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UHKDU/PRO/SOGE/SVS/0492/2020	
	UNIVERSITY HOSPITAL
	General Sir John Kotelawala Defence University

University Hospital Kotelawala Defence University Werahara ,Boralesgamuwa

Sri Lanka

T:Phone: 0112044555 Fax: 0112044592

Web:

19.../....04../2022

#### INVITATION TO BID AND GENERAL CONDITIONS OF TENDER

- 1. The Vice Chancellor of the General Sir John Kotelawala Defence University, as the Chairman, Department Procurement Committee invites Bid/s from prospective Service items listed in the schedule in Annex "A" The relevant specifications of the items are indicated in Annex "B"
- 2. <u>CLOSING DATE & TIME</u>. The tender will close at 1400 hrs on 27/04/2022 . Any Bid submitted after the closing time of the tender will be rejected & unopened such bids will be returned to the bidder.
- 3. <u>VALIDITY OF BID.</u> The bid submitted under this tender <u>must be valid for a period of 120 days from the date of closing of tender.</u>
- 4. **BID BOND / GUARANTEE.**

Tender No:

- (b) Submission of insufficient Bid Bond/Guarantee value or period will be considered as a "**major deviation**" and such offer will not be considered for further procurement action and will be rejected.
- 5. **VALUE ADDED TAX.** The Bidders who bid for locally delivered items must have the VAT registration. The VAT portion must be shown separately in the price schedule in Annex "A" and VAT registration number must be indicated. If the quoted item is exempted from VAT or Bidding Company is not liable for VAT, reference number and date of relevant Act number/Gazette notification/a certificate (as applicable) **issued for the current financial year** from the Commissioner General of Inland Revenue to that effect should be submitted along with the Bid.
- 6. BID SUBMISSION. The bidder must duly sign at the last page (before Annexes) of this document indicating the name of the signatory and the name of the company & place the company common seal to confirm the acceptance of tender conditions. The Bid/s that do not include authorized signature will be rejected. The Bid/s duly signed by the bidder enclosed and sealed in an appropriate cover addressed to the following address should be sent by registered post or could be deposited in the appropriate tender box placed at University Hospital Kotelawala Defence University. Werahara (at the Main Entrance of University Hospital Kotelawala Defence University) on or before the time & date specified for the closing of tender. The tender reference number, date & time of closing tender should be indicated & underlined at the top left corner of the envelop.

Tender Ref No : The Chairman,
Closing Date & Time : 1400 hrs on 27/04/2022. Department Procurement Committee,
University Hospital Kotelawala Defence University,
Werahara,

7. The Bid/s must be submitted in the attached schedule of prices in Annex "A" as applicable. However, bidders could use similar formats prepared with their own letter heads with all the details mentioned therein and submit in three copies along with duly signed copy of a General Conditions of tender. The Bid/s must contain Technical Literature, Pamphlets, Drawings and Quality Standard Certificate etc necessary to determine characteristics of items offered and in case of Machinery/Vehicles & Equipment, servicing and workshop data/after sales service, back up facilities or any other facilities provided by the supplier.

Sri Lanka.

8. SUBMISSION OF SAMPLES/PAYMENT OF TESTING CHARGES.

When it is required to submit samples, <u>every offer</u> must be accompanied with pre - marked samples. The marking of samples <u>indicating the Bidder & Offer number</u> must be done and the samples must be handed over to the officer at same place where tender box is placed <u>on or before the closing date & time of the Bid</u>. Samples submitted after closing time of the Bid will be rejected. The documents such as Air Way Bills etc, will not be accepted in place of samples. When the testing charges are required to be paid, bidders shall pay testing charges separately <u>for all offers</u> indicated in their bid/s.

- (1) Samples. Please submit ...... samples.
- (2) <u>Testing Charges</u>. A sum of Rs. ..... <u>per offer</u> must be paid to the Bursar of KDU, prior to the submission of bid and a copy of the receipt must be annexed to the bid. It is the responsibility of bidder to inform the Cashier of the Account Office to note the tender number on the receipt issued for such payments.
- 8. <u>BID OPENING</u>. All duly received bids <u>will be opened immediately after the scheduled closing time of Bids at the same venue</u>. Bidders or their accredited agents could be present at the time of opening of bids.
- 9. PRICES.

For locally delivered items (including locally manufactured items & foreign items imported by the bidders) price must be quoted in Sri Lankan Rupees, inclusive of all charges for delivery of items to University Hospital General Sir John Kotelawala Defence University Werahara,. <u>Unit price. VAT and Total price should be clearly indicated in schedule in Annex "A"</u>. Other than VAT, all other type of taxes (eg: NBT, BTT, etc.) should not be indicated separately and should be included in unit price.

10. **RESTRICTED TENDERS**. Invitation to Bids are circulated among the registered suppliers with Ministry of Defence (MOD), only bids submitted by registered suppliers will be allowed for consideration. However, Chairman, Department Procurement Committee reserves the right to invite the bids from multiple combinations of Procurement Methods as stipulated in Chapter III of the Government Procurement Guideline, 2006 to ensure highest competitiveness.

- 11. **PERFORMANCE BOND/GUARANTEE.** A successful bidder shall furnish a Performance Bond/Guarantee in the form of "On Demand" & "Unconditional" Bank/Insurance Guarantee for a sum equivalent to 10% of the contract value for every contract that exceeds Rs. 2,000,000.00 or equivalent amount in foreign currency through a recognized Commercial Bank registered in Sri Lanka or through an Insurance Company authorized by the Insurance Board of loss resulting from the supplier's failure to complete his performance obligations under the contract. If the contracted supplier fails to deliver the items Sri Lanka to issue such Performance Guarantee for this purpose, **within two weeks from the date of notification of award**. The proceeds of the Performance Bond/Guarantee shall be payable to the Vice Chancellor of the General Sir John Kotelawala Defence University as compensation for any o
- 12. time or fails to complete the works as per the agreed contract, **THE TOTAL VALUE OF THE PERFORMANCE BOND/GUARANTEE** will be forfeited. If only partial delivery is made during the agreed contract period, the corresponding value percentage of undelivered quantity from the Performance Bond/Guarantee will be forfeited.
- 13. SIGNING OF CONTRACT. The notification of award will be transmitted to the successful bidder by post, by fax or email. This notification constitutes the formation of the contract. The successful bidder should submit his written acceptance for the award and performance bond / guarantee (For awards over Rs. 500,000.00 without VAT) within 14 days of receipt of such notification. Upon acceptance of the award and furnishing of the Performance Bond/Guarantee, the successful bidder will have to enter into a formal contract with the Vice Chancellor of the General Sir John Kotelawala Defence University by signing the Contract.
- 14. **DELIVERY.** Preference will be given for early delivery. In case of bulk supplies for locally manufactured items, the delivery of **total quantity must be completed within 120 days of signing of contract**, unless mutually agreed for extended delivery period with University Hospital Kotelawala Defence University. **The bidder/s must indicate the proposed delivery schedule in Annex "E"**. In the event of placing a purchase order with the successful bidder, the total quantity so ordered must be supplied as one consignment unless part deliveries are agreed upon in the contract. The deliveries not made as per agreed delivery schedule will be considered as bad performances by the suppliers and **no extended delivery period will be authorized**. Under extreme unavoidable conditions too, the Chairman, Department Procurement Committee (Vice Chancellor of the General Sir John Kotelawala Defence University) reserves the right to grant or refuse delivery period extensions only within the current financial year with or without liquidated claim for delayed deliveries and that decision will be final.
- 15. **LIOUIDATED DAMAGES.** In case of delivery period extensions requested by the successful bidder, a sum equivalent to 2% of the total value of the delayed supply per delay of one week or part thereof may be deducted from the payment due to the supplier from the University Hospital General Sir John Kotelawala Defence University as liquidated damages up to the maximum limit of 10% of the total value of delayed supplies.
- 16. PAYMENT TERMS FOR LOCALLY DELIVERED ITEMS. Payment will be made after acceptance of items which should be subjected to a pre-acceptance inspection/testing by University Hospital General Sir John Kotelawala Defence University authorities. The delivery made to University Hospital should not be considered as quantities taken over by University Hospital General Sir John Kotelawala Defence University until items are properly accepted after pre-acceptance inspection. Any item that does not conform to the specifications or already approved sample will be rejected & it is the responsibility of the supplier to remove them from University Hospital stores/premises within 07 working days of such intimation (either verbal or written) at his own cost and replace them with items conforming to specification within one month of such rejection. The bidder shall allow approximately 60-90 days period of credit from the date of acceptance of items for Account Office, University Hospital General Sir John Kotelawala Defence University to obtain liquid cash from General Treasury & release the payment.
- 16. **RIGHTS OF THE PROCUREMENT COMMITTEE**. The Department Procurement Committee reserve the right to accept or reject whole or part of this tender and their decision will be final. The successful bidders will be notified. Information with regard to rejected or unsuccessful bids will not be communicated.

Thanking You Yours Faithfully

SIV MANJULA

Lieutenant Commander (S Procurement Manager

For Vice Chancellor

University Hospital Kotelawala Defence University

I/We agree to abide by the conditions of tender and undertake to supply the items as per delivery schedule mentioned in the contract, in the event of an order been placed with me/my firm/company as a result of this tender.

Name of the Company/Bidder	
Date :	Company seal

Signature

TOTAL PRICE

PRICE EACH

#### SCHEDULE OF PRICES FOR LOCALLY DELIVERED ITEMS

**ITEMS** 

Annual service charges (medium voltage and low voltage power distribution system)  TOTAL  DISCOUNT  TOTAL(AFTER DISCOUNT)  VAT %  GRAND TOTAL  2. a . Validity : 120 days from the date of closing of tender  b . Payment term : Credit  c . Warranty :  d . Brand name :  e . Country of origi		HEMS		UNIT	QTY	EACH SLRS	SLRS
DISCOUNT TOTAL(AFTER DISCOUNT)  VAT % GRAND TOTAL  2. a . Validity : 120 days from the date of closing of tender b . Payment term : Credit c . Warranty : d . Brand name : e . Country of origi  3. VAT Registration No.:	ľ						
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2. a . Validity : 120 days from the date of closing of tender  b . Payment term : Credit  c .Warranty :  d . Brand name :  e .Country of origi  3. VAT Registration No.:		GRAND TOTAL					
d . Brand name : e .Country of origi  3. VAT Registration No.:		·			C		
e .Country of origi  3. VAT Registration No.:		c .Warranty	:				
3. VAT Registration No.:		d . Brand name	:				
		e .Country of origi					
	2	VAT Designation No.					

UNIT

QTY

Э.	VAI Registration No.:			
4.	Name of the Company	:		
5.	Testing Charges Paid. No and Date:	: Rs		Receipt
6.	Signature of Bidder	:		
7.	Date.	:		
8.	MOD registered No :		Company Seal:	



# ANNUAL MAINTENANCE CONTRACT (AMC) FOR 33KV/11KV/400V POWER DISTRIBUTION SYSTEM - UHKDU

#### Annex "B"

# ANNUAL MAINTAINCNE CONTRACT (AMC) FOR 33KV/11KV/400V POWER DISTRIBUTION SYSTEM (INCLUDING TRANSFORMERS) - UHKDU

- 1. University Hospital KDU (UHKDU) currently consists with 8000 kVA bulk electricity supply and 2MVA X 4 generator back up power supply. Power Distribution system is consisting with 15 Nos. of transformers and a ring main unit. Therefore, UHKDU plans to call bids for AMC for maintenance and breakdown assistance from reputed firms.
- 2. Competitive bidders to study the work scope given by the UHKDU and quoted accordingly. Bidder should indicate suggested work scope in the adjacent column. Moreover, substantive bidders should be able to provide service demonstration in case the evaluation board demands.
- 3. Equipment list located in each and every premise has been given below. Therefore, bidder should provide AMC price for each premise separately and during the evaluation price for each premises and unit as indicated in the price schedule will be evaluated individually.
- 4. The AMC should be under the labor only category. Relevant spares should be installed during the schedule as well as during breakdowns and payments for those will be done accordingly as per the price schedule given by the bidder. Bidder should submit relevant invoices with 30 days of credit period as payment term.
- 5. Site visit is mandatory and bidders to schedule prior to pre bid meeting in liaise with procurement department of UHDKU. Pre bid meeting and site visit is scheduled on 10.11 2021.at 10.30Am Senior Electrical Engineer and staff will incorporate with a technical briefing and relevant single line diagrams will be provided during the site visit.
- 6. Bidders should correctly complete the price schedule and work scope attached herewith. Price break down for each substation and building indicated in the chart should be filled. Contract price should be included breakdown attendance and testing of cables and bus ducts. Moreover, bidder should indicate the price breakdown for 5 years of AMC in case UHKDU decides for an extension of 5 year AMC.
- 7. Bidder should offer spare part list along with prices, required to carry to out PPM along with the bid documents. Proposed spare part list is attached herewith.
- 8. Spare parts should be OEM and should carry OEM warranty in OEM indicated durations. However, UHKDU has the authority to decide the purchasing of spare parts from the bidder or local market after surveying the prevailing market prices in case by case.

- 9. Unlimited breakdown services should be covered in the AMC. Relevant breakdown spare part cost will be borne by the UHKDU. However, labor charges for the breakdowns should be borne by the bidder.
- 10. Bidder's representative should be available in the premises within 01 hour when a breakdown occurs and attend repairs immediately.
- 11. PPM schedule should be carried out under the supervision of Charter Engineer and qualified staff. Bidder to indicate the qualifications and grades of propose staff in the bid. Moreover, bidder should indicate the advanced test equipment which are planned to be used during maintenance as well as breakdowns.
- 12. Bidder to indicate past works experiences on respective field with proving documents.
- 13. Each section mentioned in below should be serviced twice a year. Bidder should propose a time table section wise along with the tender.
- 14. Test reports should be submitted undersigned by a chartered engineer immediately after completion of respective tests. Comprehensive maintenance report should be submitted undersigned by a chartered engineer immediately after completion of respective service.
- 15. The agreement will be valid for 12 calendar months from the day it is signed. Continuing the contract will be considered by the UHKDU after evaluating the performance by the bidder end of every contract period.
- 16. Bidders shall indicate any special comments/suggestions along with the bid document.
- 17. Payment will be done in quarter basis, 25% of total contract price at each quarter. However, bidders should submit 10% of performance bond before signing the contract.
- 18. Tendency of breaking down the system is in a low value during the last 04 years. Therefore, supplier may consider that facts prior quoting. System inspection can be arranged during the site visit on the demand of bidders. Relevant breakdown logs and records can be inspected during the site visit

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# $\frac{\text{HIGH VOLTAGE, MEDIUM VOLTAGE AND LOW VOLTAGE SWITCH GEAR/COMPONENT}}{\text{DETAILS}}$

#### 1. M/V (33KV/11KV) SWITCH GEAR (SCHNEIDER BRAND)

#### **A SUB STATION**

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	QTY
Incoming S/G Set	DNF7- 02G	36kV	750A	02
Outgoing S/G Set	DNF7 - 01	36kV	750A	02
Bus Bar Riser	DNF7 - 59	36kV	1250A	01
Bus Bar VT	DNF7 - 52	36kV	-	01
Sectionalizer	DNF7-42	36kV	1250A	01
Incoming S/G Set	PIX12 - 011	12kV	750A	02
Outgoing S/G Set	PIX12 - 001	12kV	750A	01
Outgoing S/G Set	PIX12 - 001	12kV	500A	03
Incoming S/G Set	PIX12 - 011	12kV	500A	04
Outgoing S/G Set	PIX12 – 001	12kV	150A	01
Bus Bar VT	PIX12 – 001	12kV	-	03
Bus Bar Riser	PIX12 – 086	12kV	1250A	01
Bus Bar Riser	PIX12 – 086	12KV	630A	01
Bus Coupler	PIX12 – 080	12kV	750A	01
Bus Coupler	PIX12 - 080	12kV	500A	01
MLTF for SS(A)	PIX12 – 045G	12kV	6.3A	02
Transformers	Dry-Type cast	33KV	8000KVA	02
	resin	TO11KV		
	Transformer			

# **C SUB STATION**

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	QTY
Transformers	Dry-Type cast	11KV TO	1250KvA	02
	resin	400V		
	Transformer			
RM6 Unit	NE DIDI	12KV	630A	01

#### **D SUB STATION**

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	QTY
Transformers	Dry-Type cast resin Transformer	11KV TO 400V	800KvA	01
RM6 Unit	NE DIDI	12KV	630A	01



# **E SUB STATION**

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	QTY
Transformers	Dry-Type cast	11KV TO	800KvA	01
	resin	400V		
	Transformer			
RM6 Unit	NE DIDI	12KV	630A	01

# **F SUB STATION**

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	QTY
Transformers	Dry-Type cast	11KV TO	1250KvA	02
	resin	400V		
	Transformer			
RM6 Unit	NE DIDI	12kV	630A	01

# **SERVICE BUILDING**

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	QTY
Incoming S/G Set	PIX12 - 011	12kV	500A	02
Outgoing S/G Set	PIX12 – 001	12kV	200A	07
Outgoing S/G Set	PIX12 – 001	12kV	150A	01
Bus Bar VT	PIX12 – 032	12kV		02
Bus Coupler	PIX12 – 080	12kV	750A	01
Bus Bar Riser	PIX1212 - 086	12KV	1250A	01
Transformers	Dry-Type cast	11KV TO	2500KVA	03
	resin	400V		
	Transformer			
Transformers	Dry-Type cast	400V TO	2500KVA	01
	resin	11KV		
	Transformer			
Transformers	Dry-Type cast	11KV TO	2000KvA	02
	resin	400V		
	Transformer			
Transformers	Transformers Dry-Type cast		1000KvA	01
	resin	400V		
	Transformer			



# **GENERATOR PANEL**

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	QTY
Power Command Panel	DMC 1000	380V-415V	_	01
	(Freestand)			
Generator Incoming	SACE PR 121/P	400V	3200A	04
Breakers				
Out Going Breakers	SACE PR 121/P	400V	4000A	04
Out Going Breakers	SACE PR 121/P	400V	3200A	02
Out Going Breakers	SACE PR 121/P	400V	1600A	01

# 2. LOW VOLTAGE PANELS (400V)

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	LOCATION	QTY
Low Voltage Power	LV	400V/50HZ	300-1600A	C Sub	01
Distribution Panel	SWITCH			Station	
	GEAR				
Low Voltage Power	LV	400V/50HZ	300-1600A	D Sub	01
Distribution Panel	SWITCH			Station	
	GEAR				
Low Voltage Power	LV	400V/50HZ	300-1600A	E Sub	01
Distribution Panel	SWITCH			<u>Station</u>	
	GEAR				
Low Voltage Power	LV	400V/50HZ	300-1600A	F Sub Station	01
Distribution Panel	SWITCH				
	GEAR				
Low Voltage Power	LV	400V/50HZ	300-1600A	Service	03
Distribution Panel	SWITCH			Building	
	GEAR				
Low Voltage Power	LV	400V/50HZ	300-1600A	Hospital	03
Distribution Panel	SWITCH			Building	
	GEAR				
		Total			10

# 3. <u>Uninterrupted Power Supply</u>

ITEM DESCRIPTION	MODEL	RATED VOLTAGE	RATED CURRENT	LOCATION	QTY
Control Power Panel	GZDW 110V/	110V	40A	A Sub	01
(UPS)	40A			Station	
Control Power Panel	GZDW 110V/	110V	20A	A Sub	01
(UPS)	40A			Station	
Control Power Panel	GZDW 110V/	110V	40A	Service	01
(UPS)	40A			Building	
		03			



# LIST OF TRANSFORMERS (DRY TYPE CAST RESIN)

SR NO.	CAPACITY (kVA)	QTY
1	8000	2
2	2500	4
3	2000	2
4	1250	4
5	1000	1
6	800	2
	TOTAL	15



SECTION 1 - CIRCUIT BREAKERS/ RM6 UNITS (33kV/11kV)					
	AREA/UNIT	UHKDU REQUIREMENT	BIDDER'S WORKSCO PE		
1.1	Cubical	Cleaning cubicle / internal equipment Inspection of the position indicators and signaling micro switches Inspection of locking + interlocking mechanism function Inspection of withdrawal mechanism Inspection of the shutters Cleaning / checking switch line operating mechanism Cleaning / checking of isolators (tightening ,chalking, cracking , signs of heating) Cleaning / checking of earthing switch operating mechanism Cleaning / checking / greasing of earthing switch plugs			
1.2	CT/VT Compartment	Cleaning / checking / greasing of shutter locking system  Cleaning / inspection of isolators (chalking, cracking, signs of heating)  Cleaning / inspection of TPs (tightening, chalking,			
		cracking, signs of heating)			
1.3	Bus bar Compartment	Inspection of bus bars (cleaning, tightening ,chalking, cracking, signs of heating)  Inspection of isolator switches (cleaning, tightening ,chalking, cracking, signs of heating)	-		
1.4	Circuit Brakes	General state: visual checking, cleanliness, insulator condition, oxidation, no corrosion of supporting structure  Checking of number of operation  Cleaning of resin bodies  Inspection of state of the auxiliaries contact (on/off, rack in, rack off etc.)  Inspection of functional and safety interlock on device  Cleaning / checking / greasing of the power contacts (plugs, sliding contact, light greasing)  Measurement of main contact resistance (micrometer)  Cleaning /checking / greasing of the moving withdrawal parts			

		Checking of coupling rods	
		Cleaning / checking / greasing of the operating	
		mechanism	
		Cleaning / checking / greasing of the latching	
		mechanism	
		Cleaning / checking / greasing of the closing and	
		opening springs	
		Cleaning / checking / greasing of the motor and reduce	
		Cleaning / checking / greasing of all linkages	
		Check LV electrical wiring connections	
1.5	Tests	Mechanical (manual on/off)	
		Electrical (remote on/off)	
1.6	Associated protection	Inspection of protection relay (setting, tripping	
		functions)	
		Inspection of upstream / downstream selectivity	
	Г		
		ProDiag Breaker Monitors opening / closing / spring-	
		loading operations drifts	
		Checking / adjusting of condition of the damper and /	
		or stop device	
		Checking of opening / closing times and speeds	
	G. I	Checking of charging time	
1.7	Checks	Checking of contact synchronization	
		Checking of safety to close (over travel and	
		stabilization)	
		Checking of safety to open (over travel and	
		stabilization)	
		ProDiag Corona Surface/internal partial discharges	
		detection.	



	SECTION 2 - PROTECTION RELAYS					
AREA/UNIT UHKDU REQUIREMENT		UHKDU REQUIREMENT	BIDDER'S WORKSC OPE			
		Inspection of protection measured values, alarms, battery status through HMI				
		Inspection of connections				
2.1	Preventive	Inspection of wiring				
2.1	Maintenance	Inspection of tripping circuits				
		Checking of tripping curves				
		Inspection of protection settings				
		Downstream / upstream blocking or permissive scheme				
	1		-			
		Checking / updating of electrical network settings				
2.2	Settings	Equipment upgrade				
		Software upgrade (digital relays)				
		Inspection of tripping circuits				
2.3	Diagnosis	Checking of tripping curves				
		Inspection of protection settings				



		SECTION 3 - TRANSFORMERS					
	AREA/UNIT	UHKDU REQUIREMENT	BIDDER'S WORKSCOPE				
		Inspection of connections (heating, discharges, etc.)					
		Inspection of magnetic circuit appearance					
3.1	Visual Inspection	Inspection of degradation of surface coating and transformer components					
		Inspection of visual leakages (Crack for CRT)					
		Checking of environmental issues (pollution / fires)					
		Checking of winding					
		De-dusting De-dusting					
3.2	Cleaning	Cleaning of transformer compartment	_				
3.2	Cicaming	Cleaning of transformer compartment  Cleaning of bushing (and winding for CRT)	_				
		Cleaning of busining (and winding for CRT)					
		Checking of transformer's protection systems					
3.3	Verification / Repairs	Checking of air dryer and repair if needed					
3.3		Checking of accessories (temperature probe,)					
		Leakage repair					
		Noise test					
		LV electrical testing (coupling, isolation resistance,					
3.4	Tests	)					
		MV electrical testing (coupling, isolation resistance,					
		)					
			T				
2.5	TT 1'	IP housing for electrical safety					
3.5	Upgrading	Installation of spike protector device (SPD)					
		Installation of temperature control relay					
		Basic analyses					
		PCB content analysis	1				
3.6	Diagnosis	Dissolved gas / furanic analyses					
		Endoscopy					



	SECTION 4 – 400V SWITCH BOARDS				
A	REA/UNIT	UHKDU REQUIREMENT	BIDDER'S WORKSCOPE		
4.1	Enclosure	Efficiency / presence of interlocking devices  Cover panel / partition: doors, form covers, automatic shutters, screws, keys  Inspection of general appearance: cleanliness, presence of humidity/oxidation  Inspection of strain  De-dusting of switchboard			
4.2	Indications	Inspection of indicators (indicator lights, mechanical indicators, etc.)  Checking signaling / measuring equipment values			
4.3	Connections	Inspection of power connections: bus bars, terminations, bus bar supports.  Inspection of downstream power connections: connecting pads, cable mechanical strength Inspection of earth connections. continuity of the grounds Inspection of clamp connections: wear / greasing Inspection of cable connections (tightening, fixing) Inspection of auxiliary connections Checking of shutter moves freely Checking of drawer locks operates correctly Cleaning / greasing of slides Checking of condition of collector Checking of isolation LV plug-in drawers Inspection / cleaning of the drawer Inspection of safety devices (tripping on withdrawal, interlocks) Drawer connection tests			
4.4	Switchgear / Control gear	De-dusting  Inspection of opening / closing  Inspection of switchgear wearing parts: main contacts, arcing chamber.			
4.5	4.5 Diagnosis  ProDiag Thermography. Identifies hot spots suffering from overheating due to bad connections, harmonics, overloads				

	SECTION 5 - POWER FACTOR CORRECTION					
	AREA/UNIT	UHKDU REQUIREMENT	BIDDER'S WORKSCOPE			
5.1	Inspections(Power On)	Inspection of variable metric regulator (cos phi set-up, delay, C/K, steps)				
		Check current (A) at the general incomer to the capacitor bank				
		Check current at incomer to each step with forcing of step				
		Check THDU, THDI (rate of voltage and current harmonic distortion)				
			<u> </u>			
5.2	Inspections(Power	Check capacitors are discharged after lock-out				
	Off)	Clean / dust removal from ventilation system and the whole of the bank				
		Check condition of components (capacitors, switches, and fuses)				
		Check capacitance values with a capacitance meter				



	SECTION 6 – CABLES/BUSBARS					
A	AREA/UNIT UHKDU REQUIREMENT					
6.1	Cables	Inspection of cables (chalking, signs of heating, insulation)				
0.1	Cables	Inspection of wiring connections (tightening, fixing, insulation)				
			•			
		Inspection of bus bars (cleaning, tightening, chalking, cracking,				
6.2	Bus Ducts	signs of heating)				
0.2		Inspection of isolator switches (cleaning, tightening, chalking,				
		cracking, signs of heating)				



	<u>SECTION 7 - UPS</u>					
	AREA/UNIT	UHKDU REQUIREMENT	BIDDER'S WORKSCOPE			
71	UPS	Visual inspection of the UPD				
		Electrical measurement and states				
		Checking and correction of all parameters, equipment				
		Rectify any apparent faults and cleaning				
7.2	Battery storage	Visual inspection				
		Each battery terminal voltage test				
		Battery analyzing				
		Adjustments and corrections				



PRICE SCHEDULE

SR NO.	YEAR			C PRICE (	Rs.)	
		1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year
01	A SUB STATION					
02	С					
03	D					
04	Е					
05	F					
06	MAIN BUILDING					
07	LOW VOLTAGE PANELS					
08	UPS					
	TOTAL					



# **SPARE PART LIST**

SPARE PART	PRICE (RS.)
Relay, LV Fuse	
Auxiliary Contact	
Tripping coil	
Mitop for switch	
Under voltage coil	
Motor	
Gear motor	
Operating mechanism	
Capacitive insulator	
Earthing cluster	
Relay, LV Fuse	
Auxiliary Contact	
Tripping coil	
Mitop for switch	
Under voltage coil	
Motor	
Gear motor	
Operating mechanism	
RS485 interface / Communication module	
Input / Output module	
Sensor module	
Battery	
Auxiliary equipment (temperature probe,)	
Air dryer (Silica gel)	
Desiccant breather	
Accessories (spike protector, cable box,)	
MV connections	
DGPT2 (ProDiag Transformer Relay recommendation)	
Gasket	
Tripping micro switch unit	
Limit switch	
Mechanical reset relay	
Tripping cable	

Control of Manual States Control of Manual Sta

Relay, LV Fuse	
Auxiliary Contact	
Tripping coil	
Earthing switch clusters	
Pressure switch (gas version)	
Electromagnetic coil	



#### **DELIVERY SCHEDULE**

(IT IS MANDATORY TO FILL T ITEM :			
DURATION		QTY	
EX STOCK QTY (WITHIN 01 V	VEEK)		
01MONTH			
02 MONTHS			
03 MONTHS			
04 MONTHS			
TOTAL			
NAME OF THE BIDDER	:		 
SIGNATURE OF BIDDER	:		 
DATE	:		
COMPANY SEAL	:	:	



#### ANNEX "D"

SPECIMEN FORM OF BID SECURITY																		
registered office	e is a	it  ally by t		(he	ereinafter	(her	reinafte calle he payr	r called d nent of w	d "the the hich su	e Si A m the	arety") authority Bidder a	are ") nd the	held in Surety	and t bind th	firmly he emselv	y es th	bound sum	onto of ecessors
submit the same accordance with su in the Tender in ac Now the Conditio	for the coach invitate cordance	onsiderat tion, the with the	ion of the Bond shal following	Autho	ority, and	the	Bidder	proposes	and to sub	to mit to	the Au	thorit	y a Bid	(herea	fter ca	lled	"the B	Bid") in by him
(a)	That it s	hall rema	ain in full f	orce ar	nd effect u	until t	he earli	estof										
	(i) prolonga		being () such date a											ne subm	nission	of te	enders,	or any
	(ii) to the A		event of acin accordar										Bidder	provid	es a pei	forn	nance s	security
(b) written d			Sond being authority st			d effe	ect, the	Surety sl	nall pay	the fi	ıll amou	nt spe	ecified in	n this E	ond up	on 1	eceipt	of first
	(i)	The Bi	dder has w	ithdrav	wn his Tei	nder o	during t	he validit	y of thi	s Bono	l, or							
	(ii) 14 days		dder has fa						y to the	e Auth	ority in a	ecord	lance wi	th the t	erms of	f the	tender	within
No altera on the part of the A			of the Tend objection f													cerni	ing the	Tender
same to the Bidder			nall not be				hority a	and upon	its ceas	ing to	be in ful	l force	e and eff	fect the	Author	ity s	hall ret	turn the
I exec	uted as a	deed on t	this (	)	) day of (		) 20 (	)										
For and on behalf of the Bidder			For a	nd on be	ehalf c	of the Sur	ety		_									
														-				
Signed b	у							Signe	d by					-				
In the ca	pacity of							In the	capaci	ty of				-				
and by								and b	y					-				
In the ca	pacity of							In the	capaci	ty of				-				

Control Mosnital

Central Sar Johnski Suelawala Detento University

Marshera

Seal (where applicable)

Seal (where applicable)