

MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO. LTD.

Name of Office : 400 KV R.S O&M Dn. Karad.
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EE/400 KV RS O&M/DN/KRD/T/

DTD :

20 NOV 2017

NO 0783


TO WHOM SO EVER IT MAY CONCERN

Please find attached herewith a detail schedule for Supply, Installation & Commissioning & Testing of new SAS (Sub-Stn. Automation System) at 400 KV R.S. Karad.

All interested & experienced bidders/suppliers are requested to submit their best lowest budgetary offer for the same upto Dtd.30.11.2017.

Please note that this budgetary offer is for estimation purpose only.


Interested bidders are requested to visit the 400 KV R.S. Karad Sub-stn. for exact scope of the work.


(Bhau Dadaso Ballal)
Executive Engineer
400 KV R.S.(O&M)Dn.Karad.

Please find Attached h/w steps for implementation of SAS & apporx. required material along with detail technical specifications required for SAS at 400 KV R.S. Karad.

Steps for implementation of SAS


1. 34 Nos. IEC compatible relays are to be connect as per available port in STAR & RING TOPOLOGY.
2. 10 Nos. Ethernet switches to be provide for 400 KV Relays & 220 kV Relays.
3. 2 Nos. Ethernet switch to be provide as Station Switch.
4. 2 Nos. of communication protocol converter (MODBUS and DNP 3.0 to IEC61850 & LON, SPA to IEC61850) to be provide for configuration of Existing Energy Meters in proposed SAS.
5. Other manufacturer relays with different ports & protocols are to be configured using protocol convertor for Monitoring, events data & Disturbance Record purpose.
6. **Existing IEC61850 Compatible SIEMENS IEDs** to be configured for Real Time DATA , Status monitoring & control (of Circuit Breaker & Isolators) purpose.
7. **New proposed GATEWAY** to be worked as **DATA CONCENTRATOR** for reporting to LD centre. & minimum 50 Substations to be report to this DATA Concentrator.


(Bhaugo Dadaso Ballal)
Executive Engineer
400 KV R.S. (O&M) Dn., Karad.

**Details of Technical Specifications for Supply, Installation & commissioning of New SAS at 400 KV RS KARAD,
MSETCL**

Approximate Material Required

Sr. No.	Particulars	Detail Specifications	Qty.	Unit	Rate (Rs)	Amt. (Rs)
1	HMI (Main, Standby, DR)	1. Certification: IEC 61850-3, IEEE-613, IEC61000-4, CE, FCC, CCCUL, CB,LVD 2. Power Supply: Redundant Power supply 3. Operating system: Windows7, Windows8, Windows Server 2008 R2,WES7 WS7P), Windows Server 2012R2, Windows Embedded 8 64-bit, Linux 4. Mounting: 2U Rack Mount 5. System Design: Fanless 6. IP- 60	3	Nos.		
2	Gateway	IEC60870-5-101/104 protocol.	2	Nos		
3	SAS software	Control software package, which shall contain an extensive range of supervisory control and data acquisition (SCADA) function, Suitable to accomodate 36 No of bays, Station auxiliaries, Busbar signals, etc (8000 tags)	1	Nos		
4	Ethernet switch	(Redundant managed Ethernet switches (complying with IEC – 61859 standard requirement) Ethernet Local Area Network communication infrastructure with hot standby)16 port (FO type-10 Nos.+Lan type -6 Nos) Gigabit Ethernet switch	10	Nos		
5	Inverter/UPS	3 KVA (In case of failure of station auxiliary supply, substation DC system ,48 volt, with galvanic separation shall feed the SAS)	1	Nos		
6	Patch cord	Multimode LAN Fibre Patch cord 3 mtr	100	Nos		
7	Multimode Fiber Optic cable (Armoured)	Multimode Fiber Optic cable (Armoured)	500	mtr		
8	Printer	Laser	1	set		
10	Mouse, Key pad	Mouse, Key pad	3	set		
11	GPS Clock, GPS Antenna, Receiver & associated cabling.	220/110 V DC, Serial interfaces with RS 422 hardware or RS 232 or RS 485	1	Nos.		
12	protocol converter	MODBUS RTU , DNP 3.0 to IEC 61850	1	Nos		
13	Furniture	Suitable to accommodate 3 Nos of HMI including keypad arrangement	1	Nos.		
14	Armoured OFC		300	mtr		
15	Cat-6 UTP cables (Ethernate cable)		500	mtr		
Note:	1. The above SAS tagging is prepared for 36 bays (400 KV 16 bays+220 KV 20 bay) 4 CTR System, 2 Nemerical Busbar System, ACDC Auxiliary System & future scope.					
	2. But The hardware mentioned in above list is for IEC 61850 compatible bays to be commissioned in first phase without BCU.					
	3. Existing Siemens make SCADA (RTU DC) to be configured in praposed SAS (for real time data of all bays, status & control of CB's and status of Isolator's)					


(Bhausa Dadaso Ballal)
Executive Engineer
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