

SR. NO.		Make & Model
	Features	Description for FRTU
1	Experience	
2	Reliability	
3	Maintenance Free	
4	Configurability	
5	Proven technology	
6	CyberSecurity features(Specify the standard implemented in FRTU)	
7	RS-232 to RS-485 Serial Converter	
8	Protocols- IEC-104 Slave, IEC-101 Master and Slave, Modbus Master, IEC-103 Master, PLC Logic.	
9	Complete Products & Accessories	
10	Interposing Relays	
11	Report to 4 Masters on IEC 104 (2 nos. of Redundant masters)	
12	PLC functionality for logic building.	
13	All DI/DO/Analog were reported in every 10 minutes (cyclic data) and by exception as well through FRTU to Control Center.	
14	Dial up facility to 4G GSM modem through serial port.	
15	Telnet support,Remote reboot and remote down loading facility shall be provided.	
16	FRTU type as per RMU configuration	
17	4G Ethernet Modem with High Gain antenna and its accessories	
18	LED indication for status input	
19	ALL FRTU cards to be coated with conformal coating for protection against weather related deterioration.	
20	FRTU to have additional relay (External/internal) on DO Card which shall energise on receipt on remote command to allow vetting supply to reach DO terminals.	
21	FRTU to have capability of reporting to four distinct IP addresses of same or different domains.	
22	12 dB High gain antenna with 15Mtr wire required. Provision for taking antenna wire outside to be provided.	
23	Power failuare event retention	
24	<p>FRTU Commissioning in vendors scope</p> <p>1) Commissioning activity shall be carried out by FRTU OEM.</p> <p>2) High gain antenna installation at site included in addition to FRTU commissioning scope</p> <p>Scope of work:</p> <p>a. Outdoor Installation of High gain antenna near roof of substation on DIN rail</p> <p>b. Saddling/Dressing of antenna cable rout between FRTU & outdoor installation.</p> <p>c. Testing and handover</p> <p>Supporting ladder, its carriage, tools for installations, consumables like DIN rail, saddles, etc required for complete wall mounted installations shall be in vendor's scope.</p> <p>Vendor shall be responsible for safety of his personnel. They shall use PPE all the time while execution.</p>	

Minutes of Meeting between M/s AEML and participating vendors of 11kV RMU and tender during Prebid Meeting held on 03.07.18 at Devadas Lane, Borivali West Office.

Reference Tender Doc No: AEML/MDB/2019-20/28 for Supply & Supervision of Installation, Testing and Commissioning of 11kV RMU with FRTU and FRTU Testing and commissioning with Control center.

Members Present:

AEML

1. Ashish Nema - CES
2. Rajendrasing Girase - CES
3. Ketan Bhagat – CPG
4. Kamlesh Nawdeti-CPG

Vendors

1. Chetan Chandrate –Schneider(02/07/19)
2. Aneesh Thomas – Lucy Electric(02/07/19)
3. Kiran Rao – Eaton (02/07/19)
4. Avinash Kulkarni – Siemens (3/07/19)

11 KV RMU:

1. All 11 Kv RMUs shall be front cable entry and FRTU front access only.
2. Enclosure shall be GI., packing suitable for outdoor storage for 18 months.
3. BoQ shall be as follows:

Material Code	Material Description	UOM	Capex PR Qty	Delivery Start	Delivery End
2100113333	RNG MAIN UNT,FRTU CBNT,1C+2I, I/D, N-EXT	Nos	118	Dec-19	Mar-20
2100113334	RNG MAIN UNT, FRTU CBNT,2C+2I, I/D, N-EXT.	Nos	21	Dec-19	Mar-20

4. Filled Type test review Format (Annexure A) to be submitted.
5. New vendor to submit filled vendor registration format.
6. Only approved FRTU during evaluation shall be offered post PO.
7. Conformal coated FRTU shall be offered with supporting certificates for review
8. FRTU compliance report shall be submitted. Refer Annexure B
9. Line metering and FCB is excluded from tender, single phase supply in scope of customer
10. HG Antenna not in scope of supply, qualification criteria can be reviewed at the time of evaluation,
11. Non approved makes of components, if offered shall be reviewed with type test of product.

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12. Battery supply shall be at the time of ITC. Separate line item for supply of battery is requested by Lucy. Based on the current experience of RMU supply, AEML requested Lucy to explore similar option to avoid separate billing and consider the cost in RMU supply only. Dispatch clearance shall mention "RMU without battery, battery to be installed at site.

Submission date for all the bids shall be strictly as per Tender publication.

TYPE TEST REPORT

TYPE TEST REPORT											
ITEM :											
VENDOR :											
Sr. No.	Type Tests stipulated as per Tender Spec.	Applicable standard	Acceptance Norms as per IS / IEC & Specs	Tests conducted by the Mfr (Yes/No)	Date of Tests Conducted	Name of the test Lab	Any Deviation from test procedure defined in IEC . If yes , pl specify with justification and support	Test Values as per report	Remarks (for AEML only)		
										Signed by Vendor	
										Signed by Client	