



Amendment Modification

Lot-3 Tender Name: Modification Amendment features of tender notice for Design, Supply, Erection, Testing & Commissioning of one (01) Unit of 500 KVA Sub-Station including Cable & Substation ECR (Electrical Control Room) civil work.

Last Date of Submission: Page – 05 - After Amendment Modification –

20-Nov-2022, 2:30PM

14. FINANCIAL OFFER: page: 18

After Amendment Modification:

SI	Name of items	Qty.	Unit Price	Total Price
01	11 KV Lightning Arrester	01 set		
02	11 KV Dropout Fuse	01 set		
03	11KV Automatic Voltage Regulator (AVR)	01 set		
04	11KV Bypass Panel	01 Set		
05	11 KV 360 630A Witherable Type VCB	01 Set		
06	Type Tested Dry Type Cast Resin Transformer	01 set		
07a	Main LT Switchgear 800A	01 set		
07b	DG Sync Panel	01 set		
07c	DG Panel	01 set		
07d	FLOOR MDB	01 set		
07e	DC-01 & -02 PANEL	02set		
08	300 KVAR Automatic PFI Plant	01 set		
09	HT & LT Busbar Trucking System	01 lot		
10	Earthing System	01 set		
11	800A Manual Changeover	01 Set		
12	Isolation Transformer 400 KVA	02 Set		
13	BMS, SCADA and Energy Monitoring	01set		
14	Other's (MCCB, Cable, Civil Work etc.)	01job		
Grand Total Including VAT and TAX				



[Signature]
05/11/2022
Head of ICT Division



e) 11 KV HT Incoming VCB - Page – 22

After Amendment Modification:

	Required Specification	Quoted Specification
Brand	Please Specify	
Model	Please Specify	
Country of origin	USA/EU/UK/Switzerland/Germany/BD	
Country of Manufacture	USA/EU/UK/Switzerland/Germany/BD	
PT	03 units Cast resin insulated, double pole, Potential Transformer, Ratio: 11/11 KV, Class 0.5, 50 VA, (in PT open delta connection). 1-unit TP MCB of adequate rating for PT Secondary Protection.	
CT	03 units Cast resin insulated, 11 KV dry type double core. CT with Ratio: 50/5/5A, 1 st core for metering, CT 2 nd for protection Core 1: 10 VA, Class 0.5M5 Core 2: 15 VA, Class 10P10	
Feature	LT Switchgear, 50 HZ Hz, three phase, hard drawn electrolytic copper bus bars having appropriate ratings (TPN&E), 415V, 50 Hz.	
Breakers	All breaker shall comply IEC60947-2 All ACB shall be 4P (for incomers) or 3pole (for outgoing) draw out type, min 50kA ACB with microprocessor-based OL and SC trip unit and fully accessories to ensure EDO feature. All MCCB up to 250A, 25kA shall have minimum TMD trip unit with auxiliary contacts and Rotary handle. All MCCB above 250A, 36kA, shall have minimum microprocessor-based OL and SC trip unit with auxiliary contacts and Rotary handle. All MCB shall have minimum 6 curve 6kA and provision for auxiliary contacts. In order to make the breakers compatible for BMS integration necessary arrangement to be considered.	
CT	800/5 ratio current transformer with Suitable accuracy and burden.	
MFM (Multi-Function Meter)	3 Phase 4 Wire energy meter with RS-485 communication port having & Parameters of KW, KWH, KVH, KVARH, Power factor, Frequency etc.	
Panel	floor mounting Low Tension cubical Panel Construction FORM 3b type switchgear according to IEC 61439--1&-2	



Others	06 Nos. Indicating Lamps ON/ OFF/ TRIP	
Type Test Certificate	Routine Test Certificates as per IEC 61439-1 shall be submitted at the time of Technical Inspection/FAT.	
Integration & Monitoring	<ul style="list-style-type: none"> On/Off/Trip status must be capable to integrate with BMS MFM must be capable to integrate with BMS All ACB shall have interlock feature and BMS Operable under Remote mode. 	
Surge Protection Device	LT panel must have Type-1+2 Surge Protection Device as per standard application.	
Interlock & auto changeover	Where ever interlock is required in SLD must be provided in electrical/mechanical means. If Auto changeover feature asked than Auto/Manual option to be provided and shall have time delay and line priority option.	
Special condition	If any other thing required to provide the solution it should be mentioned and quoted.	
BOM	To be attached	
SLD compliance	Mandatory by Bidder Additional features can be proposed in technical submission	
Warranty	Two (02) years full Warranty	

h) 300 KVAR Automatic PFI Plant – Page -26

After Amendment Modification:

Description	Required Specification	Quoted Specification
Brand	Please Specify	
Model	Please Specify	
Country of origin	USA/EU/UK/BD	
Country of Manufacture	USA/EU/UK/BD	
Description	Required Specification	Quoted Specification
Feature	Supply of following 415V, 3-phase, 50 Hz, indoor type compartmentalized power factor improvement panel from recognized manufacturer as stated in the tender document & conformity to relevant IEC61439 standard of sheet steel clad (14SWG) or as per OEM catalog, dust & vermin proof, free-standing, floor mounting, epoxy resin	



	Powder coat painted cabinet as per accepted/approved by the Engineer-in-charge. PFI panel shall Feature complete with TP bus bars and earth block, microprocessor-controlled auto power factor correction relay (PWF schedule compliant stage) with digital PF reading display, capacitor bank, contactor, fuse, ON-OFF indicators for every stage of capacitor bank except directly connected one etc. PFI panel & component shall be complied with relevant NEMA/ VOE/ IEC/ JIS/ BS Standards and shall have routine test certificate according to relevant IEC61439 Standards Country of manufacturing origin, & assembling from USA/ UK/ EU/BD.	
Bus bar	1Set 415V, TP & N+PE hard drawn Electrolytic copper bus bar.	
Relay	1 No. 12-steps Automatic power factor correction relay with necessary auxiliary relay. Brand: Mikro/GE /ABB/ Legrand	
Magnetic Contactors	13 Nos. 415VAC, 50 Hz. TP magnetic contactors of adequate rating with AC6b capacitor (including built in bypass) duty & complete with 2N/C+2N/O auxiliary contact. Brand: Telemecanique/ Siemens/ Mitsubishi/ ABB	
Circuit Breaker	TP MCCB of adequate rating	
Others	Indicating Lamps ON/OFF/TRIP ON/OFF Push Button Auto/Manual Selector Switch	
Type Test Certificate	Routine Test Certificates shall be submitted at the time of Technical inspection/FAT	
Description	Required Specification	Quoted Specification
Integration & Monitoring	All stage ON/Off/Trip status both for Contactor and Breaker must be capable to integrate with BMS	
Special condition	If any other thing required to provide the solution it should be mentioned and quoted.	
BOM	To be attached	
Product Brochure & Data Sheet	To be attached	
Warranty	Two (02) years full Warranty	



I) 400 KVA Dry-Type Isolation Transformer page – 28-

After Amendment Modification:

Description	Required Specification	Quoted Specification
Model	Please Specify	
Brand	Please Specify	
Country of origin	USA/EU/UK/BD	
Country of Manufacture	USA/EU/UK/BD	
Phase	3 phase	
Primary Winding	3 Phase Delta	
Secondary Winding	3 Phase 4 wire Star	
Capacity	400 KVA	
Construction	Dry Resin cast	
Weight of Aluminum Wire Transformer	Please Specify	
Weight of Copper Wire Transformer	Please Specify	
Primary Voltage	415 V	
Secondary Voltage	415 V	
Frequency	50Hz	
Winding Material	Aluminum/Copper wire to be mentioned	
Work Efficiency	≥95%	
Insulation Resistance	≥50 MΩ	
Electrical Strength	3000V AC/1 min	
Noise	<35-65dB (1 meter)	
Insulation Grade	F level	
Wiring Mode	Dyn11	
Cooling Mode	Dry type air cooling	
Overload Capacity	Allow more than 1.2 times rated load to work for up to 4 hours	
Enclosure Protection Grade	IP 22	
Certificate	CE, ISO	
Warranty	03 years	
Temperature	-15°C~+40°C	
Humidity	≤90%RH, without condensation	
Altitude	1000m, non-corrosive gas and conductive dust	
Enclosure	Floor mounting enclosure shall be provided with IP21 casing considering suitable cable termination facility for both incomer and outgoing.	
Bypass Mechanism	Both Transformer shall be facilitated with Adequate size Isolator/MCCB with Bypass wearing with the Setup inbuilt.	



BOM	To be attached	
Product Brochure & Data Sheet	To be attached	

K) BMS, SCADA and Energy Monitoring

After Amendment Modification:

Description	Required Specification	Quoted Specification
Feature	Supply, Installation, Testing and commissioning of Energy monitoring system with Power SCADA	
HMI	API compatible outgoing port to access from any PC in LAN Also dedicated PC and Workstation to be provided. With UPS support.	
PLC Brand	Rockwell / Phoenix contact	
Panel	Adequate size control panel shall be provided for this setup.	
Data memory	3 moth data storage Fast in last out method.	
Features	SLD mimic diagram Command under remote mode Energy meter data monitoring in trend and graph, Live Device status (breaker, PFI stage, MFM, Interlock, Generator sync, etc. as per standard) All Distribution system in DC shall be monitored as per requirement. Provision for adding HVAC system status by Bus/IO Provision for adding FIRE protection and Detection system status by Bus/IO Provision for adding Environment control system status by Bus/IO Provision for adding Access Control system status by Bus/IO Alarm event log Fault Event log Permission based Access control	
Architecture& BOM	System architecture and bill of material to be proposed by Bidder during tender submission	
I/O List	To be furnished by supplier considering all the features above	
Cabling	Power, Signal and Control cable to be considered as per Layout and architecture considering Running meter rate basis (including installation), Dedicated conduiting shall be done considering PVC type (60%max occupancy per conduit) Cable Laying layout plan must be submitted with Technical submission.	
Warranty	Three (03) years full Warranty	



Roll out plan – Page -08

After Amendment Modification

Project completion (including delivery, installation, commissioning, testing etc.) should be done within 180 days from the date of issuance of work.

Earthing System – page – 19

After Amendment Modification

Earthing System as per requirement

Payment terms – page -20

After Amendment Modification

- i. 50% of the total value on the signing of the PO against Bank Guarantee of the same amount with a validity of 9 months will be paid. BG will be released after supply and successful installation. Otherwise, 50% may be paid after delivery.
- ii. 50% after successful delivery, installation, commissioning & UAT. A Performance Security of 10% of the Total Amount should be furnished by the contractor as Bank Guarantee, otherwise this 10% of the Total Amount will be deducted from the final bill.

Price offer :

Total Substation Price with HT AVR =

Total Substation price without HT AVR =



Head of ICT Division