



MORMUGAO PORT TRUST
ENGINEERING (MECHANICAL) DEPARTMENT
ELECTRICAL HEADLAND SECTION

CME/XEN(E-HL)/W-8/2021/

Date:02.11.2021

Sub: Non-Comprehensive Maintenance Contract (CMC) for 33/11/3.3KV VCB & MOCB and LT ACB installed at various substations in Port area for a period of two years

Ref: Budgetary Quotation No. CME/XEN(E)/HL/ W-8/21/B2

Mormugao Port Trust intends to servicing and testing of VCBs, MoCB and ACBs installed at various substations in Port area through Non-Comprehensive Maintenance Contract (CMC). The CMC shall be for two years and the Port reserves the right to enter into CMC for further one year on the same terms and conditions depending on the services rendered by the bidder.

As such Kindly furnish the budgetary quotation for the same (Scope of work enclosed as Annexure-1 and Price Schedule enclosed as Annexure-2):-

Your budgetary quotation should reach to this office on 11.11.2021.

Thanking you,

Yours sincerely,

EXECUTIVE ENGINEER (E-HL)

1. SCOPE OF WORK

1. Scope of Work for servicing and testing of VCBs, MoCBs and ACBs two times in a year or as per site requirement to keep them in good condition, which includes the following works:-
 - 1.1. Air cleaning with blower including cleaning of circuit breaker body and bushings.
 - 1.2. Cleaning and assembling of front cover, push button, locking latches etc.
 - 1.3. Cleaning and assembling of arc chute cover and cover and terminal shield.
 - 1.4. Cleaning and assembling of chassis.
 - 1.5. Cleaning and tightening of every point of auxiliary and control unit connection block.
 - 1.6. Cleaning, greasing and assembling of hand pull-out System, racking mechanism of chassis and function position indicators.
 - 1.7. Cleanings, checking and assembling of arc chute.
 - 1.8. Physical inspection of main contact.
 - 1.9. Use of anti-corrosion spray where required
 - 1.10. Physical inspection and setting of contact gap & pull rod.
 - 1.11. Inspection, cleaning and setting of tripping releases.
 - 1.12. Cleaning, checking/testing and assembling of tripping Coil/ closing coil.
 - 1.13. Checking and sealing of cable entry holes
 - 1.14. Cleaning and assembling of electrical spring charging motor.
 - 1.15. Cleaning, greasing and assembling of mechanical charging system.
 - 1.16. Cleaning, greasing and assembling of jaw contacts.
 - 1.17. Testing the closing time, tripping time and springtime as per standards.
 - 1.18. Checking and measuring the closing coil resistance, trip coil resistance and Contact resistance.
 - 1.19. Lubricating the inner mechanism roller and other linkage and knife.
 - 1.20. Applying petroleum jelly on cluster contact.
 - 1.21. Cleaning of all components of ACBs/VCBs/MoCBs should be done with petrol and Contacts with CRC as per standard.
 - 1.22. Final testing of the circuit breaker for its electrical/mechanical functions.
 - 1.23. Recharge time of operating mechanism after specified sequence.
 - 1.24. Checking breaker Operation (Local/Remote operation).
 - 1.25. Checking and adjustment of Track alignment and Interlocking mechanism.
 - 1.26. Contact resistance Test (CRM) testing shall be carried out in all VCB's & MoCB's.



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- 1.27. Any complaint of MoCBs/ACBs/VCBs has to be attended free of cost within a specific period of time given by Engineer in charge or his authorized representative. Spare parts would be provided by MPT.
- 1.28. The breakdown maintenance or repair work has to be carried out free of cost within a specific period of time given by Engineer-in-charge or his authorized representative. The field service reports shall be submitted by the service engineer, for the fault attended & remedial action taken & suggestion /advices if any.
- 1.29. The Contractor shall provide all types of tools to carry out the work in time.
- 1.30. Providing the cleaning materials like petrol, CRC, Collin, cloths, etc. is in the Contractor's scope.
- 1.31. Routine inspections and checking of MoCBs/ACBs/VCB as per Standard of Company has to be carried out on half yearly basis and reports have to be submitted accordingly.
- 1.32. The contract of work does not include free repair to damages caused by Calamities, fire, accident, vandalism, negligence, mishandling, misuse or tempering.
- 1.33. These breakers are in operation in HT /LT panels of the respective substations. In the event of breaker maintenance, contractor shall carry out the work on site without hampering the utilities of premises and should ensure the normal operation of the respective breakers shall not be affected. As such, detailed schedule of work/ Bar chart with dates to be submitted for prior approval of the Port authorities before carrying out the work to ensure work goes on smoothly without affecting normal operations.
- 1.34. Any costs towards errors or damages to the existing equipment while carrying out the work will be recovered or made good by the contractor.
- 1.35. Port reserves the right to add/delete some of breaker for servicing/overhauling. Payment for the same will be done item wise on prorated basis.
- 1.36. The schedule towards servicing/repairing of breakers shall be decided by Engineer-in-charge or his authorized representative.
- 1.37. The spares which are required to replace the defective item in the breaker shall be paid extra as actual.
- 1.38. The servicing and testing of breaker to be carried out to the satisfaction of the Engineer in charge. Any additional charges borne by the contractor due to errors/delays in servicing and testing is to contractor's account.
- 1.39. **The CMC shall be for two years and the Port reserves the right to enter into CMC for further one year on the same terms and conditions depending on the services rendered by the bidder.**

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1.40. The Items to be kept Under (Non – Comprehensive maintenance Contract) are as follows:

Sr. No.	Voltage Level	Rated current of the Breaker	Type of Breaker (VCB, MOCB, SF6, ACB)	Make	Model No.	Location	Qty.
HARBOUR							
HT BREAKERS							
1	33 kV	630 A	MOCB	Jyoti LTD.	Type 0Z2M	Substation- A	4
2	12 kV	1250 A	VCB	Schneider		Jetty Substation	2
3	12 kV	1250A	VCB	Siemens	Type:: 3AH0104-2Z	Harbour Substation	6
4	12 kV	630A	MOCB	NGEF	Type GR 256/10	Substation- A	5
5	12 kV	630A	VCB	Siemens	Type:: 8DJH ST RL	Compact Substation	2
6	3.3 kV,	1250A	VCB	Megawin	Type MHVCB	Berth No:10 Substation	1
7	3.3kV	1250A	VCB	Mysore Electrical Industries Ltd.	Type VB5-25/12	Substation- A	2
8	3.3 kV	1250A	MOCB	Mysore Electrical Industries Ltd.	Type- GBU	Substation- A	1
LT BREAKERS							
9	1.1kV	800A	ACB	Marlin Gerin	NH 800	LDC,Jetty	3
						Jetty Substation	1
10	1.1kV	800 A	ACB	Schneider	NW10H1	Jetty Substation	4
11	1.1kV	1000A	ACB	Schneider	NW10H1	Substation- A	3
12	1.1kV	1000A	ACB	Schneider	NW10HA	Substation- A	4
13	1.1kV	800 A	ACB	Schneider	NW08H1	Substation- A	3
14	1.1kV	800 A	ACB	Pulsar		Berth No:10 Substation	1
15	1.1kV	1000A	ACB	L&T	Type: CN-CS-1000C	Berth No10 Substation	1
16	1.1kV	800 A	ACB	L&T	CN-CS-800	Berth No10 Substation	3
17	1.1kV	1600 A	ACB	SIEMENS	Type 3WT,	Compact Substation	2
18	1.1kV	800 A	ACB	ABB	SACE E1N 08	Compact Substation	2
19	1.1kV	1600 A	ACB	ABB	SACE E1N 16	Compact Substation	3
HEADLAND							
HT BREAKERS							
1	12 kV	800A	VCB	Siemens	3AH01041Z	Headland S/s	3
2	12 kV	1250A	VCB	Siemens	3AH01042Z	Headland S/s	2
3	12 kV	630A	SF6	Siemens	8DJH ST RRL	11KV metering yard	1
4	12 kV	1250A	VCB	Schneider	51222754FD	Hospital S/s	1
LT BREAKERS							



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5	1.1kV	1000A	ACB	L&T	CN-CS 1000C	Hospital S/s	1
6	1.1kV	800A	ACB	ABB	SACE E1N8	Hospital S/s	2
7	1.1kV	800A	ACB	Schneider	MVS08N	Headland S/s	2
8	1.1kV	800A	ACB	Schneider	MVS08NA	Headland S/s	1
A.O BUILDING							
HT BREAKERS							
1	12 kV	1250A	VCB	Schneider		3.3kV incomer AOB	1
2	12 kV	1250A	VCB	Siemens	3AH0104-2Z	11kV H.T panel	6
LT BREAKERS							
3	1.1kV	800A	ACB	Schneider	Easypact MVS08N	Main L.T outgoing panel	5
4	1.1kV	800A	ACB	L&T	CN-CS800C	Distribution panel	1
5	1.1kV	800A	ACB	L&T	CN-CS800C	Spare	1
6	1.1kV	1000A	ACB	Schneider	Masterpact MVS10N	500KVA DG set AMF panel	2
BAINA W/SHOP							
HT BREAKER							
1	12 kV	630A	SF6	Siemens	8DJH ST RRL	11kV metering yard near MM Substation	1
LT BREAKER							
2	1.1kV	800A	ACB	L&T	M.D.O. 3 Pole ACB	MM substation Baina	7

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PRICE SCHEDULE (BILL OF QUANTITIES)

NAME OF WORK: Non-Comprehensive Maintenance Contract (CMC) for 33/11/3.3KV VCB & MOCB and LT ACB installed at various substations in Port area for a period of two years

Sr. No.	Description	Unit	Qty.	Rate/Month /Unit(Rs.)		GST %	Amount (Rs.)
				In Fig	In Words		
A	B	C	D	E	F	G	H=D x E
1	Non- CMC of 33 KV, 630 A, MOCB, Jyoti LTD. - 4nos	Nos.	16				
2	Non- CMC of 12kV, 1250A, VCB, Schneider - 4nos	Nos.	16				
3	Non- CMC of 12kV, 1250A, VCB, Siemens - 14nos	Nos.	56				
4	Non- CMC of 12kV, 800A, VCB, Siemens - 3nos	Nos.	12				
5	Non- CMC of 12kV, 630A, SF6, Siemens - 2nos	Nos.	8				
6	Non- CMC of 12kV, 630A, VCB, Siemens - 2nos	Nos.	8				
7	Non- CMC of 12kV, 630A, MOCB, NGEF - 5nos	Nos.	20				
8	Non- CMC of 3.3KV, 1250A, VCB, Mysore Electrical Industries Ltd. - 2nos	Nos.	8				
9	Non- CMC of 3.3 KV, 1250A, MOCB, Mysore Electrical Industries Ltd. - 1nos	Nos.	4				
10	Non- CMC of 3.3 KV , 1250A, VCB, Megawin - 1nos	Nos.	4				
11	Non- CMC of 1.1kV, 800A, ACB, Schneider - 15nos	Nos.	60				
12	Non- CMC of 1.1kV, 800A, ACB, L&T - 12nos	Nos.	48				
13	Non- CMC of 1.1kV, 1000A, ACB, Schneider - 9nos	Nos.	36				
14	Non- CMC of 1.1kV, 1000A, ACB, L & T Limited - 2nos	Nos.	8				
15	Non- CMC of 1.1kV, 800A, ACB, ABB - 4nos	Nos.	16				
16	Non- CMC of 1.1kV, 800A, ACB, Marlin Gerin - 4nos	Nos.	16				
17	Non- CMC of 1.1kV, 800 A, ACB, Pulsar - 1nos	Nos.	4				
18	Non- CMC of 1.1kV, 1600 A, ACB, SIEMENS - 2nos	Nos.	8				
19	Non- CMC of 1.1kV, 1600 A, ACB, ABB SACE Emax - 3nos	Nos.	12				
TOTAL							

(In words Rupees _____)

Note: The rates quoted shall be inclusive of transportation, lodging and boarding, but exclusive of GST. Applicable GST shall be paid extra as applicable.