MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO LTD.

Office of the **EXECUTIVE ENGINEER**
EHV O&M DIVISION, Pimpri-Chinchwad
Near 220 KV S/S Chinchwad
Bijlinagar, Chinchwad, Pune – 411 033.
Email ID :- ee61b0@mahatransco.in
(CIN No. U40109MH2005SGC153646)

No.: EE/PCDN/PN/Tech./ No. 253 **Date : 04.03.2024**

TO WHOM SO EVER IT MAY CONCERN

Subject:- Calling budgetary offers in r/o Supply, Installation and commissioning of Transformer Monitoring System & Control at various S/Stns under EHV O&M Division Pimpri Chinchwad, Pune.

Dear Sir,

The budgetary offers through e-mail are hereby invited for the above work as per schedule 'A' mentioned below:

Sr. No.	Particulars	Unit	Quantity	Ex Rate	GST	Unit Rate
1a	Suitable HMI server software that can be used for Transformer Auxiliary Monitoring System (TAMS) & MFM meter MODBUS / RS485 data reading having features of required supervision, control, Monitoring, data acquisition, automatic log sheet generation, event sheet generation, trend view, customized HMI display Screen as per MSETCL requirements. The @ 1500 tags or tags required for integration of TAMS signals & all MFM meter all data in server software whichever is more should be provided	Set	1			
1b	Suitable HMI server software that can be used for Transformer WTI, OTI, TPI alongwith control operation having following features 1. Software should reach supplied IED data i.e. software should be compatible for IED protocol. 2. Suitable for generation of log sheets, trend view, reports, etc. 3. The @ 1500 tags or tags required for integration of TAMS signals & all MFM meter all data in server software whichever is more should be provided 4. The supplied software should be along with editor license software, log sheet generation software etc.	Set	2			

	5. The software should have facility to add required protocol & tags if required in future.					
2a	IEDs having following features 1. Non-compliant of IEC 61850 protocol 2. IED should be communicable to TAMS software, Gateway either IEC 103 or IEC 104 2. 4-20 mA Inputs :- 08 Nos. 3. Digital Inputs :- 08 Nos. 4. Digital Outputs: - 08 Nos. 5. 04 Nos. of PT inputs (R,Y,B,N) 6. 02 Nos. of RJ45 LAN communication ports. 7. IED auxiliary DC should be rated for either 220 VDC or 110 VDC whichever is applicable	Nos.	4			
2b	IEDs having following features 1. Non-compliant of IEC 61850 protocol 2. IED should be fully programmable at site. 3.IED should be communicable to SAS 4. 4-20 mA Inputs :- 06 Nos. 3. Digital Inputs :- 08 Nos. 4. Digital Outputs: - 08 Nos. 5. 04 Nos. of PT inputs (R,Y,B,N) 6. 02 Nos. of RJ45 LAN communication ports. 7. IED auxiliary DC should be rated for either 220 VDC or 110 VDC whichever is applicable	Nos.	11			
3	08 port Unmanaged Ethernet Switch 1. 04 Nos. of MM FO port for 2KM 2. 04 Nos. of RJ45 LAN ports 3. Substation rated DC auxiliary supply i.e 220 VDC or 110 VDC whichever is applicable.	Nos.	17			
4	Managed Ethernet Switch 10 port Unmanaged Ethernet Switch 1. 04 Nos. of MM FO port for 2KM 2. 06 Nos. of RJ45 LAN ports 3. Substation rated DC auxiliary supply i.e 220 VDC or 110 VDC whichever is applicable.	Nos.	1			
5	LIU 12 ports	Nos.	18			
6	Server / SAS PC for TAMS 1. Industrial PC suitable for 24 X 7 Operation. 2. Windows 10 & above OS	Set	3			

	3. 8 GB RAM 4. Minimum 1 TB hard disk capacity 5. Processor Minimum i5. 6. Dual CPU processor above base frequency is above 1.8 GHz 7. 32 inches Monitor 8. Server PC with Fan is also accepted					
7	Gateway / Protocol converter having following features 1.Required suitable protocol converter which shall support HMI server software. 2. MFM meter MODBUS to IEC 61850 / required suitable protocol converter having facility to connect 75 MFM meters 3. Shall be work as client & server feature of required protocol. 4.02 Nos. of programmable ports for server communication 6. 02 Nos. of IEC 103 protocol / suitable protocol port for communication with IEDs used for TAMS. 8. 03 Nos. of MOBBUS ports each port will support minimum 24 MFM meters for MFM meter communication with gateway / Server 7. 02 Nos. of programmable IEC 104 protocol port 9. 02 Nos. of programmable IEC 101 serial ports DB9	Nos.	1			
8	6 core Armoured Optical fiber cable along with HDPE pipe	Rmt	2400			
9	12 core, 1.5 Sqmm Copper Armored control cable for IED wiring	Rmt	1700			
10	2 Core, 2.5 Sqmm Copper Armored control cable	Rmt	950			
11	04 core, 2.5 Sqmm Copper Armored control cable for PT wiring	Rmt	800			
12	Fuse & base unit for PT supply to IED	Nos.	40			
13	WTI meter in TF / ICT FCCB having input of capillary tube of suitable length & CT inputs from ICT turret. The WTI meter should have analog display dial of 0-150 deg Cen. & having inbuilt current converter unit of 4-20 mA dual output	Nos.	1			

14	OTI meter in TF / ICT FCCB having input of capillary tube of suitable length. The WTI meter should have analog display dial of 0-150 deg Cen. & having inbuilt current converter unit of 4-20 mA dual output	Nos.	2			
15	Tap Position Indicator, 0-17 kOhm resistance inputs & 4- 20 mA dual outputs	Nos.	14			
16	WTI repeater, either 0-2.8 kOhm resistance input & 4-20 mA dual outputs as per site requirement	Nos.	19			
17	OTI repeater, either 4-20 mA input or 0-28 kOhm resistance input & 4-20 mA dual outputs	Nos.	9			
18	Ground mounted MB for accommodation of IED & various termination	Nos.	15			
19	Wall mounted rack for accommodation of Gateway, GPS device along with AC & DC supply provision	Nos.	3			
20	UPS along with maintenance free battery set having backup of minimum 05 hours 1 KVA	Nos.	1			
21	Table for Server, Keyboard, mouse, printer & UPS along with 01 Nos. of chair	Nos.	1			
22	FO patch cords MM from LIU to Ethernet switch	Nos.	36			
23	RJ45 LAN CAT 6 cable along with required RJ45 connectors & slicing work thereof.	Rmt	400			
24	2 Pair Telephone cable screened	Rmt	250			
25	GPS device along with remote display clock with 02 no. of SNTP LAN port	Nos.	1			
26	Three in one printer (Printer, Scanner & Copier)	Nos.	1			
27	Three-way switches for mode selection	Nos.	15			
28	MFM meters for HV & EHV bays	Nos.	5			
	Labour Part					
1	Installation work 1. Installation of MBs 2. Installation of IED / Gateway & WTI, OTI, TPI meters & repeaters.	Set	7			

	3. All total required wiring of IEDs to be done from OLTC DM to MB, FCCB to MB & from MB to CR as per approved drawings. 4. IED/ Gateway configuration & testing work					
2	Formation of armored FO ring i.e. 1. Laying of FO cable through HDPE pipe, 2. All required splicing work at site 3. Installation of LIUs in MB & splicing work thereof. 4. Testing of ring & troubleshooting thereof. 5. Formation of MFM meter chain upto Gateway	Set	3			
3	Software configuration, integration work 1. TAMS Software Engineering, configuration & integration of all IEDs & Gateway 2. Configuration of HMI as per MSETCL requirement 3. MFM meter configuration & integration	Set	3			

Note: Rate shall be valid for 60 days from the date of submission of offer.

You are requested to quote your best reasonable rate for the above work. The terms & Conditions are as follows:

Terms & Condition:

1. The rate should be quoted on firm quotation basis.
2. The rates should be exclusive of all taxes. Taxes should be quoted extra.
3. Quantity may be vary as per actual.
4. Before submitting the budgetary offer the agency should visit 220kV Chinchwad-1, 220kV Bhosari-I & 132kV Markal S/Stn for clarification of scope of work & site condition, MOM of visit should be made with the respective substation incharge.
5. You are requested to submit your best reasonable budgetary offer as per Schedule 'A' for above works on **E-mail id ee61b0@mahatransco.in upto 11:00 Hrs on dtd:11.03.2024.**
6. Following documents should be submitted along with your offer: -
   a) Shop Act/ Udyog Adhar Registration Certificate
   b) Work Experience Certificate for similar nature of works in MSETCL/ in any power utility.
7. Please note that said budgetary offer is only for estimation purpose and will not be considered for any bidding & no work order will be issued based on this offer.

Sd/-
(Deepak Madane)
Executive Engineer
Pimpri-Chinchwad Division, Pune