

**BILL OF QUANTITIES FOR UNDER GROUND EARTHING AND ELECTRODES REV.00****Name of Project : Substation package-SS01 for extensions of 765kV Ajmer S/s under green energy corridor ISTS( Parts B)****Name of Work : Bill of Quantity for Under Ground Earthing and Electrodes**

| S. No                                                                                                                                                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Unit | Quantity | Unit rate | Total Amount |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------|--------------|
| 1                                                                                                                                                                         | Unloading, storing of 40 mm dia MS Rods. Bringing out 40 mm dia MS Rods riser just below gravel level near the equipment foundations as per requirement including following works:<br>- excavation<br>- laying of MS rod<br>- welding of rods<br>(refer Drg No. C/ENG/STD/EARTHINGS, SH-2&3 Rev 00 for Welding details of rods)<br>- backfilling of soil for bringing out pig tail risers of 40 dia MS rod (approximately 500 nos. for Ajmer and 1200nos. for Chittorgarh) for equipments. Risers shall be raised from the earthmat (at 600 mm depth) to 150 mm below ground level to the nearest point of the equipment. This shall include all cutting, bending, welding, fixing, application of zinc rich paint on cutting surface, etc to the main earthmesh.<br>- any other work necessary to complete the laying of earthmat<br>(40 mm dia MS rod will be supplied by BHEL) | kM   | 5.5      |           |              |
| 2                                                                                                                                                                         | Fabrication & laying of Auxiliary Mat of 40 mm Dia MS Rods at a depth of 300 mm from top of FGL including excavation & backfilling as per Drg No. C/ENG/STD/EARTHINGS, SH-4 Rev 00.<br>- any other work necessary to complete the laying of earthmat<br>(40 Diameter MS rod will be supplied by BHEL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Nos. | 49       |           |              |
| 3                                                                                                                                                                         | Installing of 40 mm diameter Rod Electrode with test pit (LM, Tower with Peak, CVT & LA) as per Drg. No. C/ENG/STD/EARTHINGS, SH-6 Rev 00 including following works:<br>- excavation<br>- installing the rod electrode<br>- backfilling and compaction<br>- Casting the Test Pit with Cast Iron covers<br>- any other work necessary to complete the work<br>(only 40 mm dia MS rod and 75X12 mm GS will be supplied by BHEL)                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nos. | 23       |           |              |
| <b>Total Amount (Rs.)</b>                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |          |           |              |
| <b>Note 1 - Individual quantity may vary upto any extent during execution.</b>                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |          |           |              |
| <b>Note 2- Actual depth of below ground earth mat grid is 600mm, but it may be varies some places from 600mm to 900mm due to fouling of trench , drain , culvert etc.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |          |           |              |