must be displayed at least from four dimensions: Power supply, cooling, U space, and network port.	Major			
		1 Collects cabinet capacity statistics, displays the capacity usage of all cabinets in the data center from the aspects of space, power supply, cooling, and bearing capacity, and displays different usage in different colors.	Major			
		1 The capacity planning function should be provided. The cabinet height, power capacity, cooling capacity, and network port capacity must be designed. In addition, the department that allocates cabinets and the pre-installation of IT devices must be supported.	Major			
		1 The IP address management function, which allows users to view the usage status of all IP addresses, assign IP addresses, and allocate network ports.	Major			
		1 Provides the cabinet location recommendation function. At least three types of cabinet search methods are available: Search by device, search by reserved capacity, search by cabinet, and automatically associate the device model, power, U height, and bearing capacity.	Major			
		1 Provides the cable editing function, which allows you to edit the connection relationships between power cables and network devices. In addition, you can	Major			

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		define the type and color of the cables.				
		Intelligent energy efficiency analysis--To evaluate the energy efficiency of key devices in a data center and identify low-efficiency devices, the management system must support the energy efficiency analysis function of key devices on the entire power supply and distribution link from the mains input to the IT cabinet. The main functions are as follows:	Major			
		1 Evaluates the energy efficiency of UPSs, transformers, and refrigerating stations, such as COP and UPS efficiency of refrigerating stations. If the energy efficiency is abnormal, the system prompts you to rectify the fault.				
		O&M process management-- The O&M process functions must meet the following requirements:	Major			
		1 Create, approve, execute, and close problem, change, and event tickets. Users can add or delete process nodes, for example, add or delete work order approval phases, to accurately match the O&M process of the data center of the project.	Major			
		1 Users should be allowed to define the handling owner of problem, change, and event work orders by multiple roles such as creator, reviewer, and approver. The handling owner corresponding to each process node should be defined, and the handling owner can be transferred.	Major			

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		1 The handling process of problem, change, and event TTs should be displayed in a flowchart, including but not limited to the processing status and recipient information, to facilitate tracking of the TT progress.	Major			
		1 Users can view pending and handled issues, changes, and event TTs, and view the current notification tasks on the personal workbench.	Major			
		1 Collects and analyzes the execution status of problem, change, and event TTs, and collects the TT closure rate and exception rate to improve the TT processing timeliness.	Major			
		1 Users should be allowed to view and handle trouble tickets on mobile terminals, such as mobile phones.	Major			
		1 Supports remote notification of problem, change, and event TTs. The TT handling owner can be notified by email.				
		In addition, the management system must support user-defined processes, that is, users can create new service processes or modify existing processes to meet subsequent service development requirements.	Major			
		Report Management --The system must provide various report capabilities. The system can display monitoring data in various reports and export various reports as required. The specific requirements are as follows:	Major			

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		I The system must have the built-in report function and cannot use external programs or third-party systems to manage reports. In addition, the system must have predefined report templates, including but not limited to asset reports, capacity reports, energy consumption reports, alarm reports, and change work order reports.	Major			
		I The system not only supports instant reports and periodic reports, but also provides a comprehensive report sending mechanism by email. It has powerful data collection and display capabilities.	Major			
		I The system should allow users to create report tasks to execute required reports. You can customize the report type, generation time, and statistical range of a report task. The system automatically generates reports based on the defined generation time and sends the reports to specified users by email.	Major			
		I The system provides the report template customization function. Users can customize reports based on industry characteristics and O&M requirements.	Major			
		PUE Energy --The management system must provide the power consumption management function to monitor and analyze the power consumption of the data center infrastructure. The specific requirements are as follows:	Major			
		3.2.2.4.1 Power consumption and KPI monitoring	Major			

SI	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		To learn about data center energy consumption, the system accurately monitors energy consumption data and calculates and displays energy consumption indicators and KPIs. The specific function requirements are as follows:	Major			
		1 Supports real-time monitoring of key energy efficiency indicators, such as PUE and DCiE, of the entire data center and in different equipment rooms. Allows users to calculate the average PUE by hour, day, month, quarter, and year and display the PUE change curve.	Major			
		1 Users can configure PUE calculation algorithms to calculate PUEs in different equipment rooms or areas.	Major			
		1 Collects annual, monthly, and daily power consumption statistics of the entire data center and equipment room, and monitors key indicators such as the COP and UPS load rate of the refrigeration station in real time.	Major			
		1 Monitors the power consumption of each cabinet and collects statistics on the power consumption of each cabinet by day and month. Summarizes the power distribution units (PDUs) in the same cabinet to provide the power distribution units (A) and power distribution units (B) of the cabinet and the total power.	Major			
		1 Collects daily, monthly, and yearly total power consumption by micro-module, equipment room, floor, and data center.	Major			
		To accurately calculate the power cost of a data center, the system must support power cost calculation and statistics. The	Major			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

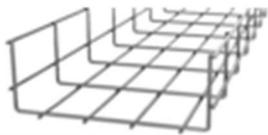
Sl	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
		specific function requirements are as follows:				
		1 Users can customize the unit price of electricity in different months.	Major			
		1 Allows users to customize the power unit price for different time segments each day.	Major			
		1 Allows users to customize the power unit price when the monthly power consumption exceeds a certain value.	Major			
		1 The hybrid template of the preceding three tariff policies can be freely combined to match the actual project situation.	Major			
B	Installation with Installation material					
1	Installation Material	Bidder should provide all necessary installation material (i.e. Cable tie, PVC channel, PVC pipe, Spiral Insulation, Flexible pipe, Royal bolt, Royal plug, screw, GI wire, Velcro etc.)	Critical	Lot	1	
		U/UTP Cable (if Any)	Critical	Lot	1	
	Power Cable as required rating (if Any)	Critical	Lot	1		
	Installation	Installation, Testing and Commissioning with necessary installation Material	Critical	Job	1	
C	Instruction and other activities					
1	Sample	Sample for necessary item should be approved by GC before implementation.	Critical	Job	1	
2	As built design	Bidder should provide as built design with details during the implementation and PAT period	Critical	Job	1	
3	Labelling	Printed labelling enclosed each applicable items	Critical	Lot	1	
4	Others	Bidder should accommodate additional items if required during implementation period.	Critical	Lot	1	
	BOM	The bidder should submit details BOM	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Sl	Item	Required specifications	Severity	UoM	Qty	Bidder's Response and reference document with page number
D	Warranty & Service Support					
1	Warranty & Service support	03 (Three) Years from the date of PAT	Critical			
2		Bidder should ensure 24x7 service support with spare parts within the warranty period.	Critical			

5. Item Name: Ladder

5.1 Wire Mesh Basket Type – Copper (Inside DC)

Sl	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Wire Mesh Basket Cable Tray Type - Copper (Inside DC) Supply & Installation				
1	Brand: Renowned Brand as installed in Local Market	Critical			
	Country of Origin: To be mentioned by bidder	Critical			
	Qty	Critical	Rft	320	
	Type: Network Cable Ladder (Overhead and a few areas under the raised floor)	Critical			
	Cable ladder size: width 300 mm	Critical			
	Height: Min. 40mm	Critical			
	Thickness: Min 5mm	Critical			
	Clamp/Saddle/Flat Bar: As required Size	Critical			
	Material: MS metal cable mesh tray provides maximum ventilation 	Critical			
	Color: To be mentioned by bidder	Major			
	Installation material -Thread Rod/Hanger, Flat BAR, Clump, Royal Bolt, Screw, Saddle, bending/L-shape, T-Shape etc. for hanging/vertical/Horizontal area both the overhead and under raised floor	Major	Lot	1	
Detail Description: Cable routing from Telco room to Server and other Data Center area using overhead with all necessary fitting & fixing etc.	Major				
Installation, Testing & Commissioning	Critical	Rft	320		
B Instruction & Other Activities					
1	Sample for necessary item should be approved by GC before implementation.	Critical	Job	1	
	Bidder should accommodate additional items if required during implementation period.	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Bidder should be responsible for cutting and fitting all kinds of necessary ladder as per design based on site requirement	Critical	Job	1	
	Bidder should provide as built design with details during implementation and PAT period	Critical	Job	1	
	Printed labeling enclosed with each applicable item	Critical	Lot	1	
	Bidder may require to conceal all holes and paint after completing the job, if required.	Major	Lot	1	
	BOM: Bidder Should submit details BOM	Critical			
C	Warranty & Service Support				
1	03 (Three) Years from the date of PAT	Critical			
	Bidder should ensure 24x7 service support with spare parts within the warranty period.				

5.2 Metal Electrical ladder (Inside DC and Sub-station)

SI	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Metal MS Electrical ladder (Inside DC) Supply & Installation				
1	Brand: Renowned Brand as installed in Local Market	Critical			
	Country of Origin: To be mentioned by bidder	Critical			
	Qty	Critical	Rft	880	
	Type: Power Cable Ladder (Under Raised Floor and applicable all areas overhead)	Critical			
	Cable ladder size: width 12"	Critical			
	Height: Approx. 3"/Customized	Major			
	Clamp/Saddle/Flat Bar: As required Size	Major	Lot	1	
	Material: Supply Fitting and Fixing of ladder, Powder coated MS sheet ladder, 18 AWG Sheet, Distance	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	between one bar to another bar 10 inch. 18 gauge ms sheet Cable Ladder Size (W x H): 300 x 75 mm Including Powder coated Ladder jointer and Powder coated Ladder supporter. SS metal thread rod for hanging from roof SS metal thread rod socket				
		Major			
	Color: Powder coating White or Silver	Major			
	Installation material- Thread Rod/Hanger, Flat BAR, Clump, Royal Bolt, Screw, Saddle, bending/L-shape, T-Shape etc. for hanging/vertical/Horizontal area both the overhead and under raised floor	Critical	Lot	1	
	Detail Description: Cable routing from Power room to Server and other Data Center area using Under Raised floor and overhead with all necessary fitting, fixing and hanger etc.	Critical			
	Installation, Testing with all necessary material	Critical	Rft	400	
B	Instruction & Other Activities	Critical			
1	Sample for necessary item should be approved by GC before implementation.	Critical	Job	1	
	Bidder should accommodate additional items if required during implementation period.	Critical	Lot	1	
	Bidder should be responsible for cutting and fitting all kinds of necessary ladder as per design based on site requirement	Critical	Job	1	
	Bidder should provide as built design with detail during the implementation and PAT period	Critical	Job	1	
	Printed labelling enclosed each applicable item	Critical	Lot	1	
	Bidder may require to conceal all holes and paint after completing the job, if required.	Major	Lot	1	
	BOM: Bidder Should submit details BOM	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

C	Warranty & Service Support				
1	03 (Three) Years from the date of PAT	Critical			
	Bidder should ensure 24x7 service support with spare parts within the warranty period.				

5.3 Metal Ladder for Electrical (Sub-Station - DC Power Room)

Sl	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Supply & Installation of MS powder coated Electrical ladder	Critical			
1	Brand: Renowned Brand as installed in Local Market	Critical			
	Country of Origin: to be mentioned by bidder	Critical			
	Qty (H x W = 8"x 3")		Rft	650	
	Qty (H x W = 12"x 3")		Rft	650	
	Type: Power Cable Ladder (Using Sub-station and Building Duct and over ceiling)	Critical			
	Cable ladder size: width 8" and 12"	Major			
	Height: Approx. 3"/Customized	Major			
	Clamp/Saddle/Flat Bar: As required Size	Major	Lot	1	
	Thickness: 18 AWG	Critical			
	Material: MS	Critical			
					
	Color: To be mentioned by bidder	Major			
	Installation material- Thread Rod/Hanger Flat BAR, Clump, Royal Bolt, Screw, Saddle, bending/L-shape, T-Shape etc. for hanging/vertical/Horizontal area both the overhead and under raised floor	Critical			
Detail Description: Cable routing from Power room to Server and other Data Center area using Under Raised floor and overhead with all necessary fitting, fixing and hanger etc.	Critical				

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Installation, Testing with all necessary material	Critical	Rft	1100	
B	Instruction & Other Activities				
1	Sample for necessary item should be approved by GC before implementation.	Critical	Job	1	
	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
	Bidder should be responsible for cutting and fitting all kinds of necessary ladder as per design based on site requirement	Critical	Job	1	
	Bidder should provide as built design with details during the implementation and PAT period	Critical	Job	1	
	Printed labeling enclosed each applicable item	Critical	Lot	1	
	Bidder may require to conceal all holes and paint after completing the job, if required.	Major	Lot	1	
	BOM: Bidder Should submit details BOM	Critical			
C	Warranty & Service Support				
1	03 (Three) Years from the date of PAT	Critical			
	Bidder should ensure 24x7 service support with spare parts within the warranty period.				

5.4 Metal ladder or Clamp or Saddle for Air Conditioner indoor to outdoor

SI	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
A	Customized Metal ladder or Clamp or Saddle For Air Conditioner indoor to outdoor -Indoor To Outdoor	Critical			
	Supply & Installation				
1	Brand: Renowned Brand as installed in Local Market	Critical			
	Country of Origin: o be mentioned by bidder	Critical			
	Qty	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Installation, Testing with all necessary material	Critical	Lot	1	
B	Instruction & Other Activities	Critical			
1	Sample for necessary item should be approved by GC before implementation.	Critical	Job	1	
	Bidder should accommodate additional items if required during the implementation period.	Critical	Lot	1	
	Bidder should be responsible for cutting and fitting all kinds of necessary ladder as per design based on site requirement	Critical	Job	1	
	Bidder should provide as built design with detail during implementation and PAT period	Critical	Job	1	
	Printed labeling enclosed each applicable item	Critical	Lot	1	
	Bidder may require to conceal all holes and paint after completing the job, if required.	Major	Lot	1	
	BOM: Bidder Should submit details BOM	Critical			
C	Warranty & Service Support				
1	03 (Three) Years from the date of PAT	Critical			
	Bidder should ensure 24x7 service support with spare parts within the warranty period.				

5.5 PVC Pipe, PVC Channel, Metal Flexible

SI	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
B	PVC Pipe, PVC Channel, Flexible and fittings-Supply & Installation	Critical			
1	Brand: RFL /Gazi or equivalent	Critical			
	Country of Origin: Renowned country over the world	Critical			
	Good & Heavy-Duty PVC pipe dia 0.5" / 1" / 1.25"/1.5"/1.75" /2" as per requirement	Critical	Lot	1	
	PVC Electric Channel 1"/1.5" as per requirement	Critical	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
	Different types of connectors like, U, T, L-bow, saddle, Screw, glue, etc. installation material	Critical	Lot	1	
	Best quality Different sizes flexible pipe (PVC) based on site requirement etc. installation material (Only use for overlapping area but encourage to avoid)	Critical	Lot	1	
	Cable tie different sizes (100 pcs per pkt.) Best quality cable tie with different sizes as per site requirement	Critical	Lot	1	
	Aluminum Channel 3". Supply Fitting and Fixing of 3" aluminum channel. Channel with cover and related all accessories should be considering. Brand: To be mentioned by the bidder	Critical	Rft	400	
	Accessories: Screw, GI wire, Royal Plug, Royal Bolt, Nut, Bolt, metal Clump, saddle, socket, PVC Tape, Masking Tape, Rivet, High Quality nylon Fastener, Lugs, PVC Tape, Heat Shrink all required accessories etc.	Critical	Lot	1	
	Based on site requirement their need to cut the wall and concealed the pipe.	Critical	Job	1	
	Installation, Testing with all necessary material	Critical	Job	1	
B	Instruction				
	Sample for necessary item should be approved by GC before implementation.	Critical	Job	1	
	Bidder should accommodate additional items if required the during implementation period.	Critical	Lot	1	
	Bidder should be responsible for cutting and fitting all kinds of necessary item as per design based on site requirement	Critical	Job	1	
1	Bidder should provide as built design with detail during implementation and PAT period	Critical	Job	1	
	Printed labeling enclosed each applicable item	Critical	Lot	1	
	Bidder may require to conceal all holes after completing the job as well as color it if required.	Major	Lot	1	
	BOM: Bidder Should submit details BOM	Critical			
C	Warranty & Service Support				

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

SI	Required Technical Specification	Severity	UoM	Qty	Bidder's Response and reference document with page number
1	03 (Three) Years from the date of PAT	Critical			
	Bidder should ensure 24x7 service support with spare parts within the warranty period.	Critical			

6. Item Name: Structure Cabling

6.1 Copper Cabling

Descriptions	Required Specification	Severity	UoM	QTY	Bidder's Response and reference document with page number
Brand name	CommScope/Panduit/Belden	Critical			
Model	Please specify	Critical			
Country of origin	Renowned country over the world	Critical			
Country of Manufacture	Renowned country over the world	Critical			
OEM Criteria	OEM shall be a member of global Telecommunications Industry Association (TIA) committee. Membership shall be available for validation at www.tiaonline.org OEM must have ISO 9001:2015 and ISO 14001 certified manufacturing unit, certified for min. 25 years. OEM must have minimum five data Center reference in Bangladesh over the last five years.	Critical			
CAT 6A UTP Cable, LSZH, Frequency at least 500 MHz (1000 ft. per Box)	<ul style="list-style-type: none"> • CAT6A U/UTP 23 AWG Cable should be ETL Verified to ANSI/TIA 568.2-D Category 6A and ISO/IEC 11801 Class EA Specifications. • Cable shall be constructed with pair separator as well as individual conductor separator for superior ANEXT performance under CAT6A channel. 	Critical	Box	40 or at actual, as per design	
Electrical properties:	<ul style="list-style-type: none"> • Max DC Resistance: <7.61 Ohms/100m • Max. Operating voltage: 80 V • Frequency: up to 550 Mhz 	Critical			
	The cable shall have Low-Smoke, Zero Halogen (LSZH) jacketing and must comply with the following Fire Safety standards: 1) ISO/IEC 60332-3-22: Vertical Flame Spread	Major			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	2) ISO/IEC 60754-2: Acidity				
	3) ISO/IEC 61034-2: Smoke Density Cable shall be compliant to EN50575 CPR Cable Euro Class and certified for Dca or better standards. Certificate should be submitted with bid.	Major			
Certifications and Test Reports:	Category 6A cable alongwith offered channel components should be certified by Intertek lab under 4 connector channel configurations to the requirement of ANSI/TIA 568-C.2 for short links (<15m) as required for data centers. Test Certificates to be provided with bid.	Major			
	CAT6A Cable must be certified for IEEE 802.3bt Type 4 transmission for remote powering (4PPoE) upto 60 Deg C.	Major			
	Factory test report for each cable box shall be available for any time access and download from OEM public website using unique print string from cable jacket.	Major			
	Product Brochure & Data Sheet: To be attached				
	Warranty: Five (05) years full warranty	Critical			
24 Port U/UTP Patch Panel, 1U			Nos	50 or at actual, as per design	
Required Specification	24 Port modular discrete patch panel suitable for CAT6 / 6A outlets	Critical			
	Shall be rack mountable, 1U with rear cable management system	Critical			
	The angled orientation of panel ports should facilitate in routing half of the	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	panel ports on either side of the rack for better front patch cord management.				
	Material: High-impact, flame retardant, thermoplastic, UL 94V-0 rated	Critical			
	Panel shall have plug retention force of 133N min.	Critical			
	Current Rating - 1.5 A @ 20 °C Dielectric Withstand Voltage, RMS - 1500 Vac @ 60 Hz Insulation Resistance, minimum - 500 MOhm	Critical			
	Should be UL and cUL listed	Critical			
Category 6A U/UTP Modular Information Outlets for Discrete Panels			Nos	1200 or at actual, as per design	
Required Specification	The CAT6A UTP 8-pin modular (RJ-45) jacks shall have Electrical performance guaranteed to meet or exceed the channel specifications of ISO/IEC 11801 Class EA and ANSI/TIA-568-C.2 Category 6A.	Critical			
	The information outlet shall support IEEE 802.3bt (Type 4) and have a Current Rating of 1.5 A at 20°C	Critical			
	Insulation Resistance, minimum: 500 MOhm	Critical			
	Dielectric withstand voltage rating 1500 Vac @60Hz	Critical			
	Shall be complied to IEC 60512-99-002 for safe un-mating of the modular jacks under electrical load.	Critical			
	Shall have IEC 60603-7 certified plug performance. Intertek report to be enclosed.	Critical			
	Plug retention force, min: 133N				
	Shall support mating cycle durability under 4PPoE (90W) transmissions upto min 3000 mating cycles.				
	Faceplate shall be available with 1 or 2-port configuration.				
	Shall be UL 94V-0 rated.				
	Faceplate ports shall be with integrated shutter.				
CAT 6A U/UTP Small Diameter Patch Cord	CAT6A U/UTP Patch Cord, shall be of small diameter constructed with 4 pair 28 AWG solid construction, with pair separator.	Critical			
	CAT6A Patch Cord shall be compliant to TIA-568 Cat 6A, IEEE	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	802.3bt Type 4 and ISO/IEC 11801 Class EA				
	Offered CAT6A Patch cord shall support intelligent cable detection mechanism and function when used with AIM system.	Critical			
	The cordage shall be UTP components that do not include internal or external shields, screened components or drain wires.	Critical			
	Patch Cord outer diameter shall be 5.0mm +/- 0.1mm.	Critical			
	Patch Cord shall have min plug insertion life of 750 cycles.				
	Min Plug retention force: 90N or better				
	Shall be UL 1863 listed.				
	Patch Cords shall have maximum dc Resistance: 0.30 Ohm				
	Safety voltage rating: 300 V				
	Contact Plating Material Gold over nickel				
UTP Patch cord	CAT 6A Small Diameter Patch cord 0.5M (25% Red color, 25% Blue color, 25% Yellow and 25% Green color)	Critical	Nos	200	
	CAT 6A Small Diameter Patch cord 1.0M (25% Red color, 25% Blue color, 25% Yellow and 25% Green color)	Critical	Nos	300	
	CAT 6A Small Diameter Patch cord 2.0M (25% Red color, 25% Blue color, 25% Yellow and 25% Green color)	Critical	Nos	300	
	CAT 6A Small Diameter Patch cord 3.0M (25% Red color, 25% Blue color, 25% Yellow and 25% Green color)	Critical	Nos	200	
	CAT 6A Small Diameter Patch cord 5.0M (25% Red color, 25% Blue color, 25% Yellow and 25% Green color)	Critical	Nos	100	
Front Cable Manager	1U Front Cable Manager	Critical			
Brand	Same brand of cable	Critical			
Model	To be mentioned by bidder	Critical			
Country of Origin	Renowned country over the world	Critical			
Country of Manufacture	Renowned country over the world	Critical			
Quantity	1U Front Cable Manager	Critical	Nos	50	
Required Specifications	1. Horizontal Trough kit, 19 in, single sided	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	<p>2. Shall be available in 1U and 2u finger style ducts</p> <p>3. Should be UL and CUL listed</p> <p>4. Material: Carbon steel with Black powder coated finish.</p> <p>Shall have snap on front cover for easy access</p>				
Cable lay/labeling	All cable lay/Panel labeling has to be done as per requirement	Critical			
Cabling Installation	<p>CAT 6A cables should be laid up to the rack level in the Data Centre. Dedicated raceways / cable-trays should be used for laying LAN as mentioned in cable raceway part. Along with Fiber cabling, cables for Storage Area Network (SAN) up to the racks in the Data Centre should also be implemented</p> <p>Additional cabling requirements on an on-going basis will also need to be catered.</p> <p>All the cable raceways shall be adequately grounded and fully concealed with covers</p> <p>The cables should be appropriately marked and labeled</p>	Critical			
Special Condition	If any other thing required providing the solution, it should be mentioned and quoted.	Critical			
BOM	To be attached	Critical			
Product Brochure & Data Sheet	To be attached	Critical			
Installation Material	Accessories: Velco, cable tie,Screw, GI wire, Royal Plug, Royal Bolt,Flexible Pipe,, Nut, Bolt, metal Clump,MK Box, PVC Tape, Masking Tape, all required accessories etc.	Critical	Lot	1	
Instruction	Sample for necessary item should be approved by GC before implementation.	Critical	Job	1	
	Bidder should accommodate additional items if required the during implementation period.	Critical	Lot	1	
	Bidder should be responsible for cutting and fitting all kinds of necessary item as per design based on site requirement	Critical	Job	1	
	Bidder should provide as built design with detail during implementation and PAT period	Critical	Job	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

	Printed labeling enclosed each applicable item	Critical	Lot	1	
	Bidder may require to conceal all holes after completing the job as well as color it if required.	Major	Lot	1	
Installation	Installation Testing & Commissioning	Critical	Lot	1	
Fluke Test	Bidder shall provide fluke test report	critical	Lot	1	
Warranty	03 (Three) Years from the date of PAT	Critical			
	Bidder should ensure 24x7 service support with spare parts within the warranty period.				

Note : Fiber and UTP section will be changed according to site requirement .

6.2 Fiber Cabling

Descriptions	Required Specification	Severity	UoM	QTY	Bidder's Response and reference document with page number
Brand name	CommScope/Panduit/Belden	Critical			
Model	Please specify	Critical			
Country of origin	Renowned country over the world	Critical			
Country of Manufacture	Renowned country over the world	Critical			
OEM Criteria	OEM shall be a member of global Telecommunications Industry Association (TIA) committee. Membership shall be available for validation at www.tiaonline.org OEM must have ISO 9001:2015 and ISO 14001 certified manufacturing unit, certified for min. 25 years. OEM must have minimum five data Center reference in Bangladesh over the last five years.	Critical			
Fiber Optic Cable	Fiber Optic Cable 12 core Multimode	Critical	Mtr	1000	
Brand name	CommScope/Panduit/Belden	Critical			
Model	Please specify	Critical			
Country of origin	Renowned country over the world	Critical			
Country of Manufacture	Renowned country over the world	Critical			
Part No:	To be mentioned by the bidder	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Fiber patch panel	Fully loaded Rack Mount Fiber Patch panel, with complete set of 24 port patch panel, they support high density patching with 48 cords in one height unit (dual LC). 24F 1U Drawer Shelf, loaded with LC MM OM3/4 Pigtails, Adapters, Splice trays, fiber management rings and splice sleeves	Critical	Nos	40	
Brand name	CommScope/Panduit/Belden	Critical			
Model	Please specify	Critical			
Country of origin	Renowned country over the world	Critical			
Country of Manufacture	Renowned country over the world	Critical			
Part No:	To be mentioned by the bidder	Critical			
Fiber Patch Cord	Fiber Patch Cord Multimode duplex (LC – LC) , MM	Critical			
Brand name	CommScope/Panduit/Belden	Critical			
Model	Please specify	Critical			
Country of origin	Renowned country over the world	Critical			
Country of Manufacture	Renowned country over the world	Critical			
Part No:	To be mentioned by the bidder	Critical			
	1 meter Fiber Patch Cord Multi Mode duplex	Critical	Nos	400	
	3 meter Fiber Patch Cord Multi Mode duplex	Critical	Nos	200	
	5 meter Fiber Patch Cord Multi Mode duplex	Critical	Nos	100	
	10 meter Fiber Patch Cord Multi Mode duplex	Critical	Nos	100	
	Splicing work	Critical	Job	1	
	Velcro	Critical	Lot	1	
	Accessories	Critical	Lot	1	
	Labeling paper	Critical	Lot	1	
	Copper cable installation and Permanent link testing	Critical	Job	1	
	Fiber cable installation and Link testing	Critical	Job	1	
Testing & Documentation	Standard: ANSI/TIA-568.3-D and IEC 61280-4-1/2 Tests Required: Insertion Loss (IL), Return Loss (RL), Link Continuity Documentation: Detailed report for each link including length, IL/RL values, and pass/fail results	Critical			
Cable lay/labeling	All cable lay/Panel labeling has to be done as per requirement	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Special Condition	If any other thing required providing the solution, it should be mentioned and quoted.	Critical			
BOM	To be attached	Critical			
Installation Material	Accessories: Velco, cable tie,Screw, GI wire, Royal Plug, Royal Bolt,Flexible Pipe,, Nut, Bolt, metal Clump,MK Box, PVC Tape, Masking Tape, all required accessories etc.	Critical	Lot	1	
Instruction	Sample for necessary item should be approved by GC before implementation.	Critical	Job	1	
	Bidder should accommodate additional items if required the during implementation period.	Critical	Lot	1	
	Bidder should be responsible for cutting and fitting all kinds of necessary item as per design based on site requirement	Critical	Job	1	
	Bidder should provide as built design with detail during implementation and PAT period	Critical	Job	1	
	Printed labeling enclosed each applicable item	Critical	Lot	1	
	Bidder may require to conceal all holes after completing the job as well as color it if required.	Major	Lot	1	
Installation	Installation Testing & Commissioning	Critical	Lot	1	
Fluke Test	Bidder shall provide fluke test report	critical	Lot	1	
Warranty	03 (Three) Years from the date of PAT	Critical			
	Bidder should ensure 24x7 service support with spare parts within the warranty period.				

Note : Fiber and UTP section will be changed according to site requirement .

6.3 Fiber Raceway

Descriptions	Required Specification	Severity	UoM	QTY	Bidder's Response and reference document with page number
Brand name	Any International Reputed brand	Critical			

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

Model	Please specify	Critical			
Country of origin	Renowned country over the world	Critical			
Country of Manufacture	Renowned country over the world	Critical			
QTY	Overhead fiber raceway	Critical	Lot	1	
Built Material	ABS Plastic. Material must be environmental hazard free.	Critical			
Features for overhead hanging cable Raceway with cover	1. It should have clips/hole to hold the cables. 2. It should have the mechanism of holding the cable, which comes out from the top of the Racks. 3. The cable tray should be hanged from the rooftop. 4. The tray should pass over all the Racks in the datacenter, so that cable can be routed from any rack to other. 5. The cable dropper should be hanged from the raceway to Rack. 6. Material shall be fire rated as per UL 94V-0 & UL2024	Major			
Load Capacity	Please Specify (higher is preferred)	Major			
Raceway width	At least W: 240 x H:100 mm (As per site Requirement)	Critical			
Area to be covered	As per site Requirement	Major			
Color Scheme	Please Specify	Major			
Special Condition	If any other thing required providing the solution, it should be mentioned and quoted.	Critical			
BOM	To be attached	Critical			
Product Brochure & Data Sheet	To be attached	Critical			
Warranty	Three (03) years full warranty	Critical			

7. Item Name: Product Training

7.1 Relevant Product Training and SOP

Sl	Required Technical Specification	UoM	Qty	Bidder's Response and reference document with page number
A	OEM Training			
1	Bidder shall arrange required training for 5-8 personnel related to supplied Product (i.e. RACK, UPS, Cooling, Power equipment, DCIM, Structure cabling, etc.) by OEM expert.	Lot	1	

RFQ for Selection of Bidder for Establishing GC Tier-III DC: Lot-2

2	Bidder shall send all training materials before start of the training.	Lot	1	
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7.2 Professional Training and certification

SI	Required Technical Specification	UoM	Qty	Bidder's Response and reference document with page number
A	Professional Training & Certification exam voucher			
1	CDCP	Person	4	
2	CDCS	Person	4	
3	CDFOM	Person	4	

-----xxx End xxx-----