ANNEXURE - 7

CUSTOM SPECIFICATION

1. **Scope of Work:**
Supply, Erection, Testing and Commissioning of 4 Nos. 6.6KV / 11KV, 800A VCB for Retrofitting in the existing 6.6KV Jyoti Make MOCB at Main Receiving Station, Narwapahar.

Detail scope of work will be as below:

a) Dismantling of existing 6.6KV MOCB breaker's mechanical & electrical accessories & arrangements to retrofit the new 6.6KV/11KV VCB sub cubicle.
b) Retrofitting VCB breakers trolley in old Jyoti make breaker panel without tempering the existing bus bar.
c) Checking of breaker alignment after racking inside the cubicle.
d) Matching pin configuration depending upon existing plug configuration and replacement of electrical control plug with new control plug or wiring of same .
e) Safety shutter and isolating plugs with breaker rack in / rack out in new VCB sub cubicle.
f) VCB shall be of horizontal isolation, horizontal draw out pattern.
g) Retrofitted VCB must have mechanical counter to access the total number of operations of the breakers.
h) Special tool tackles / instruments required during retrofitting job will be in the scope of bidder. Service engineer(s) shall bring all tools, special tools/instruments along with him or successful completion of job.
i) Following tests shall be carried out before commissioning of the VCBs (All required testing instruments shall be in the scope of party.
   i. HV test on sub cubicle.
   ii. Insulation Resistance Measurement
   iii. Closing & Opening Time Measurement.
   iv. CRM test
   v. Breaker Time test
   vi. Electrical/Mechanical ON/OFF Operational test
   vii. Simulation of all control circuit, indications & interlocks
j) Transportation of VCB and other accessories to the site shall be included in the scope of the contractor.
k) The Control wiring shall match the existing panel wiring diagram. The Copy of SLD & Schematic Drawing of existing Circuit Breakers for outgoing feeders (4sheets) shall be provided after placement of order. Modification in control wiring by replacing fuses with MCB, Glass relay by contactor having facility to add on auxiliary contacts and indication bulb with LED indication lamp are to be executed by the bidder. Supply of material is also in the scope of the bidder.
l) The operating voltage for closing coil, tripping coil and spring charging motor shall match with our existing breakers.
m) Other accessories that are required to retrofit the 6.6KV/11KV, 800Amps, Vacuum Circuit Breaker in the existing Jyoti Panel are to be supplied by the bidder.
n) Manual of VCB is to be provided with spare list.
o) Maintenance training is to be provided to UCIL's personnel upon completion of work.

p) Technical data of existing 6.6KV MOCB installed at MRS, Narwapahar.

Make	M/s Jyoti Ltd.
Circuit Breaker Type	MOCB
Pole	3
Type	MT2-1212-20
Rated Current	800Amps
Rated Voltage	7.2KV
Rated Frequency	50HZ
Rated Breaking Capacity	22KA
Rated Making Capacity	55KA peak
Short Circuit Current Duration	1Sec
Spring charging Supply Voltage	230V AC
Closing coil voltage	110V DC
Tripping coil voltage	110V DC

q) Technical Data required for new VCB (to be supplied)

Circuit Breaker Type	VCB
Pole	3
Rated Current	800Amps
Rated Voltage	7.2KV/12KV
Rated Frequency	50HZ
Rated Breaking Capacity	26.3KA
Short Circuit Current Duration	3Sec
Spring charging Supply Voltage	230V AC
Closing coil voltage	110V DC
Tripping coil voltage	110V DC

Special Terms & Conditions:

Bidder shall confirm that they will supply spare parts of VCB for at least 10 years from the date of commissioning.