



MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LIMITED
CIN No. : U40109MH2005SGC153646

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SP/T-0604/0722

Date: 10.08.2022

Amendment -III

Sub:- Procurement of BCU-based Control & Relay Panels against LE scheme at various Substations under Vashi Zone in MSETCL against e-Tender No.SP/T-0604/0722 (Rfx No.5000001013) submission due on 10.08.2022.--**Issue of Clarification/Amendment to tender document in response to bidder's queries.**

Please refer e-Tender No. SP/T-0604/0722 (Rfx No.5000001013), advertised for procurement of BCU-based Control & Relay Panels against LE scheme at various Substations under Vashi Zone in MSETCL.

In response to above tender **Clarification/Amendment to Tender Specifications** on bidder's queries are given in Annexure-I enclosed herewith.

The Due dates of Submission and Opening of subject Tender are extended as under:

- i) Due date of Submission - 17.08.2022 upto 16:00 Hrs.
- ii) Due date of Opening - 17.08.2022 at 16:05 Hrs.

Bidders are requested to note the same and submit their offers accordingly.

This is issued without prejudice to all other terms & conditions of the subject tender.

Sd/-
Executive Engineer (St-VI)

ANNEXURE-I

S. No	Clause	Technical specification description	Siemens Clarifications	MSETCL Reply
1	Clause no. 14.1	Annunciators shall be IEC 61850 protocol compliant microprocessor based with suitable communication port. And window size shall be approximate 35mm x 50mm	IEC 61850 compliant Annunciator is not available with any manufacturer. Only RS485 communication port is available. Also In SAS based solution, all the information routed to Annunciators shall also be available at SAS level via IEDs. Further available Window size is 34mm x 32mm or 68mm x 32mm. Please confirm which one to select.	Annunciator without IEC 61850 compatibility are also accepted which are used in MSETCL's earlier projects.
2	Clause no. 17.7	The BCU shall preferably have dual power supply units from two separate sources. The BCU shall have non- volatile memory using ELPROM so as to retain the recorded parameters during power failure or in case of re-boot. In case of Supply failure, the recorded parameters shall have a life not less than 10 years.	As per standard practice and earlier executed projects of MSETCL, we shall provide DC changeover scheme in CRP and BCU shall be connected with Changeover DC supply as similar to Ethernet switches. This will provide Uninterrupted DC supply to BCU. Further none of the manufacturer provide recorded parameter with a life of 10 years. Instead the parameters can be downloaded/saved in a CD or other storage devices.	BCU with Single Power Supply Unit and DC Changeover scheme is accepted.
3	Clause no. 19.1.i	Contact multiplication relays shall comprise of one number electrical reset latch type relay with minimum 8 pairs of contacts and one auxiliary (non-latch type) relay having minimum 6 pairs of contacts, the latter to be used in conjunction with the former for the purpose of achieving minimum 14 pairs of contacts altogether. The contact multiplication relays shall have visual operation indicators (flags).	For Contact multiplication of Primary equipments, CMR with Flag is not required because it will not get auto resetted whenever the position of equipment get changed. Instead for this particular application, only latched type electrical resettable bistable relay/contactors are suitable. Please accept the same.	For CB & Isolator contact multiplication, latched type electrical resettable bistable relays without flag as CMRs are also acceptable.
4	Clause no. 19.1.iv	For auxiliary contact multiplication of earth switch as well as 132kV and below rated isolators, only one latch type (electrical reset) auxiliary relay with 8 pairs of contacts will be adequate.	We propose din rail mountable Siemens make electrical resettable bistable contactors with 8 pair of contacts. Please confirm the same.	Accepted
5	Clause no. 24.2	The auxiliary relays for all the above functions shall be self-resetting type, (having hand-reset operation indicators flags). Each element shall have minimum 4 pairs of N/O contacts for BCU input & DR.	Since this is for a SAS based system, we propose to use the self reset type relays with one or more elements each having 3 contacts min. (one for BCU, one for Annunciator and one spare contacts). Hand-reset flag is not required for alarming application to avoid frequent manual operation to reset the same. Please accept.	Auxiliary relays for CB Troubles should be Self reset type with flag having minimum 3 NO contacts.
6	Annexure-II Clause no. 1.17	Distance relay shall have capability to report at least five client.	Please clarify the requirement of relay reporting to 5 clients. Offered relay shall be further capable to report 4 clients.	No Change in Technical Specifications
7	Annexure-II Clause no. 1.70	BCU: Built in features availability Autoreclose, VT supply supervision, Carrier supervision, events recording, self-diagnosis etc	As per standard protection philosophy of MSETCL as well as earlier executed projects, Auto reclose shall be the part of distance relay. In this regard we request MSETCL to maintain the same philosophy and optimize the cost due to same functionality in multiple IEDs.	No Change in Technical Specifications
8	Annexure-II Clause no. 1.(99-i)	BCU hardware specification: DI-64, DO-16, AI-4I+6U	As per 220kV voltage level AIS feeders the correct combination of DI/ DO/AI shall be min. 49 DI and 24 DO, because 16 DOs are not sufficient to cater the control of primary equipments, VT selection Set/reset and Trip relay reset function. Further As per standard philosophy and earlier executed projects, 4I and 4V are sufficient for CT & VT monitoring and Sync. functionality.	No Change in Technical Specifications
9	Annexure-II Clause no. 1.(99-ii)	BCU : Input Supply (Vaux - 60 to 300V DC)	As per standard available DC Voltage at substations which is (110V DC or 220V DC) we further offer Vaux - 48V to 250V DC. Please accept.	Accepted
10	Annexure-II Clause no. 1.(99-iii)	BCU : Ethernet TCP/IP port (100MBPS) : 2 Nos Optical ports – 3 Nos	As per standard practice and earlier executed projects of MSETCL, we shall provide 2xFO Port for SAS communication.	Spare Ports should be provided for SAS communication.
11	Annexure-II Clause no. 1.(99-iv)	BCU: Serial ports – configurable RS232 / 485	There is no use of serial communication ports in BCU. All MFMs/Meters can be looped in daisy chain and connected to ethernet switch via converter which is as per standard practices of MSETCL and other Indian utilities as well.	Serial Ports in BCU are not mandatory

Reply to CTR Queries received by mail on dt: 08.08.22

1. The price estimate appears to be based on Three-year-old rates. As you are well aware, prices of semiconductor devices remain elevated at least by 20% to 30% post pandemic followed by Russia-Ukraine war induced inflation and supply chain challenges. Therefore, it is difficult to match MSETCL's estimated price.

➤ **MSETCL Reply:** No changes in price estimate.
2. As per the Annexure - II, Principle Technical Particulars under clause Nr. 99i general hardware specifications of BCU based C&R panels applicable for 220kV level, it is mentioned that total DI - 64, DO - 16, AI - 4I & 6U are required. The requirement of Binary I/O in this quantity are generally required for 400/765kV S/S schemes, while for 220kV and below substation schemes BCU having DI - 32, DO - 20 are best suited. Please review.

➤ **MSETCL Reply:** No. changes in Technical specifications
3. Under clause Nr. 99ii general hardware requirement of BCU, Input Supply is mentioned as 60 - 300V DC. In practice, most of the BCUs are designed for input supply voltage of 110V - 280V DC. Please review.

➤ **MSETCL Reply:** 110V - 280V DC with \pm 20% variation is also acceptable.
4. As per the Annexure - II, Principle Technical Particulars under clause Nr. 34, microprocessor-based annunciators having IEC 61850 communication protocol with communication port is desired. As per the clause Nr. 14 of specifications, microprocessor-based conventional type annunciator having 35X50MM translucent windows with long life LED lamps etc. is desired. As of now, the CTR ROCON offered microprocessor- based annunciators as per the clause Nr. 34, are modern and except the window size as mentioned above, all latest features are available and it is far more superior than the conventional one. The CTR ROCON annunciator's window size is 60X12.5MM and two-line 5 MM text can be easily accommodated.

- **MSETCL Reply:** Not acceptable. However, Annunciator without 61850 compatibility is also acceptable which are used in MSETCL earlier projects.
5. In case of embedded computers (IEC 61850-3) and Ethernet switches for SAS under aforesaid tender, we have received type test reports from ADVANTECH based in China. Please advise whether these devices are acceptable for this tender.
- **MSETCL Reply:** The bidder need to follow the Govt. of India Guidelines, for “ sharing Land Border with India”. Same is mentioned at Section III, Clause No. 13.0, of tender , please refer same.
6. In case of 220kV Mulund Substation at item Nr 15, product id 500027090 - supply of 220kV TIE BCU Based C & R panel for TIE bay, Backup protection, BCU & discreet LBB is desired. Instead of TEED protection, Backup protection is desired here, please review.
- **MSETCL Reply:** As the said Tie bay Breaker is provided to transfer the Transformer bay from one bus to another by utilizing own bay CT, TEED protection is not required. The existing Tie Bay is not provided with separate CT. Tender requirement for said item is correct.