

| Tender Specification: BHE/PW/PUR/NTPRT-CABLING/2479                      |                                                                                                                                                       |       |       |                                                     |                 |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-----------------------------------------------------|-----------------|
| Job: Cabling Package of Unit#1 and BOP of 3x800MW PVUNL Patratu Project. |                                                                                                                                                       |       |       |                                                     |                 |
| Chapter XII-BOQ and Percentage Weightage-2479                            |                                                                                                                                                       |       |       |                                                     |                 |
| S. No                                                                    | DESCRIPTION                                                                                                                                           | UOM   | QTY   | FACTOR FOR DERIVING ITEM RATE FROM ACCEPTED LUMPSUM | TERMS OF PAYMEN |
| E1A                                                                      | CABLE TRAYS AND ACCESSORIES                                                                                                                           |       |       |                                                     | E1              |
| E1A.01                                                                   | Ladder type Cable Tray 50mm                                                                                                                           | Meter | 500   | 0.000322192003841892                                |                 |
| E1A.02                                                                   | Ladder type Cable Tray 100mm                                                                                                                          | Meter | 500   | 0.000438602376299920                                |                 |
| E1A.03                                                                   | Ladder type Cable Tray 150mm                                                                                                                          | Meter | 7840  | 0.008052567489525240                                |                 |
| E1A.04                                                                   | Ladder type Cable Tray 300mm                                                                                                                          | Meter | 14872 | 0.020821383302579500                                |                 |
| E1A.05                                                                   | Ladder type Cable Tray 600mm                                                                                                                          | Meter | 53540 | 0.091281985721311000                                |                 |
| E1A.06                                                                   | Perforated type Cable Tray 50mm                                                                                                                       | Meter | 500   | 0.000484991477593077                                |                 |
| E1A.07                                                                   | Perforated type Cable Tray 100mm                                                                                                                      | Meter | 500   | 0.000613742029842777                                |                 |
| E1A.08                                                                   | Perforated type Cable Tray 150mm                                                                                                                      | Meter | 800   | 0.001055372298548040                                |                 |
| E1A.09                                                                   | Perforated type Cable Tray 300mm                                                                                                                      | Meter | 6272  | 0.010705557212799200                                |                 |
| E1A.10                                                                   | Perforated type Cable Tray 600mm                                                                                                                      | Meter | 19240 | 0.052909783134313200                                |                 |
| E1B                                                                      | FLEXIBLE CABLE TRAY SUPPORT AND ACCESSORIES                                                                                                           |       |       |                                                     |                 |
| E1B.01                                                                   | Single Channel (in standard length of 6meter per piece)                                                                                               | Meter | 26560 | 0.048015648096237100                                |                 |
| E1B.02                                                                   | Double Channel (in standard length of 6meter per piece)                                                                                               | Meter | 10880 | 0.022278221774674100                                |                 |
| E1C                                                                      | CANTILEVER ARM (EACH COMPLETE WITH, 2 NOS.-M12 HEX. BOLT & WASHER, 2 NOS.-M12 SPRING NUTS, 2 NOS.-M6 PAN HEAD SCREWS & WASHER, 2 NOS.-M6 SPRING NUTS) |       |       |                                                     |                 |
| E1C.01                                                                   | For 600mm wide trays                                                                                                                                  | No    | 46208 | 0.061373136233951000                                |                 |
| E1C.02                                                                   | For 300mm wide trays                                                                                                                                  | No    | 12352 | 0.010709366704720100                                |                 |
| E1C.03                                                                   | For 150mm wide trays                                                                                                                                  | No    | 3232  | 0.001490527556466670                                |                 |
| E1C.04                                                                   | For 100mm wide trays                                                                                                                                  | No    | 320   | 0.000098404334123958                                |                 |
| E1D                                                                      | CLAMPS & FITTINGS (COMPLETE WITH REQUIRED HARDWARE I.E. SPRING NUTS / WASHERS, TRESTLE BRACKET, ETC. AS REQUIRED FOR COMPLETE INSTALLATION)           |       |       |                                                     |                 |
| E1D.01                                                                   | Base plate for single channel.                                                                                                                        | No    | 6240  | 0.003338191418542180                                |                 |
| E1D.02                                                                   | Base plate for double channel.                                                                                                                        | No    | 2240  | 0.001322289792667460                                |                 |
| E1D.03                                                                   | Flat plate TEE fitting - PF1                                                                                                                          | No    | 3680  | 0.001968676990422310                                |                 |
| E1D.04                                                                   | Flat plate straight fitting - PF2                                                                                                                     | No    | 1840  | 0.000984338495211155                                |                 |
| E1D.05                                                                   | Beam Clamps                                                                                                                                           | No    | 11040 | 0.004887749769324360                                |                 |
| E1D.06                                                                   | 90degree angle fitting (LA1)                                                                                                                          | No    | 4768  | 0.002374808855313030                                |                 |
| E1D.07                                                                   | 90degree angle fitting (HL1)                                                                                                                          | No    | 5536  | 0.002757328402477540                                |                 |
| E1D.08                                                                   | 90degree angle fitting - PF1                                                                                                                          | No    | 1920  | 0.000956298867911287                                |                 |
| E1D.09                                                                   | Clamp CC1                                                                                                                                             | No    | 1856  | 0.000547805771247947                                |                 |
| E1D.10                                                                   | Clamp CC2                                                                                                                                             | No    | 480   | 0.000150528525504554                                |                 |
| E1D.11                                                                   | Tray fixing Clamp -TC1                                                                                                                                | No    | 1296  | 0.000382519547164515                                |                 |
| E2A                                                                      | LT XLPE/ PVC ARMoured/ UNARMoured ALUMINIUM/ COPPER CONDUCTOR POWER/ FRLS CABLE                                                                       |       |       |                                                     |                 |
| E2A.01                                                                   | 1Cx35sqmm Al Cable                                                                                                                                    | Meter | 14000 | 0.004205823628598280                                |                 |
| E2A.02                                                                   | 1Cx120sqmm Al Cable                                                                                                                                   | Meter | 17520 | 0.006310641859286730                                |                 |
| E2A.03                                                                   | 1Cx300sqmm Al Cable                                                                                                                                   | Meter | 82880 | 0.043465339969399100                                |                 |
| E2A.04                                                                   | 1Cx630sqmm Al Cable                                                                                                                                   | Meter | 30080 | 0.015796636677075400                                |                 |
| E2A.05                                                                   | 2Cx10sqmm Al Cable                                                                                                                                    | Meter | 12720 | 0.002529752510205300                                |                 |
| E2A.06                                                                   | 2Cx16sqmm Al Cable                                                                                                                                    | Meter | 700   | 0.000142721196910633                                |                 |
| E2A.07                                                                   | 2Cx25sqmm Al Cable                                                                                                                                    | Meter | 3040  | 0.000529481782505387                                |                 |
| E2A.08                                                                   | 2Cx35sqmm Al Cable                                                                                                                                    | Meter | 9280  | 0.001869768240479410                                |                 |
| E2A.09                                                                   | 2Cx70sqmm Al Cable                                                                                                                                    | Meter | 15360 | 0.004538271090709290                                |                 |
| E2A.10                                                                   | 2Cx95sqmm Al Cable                                                                                                                                    | Meter | 17600 | 0.005117586851335720                                |                 |
| E2A.11                                                                   | 2Cx120sqmm Al Cable                                                                                                                                   | Meter | 1200  | 0.000522277442919093                                |                 |
| E2A.12                                                                   | 3Cx10sqmm Al Cable                                                                                                                                    | Meter | 41840 | 0.009822752032039920                                |                 |
| E2A.13                                                                   | 3Cx16sqmm Al Cable                                                                                                                                    | Meter | 25200 | 0.006368550501259870                                |                 |
| E2A.14                                                                   | 3Cx25sqmm Al Cable                                                                                                                                    | Meter | 29240 | 0.008549827340485080                                |                 |
| E2A.15                                                                   | 3Cx50sqmm Al Cable                                                                                                                                    | Meter | 13920 | 0.004766180308546090                                |                 |
| E2A.16                                                                   | 3Cx70sqmm Al Cable                                                                                                                                    | Meter | 2400  | 0.000874529972397383                                |                 |
| E2A.17                                                                   | 3Cx95sqmm Al Cable                                                                                                                                    | Meter | 11640 | 0.005091200847913090                                |                 |

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|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|-----------------------------------------------------------|-----------------------|
| E2A.18   | 3Cx150sqmm Al Cable                                                                                                                                             | Meter | 4480   | 0.002898348203450640                                      | E2                    |
| E2A.19   | 3Cx240sqmm Al Cable                                                                                                                                             | Meter | 24960  | 0.016381810424307900                                      |                       |
| E2A.20   | 3.5Cx25sqmm Al Cable                                                                                                                                            | Meter | 25280  | 0.008587991150459290                                      |                       |
| E2A.21   | 3.5Cx50sqmm Al Cable                                                                                                                                            | Meter | 67200  | 0.025363055142521700                                      |                       |
| E2A.22   | 3.5Cx95sqmm Al Cable                                                                                                                                            | Meter | 10400  | 0.004593247106675140                                      |                       |
| E2A.23   | 2Cx1.5sqmm Cu Control Cable                                                                                                                                     | Meter | 108480 | 0.018775811361762200                                      |                       |
| E2A.24   | 2Cx2.5sqmm Cu Power Cable                                                                                                                                       | Meter | 116960 | 0.019080272420062400                                      |                       |
| E2A.25   | 3Cx1.5sqmm Cu Control Cable                                                                                                                                     | Meter | 35680  | 0.006398459900330210                                      |                       |
| E2A.26   | 3Cx2.5sqmm Cu Power Cable                                                                                                                                       | Meter | 245120 | 0.045087572299957600                                      |                       |
| E2A.27   | 4Cx1.5sqmm Cu Screened Cable for ESP                                                                                                                            | Meter | 48800  | 0.009184158699589410                                      |                       |
| E2A.28   | 5Cx1.5sqmm Cu Control Cable                                                                                                                                     | Meter | 4160   | 0.000783771172049752                                      |                       |
| E2A.29   | 5Cx2.5sqmm Cu Control Cable                                                                                                                                     | Meter | 24000  | 0.004521756761825490                                      |                       |
| E2A.30   | 7Cx1.5sqmm Cu Control Cable                                                                                                                                     | Meter | 9280   | 0.002354572254586410                                      |                       |
| E2A.31   | 12Cx1.5sqmm Cu Control Cable                                                                                                                                    | Meter | 77920  | 0.018105644514606100                                      |                       |
| E2A.32   | 14Cx1.5sqmm Cu Control Cable                                                                                                                                    | Meter | 16800  | 0.003981158973049670                                      |                       |
| E2B      | HT ALUMINIUM CONDUCTOR, ARMOURED/ UNARMOURED XLPE POWER CABLE                                                                                                   |       |        |                                                           |                       |
| E2B.01   | 11/11kV, 1Cx240sqmm Power Cable                                                                                                                                 | Meter | 10560  | 0.008248450743267730                                      |                       |
| E2B.02   | 11/11kV, 1Cx400sqmm Power Cable                                                                                                                                 | Meter | 20800  | 0.027666628995187400                                      |                       |
| E2B.03   | 11/11kV, 1Cx630sqmm Power Cable                                                                                                                                 | Meter | 5760   | 0.008741543011250590                                      |                       |
| E2B.04   | 11/11kV, 3Cx185sqmm Power Cable                                                                                                                                 | Meter | 19920  | 0.037274112361499200                                      |                       |
| E2B.05   | 3.3/3.3kV, 1Cx150sqmm Power Cable                                                                                                                               | Meter | 2560   | 0.002795768687723240                                      |                       |
| E2B.06   | 3.3/3.3kV, 3Cx150sqmm Power Cable                                                                                                                               | Meter | 13920  | 0.019870111201672200                                      |                       |
| E2C      | CABLE TERMINATION KITS & JOINING KITS                                                                                                                           |       |        |                                                           |                       |
| E2C.1    | HT END TERMINATION JOINTING KITS, XLPE INSULATED, UNARMOURED/ ARMOURED, ALUMINIUM                                                                               |       |        |                                                           |                       |
| E2C.1.01 | 11/11kV, 1Cx240sqmm Power Cable                                                                                                                                 | No    | 58     | 0.003592212121322360                                      |                       |
| E2C.1.02 | 11/11kV, 1Cx400sqmm Power Cable                                                                                                                                 | No    | 66     | 0.004577362729132030                                      |                       |
| E2C.1.03 | 11/11kV, 1Cx630sqmm Power Cable                                                                                                                                 | No    | 11     | 0.000762893788188672                                      |                       |
| E2C.1.04 | 11/11kV, 3Cx185sqmm Power Cable                                                                                                                                 | No    | 88     | 0.007278601111961970                                      |                       |
| E2C.1.05 | 3.3/3.3kV, 1Cx150sqmm Power Cable                                                                                                                               | No    | 7      | 0.000433542842228561                                      |                       |
| E2C.1.06 | 3.3/3.3kV, 3Cx150sqmm Power Cable                                                                                                                               | No    | 72     | 0.005955219091605250                                      |                       |
| E2C.2    | HT STRAIGHT THROUGH JOINTING KITS, XLPE INSULATED, UNARMOURED/ ARMOURED, ALUMINIUM                                                                              |       |        |                                                           |                       |
| E2C.2.01 | 11/11kV, 1Cx240sqmm Power Cable                                                                                                                                 | No    | 2      | 0.000123869383493874                                      |                       |
| E2C.2.02 | 11/11kV, 1Cx630sqmm Power Cable                                                                                                                                 | No    | 2      | 0.000138705821554018                                      |                       |
| E2C.2.03 | 3.3/3.3kV, 1Cx150sqmm Power Cable                                                                                                                               | No    | 1      | 0.000061934691746937                                      |                       |
| E2C.2.04 | 3.3/3.3kV, 3Cx150sqmm Power Cable                                                                                                                               | No    | 3      | 0.000208058732331026                                      |                       |
| E3       | JUCTION BOXES AND PUSH BUTTON                                                                                                                                   |       |        |                                                           | E3                    |
| E3.01    | Start Stop Push Button Station (Local push button station Type A/ B/ C/ D)                                                                                      | No    | 962    | 0.007297404617091510                                      |                       |
| E3.02    | Local Motor Starter                                                                                                                                             | No    | 260    | 0.002498923261109490                                      |                       |
| E4       | STRUCTURAL STEEL                                                                                                                                                |       |        |                                                           | E4                    |
| E4.01    | Structural Steel fabrication & Installation (MS angle, Channel, Plate etc)/ Cable tray structural steel fabrication & installation.                             | MT    | 253    | 0.067577447467796700                                      |                       |
| E6       | ABOVE GROUND EARTHING & LIGHTNING PROTECTION MATERIALS                                                                                                          |       |        |                                                           | E6                    |
| E6.01    | 8 SWG GI wire                                                                                                                                                   | Meter | 6510   | 0.000656849160794042                                      |                       |
| E6.02    | 65x8mm GI flat                                                                                                                                                  | Meter | 21919  | 0.033116063129827200                                      |                       |
| E6.03    | 50x6mm GI flat                                                                                                                                                  | Meter | 6509   | 0.006396369705752030                                      |                       |
| E6.04    | 30x5mm GI flat                                                                                                                                                  | Meter | 6400   | 0.004585613458831280                                      |                       |
| E6.05    | 25x6mm GI flat                                                                                                                                                  | Meter | 19248  | 0.014352995499973000                                      |                       |
| E6.06    | 25x3mm GI flat                                                                                                                                                  | Meter | 5334   | 0.003649739821050160                                      |                       |
| E6.07    | 40mm dia MS Rod                                                                                                                                                 | Meter | 960    | 0.000782582835463664                                      |                       |
| E6.08    | Ground Electrode with 40mm Dia rod (One end Sharpened) 3000mm long located along the periphery of Earthing Grid (Without Treated Pit Other than Earth Test Pit) | No    | 60     | 0.002151047870402230                                      |                       |
| E6.09    | GS Rod 20mm dia Vertical Air Termination                                                                                                                        | No    | 234    | 0.006511179565167360                                      |                       |

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|--------------|---------------------------------------------------------------------------------------------------------------|-----|-------|-----------------------------------------------------------|-----------------------|
| E6.10        | Test Links with 150x150x3mm GS flat                                                                           | No  | 234   | 0.000704529882241341                                      |                       |
| E6.11        | Flexible braided Copper conductor of 600mm with tinned Cu, clamp connected by U-bolt for fence gate earthing. | No  | 24    | 0.000013175010309497                                      |                       |
| E6.12        | 50NB gal MS pipe(PERF) (for neutral earthing along with salt, sand, charcol & chamber with cover)             | No  | 90    | 0.005115592130253500                                      |                       |
| <b>E10.1</b> | <b>TREFOIL CLAMPS (COMPLETE WITH FIXING HARDWARES)</b>                                                        |     |       |                                                           | <b>E10</b>            |
| E10.1.1      | Trefoil Clamp Cable OD (30.1 – 35mm)                                                                          | No  | 160   | 0.000322260647579888                                      |                       |
| E10.1.2      | Trefoil Clamp Cable OD (35.1 – 40mm)                                                                          | No  | 960   | 0.001933563885479330                                      |                       |
| E10.1.3      | Trefoil Clamp Cable OD (40.1 – 45mm)                                                                          | No  | 3840  | 0.007734255541917320                                      |                       |
| E10.1.4      | Trefoil Clamp Cable OD (45.1 – 50mm)                                                                          | No  | 3360  | 0.006767473599177660                                      |                       |
| E10.1.5      | Trefoil Clamp Cable OD (50.1 – 55mm)                                                                          | No  | 7520  | 0.015146250436254800                                      |                       |
| E10.1.6      | Trefoil Clamp Cable OD (55.1 – 60mm)                                                                          | No  | 13920 | 0.028036676339450300                                      |                       |