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## COST DATA OF CENTRALISED MATERIALS FOR R.E. AND DISTRIBUTION WORKS

| Sl. No | Name of the Material | P.O. No. | Unit | Rupees | SAP Code No. |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | |
| **SUBHEAD - I : SUPPORTS AND FIXTURES, IRON, STEEL AND CEMENT** | | | | | |
| 1 (a) | RS Joists 175 x 85 mm. | PM-200/25-02-2016 | MT | 39,900.00 | MST00032 |
| (b) | RS Joists 150 x 150 mm. | PM-200/25-02-2016 | MT | 42,000.00 | MST00029 |
| (c) | Spun Pole 9.5 m. PM-2458/28.11.07 | | - | 12,799.99 | |
| 2 | MS Channel 100 x 50. | PM-200/25-02-2016 | MT | 34,650.00 | MST00012 |
| 3 | MS Channel 75 x 40 mm | PM-200/25-02-2016 | MT | 33,075.00 | MST00013 |
| 4 | MS Angle 65 x 65 x 6 mm. | PM-200/25-02-2016 | MT | 32,484.38 | MST00003 |
| 5 | MS Angle 50 x 50 x 6 mm | PM-200/25-02-2016 | MT | 33,665.63 | MST00002 |
| 6 | MS Flat 75x 8 | PM-200/25-02-2016 | MT | 41,475.00 | MST00015 |
| 7 | MS Flat 50 x 6 mm | PM-200/25-02-2016 | MT | 41,475.00 | MST00014 |
| 8 | MS Rod 20 mm. | PM-200/25-02-2016 | MT | 35,542.50 | MST00019 |
| 9 | MS Rod 16 mm. | PM-200/25-02-2016 | MT | 38,325.00 | MST00018 |
| 10 | GI Stay wire 7/3.15 mm. | Rpt PM-538/31-10-2015 | MT | 62,476.58 | WRS00006 |
| 11 | GI Stay wire 7/2.5 mm | Rpt PM-538/31-10-2015 | MT | 64,078.22 | WRS00007 |
| 12 | GI wire 4 mm | Rpt PM-538/31-10-2015 | MT | 57,370.15 | WRS00005 |
| 13 | PSCC Pole (9.1 M) - 280 Kg WL | PM-598/28-12-2015 | Nos. | 3,478.25 | PLS00004 |
| 14 | PSCC Pole (8.0 M) - 140 Kg WL | PM-610/06-01-2016 | Nos. | 1,585.19 | PLS00001 |
| 15 | PSCC Poles (11 Mtrs) 365 Kgs | PM-481/03-11-2015 | Nos. | 6,800.00 | PLS00013 |
| **SUBHEAD - II : INSULATORS AND HARDWARE** | | | | | |
| 1 | 33 KV Pin Insulator | PM-587/01-12-2015 | Nos. | 249.61 | INS30001 |
| 2 | 33 KV GI Pin | PM-589/03-12-2015 | Nos. | 152.32 | HWR00003 |
| 3 | 33 KV Post Insulators | PM-649/05-02-2016 | Sets | 870.98 | INS30004 for sets unit INS30003 for each unit |
| 4 | 33 KV Hard Ware Fittings (B&S) | PM-595/28-12-20215 | Sets | 178.99 | HWR00004 |
| 5 | 33 KV Polymer String Insulator (B&S) | PM-580/01-12-2015 | Nos. | 298.74 | INS30007 |
| 6 | 11KV Pin Insulator | PM-635/21-01-2016 | Nos. | 51.03 | INS10001 |
| 7 | 11 KV GI Pin | PM-658/11-02-2016 | Nos. | 63.49 | HWR00001 |
| 8 | 11 KV Post Insulator. | PM-583/01-12-2015 | Nos. | 252.00 | INS10008 |
| 9 | 11 KV String Insulator (B&S). | PM-2385/07,Dt: 03-09-2007 | Nos. | 187.00 | INS10004 |
| 10 | 11 KV String Insulator (C&T). | PM-2063/06.Dt.26.08.06 | Nos. | 192.00 | INS10002 |
| 11 | 11 KV String Hardware Fitting (C&T). | PM-582/01-12-2015 | Sets | 77.00 | HWR00002 |
| 13 | 11 KV Polymer String insulator (C&T) | PM-655/11-02-2016 | Nos. | 145.00 | INS10003 |
| 14 | 11 KV Solid Core Insulator. | PM-508/17-10-2015 | Nos. | 197.00 | INS10006 |
| 15 | LT Pin Insulator. | PM-584/01-12-2015 | Nos. | 231.00 | INS00001 |
| 16 | LT GI Pin. | PM-669/02-03-2016 | Nos. | 18.50 | HWR00015 |
| 17 | LT Shackle Insulator. | PM-684/17-03-2016 | Nos. | 28.28 | INS00002 |
| 18 | LT Shackle Hardware (LT Metal Parts) | PM-408/20-11-2015 | Nos. | 12.47 | HWR00016 |
| 19 | HT Guy Insulator. | PM-462/21-08-2015 | Nos. | 32.00 | INS10005 |
| 20 | LT Guy Insulator. | Rpt & Extn. PM-150/09-09-2014 | Nos. | 32.75 | INS00003 |
| **SUBHEAD - III CONDUCTOR AND CABLES** | | Rpt & Extn. PM-147/09-09-2014 | Nos. | 17.80 | |
| 1 | ACSR Zebra Conductor | | - | | CDR00011 |
| 2 | ACSR Panther Conductor (200 sq mm). | PM-248/12-01-2015 | KM | 143,869.12 | CDR00010 |
| 3 | 100 Sqmm AAA Conductor or 7/4.26 AAAC. | PM-574/30-11-2015 | KM | 46,068.00 | CDR00004 |
| 4 | 55 Sqmm AAA Conductor or 7/3.15 AAAC/RABBIT | PM-694/28-03-2016 | KM | 23,374.00 | CDR00003 |
| 5 | 34 Sqmm AAA Conductor or 7/2.50 AAAC/Weasel | PM-381/18-05-2015 | KM | 17,821.76 | CDR00002 |
| **SUBHEAD - III (A) LT AERIAL BUNCHED CABLE** | | | | | |
| 1 | 2 x 16+25 Sqmm Cable | PM-691/26-03-2016 | KM | 28,950.00 | CBA00002 |
| 2 | 3 x 16+25 Sqmm Cable | PM-332/26-03-2015 | KM | 50,154.54 | CBA00003 |
| 3 | 3 x 70 + 1x16 +1x50 Sqmm XLPE AB, Cable | PM-340/08-04-2015 | KM | 182,517.87 | CBA00004 |
| **SUBHEAD - III (B) 33 & 11 KV XLPE POWER CABLE** | | | | | |
| 1 | 33 KV 400 Sq.mm. | PM-144/09-09-2014 | KM | 2,167,700.00 | CBX30001 |
| 2 | 11 KV 3x300 sq.mm | PM-310/04-03-2015 | KM | 1,064,010.25 | CBX10008 |
| 3 | 11 KV 3x185 sq.mm. | PM-678/10-03-2016 | KM | 745,111.00 | CBA10007 |
| 4 | 11 KV 3x95 sq.mm | PM-285/11-02-2015 | KM | 521,049.85 | CBX10005 |
| 5 | 11 KV 3x35 sq.mm | PM-4327/22-04-2015 | KM | 317,665.84 | CBX10002 |

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| 1 | 2 | 3 | 4 | 5 | |
| **SUBHEAD - III (C)11 KV AB Cable (Aluminum)** | | | | | |
| 1 | 3x35+35 Sqmm. | PM-3326/16-05-2011 | KM | 214,895.25 | CBX10004 |
| 2 | 3x70+70 Sqmm. | PM-3326/16-05-2011 | KM | 299,076.25 | CBX10005 |
| 3 | 3x120+70 Sqmm. | Not procured by P&MM | | | CBX10007 |
| 4 | 3x185+70 Sqmm. | PM-17/06-06-2014 | KM | 688,238.91 | CBX10006 |
| **SUBHEAD - III (D) LT XLPE POWER CABLE** | | | | | |
| 1 | LT 3 ½ Cx300 sq.mm. | Not procured recently | - | | CBX00016 |
| 2 | 3 ½ Cx185 sq.mm. | PM-386/23-05-2015 | KM | 491,101.23 | CBX00015 |
| 3 | 3 ½ Cx95 sq.mm | PM-2514/08,09.05.08 | - | 244,438.74 | CBX00013 |
| 4 | 3 ½ Cx70 sq.mm | PM-2327/07,24.04.07 | - | 178,272.00 | CBX00012 |
| 5 | 3 ½ Cx25 sq.mm | Not procured recently | - | - | CBX00010 |
| 6 | 1x120 sq mm | PM-218/20-11-2014 | KM | 81,569.66 | CBX00004 |
| **SUBHEAD - III (E) L.T.P.CONTROL CABLE** | | | | | |
| 1 | 2x2.5 sq.mm Copper | PM-662/25-02-2016 | KM | 36,900.00 | CBP00001 |
| 2 | 4x2.5 sq.mm Copper. | PM-663/25-02-2016 | KM | 65,500.00 | CBP00002 |
| 3 | 10x2.5 sq.mm Copper. | PM-662/25-02-2016 | KM | 141,500.00 | CBP00006 |
| **SUBHEAD - IV : POWER TRANSFORMERS & TRANSFORMER OIL** | | | | | |
| 1 | 5 MVA PTR | PM-599/29-12-2015 | Nos. | 3,270,000.00 | PTR00006 |
| 2 | 8 MVA PTR | PM-491/03-10-2015 | Nos. | 4,435,200.00 | PTR00008 |
| 3 | 12.5 MVA PTR | PM-492/03-10-2015 | Nos. | 6,548,000.00 | PTR00020 |
| 4 | Transformer Oil (New) - (IOCL MOU) | PM-592/04-12-2015 | L | 67.62 | OF010006 |
| **SUBHEAD - IV (A) : Distribution Transformers** | | | | | |
| 1 | 3-Phase 63 KVA (CSP) (Aluminium) | PM-640/29-01-2016 | Each | 96,160.49 | DTC30004 |
| 2 | 3-Phase 100 KVA (CSP) (Aluminium) | PM-130/26-08-2014 | Each | 119,309.11 | DTC30006 |
| 3 | 3-Phase 160 KVA (CSP) (Aluminium) | PM-440/27-06-2015 | Each | 188,055.39 | DTC30007 |
| 4 | 3-Phase 315 KVA (CSP) (Aluminium) | PM-155/13-09-2014 | Each | 559,853.85 | DTC30009 |
| 5 | 3-Phase 500 KVA (Con.) (Aluminium) | PM-271/04-02-2015 | Each | 756,011.72 | DTC30110 |
| 6 | 3-Phase 25 KVA (CSP) (Aluminium) | PM-451/20-07-2015 | Each | 61,217.87 | DTC30002 |
| 7 | 3-Phase 25KVA (CSP) (Copper) | Repeat,PM-3464, Dt:07-12-2011 | Each | 65,524.04 | DTC30011 |
| 8 | 3-Phase 16KVA (CSP) (Copper) | PM-3077/10,07.07.2010 | Each | 46228.72 | DTC30101 |
| 9 | 1-Phase 10kVA 11kV/250V (CSP) (Aluminium) | Not procuring | - | | DTC10002 |
| 10 | 1-Phase 10kVA 11kV/Ö3/250V (CSP) (Aluminium) | Not procuring | - | | DTC10003 |
| 11 | 1-Phase 15 KVA (CSP) (Copper) | PM-3546/11,Dt.18.04.2012 | Each | 25868.57 | DTC10004 |
| 12 | 1-Phase 25 KVA (CSP) (Copper) | Repeat,PM-3826, Dt; 07-12-2012 | Each | 43,590.36 | DTC3009 |
| 13 | 3-Phase 315 KVA (CSP) Copper | PM-155/13-09-2014 | Each | 549,633.67 | DTC10006 |
| 14 | 3-Phase 500 KVA (Dry type) Copper | PM-436/16-06-20115 | - | 756,952.26 | |
| **SUBHEAD - V : SWITCH CONTROL AND PROTECTIVE GEAR** | | | - | | |
| 1 | 33 KV 24V DC VCB **with differential protection** with Control Relay Panel & CTs ratio 400-200-100/1-1-1A | PM-556/05-11-2015 | Nos. | 397,638.09 | BRK30018 |
| 2 | 33 KV 24V DC VCB with Control Relay Panels & CTs ratio 400-200-100/1-1A | PM-603/02-01-2016 | Nos. | 377,745.49 | BRK30019 |
| 3 | 11 KV, 24V/220V DC LV VCB **with differential protection** with Control Relay Panel with CTs of Ratio 600-300/01-01-0.577A | PM-575/30-11-2015 | Nos. | 320,479.29 | BRK10009 |
| 4 | 11 KV LV VCBs with CTs & Panel (400-200/1-1A) without D/R | PM-3533, Dt.14-03-2012 | Nos. | 224,886.06 | BRK10004 |
| 5 | 11 KV, 24V DC feeder VCBs with Control Relay Panels & CTs or Ratio 400-200-100/1-1A | PM-572/30-11-2015 | Nos. | 248763.63 | BRK10015 |
| 6 | 33 KV Feeder CTs (400-200-100/1-1A) 0.5 class | PM-3743, Dt.12-10-2012 | Nos. | 16,022.88 | ITR30011 |
| 7 | 33 KV CTs 25/1 for HT Metering (0.5 class) | PM-4048/13Dt.22-06-2013 | Nos. | 15,957.83 | ITR30029 |
| 8 | 33 KV CTs 50/1 for HT Metering (0.2 class) | PM-4294/13,Dt.21-03-2013 | Nos. | 17,097.36 | ITR30028 |
| 9 | 33 KV CTs 100/1 for HT Metering (0.2 class) | PM-07/03-06-2014 | Nos. | 16,735.00 | ITR30054 |
| 10 | 33 KV CTs 200/1A for HT Metering (0.2 Class) | PM-3578/13,Dt.24-05-2012 | Nos. | 16,873.18 | ITR30026 |
| 11 | 33 KV CTs 25/1 for HT Metering (0.2 class) | PM-4048/22-06-2013 | Nos. | 15,958.00 | ITR30055 |
| 12 | 33 KV CTs 50/1 for HT Metering (0.5 class) | PM-2108, Dt.20-09-2006 | Nos. | 20,029.00 | ITR30004 |
| 13 | 33 KV CTs 100/1 for HT Metering (0.5 class) | PM-2108, Dt.20-09-2006 | Nos. | 18,720.40 | ITR30003 |
| 14 | 33 KV CTs 200/1 for HT Metering (0.5 class) | PM-2108, Dt.20-09-2006 | Nos. | 18,720.40 | ITR30002 |
| 15 | 33 KV CTs 400-200-100/1-1A for HT Metering (0.5 class) | Not Procured | | | ITR30011 |

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|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | |
| 16 | 11 KV Feeder CTs (400-200-100/1-1A) (0.5 class) | PM-2906, Dt.19-01-2010 | Nos. | 13,564.00 | ITR10020 |
| 18 | 33 KV PT (Single Phase) 0.5 Class | PM-2090, Dt.13-09-2006 | Nos. | 18,960.00 | ITR30001 |
| 19 | 33 KV PT (Single Phase) 0.2 Class | PM-3672, Dt.23-07-2012 | Nos. | 17,910.75 | ITR30030 |
| 20 | 11 KV PT 3 Phase 0.5Class | PM-2975, Dt.11-03-2010 | Nos. | 12,107.85 | ITR10032 |
| 21 | 33 KV 800 Amps AB Switch | PM-629/20-01-2016 | Nos. | 28,999.00 | ABS30004 |
| 22 | 11 KV 800 Amps (Conventional) AB Switch | Rpt PM-637/27-01-2016 | Nos. | 15,123.35 | ABS10015 |
| 23 | 11 KV 400 Amps (Conventional) single break AB Switch with post type porcelain insulators | Rpt PM-166/23-09-2014 | Nos. | 10,500.00 | ABS10008 |
| 24 | 11 KV 400 Amps AB Switch for single phasing | PM-3312, Dt.03-05-2011 | Nos. | 6,309.99 | |
| 25 | 11 KV 200 Amps AB Switch (Tilting) round pipe | Rpt. PM-3908, Dt.16-02-2013 | Nos. | 7,610.00 | ABS10002 |
| 26 | 30 KV 10 KA Metal Oxide Lightning Arresters (station type) | PM-650/09-02-2016 | Nos. | 3,640.87 | LAS00004 |
| 27 | 9 KV 10 KA Metal Single Phase Lightning Arrester (station | PM-558/05-11-2015 | Nos. | 2,016.70 | LAS00002 |
| 28 | 9 KV 5 KA Metal Oxide Lightning Arrester (DTR Class) | PM-3134/08-2010 | Nos. | 371.94 | LAS00008 |
| 29 | 11 KV HG Fuse set with insulators | PM-251/17-04-2015 | Nos. | 1,842.75 | HGF10002 |
| 30 | 24 V, 40 AH SMF Batteries with Chargers | PM-4084/20-07-2013 | Nos. | 17,150.00 | BAT00027 |
| 31 | 24 V, 40 AH SMF Batteries | PM-3886, Dt: 19-01-2013 | Nos. | 3,244.00 | BAT00025 |
| 32 | 24 V, 40 AH Chargers (SMPS) | PM-4019/13, Dt.16-05-2013 | Nos. | 7,900.00 | BAT00026 |
| 33 | 12 V 42 AH SMF VRLA Batteries | PM-300/13-02-2015 | Nos. | 3,400.00 | SBA10056 |
| 34 | 12 V, 80 AH SMF Batteries cells | PM-2875, Dt.31-12-2009 | Nos. | 4,500.00 | SBA10051 |
| 35 | 220V 80 AH Battery charger & DCDB | PM-638/25-01-2016 | Nos. | 294,572.00 | BAT00072 |
| 36 | 220 V, 80 AH SMF Batteries | PM-638/25-01-2016 | Nos. | 174,027.65 | BAT00023 |
| 37 | LT Switched capacitors | - | - | - | |
| (a) | 1*9 KVAR (Shunt) | PM-2159,Dt.23.10.2006 | - | 2,548.00 | CPT00027 |
| (b) | 1x10 KVAR | PM-1837,Dt.20.05.2005 | - | 2,614.44 | CPT00025 |
| 38 | 11 KV 2 MVAR Capacitor banks with associated equipment | | | | |
| (a) | Type A | PM-4076/13, Dt.18-07-2013 | Nos. | 870,000.00 | CPT10009 |
| (b) | Type B with 40 Mtrs HT UG cable | - | - | - | |
| ( c ) | Type C (Indoor Type with HT UG cable | PM-3518, Dt.29-02-2012 | Nos. | 1,295,000.00 | CPT10014 |
| 39 | Sectionalizers | PM-671/04-03-2016 | Nos. | 487,782.24 | |
| 40 | Auto - Reclosures | PM-671/04-03-2016 | Nos. | 855,193.83 | |
| 41 | 11 KV 3 Way RMU (Conventional) | PM-2106, Dt.27-10-2006 | - | 1,71,658.33 | |
| 42 | 11 KV 3 Way RMU (SF6) | PM-411/06-06-2015 | Nos. | 462,883.95 | BRK00001 |
| 43 | 11 KV SF6 5 Way RMU | PM-239/22-12-2014 | Nos. | 863,500.00 | BRK00002 |
| 44 | 33 KV Indoor twin feeder control panel | PM-579/30-11-2015 | Nos. | 374,650.47 | BRK30014 |
| 45 | Indoor type VCB with control panel (LV) | PM-2494, Dt.13-02-2008 | Nos. | 3,76,367.74 | |
| 46 | Indoor type VCB with control panel (feeder) | PM-2494, Dt,13-02-2008 | Nos. | 274,818.43 | |
| 47 | 33/11 KV Indoor switch gear (8 feeders) | PM-187/24-10-2014 | Nos. | 17,180,693.60 | BRK30020 |
| 48 | 33 KV CTs of ratio 600-300/1-1A 0.2S Class of Accuracy | PM-3216/18-12-2010. | | 17,951.00 | ITR30052 |
| 49 | 33 KV HG fuse set | Not Procured in P&MM wing | | | HGF30001 |
| 50 | 11KV switch Fuse unit (SFU) | Not Procured in P&MM wing | | | |
| 51 | 33KV switch Fuse unit (SFU) | Not Procured in P&MM wing | | | |
| 52 | 33KV 3-way RMU without VCB | Not Procured in P&MM wing | | | |
| 53 | 33KV 3-way RMU with VCB | PM-151/09-09-2014 | Nos. | 2940533.24 | |
| 54 | 11KV metering panel with CTS& PTS (Indoor) | Not Procured in P&MM wing | | | |
| 55 | 33KV metering panel with CTS&PTS (Indoor) | Not Procured in P&MM wing | | | |
| **SUBHEAD - VI : METERS AND METERING EQUIPMENT** | | | | | |
| **I** | **HT Metering** | | | | |
| 1 | HT Trivector Meter of class 0.2S | PM-604/05-01-2016 | EA | 7,997 | MHT30031,32 |
| 2 | HT Trivector Meter of class 0.5S | Rpt. PM-3283/01-04-2011 | Nos. | 4,911.78 | MHT30022 |
| **II** | **11 KV Metering (11 KV CT PT Sets)** | | | | |
| 1 | 10/5, 20/5, 40/5 (0.5 class) | PM--3767, Dt.01-11-2012 | EA | 28,978.94 | ITR10006 ITR10007 ITR10008 |
| 2 | 5/5A (0.5 class) | PM-3267/10,14.02.11 | EA | 30,185.49 | ITR10057 |
| 3 | 60/5 & 100/5 (0.5 class) | PM-3762/01-11-2012 | Nos. | 30,185.82 | ITR10042 ITR10043 ITR10044 |
| 4 | 40/5A,60/5,100/5A(0.2S CLASS) | PM-3762/01-11-2012 | Nos. | 38,852.76 | ITR10047, 46,45 |

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|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | |
| 5 | **100/5A & 40/5A (0.2s class)** | PM-3762/12,01.11.12 | Nos. | 38,852.76 | ITR10047 |
| 6 | **60/5A (0.2s class)** | PM-3762/12,01.11.12 | EA | 38,852.76 | ITR10046 |
| 7 | **20/5A & 10/5A (0.2s class)** | PM-3762/12,01.11.12 | EA | 37,555.94 | ITR10048& ITR10049 |
| III | **LT Meters** | | | | |
| 1 | LT Trivector meter (without CTs & Meter box) | Rpt.PM-4068, Dt.11-07-2013 | Nos. | 2,640.00 | |
| 2 | LT TVR Meters Cl. 0.5 (Including Box & 3 CTs) 200/5A for DTR Metering | PM-4291/14-03-2014 | - | 5,968.00 | MTE30025 |
| 3 | LT TVR Meters Cl. 0.5S (Including Box & 3 CTs) 200/5A for AGL DTRs | PM-4291/14-03-2014 | Nos. | 6,353.00 | MTE30023 |
| 4 | LT TVR Meters Cl. 0.5S (Including Box & 3 CTs) 100/5A | PM-4291/14-03-2014 | Nos. | 6,177.00 | MTE30024 |
| IV | **Single phase electronic meter** | | | | |
| 1 | 5-30A With PP box & IR port | Rpt.PM-4001, Dt.29-04-2013 | Nos. | 819.07 | MTE10018 |
| 2 | 5-30A Without PP Box & IR port | PM-3884, Dt. 18-01-2013 | Nos. | 693.04 | MTE10017 |
| V | **Three phase Electronic meters** | | | | |
| 1 | 5-20 A with PP Box | Not Procured | | | |
| 2 | 5-20 A without PP Box | Not Procured | | | |
| 3 | 10-40 A with PP Box with trivector features | Rpt.PM-4060, Dt.02-07-2013 | Nos. | 1,941.00 | MTE30027 |
| 4 | 10-40 A without PP Box with trivector features | Rpt.PM-4060, Dt.02-07-2013 | Nos. | 1,606.00 | MTE30028 |
| 5 | LT pole mounted meter box (Type-A) | PM-4313/13, Dt.27-03-2014 | Nos. | 9,125.00 | BX300051 |
| 6 | LT pole mounted meter box (Type-B) | Rpt.PM-3567, Dt.08-05-2012 | Nos. | 6,590.00 | BX300047 |
| 7 | 3 - Phase meter box | - | - | - | |
| VI | **Testing equipments & others** | | | | |
| 1 | LT ERS Field Testing Kit (Along with accessories) | Not Procured | | | |
| 2 | ERS Testing kits of accuracy 0.02 Class | Extn.PM-3357,28.06.11 | Nos. | 12,68,665.00 | TEQ10029 |
| 3 | Semi Automatic Master Test benches of class 0.1 accuracy | PM-2627, Dt.03-10-2008 | Nos. | 19,86,130.00 | |
| 4 | Hand held computers | | | | OMT10026 |
| 5 | Integrated spot billing machine with GSM/GPRS Modems | PM-4004, Dt.03-05-2013 | Nos. | 10,800.00 | OMT10088 |
| 6 | CMRI | PM-4316, Dt.02-04-2014 | | 24,920.00 | OMT10015 |
| 7 | LT distribution box (SMC) | Rpt. PM-3566,08.05.12 | Nos. | 6,590.00 | BXS00047 |
| 8 | Special moulded Box for HT meter | Not Procured | | | |
| **SUBHEAD - VII : VCB & PTR spares** | | | | | |
| 1 | IDMT (3 O/L+E/L) Numerical Relay | PM-3572, Dt.15-05-2012 | - | 8,904.98 | |
| 2 | IDMT Static Relay (3 O/L+1E/L) | Not procured in P&MM wing | | | |
| 3 | 11KV Breaker, Single Pole Assembly (Complete Set) | PM-3207,Dt:06-01-2010 | Nos. | 101,192.00 | |
| 4 | 33KV Breaker, Single Pole Assembly (Complete Set) | Not procured in P&MM wing | | | |
| 5 | Driving Mechanism (Complete Set) | Not procured in P&MM wing | | | |
| 6 | 11KV Breaker, Vaccum interrupter | PM-4117/13, 31-8-2013 | Nos. | 17,191.08 | SBR00010 |
| 7 | 33KV Breaker, Vaccum interrupter | PM-4117/13, 31-8-2013 | Nos. | 45,842.88 | SBR00014 |
| 8 | Trip / Close coil (Complete Set) | PM-3207,Dt:06-01-2010 | Nos. | 2,236.00 | SBR00048 |
| 9 | 11KV VCB Bushing | Not procured in P&MM wing | | | MIS10004 |
| 10 | 33KV VCB Bushing | Not procured in P&MM wing | | | MIS10001 |
| 11 | Bucholz Relay | Not procured in P&MM wing | | | - |
| 12 | PTR winding & oil temperature meters | Not procured in P&MM wing | | | STR10183 & |
| 13 | 250 W SV Lamps (Complete set) | Not procured in P&MM wing | | | SLA10069 |
| 14 | 150 W SV Lamps (Complete set) | Not procured in P&MM wing | | | SLA10074 |
| 15 | 400 W metal halloid | Not procured in P&MM wing | | | - |
| | Rates are as per prevailing market rates | | | | |
| VIII | **COMPUTERS/LAPTOPS** | | | | |
| 1 | Desktop Computers(Make HP DX 2000 series) | PM-2730, Dt: 23-04-2009 | | 33,217.00 | CAH00011 |
| 2 | Desktop Computers(Make DELL) | PM-3485, Dt: 29-12-2011 | | 34,866.30 | CAH00011 |
| 3 | Desktop Computers(Make ACER) | PM-238, Dt: 22-12-2014 | | 38,850.00 | CAH00011 |
| 4 | Printers Dot Matrix Printers: Epson LQ - 300 (80 Column) | PM-3485, Dt: 29-12-2011 | | 9,345.00 | CAH00016 |
| 5 | Dot Matrix Printers: Epson LQ - 1150+II Pin:24, Column 136, cpi:300:(136 Column) | PM-2737, Dt: 29-04-2009 | | 10,026.00 | CAH00003 |

| Sl. No | Name of the Material | P.O. No. | Unit | Rupees | SAP Code No. |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | |
| 6 | Laser Jet Printers (HP make) (Model No: HP/LJ T 1007 | PM-2730, Dt: 23-04-2009 | | 5,475.00 | CAH00004 |
| 7 | i. 1.0 KVA UPS with 2 Hrs. online Backup | PM-2731, Dt: 23-04-2009 | | 36,000.00 | CAH00052 |
| 8 | ii. 2.0 KVA UPS with 2 Hrs. online Backup | PM-2731, Dt: 23-04-2009 | | 62,000.00 | CAH00053 |
| 9 | iii. 3.0 KVA UPS with 2 Hrs. online Backup | PM-2731, Dt: 23-04-2009 | | 80,000.00 | CAH00054 |
| 10 | Fax Machine Model: Samsung SCX 451 F/XIP digital copier multifunction printer with Fax. (DGS & D rate contract) | PM-3217, Dt: 21-12-2010 | | 14,200.00 | OEE10016 |
| 11 | Transformer winding resistance kit | PM-2729, Dt: 23-04-2009 | | 113,404.80 | TEQ10033 |
| 12 | Transformer Turns Ratio Test Kit | PM-2729, Dt: 23-04-2009 | | 124,445.28 | TEQ10034 |
| 13 | Tan Delta and Capacitance Test Kit | PM-2729, Dt: 23-04-2009 | | 534,943.04 | TEQ10035 |
| 14 | Transformer Oil Resistivity Test kit | PM-2729, Dt: 23-04-2009 | | 334,214.40 | TEQ10036 |
| 15 | Supply & fixing of Mini Water Cooler Dispenser | - | - | - | |
| 16 | Digital Earth Clamp Testers | PM-3180, Dt:06-10-2010 | | 54,970.00 | TEQ10073 |
| 17 | High Voltage Detectors | PM-3180, Dt:06-10-2010 | | 16,409.70 | TEQ10074 |
| 18 | **11KV LV VCBs with CTs and panel (CTs ratio 600-300/1-1A)** | | | | |
| 19 | 9KV 10KA LAS (Line type) Porcelain | PM-221/28-11-2014 | Nos. | 1,055.97 | LAS00001 |
| 20 | Three phase portable analyzers | PM-2833, Dt: 10-11-2009 | Nos. | 385,856.64 | TEQ10067 |
| 21 | Circuit Breaker Time interval Meter with PC download software | PM-2834, Dt: 10-11-2009 | Nos. | 82,803.60 | TEQ10068 |
| 22 | Dissolved Gas Analyzer(DGA) with water PPM Kit(Model-Transport-X) | PM-2835, Dt; 10-11-2009 | Nos. | 2,721,360.00 | TEQ10069 |
| 23 | RGGVY SMC Meter Boxes along with accessories | PM-3227, Dt: 07-01-2011 | Nos. | 304.60 | BXS00048 |
| 24 | RGGVY Polycorbonate Meter Boxes along with accessories | PM-3076, Dt: 06-09-2010 | Nos. | 248.56 | BXS00049 |
| 25 | Digital Clamp Meters | PM-3286, Dt: 06-04-2011 | Nos. | 2,372.15 | OMT10050 |
| 26 | Single phase Variacs | PM-3286, Dt: 06-04-2011 | Nos. | 14,950.78 | TEQ10075 |
| 27 | Electronic Insulated Testers/Meggers | PM-3286, Dt: 06-04-2011 | Nos. | 75,532.69 | TEQ10076 |
| 28 | Ratio Test Kits | PM-3287, Dt: 06-04-2011 | Nos. | 100,217.74 | TEQ10079 |
| 29 | Capacitance Meters | PM-3287, Dt: 06-04-2011 | Nos. | 29,282.70 | TEQ10080 |
| 30 | Portable Relay Test Kits | PM-3288, Dt: 06-04-2011 | Nos. | 459,000.00 | TEQ10077 |
| 31 | Time interval Meter | PM-3289, Dt: 06-04-2011 | Nos. | 19,688.55 | TEQ10078 |
| 32 | Earth Tester (0-20-200-2000Ω) | PM-3290, Dt: 06-04-2011 | Nos. | 4,098.40 | OMT10074 |
| 33 | Primary Injection Kit | PM-3291, Dt: 06-04-2011 | Nos. | 77,806.00 | TEQ10081 |
| 34 | 56 W LED Light Fixtures (equivalent to 150 W HPSV light fixtures | PM-3321, Dt: 09-05-2011 | Nos. | 30,156.22 | SLA10102 |
| 35 | 33KV, 3CX400 Sq.mm XLPE UG Cable Straight through heat shrinkable jointing kits | PM-624/10-01-2016 | Nos. | 21,960.64 | SCB10113 |
| 36 | Integrated Spot Billing Machines Without GSM/GPRS Modems | PM-4181, Dt.12-11-2013 | Nos. | 7,265.00 | OMT10083 |
| 37 | 9KV 10KA LAS (Line type) Polymer | PM-221/28-11-2014 | Nos. | 1,055.97 | LAS00009 |
| | **Additional Items** | | | | |
| 1 | Spun Pole 12Mtrs/300 Kgs. | PM-3554, 20-04-2012 | Nos. | 9,800.00 | PLS00008 |
| 2 | Spun Poles 12.9 Mtrs/350 Kgs | PM-3919, Dt:19-02-2013 | Nos. | 12,799.99 | |
| 3 | 11 KV 400 Amps (Conventional) Double Break AB Switch with Porcelain type insulators | Rpt PM-613/06-01-2016 | Nos. | 10,784.00 | ABS510009 |
| 4 | 11 KV 200 Amps AB Switch (Tilting) Square pipe (a) Polymer Type | Rpt PM-518/30-10-2015 | Nos. | 8,250.00 | ABS10002 |
| 5 | 11 KV HG Fuse set without solid core insulator | Rept. PM-3851, Dt: 20-12-2012 | Nos. | 2,120.00 | HGF10003 |
| 6 | 33 KV Solid Core Insulators | PM-3482/11, Dt:28-12-2011 | Nos. | 1112.62 | INS30002 |
| 7 | 11 KV Polymer Pin Insulators along with Pins | PM-157/12,Dt:25-09-2014 | Nos. | 184.58 | INS10009 |
| 8 | 11 KV Solid Core Insulators for HG Fuses | PM-3866/12,Dt;05-01-2013 | Nos. | 116.50 | INS10007 |
| 9 | LT Capacitor<br>1x10KVAR<br>2x10KVAR | PM-1837/ 20-5-05 | Nos. | 2614.44<br>5061.00 | CPT00025<br>CPT00026 |
| 10 | LT Shunt Capacitor<br>1x9 KVAR<br>i) Supply<br>ii) Erection & Commissioning<br>2x9 KVAR<br>i) Supply | PM-2159/23-10-06 | Nos. | 2,548.00<br>878.00<br><br>4,982.00<br>1,072.00 | CPT00027<br>CPT00028 |
| 11 | 33KV / 11KV indoor switch gear (8 feeders) | PM-187,24.11.14 | Nos. | 16,869,455.87 | BRK 30020 |

| Extra Items | | | | | |
|---|---|---|---|---|---|
| **Sl. No** | **Name of the Material** | **P.O. No.** | **Unit** | **Rupees** | **SAP Code No.** |
| 1 | 11 KV Solid Core Insulator for HG Fuses | Rpt. & Extn. PM-120/16-08-2014 | Nos. | 126.00 | INS10007 |
| 2 | 33 KV CTs 100/1 for HT Metering (0.2 class) | PM-07/03-06-2014 | Nos. | 16,735.00 | ITR30054 |
| 3 | 11 KV CTs 900-450/1-1-0.577A, 0.2 Class (with Diff. Core) | PM-4200/21-12-2013 | Nos. | 23189.75 | ITR10064 |
| 4 | 33 KV Single Phase PTs, 10VA Burden, 0.2 Class. | PM-4295//21-03-2013 | Nos. | 19620.24 | ITR30061 |
| 5 | 11 KV 24V DC LV VCBs with CRPS & CTs of ratio 600-300/1-1A | PM-4247/07-02-2014 | Nos. | 2,48,247.00 | BRK10014 |
| 6 | 33 KV CTs of ratio 400-200/1-1A, 0.2 Class | PM-4315/02-04-2014 | Nos. | 21160.95 | ITR30060 |
| 7 | 11KV 3Ph PTs, 50VA Burden, 0.2 Class | PM-4299/24-03-2014 | Nos. | 18193.3 | ITR10065 |
| 8 | 11KV CTs 600-300/1-1-0.577A, 0.577A, 0.2 Class | PM-4293/21-03-2014 | Nos. | 20629.71 | ITR10066 |
| 9 | 11KV CTs 600-300/1-1A, 0.2 Class | PM-4293/21-03-2014 | Nos. | 17155.26 | ITR10067 |
| 10 | 24V AC/DC Non- Directional Numerical 3O/C + 1E/F Relays (IDMTL with Highest ) 1A & 5A(Multiple Secondary option) | Rpt.& Extn. PM-154/13-09-2014 | Nos. | 9209.00 | SBR00177 |
| 11 | 220V AC/DC Non- Directional Numerical 3O/C + 1E/F Relays(IDMTL with Highest ) 1A & 5A(Multiple Secondary option) | Rpt.& Extn. PM-154/13-09-2014 | Nos. | 9209.86 | SBR00216 |
| 12 | 33KV 24V DC HV VCBs, CTs(3 core) and CRPs | Rpt.PM-118/13-08-2014 | Nos. | 418233.55 | BRK30031 |
| 13 | 11KV CTs 400-200-100/1-1A, 0.2 Class | PM-4201/21-12-2013 | Nos. | 13948.82 | ITR10062 |
| 14 | 33KV 220V DC VCBs CTs & CRPs & Differential IED Relay | PM-3859/28-12-2012 | Nos. | 4,80,207.15 | BRK30027 |
| 15 | 33KV 220V DC VCBs CTs & CRPs & Prot. IED Relay | PM-68/16-09-2014 | Nos. | 450751.15 | BRK30028 |
| 16 | 33KV 220V DC VCBs with CTs 400-200-100/1-1A (W/o CRPS) | PM-67/16-07-2014 | Nos. | 309520.00 | BRK30029 |
| 17 | 11KV,220V LV VCBs CTs & CRPs and with Differential and Prot. IED Relays | PM-51/07-07-2014 | Nos. | 375374.88 | BRK10020 |
| 18 | 11KV, 220V fed VCBs with CTs & CRPs and IED Relays | PM-3882/15-01-2013 | Nos. | 3,17,164.00 | BRK10019 |
| 19 | HT Trivector Meter 33/110V 25/1A 30min 0.2S Class | PM-69/16-07-2014 | Nos. | 7,997.18 | MHT30031 |
| 20 | HT Trivector Meter 33/110V 50/1A 30min 0.2S Class | PM-69/16-07-2014 | Nos. | 7,997.18 | MHT30032 |
| 21 | HT Trivector Meter 33/110V 100/1A 30min 0.2S Class | PM-69/16-07-2014 | Nos. | 7,997.18 | MHT30028 |
| 22 | HT Trivector Meter 33/110V 100/1A 15min 0.2S Class | PM-69/16-07-2014 | Nos. | 7,997.18 | MHT30027 |
| 23 | HT Trivector Meter 33/110V 200/1A 15min 0.2S Class | PM-69/16-07-2014 | Nos. | 7,997.18 | MHT30033 |
| 24 | HT Trivector Meter 33/110V 10/5A 30min 0.2S Class | PM-69/16-07-2014 | Nos. | 7,997.18 | MHT30057 |
| 25 | HT Trivector Meter 33/110V 50/1A 30min 0.2S Class | PM-69/16-07-2014 | Nos. | 7,997.18 | MHT30058 |
| 26 | HT Trivector Meters with ABT features | PM-3897/11-02-2013 (with testing & other charges) | Nos. | 125,000.00 | |
| 27 | HT Triivector open access 11KV 10/5A IP:15min | (without testing) | | 55,000.00 | MHT30038 |
| 28 | HT Triivector open access 11KV 20/5A IP:15min | | | 55,000.00 | MHT30039 |
| 29 | HT Triivector open access 11KV 40/5A IP:15min | | | 55,000.00 | MHT30040 |
| 30 | HT Triivector open access 11KV 60/5A IP:15min | | | 55,000.00 | MHT30041 |
| 31 | HT Triivector open access 11KV 100/5A IP:15min | | | 55,000.00 | MHT30042 |
| 32 | HT Triivector open access 33KV 25/1A IP:15min | | | 55,000.00 | MHT30043 |
| 33 | HT Triivector open access 33KV 50/1A IP:15min | | | 55,000.00 | MHT30044 |
| 34 | HT Triivector open access 33KV 100/1A IP:15min | | | 55,000.00 | MHT30045 |
| 35 | HT Triivector open access 33KV 200/1A IP:15min | | | 55,000.00 | MHT30046 |
| 36 | HT Triivector open access 132KV 25/1A IP:15min | | | 55,000.00 | MHT30047 |

| Sl. No | Name of the Material | P.O. No. | Unit | Rupees | SAP Code No. |
|---|---|---|---|---|---|
| 37 | HT Triivector open access 132KV 50/1A IP:15min | | | 55,000.00 | MHT30048 |
| 38 | HT Triivector open access 132KV 100/1A IP:15min | | | 55,000.00 | MHT30049 |
| 39 | HT Triivector open access 132KV 200/1A IP:15min | | | 55,000.00 | MHT30061 |
| 40 | HT Triivector open access 220KV 100/1A IP:15min | | | 55,000.00 | MHT30051 |
| 41 | LT CT Meters with DLMs<br>(i) Protocol (Cat-A) 200/5A,<br>400/5A CT ratio along with TTB in PP Box | | | | |
| a | 200/5A | | | 6,481.00 | MTE30026 |
| b | 400/5A | | | 6,481.00 | MTE30036 |
| 42 | 1Ph meter 10-60A Meter with PP Box | | | 1,530.00 | MTN10001 |
| 43 | 3 Ph meter 10-60A Meter with PP Box | | | 5,259.00 | MTN30001 |
| | HT ERS Field Testing Kit (Along with accessories) | | | | |
| 44 | ERS Testing kits of accuracy 0.05 Class | PM-3747/16-10-2012 | Nos. | 1,216,519.00 | TEQ10087 |
| 45 | 3-Phase 63 KVA DTR (CSP) with 3-star rating | PM-196/30-10-2014 | Each | 90,397.55 | DTC30004 |
| 46 | 33KV, 3x400 Sq.mm Heat Shrinkable Indoor End Termination kits | PM-4391/31-05-2014 | Each | 3,185.00 | |
| 47 | 33KV, 3x400 Sq.mm Heat Shrinkable Outdoor End Termination kits | | Each | 3,577.00 | |
| 48 | Fake Note Detection and Loose Note Counting Machines | PM-249/12-01-2015 | Each | 100,237.50 | |
| 49 | Agricultural Load Management Units (ALMUs) | PM-34/19-06-2014 | Each | 6,000.00 | |
| 50 | HP Probook 440G1 model Laptops with Universal Prop Cable | PM-97/31-07-2014 | Each | 43,850.00 | |
| 51 | Line Matrix Printers (500 LPM) Model : LIPI 6605L | PM-220/21-11-2014 | Each | 1,45,425.00 | |
| 52 | Line Matrix Printers (1000 LPM) Model : LIPI 6610L | | | 257,250.00 | |
| 53 | 11KV, 3x300 Sq.mm Heat Shrinkable Straight Through Cable Jointing Kits (SCB10101) | PM-261/29-01-2015 | Each | 2,522.00 | |
| 54 | 11KV, 3x185 Sq.mm Heat Shrinkable Straight Through Jointing Kits (SCB10104) | | | 2,437.00 | |
| 55 | 11KV 3x185 Sq.mm Outdoor End Termination Kits (SCB10105) | | | 872.00 | |
| 56 | Garmin make eTrex 20 Hand Held GPS Devices | 4381/21-05-2014 | Each | 19,448.00 | |
| 57 | 24V, 40AH Batteries with Chargers (Conventional type) | PM-23/11-06-2014 | Each | 20,500.00 | |
| 58 | 24V, 40AH Battery Chargers Of Conventional Type<br>(Linear Type) | PM-20/11-06-2014 | Each | 10,100.00 | |
| 59 | Capacitor cells of rating 7.3KV, 220KVAR (Internal Fuse Protection) | PM-274/06-02-2014 | Each | 11,455.31 | |
| 60 | LT TVR Meters of 0.5S Class with PP Box with 4 CTs with Modem (Cat-C) | PM-3898/11-02-2013 | Nos. | 10,350.00 | MTE30030 |

**COST - DATA ABSTRACT**

| Sl. No | Particulars of items | Wind. Pr. In Kg /m2 | W.Load in Kg. | Type of pole being used | Span in Mtrs. | No. of poles/ KM | Size of conductor | Total Cost in Rs. |
|---|---|---|---|---|---|---|---|---|
| 1 | 33 KV Line | 75 | 365 | 11 M RS Joist | 50 | 21 | 100 sqmm AAAC | 944335 |
| 2 | 33 KV DC Line | 75 | 365 | 12 M RS Joist | 50 | 21 | 100 sqmm AAAC | 1284210 |
| 3 | 33 KV Line | 75 | 365 | 11 M PSCC | 60 | 17 | 100 sqmm AAAC | 708214 |
| 4 | 33 KV DC Line | 75 | 365 | 11 M PSCC | 40 | 26 | 100 sqmm AAAC | 1169589 |
| 5 | 33 KV Line | 75 | 280 | 9.1 Mtr.PSCC | 80 | 14 | 100 sqmm AAAC | 486500 |
| 6 | 33 KV Line | 75 | 280 | 9.1 Mtr.PSCC | 65 | 16 | 100 sqmm AAAC | 505500 |
| 7 | 11 KV line | 75 | 140 | 9.1 Mtr.PSCC | 60 | 18 | 55 sqmm AAAC | 390080 |
| 8 | 11 KV line | 75 | 140 | 9.1 Mtr.PSCC | 60 | 18 | 34 sqmm AAAC | 368309 |
| 9 | 11 KV line | 75 | 140 | 8 Mtr.PSCC | 60 | 18 | 55 sqmm AAAC | 345601 |
| 10 | 11 KV line | 75 | 140 | 8 Mtr.PSCC | 60 | 18 | 34 sqmm AAAC | 323788 |
| 11 | 11 KV line | 75 | 140 | RSJoist Poles | 50 | 21 | 55 sqmm AAAC | 528068 |
| 12 | 6.3 KV line | 75 | 140 | 8 Mtr.PSCC | 90 | 11 | 34 sqmm AAAC | 149264 |
| 13 | LT 3 Ph.5 Wire line (Horizontal) | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 3x55+2x34sqmmAAA | 330865 |
| 14 | LT 3 Ph.5 Wire line (Horizontal) | 75 | 140 | 8 Mtr.PSCC | 45 | 23 | 3x55+2x34sqmmAAA | 375613 |
| 15 | LT 3 Ph.5 Wire line (Horizontal) | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 5x34sqmm AAA | 310715 |
| 16 | LT 3 Ph.4 Wire line (Horizontal) | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 3x55+1x34sqmmAAA | 299209 |
| 17 | LT 3 Ph.4 Wire line (Horizontal) | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 4x34sqmm AAA | 279126 |
| 18 | LT 1 Ph. 3 Wire line (Horizontal) | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 3x34 sqmm AAA | 236261 |
| 19 | LT 1 Ph. 2 Wire line (Horizontal) | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 2x34 sqmm AAA | 203419 |
| 20 | L.T.AB Cable | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 3x16+25sqmm | 205530 |
| 21 | L.T.AB Cable | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 2x16+25sqmm | 178781 |
| 22 | Convertion of 1Ph 2 W/L to 3 Ph 4 W/L | 75 | 140 | 8 Mtr.PSCC | 65 | 16 | 2x55xqmm | 94265 |
| 22 | Erection of 100 KVA CSP CRGO Distribution Transformer | | | | | | | 238148 |
| 23 | Erection of 63 KVA CSP Distribution Transformer | | | | | | | 211295 |
| 24 | Erection of 63 KVA CSP CRGO core Distribution Transformer on plinth | | | | | | | 195434 |
| 25 | Erection of 63 KVA CSP CRGO core Distribution Transformer on structure | | | | | | | 182096 |
| 26 | Erection of 100 KVA CSP CRGO core Distribution Transformer on column plinth | | | | | | | 216911 |
| 27 | Erection of 25 KVA, 3- Phase CRGO core Distribution Transformer | | | | | | | 125025 |
| 28 | Erection of 25 KVA, 3-Phase, 11 KV/433 V /250 V CRGO Conventional Transformer | | | | | | | 120086 |
| 29 | Erection of 25 KVA, Single Phase, 6.3 KV/0-240 V C.S.P. CRGO Transformer | | | | | | | 65500 |
| 30 | Erection of 15 KVA Single Phase 6.3 KV/0-240 V CSP CRGO Distribution Transformer | | | | | | | 44844 |
| 31 | Release of poly phase Agl. Service erected on support | | | | | | | 7717 |
| 32 | Release of 1 ph Domestic & non-domestic service (Electronic meter) | | | | | | | 2370 |
| 33 | Release of 3 ph. Domestic & non-domestic service (Electronic meter) | | | | | | | 5772 |

| | | |
|---|---|---|
| 34 | Release of poly phase Indl.service below 20 HP (Electronic meter) | 6428 |
| 35 | Release of Industrial service above 20H.P upto 50 HP with LT Trivector meter | 11485 |
| 36 | Release of Industrial service above 50 HP and upto 75 HP (HT metering) | 194194 |
| 37 | Release of Street light service (1 -ph electonic meter) | 2907 |
| 38 | Erection of L.T. C.T. Operated Electonic trivector meter on LV side of DTR | 12019 |
| 39 | Erection of 33/11 KV Sub-station with2 x8 MVA power transformer & 6 Nos. 11 KV feeders ( without 11 KV 2 MVAR capacitor Bank) | 25800000 |
| 40 | Erection of 33/11 KV Sub-station with2 x8 MVA power transformer & 6 Nos. 11 KV feeders ( with 11 KV 2 MVAR capacitor Bank) | 27200000 |
| 41 | Erection of 33/11 KV Sub-station(Indoor substation) with2x8 MVA power transformer & 6 Nos. 11 KV feeders ( without 11 KV 2 MVAR capacitor Bank) | 40606529 |
| 42 | Erection of 33/11 KV Sub-station with 9.1 mts PSCC Poles and 2x5 MVA power transformer & 5 Nos. 11 KV feeders ( without 11 KV 2 MVAR capacitor Bank) | 16348000 |
| 43 | Erection of 33/11 KV Sub-station with 9.1 mts PSCC Poles and 2x5 MVA power transformer & 5 Nos. 11 KV feeders ( with 11 KV 2 MVAR capacitor Bank) | 17600000 |
| 44 | Erection of 33/11 KV Sub-station with 9.1 mts PSCC Poles and 1 No.power transformer & 3 Nos. 11 KV feeders ( with 11 KV 2 MVAR capacitor Bank) | 12190000 |
| 45 | 11 KV Bay extention in existing 33/11 KV Sub-stations with girder poles | 80285 |
| 46 | 11 KV Bay extention in existing 33/11 KV Sub-stations with PSCC poles | 59746 |
| 47 | 33KV Bay Extension at 33/11 kV Sub-station | 110800 |
| 48 | 33KV Bay Extension at 132/33KV SS | 768123 |
| 49 | Erection of 11 KV VCB at 33/11 kV Sub-station | 320716 |
| 50 | Erection of 33KV VCB at 132/33KV SS | 1178750 |
| 51 | Erection of 2MVAR Capacitor Bank | 1154243 |
| 52 | Enhancement of PTR Capacity | 3649792 |
| 53 | Laying of 11 KV, 3 core 300 Sq.mm UG Cable | 2306660 |
| 54 | Laying of 33 KV, 3 core 400 Sq.mm UG Cable | 3241935 |
| 55 | Erection of M+3 tower | 141569 |
| 56 | Erection of K+3 tower | 79191 |
| 57 | Erection of L+3 tower | 112161 |
| 58 | Erection of additional 5 MVA PTR in existing 33/11 KV Sub-station | 4240700 |
| 59 | Extention of 3Mtrs for K+3 Towers as per ASCI Standard | 11849 |
| 60 | Extention of 3Mtrs for L+3 Towers as per ASCI Standard | 18819 |
| 61 | Extention of 3Mtrs for M+3 Towers as per ASCI Standard | 25989 |
| 62 | REC construction standard Drawings (19 Nos.) | |

## COST DATA FOR HILLY AND TRIBAL AREAS
## AS ADOPTED BY IRRIGATION DEPARTMENT IN THE STATE

For hilly and tribal areas, the following extra rates are allowed over and above approved cost data of labour.

a. 40% extra is allowed for the works located within the interior Agency / Tribal areas. (i.e.) for works located beyond 16 Kilometers from any all-weather bus route inside the agency / tribal area. (Where Bus routes are not available)

b. 25% extra is allowed for the works located inside the agency / tribal area.

c. 15% extra is allowed for the works located in the border of agency / tribal area. (i.e.) works located within a belt of 16 kilometers from the boundary of agency / tribal area.

**Cost data per Km of 33 KV Line with 100 Sq.mm AAA Conductor over 11 Mts.**
**RS Joist box type at 50 Mts. Span, 100 Kg/sq.Mt wind pressure, working load 365 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | RS Joist box type11mtrs Pole (150x75mm) | 21 | 17,955 | Each | 377,055 |
| 2 | 1.53 M Channel / '**V**' Cross Arm (100x50mm) | 21 | 993 | Each | 20,853 |
| 3 | Top Clamp with cleat(75x8mm) | 20 | 291 | Each | 5,820 |
| 4 | Back Clamp | 20 | 162 | Each | 3,240 |
| 5 | Stay Set complete | 12 | 983 | Each | 11,796 |
| 6 | Bracing Set with double cross arm | 1 | 6,049 | Set | 6,049 |
| 7 | 100 Sq.mm AAA Conductor | 3.06 | 46,068 | K.M. | 140,968 |
| 8 | 33 KV Pin Insulator with Pin | 63 | 402 | Each | 25,326 |
| 9 | Strain Insulators set ( 3x 11 KV B&S Insulator with 33 KV Hard ware fitting)) | 12 | 740 | Set | 8,880 |
| 10 | Concreting of Pole, Stay sets & Base concreting | L.S | | L.S | 97,103 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | L.S | | L.S | 9036 |
| | **Total Cost of Material** | | | | **706,126** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 18,000 |
| 3% Contingencies on Materials | | 21,184 |
| Labour & Transport | | 112,150 |
| Service Tax at 14.5 % on L&T | | 16,262 |
| 10% Estt. & Genl. Charges on Materials | | 70,613 |
| | **Total** | **944335.05** |
| | **Or Say** | **944,335** |

**Cost data per Km of 33 KV DC Line with 100 Sq.mm AAA Conductor over 12 Mts.**
**RS Joist box type at 50 Mts. Span, 100 Kg/sq.Mt wind pressure, working load 365 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | RS Joist box type12mtrs Pole | 21 | 21,000 | Each | 441,000 |
| 2 | 1.53 M Channel / '**V**' Cross Arm | 60 | 993 | Each | 59,580 |
| 3 | Back Clamp | 60 | 162 | Each | 9,720 |
| 4 | Stay Set complete | 12 | 983 | Each | 11,796 |
| 5 | Double Bracing Set with double cross arm | 1 | 7,462 | Set | 7,462 |
| 6 | 100 Sq.mm AAA Conductor | 6.12 | 46,068 | K.M. | 281,936 |
| 7 | 33 KV Pin Insulator with Pin | 108 | 402 | Each | 43,416 |
| 8 | Strain Insulators set ( 3x 11 KV B&S Insulator with 33 KV Hard ware fitting) | 24 | 740 | Set | 17,760 |
| 9 | Concreting of Pole, Stay sets & Base concreting | L.S | | L.S | 98,489 |
| 10 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | L.S | | L.S | 9,036 |
| | **Total Cost of Material** | | | | **980,195** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (8) | | 26,180 |
| 3% Contingencies on Materials | | 29,406 |
| Labour & Transport | | 131361 |
| Service Tax at 14.5 % on L&T | | 19,047 |
| 10% Estt. & Genl. Charges on Materials | | 98,020 |
| | **Total** | **1,284,210** |
| | **Or Say** | **1,284,210** |

**REC Construction Standard No.M2/1979 (R-1989)**

**Cost data per Km of 33 KV Line (SC) with 100 Sq.mm AAA Conductor over 11 Mts. PSCC Poles at 60 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 365 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 11 M PSCC Pole | 17 | 6800 | Each | 115,600 |
| 2 | 1.53 M Channel / '**V**' Cross Arm | 17 | 993 | Each | 16,881 |
| 3 | Top Clamp with cleat | 16 | 291 | Each | 4,656 |
| 4 | Back Clamp | 17 | 162 | Each | 2,754 |
| 5 | Stay Set complete | 12 | 983 | Each | 11,796 |
| 6 | Bracing Set with double cross arm | 1 | 6049 | Set | 6,049 |
| 7 | 100 Sq.mm AAA Conductor | 3.06 | 46068 | K.M. | 140,968 |
| 8 | 33 KV Pin Insulator with Pin | 48 | 402 | Each | 19,296 |
| 9 | Strain Insulators set ( 3x 11 KV B&S Insulator with 33 KV Hard ware fitting) | 12 | 740 | Set | 8,880 |
| 10 | Concreting of Pole, Stay sets & Base concreting | L.S | | L.S | 112783 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | L.S | | L.S | 6050 |
| | **Total Cost of the Material** | | | | **445,713** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 9,806 |
| 3% Contingencies on Materials | | 13,371 |
| Labour & Transport | | 170090 |
| Service Tax at 14.5 % on L&T | | 24,663 |
| 10% Estt. & Genl. Charges on Materials | | 44,571 |
| | **Total** | **708,214** |
| **Stays Pits (0.76x0.76x1.5) Excavation** | | |
| | **Or Say** | **708,214** |

**REC Construction Standard No.M2/1979 (R-1989)**

**Cost data per Km of 33 KV Line (DC) with 100 Sq.mm AAA Conductor over 11 Mts. PSCC Poles at 40 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 365 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 11 M PSCC Pole | 26 | 6800 | Each | 176,800 |
| 2 | 1.53 M Channel / '**V**' Cross Arm | 72 | 993 | Each | 71,496 |
| 3 | Back Clamp | 75 | 162 | Each | 12,150 |
| 4 | Stay Set complete | 12 | 983 | Each | 11,796 |
| 5 | Double Bracing Set with double cross arm | 1 | 7462 | Set | 7,462 |
| 6 | 100 Sq.mm AAA Conductor | 6.12 | 46068 | K.M. | 281,936 |
| 7 | 33 KV Pin Insulator with Pin | 156 | 402 | Each | 62,712 |
| 8 | Strain Insulators set ( 3x 11 KV B&S Insulator with 33 KV Hard ware fitting) | 24 | 740 | Set | 17,760 |
| 9 | Concreting of Pole, Stay sets & Base concreting | L.S | | L.S | 135527 |
| 10 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | L.S | | L.S | 6655 |
| | **Total Cost of the Material** | | | | **784,294** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (8) | | 19,263 |
| 3% Contingencies on Materials | | 23,529 |
| Labour & Transport | | 230632 |
| Service Tax at 14.5 % on L&T | | 33,442 |
| 10% Estt. & Genl. Charges on Materials | | 78,429 |
| | **Total** | **1,169,589** |
| | **Or Say** | **1,169,589** |

**REC Construction Standard No.M-2/1979 (R-1989)**
**Cost data per Km of 33 KV Line with 100 Sq.mm AAA Conductor over 9.1 Mts. PSCC Poles at 80 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 280 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 9.1 M PSCC Pole | 14 | 3,478 | Each | 48,696 |
| 2 | 1.53 M Channel / '**V**' Cross Arm | 14 | 993 | Each | 13,902 |
| 3 | Top Clamp with cleat | 12 | 291 | Each | 3,492 |
| 4 | Back Clamp | 13 | 162 | Each | 2,106 |
| 5 | Stay Set complete | 12 | 983 | Each | 11,796 |
| 6 | Bracing Set with double cross arm | 1 | 6,049 | Set | 6,049 |
| 7 | 100 Sq.mm AAA Conductor | 3.06 | 46,068 | K.M. | 140,968 |
| 8 | 33 KV Pin Insulator with Pin | 39 | 402 | Each | 15,678 |
| 9 | Strain Insulators set ( 3x 11 KV B&S Insulator with 33 KV Hard ware fitting) | 12 | 740 | Set | 8,880 |
| 10 | Concreting of Pole, Stay sets & Base concreting | L.S | | L.S | 83,948 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | L.S | | L.S | 5500 |
| | **Total Cost of Material** | | | | **341,015** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 7,547 |
| 3% Contingencies on Materials | | 10,230 |
| Labour & Transport | | 81753 |
| Service Tax at 14.5 % on L&T | | 11,854 |
| 10% Estt. & Genl. Charges on Materials | | 34,102 |
| | **Total** | **486,501** |
| | **Or Say** | **486,500** |

**REC Construction Standard No.M-2/1979 (R-1989)**
**Cost data per Km of 33 KV Line with 100 Sq.mm AAA Conductor over 9.1 Mts. PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 280 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 9.1 M PSCC Pole | 16 | 3,478 | Each | 55,652 |
| 2 | 1.53 M Channel / '**V**' Cross Arm | 16 | 993 | Each | 15,888 |
| 3 | Top Clamp with cleat | 15 | 291 | Each | 4,365 |
| 4 | Back Clamp | 15 | 162 | Each | 2,430 |
| 5 | Stay Set complete | 10 | 983 | Each | 9,830 |
| 6 | Bracing Set with double cross arm | 1 | 6,049 | Set | 6,049 |
| 7 | 100 Sq.mm AAA Conductor | 3.06 | 46,068 | K.M. | 140,968 |
| 8 | 33 KV Pin Insulator with Pin | 45 | 402 | Each | 18,090 |
| 9 | Strain Insulators set ( 3x 11 KV B&S Insulator with 33 KV Hard ware fitting) | 12 | 740 | Set | 8,880 |
| 10 | Concreting of Pole, Stay sets & Base concreting | L.S | | L.S | 78,843 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | L.S | | L.S | 5500 |
| | **Total Cost of Material** | | | | **346,495** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 7,865 |
| 3% Contingencies on Materials | | 10,395 |
| Labour & Transport | | 92687 |
| Service Tax at 14.5 % on L&T | | 13,440 |
| 10% Estt. & Genl. Charges on Materials | | 34,650 |
| | **Total** | **505,532** |
| | **Or Say** | **505,500** |

**REC Construction Standard No. A-34/1993**
**Cost data per Km of 11 KV Line with 55 Sq.mm AAA Conductor over 9.1 Mts. PSCC Poles at 60 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 9.1 M PSCC Pole | 18 | 3,478 | Each | 62,609 |
| 2 | 1.07 M Channel / '**V**' Cross Arm | 18 | 423 | Each | 7,614 |
| 3 | Top Clamp with cleat | 16 | 291 | Each | 4,656 |
| 4 | Back Clamp | 17 | 120 | Each | 2,040 |
| 5 | Stay Set complete | 10 | 818 | Each | 8,180 |
| 6 | Bracing Set with double cross arm | 1 | 4,847 | Set | 4,847 |
| 7 | 55 Sq.mm AAA Conductor | 3.06 | 23,374 | K.M. | 71,524 |
| 8 | 11 KV Pin Insulator with Pin | 54 | 115 | Each | 6,184 |
| 9 | Strain Insulator with metal parts | 12 | 269 | Each | 3,228 |
| 10 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 73,996 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **248,878** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 5,126 |
| 3% Contingencies on Materials | | 7,466 |
| Labour & Transport | | 90587 |
| Service Tax at 14.5 % on L&T | | 13,135 |
| 10% Estt. & Genl. Charges on Materials | | 24,888 |
| | **Total** | **390,080** |
| | **Or Say** | **390,080** |

**Cost data per Km of 11 KV Line with 34 Sq.mm AAA Conductor over 9.1 Mts. PSCC Poles at 60 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 9.1 M PSCC Pole | 18 | 3,478 | Each | 62,609 |
| 2 | 1.07 M Channel / '**V**' Cross Arm | 18 | 423 | Each | 7,614 |
| 3 | Top Clamp with cleat | 16 | 291 | Each | 4,656 |
| 4 | Back Clamp | 17 | 120 | Each | 2,040 |
| 5 | Stay Set complete | 10 | 818 | Each | 8,180 |
| 6 | Bracing Set with double cross arm | 1 | 4,847 | Set | 4,847 |
| 7 | 34 Sq.mm AAA Conductor | 3.06 | 17,822 | K.M. | 54,535 |
| 8 | 11 KV Pin Insulator with Pin | 54 | 115 | Each | 6,184 |
| 9 | Strain Insulator with metal parts | 12 | 269 | Each | 3,228 |
| 10 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 73996 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **231,889** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 4,617 |
| 3% Contingencies on Materials | | 6,957 |
| Labour & Transport | | 88783 |
| Service Tax at 14.5 % on L&T | | 12,874 |
| 10% Estt. & Genl. Charges on Materials | | 23,189 |
| | **Total** | **368,309** |
| | **Or Say** | **368,309** |

**REC Construction Standard No. A-34/1993**
**Cost data per Km of 11 KV Line with 55 Sq.mm AAA Conductor over 8 Mts. PSCC Poles at 60 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 18 | 1,585 | Each | 28,533 |
| 2 | 1.07 M Channel / '**V**' Cross Arm | 18 | 423 | Each | 7,614 |
| 3 | Top Clamp with cleat | 16 | 291 | Each | 4,656 |
| 4 | Back Clamp | 17 | 120 | Each | 2,040 |
| 5 | Stay Set complete | 10 | 818 | Each | 8,180 |
| 6 | Bracing Set with double cross arm | 1 | 4,847 | Set | 4,847 |
| 7 | 55 Sq.mm AAA Conductor | 3.06 | 23,374 | K.M. | 71,524 |
| 8 | 11 KV Pin Insulator with Pin | 54 | 115 | Each | 6,184 |
| 9 | Strain Insulator with metal parts | 12 | 269 | Each | 3,228 |
| 10 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 73,996 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **214,802** |

| | |
|---|---|
| 3% storage & handling charges on items (1) to (9) | 4,104 |
| 3% Contingencies on Materials | 6,444 |
| Labour & Transport | 86263 |
| Service Tax at 14.5 % on L&T | 12,508 |
| 10% Estt. & Genl. Charges on Materials | 21,480 |
| **Total** | **345,601** |
| **Or Say** | **345,601** |

**REC Construction Standard No. A-34/1993**
**Cost data per Km of 11 KV Line with 34 Sq.mm AAA Conductor over 8 Mts. PSCC Poles at 60 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 18 | 1,585 | Each | 28,533 |
| 2 | 1.07 M Channel / '**V**' Cross Arm | 18 | 423 | Each | 7,614 |
| 3 | Top Clamp with cleat | 16 | 291 | Each | 4,656 |
| 4 | Back Clamp | 17 | 120 | Each | 2,040 |
| 5 | Stay Set complete | 10 | 818 | Each | 8,180 |
| 6 | Bracing Set with double cross arm | 1 | 4,847 | Set | 4,847 |
| 7 | 34 Sq.mm AAA Conductor | 3.06 | 17,822 | K.M. | 54,535 |
| 8 | 11 KV Pin Insulator with Pin | 54 | 115 | Each | 6,184 |
| 9 | Strain Insulator with metal parts | 12 | 269 | Each | 3,228 |
| 10 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 73,996 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **197,813** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 3,595 |
| 3% Contingencies on Materials | | 5,934 |
| Labour & Transport | | 84424 |
| Service Tax at 14.5 % on L&T | | 12,241 |
| 10% Estt. & Genl. Charges on Materials | | 19,781 |
| | **Total** | **323,788** |
| | **Or Say** | **323,788** |

**REC Construction Standard No. A-34/1993**
**Cost data per Km of 11 KV Line with 55 Sq.mm AAA Conductor over RS Joist Poles at 50 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | RSJoist Poles (175x85mm) | 21 | 8,400 | Each | 176,400 |
| 2 | 1.07 M Channel / '**V**' Cross Arm | 21 | 423 | Each | 8,883 |
| 3 | Top Clamp with cleat | 20 | 291 | Each | 5,820 |
| 4 | Back Clamp | 21 | 120 | Each | 2,520 |
| 5 | Stay Set complete | 10 | 818 | Each | 8,180 |
| 6 | Bracing Set with double cross arm | 1 | 4,847 | Set | 4,847 |
| 7 | 55 Sq.mm AAA Conductor | 3.06 | 23,374 | K.M. | 71,524 |
| 8 | 11 KV Pin Insulator with Pin | 54 | 115 | Each | 6,184 |
| 9 | Strain Insulator with metal parts | 12 | 269 | Each | 3,228 |
| 10 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 83,690 |
| 11 | Misc. Items like coil earthing, pipe eathing, danger, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **375,276** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 8,628 |
| 3% Contingencies on Materials | | 11,258 |
| Labour & Transport | | 83299 |
| Service Tax at 14.5 % on L&T | | 12,078 |
| 10% Estt. & Genl. Charges on Materials | | 37,528 |
| | **Total** | **528,068** |
| | **Or Say** | **528,068** |

**REC Construction Standard No. A-17/1987**
**Cost data per Km of 6.3 KV Sph Line with 34 Sq.mm AAA Conductor over 8 Mts. PSCC Poles at 90 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 11 | 1,585 | Each | 17,437 |
| 2 | Top Clamp with cleat | 11 | 291 | Each | 3,201 |
| 3 | D Clamp | 10 | 100 | Each | 1,000 |
| 4 | Stay Set complete | 4 | 818 | Each | 3,272 |
| 5 | 34 Sq.mm AAA Conductor | 1.02 | 17,822 | K.M. | 18,178 |
| 6 | 11 KV Pin Insulator with Pin | 10 | 115 | Each | 1,145 |
| 7 | Strain Insulator with metal parts | 4 | 269 | Each | 1,076 |
| 8 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 29598 |
| 9 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 2100 |
| | **Total Cost of Material** | | | | **77,007** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (7) | | 1,359 |
| 3% Contingencies on Materials | | 2,310 |
| Labour & Transport | | 53177 |
| Service Tax at 14.5 % on L&T | | 7,711 |
| 10% Estt. & Genl. Charges on Materials | | 7,701 |
| | **Total** | **149,264** |
| | **Or Say** | **149,264** |

**REC Construction Standard No. B-8/1984**
**Cost data per Km of LT 3 Ph 5 Wire line (Horizontal formation) with**
**3 x 55 Sq. mm + 2 x 34 Sq. mm AAAC over 8 Mts.**
**PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 16 | 1,585 | Each | 25,363 |
| 2 | LT 3 Phase cross arms | 18 | 251 | Each | 4,518 |
| 3 | LT top fitting | 18 | 154 | Each | 2,772 |
| 4 | Back Clamp | 18 | 64 | Each | 1,152 |
| 5 | Stay Set complete | 6 | 818 | Each | 4,908 |
| 6 | 55 Sq.mm AAA Conductor | 3.06 | 23,374 | KM | 71,524 |
| 7 | 34 Sq.mm AAA Conductor | 2.04 | 17,822 | KM | 36,357 |
| 8 | Shackle Insulator with metal parts | 16 | 41 | Each | 656 |
| 9 | LT pin insulator with pin | 56 | 250 | Each | 14,000 |
| 10 | C.I. Knob | 16 | 10 | Each | 160 |
| 11 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 44397 |
| 12 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **209,807** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (10) | | 4,842 |
| 3% Contingencies on Materials | | 6,294 |
| Labour & Transport | | 77678 |
| Service Tax at 14.5 % on L&T | | 11,263 |
| 10% Estt. & Genl. Charges on Materials | | 20,981 |
| | **Total** | **330,865** |
| | **Or Say** | **330,865** |

**REC Construction Standard No. B-8/1984**
**Cost data per Km of LT 3 Ph 5 Wire line (Horizontal formation) with**
**3 x 55 Sq. mm + 2 x 34 Sq. mm AAAC over 8 Mts.**
**PSCC Poles at 45 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 23 | 1,585 | Each | 36,459 |
| 2 | LT 3 Phase cross arms | 24 | 251 | Each | 6,024 |
| 3 | LT top fitting | 24 | 154 | Each | 3,696 |
| 4 | Back Clamp | 24 | 64 | Each | 1,536 |
| 5 | Stay Set complete | 6 | 818 | Each | 4,908 |
| 6 | 55 Sq.mm AAA Conductor | 3.06 | 23,374 | KM | 71,524 |
| 7 | 34 Sq.mm AAA Conductor | 2.04 | 17,822 | KM | 36,357 |
| 8 | Shackle Insulator with metal parts | 16 | 41 | Each | 656 |
| 9 | LT pin insulator with pin | 84 | 250 | Each | 21,000 |
| 10 | C.I. Knob | 23 | 10 | Each | 230 |
| 11 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 54091 |
| 12 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **240,481** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (10) | | 5,472 |
| 3% Contingencies on Materials | | 7,214 |
| Labour & Transport | | 85,937 |
| Service Tax at 14.5 % on L&T | | 12,461 |
| 10% Estt. & Genl. Charges on Materials | | 24,048 |
| | **Total** | **375,613** |
| | **Or Say** | **375,613** |

**REC Construction Standard No. B-8/1984**
**Cost data per Km of LT 3 Ph 5 Wire line (Horizontal formation) with 5 x 34 Sqmm AAAC over 8 Mts.**
**PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 16 | 1,585 | Each | 25,363 |
| 2 | LT 3 Phase cross arms | 18 | 251 | Each | 4,518 |
| 3 | LT top fitting | 18 | 154 | Each | 2,772 |
| 4 | Back Clamp | 18 | 64 | Each | 1,152 |
| 5 | Stay Set complete | 6 | 818 | Each | 4,908 |
| 6 | 34 Sq.mm AAA Conductor | 5.1 | 17,822 | KM | 90,892 |
| 7 | Shackle Insulator with metal parts | 16 | 41 | K.M. | 656 |
| 8 | LT pin insulator with pin | 56 | 250 | Each | 14,000 |
| 9 | C.I. Knob | 16 | 10 | Each | 160 |
| 10 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 44397 |
| 11 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **192,818** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 4,333 |
| 3% Contingencies on Materials | | 5,785 |
| Labour & Transport | | 77290 |
| Service Tax at 14.5 % on L&T | | 11,207 |
| 10% Estt. & Genl. Charges on Materials | | 19,282 |
| | **Total** | **310,715** |
| | **Or Say** | **310,715** |

**REC Construction Standard No. B-8/1984**
**Cost data per Km of LT 3 Ph 4 Wire line (Horizontal formation) with**
**3 x 55 Sqmm + 1 x 34 mm AAAC over 8 Mts.**
**PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 16 | 1,585 | Each | 25,363 |
| 2 | LT 3 Phase cross arms | 18 | 251 | Each | 4,518 |
| 3 | Back Clamp | 18 | 64 | Each | 1,152 |
| 4 | Stay Set complete | 6 | 818 | Each | 4,908 |
| 5 | 55 Sq.mm AAA Conductor | 3.06 | 23,374 | K.M. | 71,524 |
| 6 | 34 Sq.mm AAA Conductor | 1.02 | 17,822 | K.M. | 18,178 |
| 7 | Shackle Insulator with metal parts | 12 | 41 | Each | 492 |
| 8 | LT pin insulator with pin | 42 | 250 | Each | 10,500 |
| 9 | C.I. Knob | 16 | 10 | Each | 160 |
| 10 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 44397 |
| 11 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **185,192** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (9) | | 4,104 |
| 3% Contingencies on Materials | | 5,556 |
| Labour & Transport | | 74967 |
| Service Tax at 14.5 % on L&T | | 10,870 |
| 10% Estt. & Genl. Charges on Materials | | 18,519 |
| | **Total** | **299,209** |
| | **Or Say** | **299,209** |

**REC Construction Standard No. B-8/1984**
**Cost data per Km of LT 3 Ph 4 Wire line (Horizontal formation) with 4 x 34 Sqmm AAAC over 8 Mts.**
**PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 16 | 1,585 | Each | 25,363 |
| 2 | LT 3 Phase cross arms | 18 | 251 | Each | 4,518 |
| 3 | Back Clamp | 18 | 64 | Each | 1,152 |
| 4 | Stay Set complete | 6 | 818 | Each | 4,908 |
| 5 | 34 Sq.mm AAA Conductor | 4.08 | 17821.8 | K.M. | 72,713 |
| 6 | Shackle Insulator with metal parts | 12 | 41 | Each | 492 |
| 7 | LT pin insulator with pin | 42 | 250 | Each | 10,500 |
| 8 | C.I. Knob | 16 | 10 | Each | 160 |
| 9 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 44397 |
| 10 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **168,203** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (8) | | 3,594 |
| 3% Contingencies on Materials | | 5,046 |
| Labour & Transport | | 74,640 |
| Service Tax at 14.5 % on L&T | | 10,823 |
| 10% Estt. & Genl. Charges on Materials | | 16,820 |
| | **Total** | **279,126** |
| | **Or Say** | **279,126** |

**REC Construction Standard No. B-11/1984**
**Cost data per Km of LT Single Phase 3 Wire line (Horizontal formation)**
**with 34 Sqmm AAAC over 8 Mts.**
**PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 16 | 1,585 | Each | 25,363 |
| 2 | LT 1 Phase cross arms | 18 | 135 | Each | 2,429 |
| 3 | LT top fitting | 18 | 154 | Each | 2,772 |
| 4 | Back Clamp | 18 | 64 | Each | 1,152 |
| 5 | Stay Set complete | 4 | 818 | Each | 3,272 |
| 6 | 34 Sq.mm AAA Conductor | 3.06 | 17,822 | K.M. | 54,535 |
| 7 | Shackle Insulator with metal parts | 8 | 41 | Each | 328 |
| 8 | LT pin insulator with pin | 28 | 250 | Each | 7,000 |
| 9 | C.I. Knob | 16 | 10 | Each | 160 |
| 10 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 34445 |
| 11 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 4000 |
| | **Total Cost of Material** | | | | **135,456** |

| | |
|---|---|
| 3% storage & handling charges on items (1) to (9) | 2,910 |
| 3% Contingencies on Materials | 4,064 |
| Labour & Transport | 70,117 |
| Service Tax at 14.5 % on L&T | 10,167 |
| 10% Estt. & Genl. Charges on Materials | 13,546 |
| **Total** | **236,261** |
| **Or Say** | **236,261** |

**REC Construction Standard No. B-11/1984**
**Cost data per Km of LT Single Phase 2 Wire line (Horizontal formation)**
**with 2 x 34 Sqmm AAAC over 8 Mts.**
**PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 16 | 1,585 | Each | 25,363 |
| 2 | LT 1 Phase cross arms | 18 | 135 | Each | 2,430 |
| 3 | Back Clamp | 18 | 64 | Each | 1,152 |
| 4 | Stay Set complete | 4 | 818 | Each | 3,272 |
| 5 | 34 Sq.mm AAA Conductor | 2.04 | 17,822 | K.M. | 36,357 |
| 6 | Shackle Insulator with metal parts | 4 | 41 | Each | 164 |
| 7 | LT pin insulator with pin | 14 | 250 | Each | 3,500 |
| 8 | C.I. Knob | 16 | 10 | Each | 160 |
| 9 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 34445 |
| 10 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 2900 |
| | **Total Cost of Material** | | | | **109,743** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (8) | | 2,172 |
| 3% Contingencies on Materials | | 3,292 |
| Labour & Transport | | 67,456 |
| Service Tax at 14.5 % on L&T | | 9,781 |
| 10% Estt. & Genl. Charges on Materials | | 10,974 |
| | **Total** | **203,419** |
| | **Or Say** | **203,419** |

**REC Construction Standard No. B-32/1984**
**Cost data per Km of LT Line with 3 x 16 + 25 Sqmm AB Cable over 8 Mts.**
**PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 16 | 1,585 | Each | 25,363 |
| 2 | Suspension clamp assembly with eye hook | 14 | 65 | Each | 910 |
| 3 | Dead end clamp assembly with eye hook | 4 | 80 | Each | 320 |
| 4 | Stay Set complete | 4 | 818 | Set | 3,272 |
| 5 | L.T. A.B. Cable 3 x 16 + 25 Sq.mm | 1.02 | 50,155 | K.M. | 51,158 |
| 6 | Insulated Connectors with covers | 56 | 80 | Each | 4,480 |
| 7 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 34445 |
| 8 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 3000 |
| | **Total Cost of Material** | | | | **122,948** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (6) | | 2,565 |
| 3% Contingencies on Materials | | 3,688 |
| Labour & Transport | | 55,925 |
| Service Tax at 14.5 % on L&T | | 8,109 |
| 10% Estt. & Genl. Charges on Materials | | 12,295 |
| | **Total** | **205,530** |
| | **Or Say** | **205,530** |

**REC Construction Standard No. B-32/1984**
**Cost data per Km of LT Line with 2 x 16 + 25 Sqmm AB Cable over 8 Mts.**
**PSCC Poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 8 M PSCC Pole | 16 | 1,585 | Each | 25,363 |
| 2 | Suspension clamp assembly with eye hook | 14 | 71 | Each | 994 |
| 3 | Dead end clamp assembly with eye hook | 4 | 88 | Each | 352 |
| 4 | Stay Set complete | 4 | 818 | Set | 3,272 |
| 5 | L.T. A.B. Cable 2 x 16 + 25 Sq.mm | 1.02 | 28,950 | K.M. | 29,529 |
| 6 | Insulated Connectors with covers | 56 | 88 | Each | 4,928 |
| 7 | Concreting of Pole, Stay sets & Base concreting | | | L.S | 34445 |
| 8 | Misc. Items like coil earthing, danger board, bolts & nuts, etc | | | L.S | 3000 |
| | **Total Cost of Material** | | | | **101,883** |

| | | |
|---|---|---|
| 3% storage & handling charges on items (1) to (6) | | 1,933 |
| 3% Contingencies on Materials | | 3,056 |
| Labour & Transport | | 53,905 |
| Service Tax at 14.5 % on L&T | | 7,816 |
| 10% Estt. & Genl. Charges on Materials | | 10,188 |
| | **Total** | **178,781** |
| | **Or Say** | **178,781** |

**Cost Data for Conversion of Single Phase 2 wire line to Three Phase 4 wire line over existing 8 M PSCC poles at 65 Mts. Span, 75 Kg/sq.Mt wind pressure, working load 140 Kgs.**

| Sl. No. | Particulars | Qty. | Rate in Rs. | Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 55 Sq.mm AAA conductor | 2.04 | 23374 | KM | 47683 |
| 2 | LT 3 phase X arms | 17 | 251.00 | Each | 4267 |
| 3 | Back Clamps | 17 | 64.00 | Each | 1088 |
| 4 | Shackle Insulators with metal parts | 12 | 40.75 | Each | 489 |
| 5 | Pin Insulators with pins | 45 | 249.5 | Each | 11227.5 |
| 6 | Stay sets complete | 6 | 818 | Each | 4908 |
| | **Total Cost of Material** | | | | **69,662** |
| | 3% storage & handling charges on items (1) to (6) | | | | 2,090 |
| | 3% Contingencies on Materials | | | | 2,090 |
| | Labour & Transport | | | | 14,300 |
| | Distmentling Charges | | | | 1,000 |
| | Service Tax at 14.5 % on L&T | | | | 2,074 |
| | 10% Estt. & Genl. Charges on Materials | | | | 6,966 |
| | | | **Total** | | **98,182** |
| | | | **Or Say** | | **98,182** |
| | **Less Credits** | | | | |
| 1 | Single Phase cross arms (scrap) | 51 | 11 | Kg | 561 |
| 2 | Original Erection charges | | | | 2200 |
| 3 | Dismantling charges | | | | 1100 |
| 4 | Orginal Estt & Genl Charges | | | | 56 |
| | | | **Total** | | **3917** |
| | | | **Or Say** | | **3917** |
| | Net Cost | | Gross - Less | | **94,265** |

## REC - CONSTRUCTION STANDARD SPECIFICATION No. F3 & F4/1993

## COST DATA FOR ERECTION OF 100 KVA - 11 KV/433 V CSP TRANSFORMER

| S. No. | Particulars | Cost of Material (Rs.) | Labour & Transport (Rs.) |
|---|---|---|---|
| 1 | 11 KV/433 V 100 KVA CSP TRANSFORMER (Aluminium) | 119309.11 | 11,129 |
| 2 | Erection of 11 KV AB Switch (200A) | 7,610 | 2,058 |
| 3 | D.P. Structure | 13,911 | 15,909 |
| 4 | Erection of 11 K.V. H.G. Fuse set | 1,843 | 719 |
| 5 | Installation of L.T.H.G. Fuse sets including connections | 968 | 484 |
| 6 | L.T. Metering arrangement with CTs including cable connections and cleat arrangement | 9,039 | 760 |
| 7 | Installation of HT Lightening Arresters | 1,116 | 1,272 |
| 8 | C.I. Pipe earthing (3 Nos.) | 10,725 | 8,982 |
| | **Total Cost of Material** | **164,521** | **41,313** |
| | 3% Storage & handling charges | 4,936 | |
| | 3% Contingencies on Materials | 4,936 | |
| | Labour & Transport | 41,313 | |
| | Service Tax at 14.5 % on L&T | 5,990 | |
| | 10% Estt. & General charges on Materials | 16,452 | |
| | **Total Cost in Rs.** | **238,148** | |
| | **Or Say** | **238,148** | |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. F3 & F4/1981**

**COST DATA FOR ERECTION OF 63 KVA - 11 KV/433 V CSP TRANSFORMER**

| S. No. | Particulars | Cost of Material (Rs.) | Labour & Transport (Rs.) |
|---|---|---|---|
| 1 | 11 KV/433 V 63 KVA CSP Distribution Transformer (Aluminium) | 96,160.49 | 11,129 |
| 2 | Erection of 11 KV AB Switch (200A) | 7,610 | 2,058 |
| 3 | D.P. Structure | 13,911 | 15,909 |
| 4 | Erection of 11 K.V. H.G. Fuse set | 1,843 | 719 |
| 5 | Installation of L.T.H.G. Fuse sets including connections | 968 | 484 |
| 6 | Metering arrangement with CTs including cable connections and cleat arrangement | 9,039 | 760 |
| 7 | Installation of HT Lightening Arresters | 1,116 | 1,272 |
| 8 | C.I. Pipe earthing (3 Nos.) | 10,725 | 8,982 |
| | **Total Cost of Material** | **141,372** | **41,313** |
| | 3% Storage & handling charges | 4,241 | |
| | 3% Contingencies on Materials | 4,241 | |
| | Labour & Transport | 41,313 | |
| | Service Tax at 14.5 % on L&T | 5,990 | |
| | 10% Estt. & General charges on Materials | 14,137 | |
| | **Total Cost in Rs.** | **211,295** | |
| | **Or say** | **211,295** | |

## REC - CONSTRUCTION STANDARD SPECIFICATION No. F3 & F4/1981

## COST DATA FOR ERECTION OF 63 KVA - 11 KV/433 V TRANSFORMER

| S. No. | Particulars | Cost of Material (Rs.) | Labour & Transport (Rs.) |
|---|---|---|---|
| 1 | 11 KV/433 V 63 KVA Distribution Transformer (Aluminium) | 96,160 | 11,129 |
| 2 | Erection of 11 KV AB Switch (200A) | 7,610 | 2,058 |
| 3 | Plinth for distribution transformer (5'x4'x9') (SWR11070) | 0 | 16,149 |
| 4 | Erection of 11 K.V. H.G. Fuse set | 1,843 | 719 |
| 5 | Installation of L.T.H.G. Fuse sets including connections | 968 | 484 |
| 6 | L.T. Metering arrangement with CTs including cable connections and cleat arrangement | 9,039 | 760 |
| 7 | Installation of HT Lightening Arresters | 1,116 | 1,272 |
| 8 | C.I. Pipe earthing (3 Nos.) | 10,725 | 8,982 |
| | **Total Cost of Material** | **127,461** | **41,553** |
| | 3% Storage & handling charges | 3,824 | |
| | 3% Contingencies on Materials | 3,824 | |
| | Labour & Transport | 41,553 | |
| | Service Tax at 14.5 % on L&T | 6,025 | |
| | 10% Estt. & General charges on Materials | 12,746 | |
| | **Total Cost in Rs.** | **195,434** | |
| | **Or say** | **195,434** | |

## REC - CONSTRUCTION STANDARD SPECIFICATION No. F3 & F4/1981

## COST DATA FOR ERECTION OF 63 KVA - 11 KV/433 V TRANSFORMER

| S. No. | Particulars | Cost of Material (Rs.) | Labour & Transport (Rs.) |
|---|---|---|---|
| 1 | 11 KV/433 V 63 KVA CSP Distribution Transformer (Aluminium) | 96,160 | 11,129 |
| 2 | Erection of 11 KV AB Switch (200A) | 7,610 | 2,058 |
| 3 | Erection of structure for mounting of transformer | 3,590 | 863 |
| 4 | Erection of 11 K.V. H.G. Fuse set | 1,843 | 719 |
| 5 | Installation of L.T.H.G. Fuse sets including connections | 968 | 484 |
| 6 | L.T. Metering arrangement with CTs including cable connections and cleat arrangement | 9,039 | 760 |
| 7 | Installation of HT Lightening Arresters | 1,116 | 1,272 |
| 8 | C.I. Pipe earthing (3 Nos.) | 10,725 | 8,982 |
| | **Total Cost of Material** | **131,051** | **26,267** |
| | 3% Storage & handling charges | 3,932 | |
| | 3% Contingencies on Materials | 3,932 | |
| | Labour & Transport | 26,267 | |
| | Service Tax at 14.5 % on L&T | 3,809 | |
| | 10% Estt. & General charges on Materials | 13,105 | |
| | **Total Cost in Rs.** | **182,096** | |
| | **Or say** | **182,096** | |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. F3 & F4/1981**

**COST DATA FOR ERECTION OF 100 KVA - 11 KV/433 V**

**CSP TRANSFORMER**

| S. No. | Particulars | Cost of Material (Rs.) | Labour & Transport (Rs.) |
|---|---|---|---|
| 1 | 11 KV/433 V 100 KVA CSP Distribution Transformer (Aluminium) | 119,309 | 11,129 |
| 2 | Erection of 11 KV AB Switch (200A) | 7,610 | 2,058 |
| 3 | Construction of column type plinth 4'x4'x6'' footing and 4'x4'x6'' platform over 1'x9'' column of 9' height. | 0 | 11,456 |
| 4 | Erection of 11 K.V. H.G. Fuse set | 1,843 | 719 |
| 5 | Installation of L.T.H.G. Fuse sets including connections | 968 | 484 |
| 6 | L.T. Metering arrangement with CTs including cable connections and cleat arrangement | 9,039 | 760 |
| 7 | Installation of HT Lightening Arresters with earth connection | 1,116 | 1,272 |
| 8 | C.I. Pipe earthing (3 Nos.) | 10,725 | 8,982 |
| | **Total Cost of Material** | **150,610** | **36,859** |
| | 3% Storage & handling charges | 4,518 | |
| | 3% Contingencies on Materials | 4,518 | |
| | Labour & Transport | 36,859 | |
| | Service Tax at 14.5 % on L&T | 5,345 | |
| | 10% Estt. & General charges on Materials | 15,061 | |
| | **Total Cost in Rs.** | **216,911** | |
| | **Or say** | **216,911** | |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. F3 & F4/1981**

**COST DATA FOR ERECTION OF 25 KVA, 3-Ph, 11 KV/433 V/250 V DISTRIBUTION TRANSFORMER (COPPER)**

| S. No. | Particulars | Cost of Material (Rs.) | Labour & Transport (Rs.) |
|---|---|---|---|
| 1 | 11 KV/433V/250 V 25 KVA 3-Ph Distribution Transformer (Copper) | 65,524 | 11,129 |
| 2 | Erection of 11 KV AB Switch (200A) | 7,610 | 2,058 |
| 3 | Erection of 11 KV HG Fuse set | 1,843 | 719 |
| 4 | Mounting arrangements for Transformer | 3,590 | 500 |
| 5 | Installation of L.T.H.G. Fuse sets including connect | 968 | 484 |
| 6 | C.I. Pipe earthing (2 Nos.) | 7,150 | 5,988 |
| 7 | Misc. items (like bolts & nuts, washers etc.) | 500 | |
| | **Total Cost of Material** | **87,185** | **20,878** |
| | 3% Storage & handling charges | 2,601 | |
| | 3% Contingencies on Materials | 2,616 | |
| | Labour & Transport | 20,878 | |
| | Service Tax at 14.5 % on L&T | 3,027 | |
| | 10% Estt. & General charges on Materials | 8,718 | |
| | **Total Cost in Rs.** | **125,025** | |
| | **Or Say** | **125,025** | |

**COST DATA FOR ERECTION OF 25 KVA, 3-Ph, 11 KV/433 V /250 V CONVENTIONAL TRANSFORMER (Alluminium)**

| S. No. | Particulars | Cost of Material (Rs.) | Labour & Transport (Rs.) |
|---|---|---|---|
| 1 | 11 KV/433V/250 V 25 KVA 3-Ph Conventional Distribution Transformer (Aluminium) | 61,218 | 11,129 |
| 2 | Erection of 11 KV AB Switch (200A) | 7,610 | 2,058 |
| 3 | Erection of 11 KV HG Fuse set | 1,843 | 719 |
| 4 | Mounting arrangements for Transformer | 3,590 | 550 |
| 5 | Installation of L.T.H.G. Fuse sets including connect | 968 | 484 |
| 6 | C.I. Pipe earthing (2 Nos.) | 7,150 | 5,988 |
| 7 | Misc. items (like bolts & nuts, washers etc.) | 500 | |
| | **Total Cost of Material** | **82,879** | **20,928** |
| | 3% Storage & handling charges | 2,471 | |
| | 3% Contingencies on Materials | 2,486 | |
| | Labour & Transport | 20,928 | |
| | Service Tax at 14.5 % on L&T | 3,035 | |
| | 10% Estt. & General charges on Materials | 8,288 | |
| | **Total Cost in Rs.** | **120,086** | |
| | **Or Say** | **120,086** | |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. F-13/1987**

**COST DATA FOR ERECTION OF 25 KVA SINGLE PHASE 6.3 KV/0-240 V C.S.P. TRANSFORMER ON EXISTING 8 M PSCC SUPPORT**

| S. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 25 KVA Oil Immersed Single Phase 6.3 KV/0-240 V CSP CRGO core Transformer (Copper) | 1 | 43,590 | Each | 43,590 |
| 2 | Mounting arrangements for Transformer | 1 | 1,315 | Set | 1,315 |
| 3 | C.I. Pipe earthing | 2 | 3,575 | Each | 7,150 |
| 4 | LT Distribution Box (1-Phase) with XLPE 70 sq mm cable and 100 A fuse unit completely | 1 | 1,000 | Each | 1,000 |
| 5 | Misc. items (like bolts & nuts, washers etc.) | L.S. | 500 | L.S. | 500 |
| | **Total Cost of Material** | | | | **53,555** |
| | 3% Storage & handling charges on items 1 to 3 | | | | 1,562 |
| | 3% Contingencies on Materials | | | | 1,607 |
| | Labour & Transport | | | | 3,000 |
| | Service Tax at 14.5 % on L&T | | | | 435 |
| | 10% Estt. & General charges on Materials | | | | 5,356 |
| | **Total Cost in Rs.** | | | | **65,515** |
| | **Or Say** | | | | **65,500** |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. F-13/1987**

**COST DATA FOR ERECTION OF 15 KVA SINGLE PHASE 6.3 KV/0-240 V**

**CRGO CORE C.S.P. TRANSFORMER ON EXISTING 8 M PSCC SUPPORT**

| S. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 15 KVA Oil Immersed Single Phase 6.3 KV/0-240 V CRGO Core Transformer (Copper) | 1 | 25,869 | Each | 25,869 |
| 2 | Mounting arrangements for Transfomer | 1 | 1,315 | Set | 1,315 |
| 3 | C.I. Pipe earthing | 2 | 3,575 | Each | 7,150 |
| 4 | LT Distribution Box (1-Phase) with XLPE 70 sq mm cable and 100 A fuses complete. | 1 | 1,000 | Each | 1,000 |
| 5 | Misc. Items | L.S. | 400 | L.S. | 400 |
| | **Total Cost of Material** | | | | **35,734** |
| | 3% Storage & handling charges on items 1 to 3 | | | | 1,030 |
| | 3% Contingencies on Materials | | | | 1,072 |
| | Labour & Transport | | | | 3,000 |
| | Service Tax at 14.5 % on L&T | | | | 435 |
| | 10% Estt. & General charges on Materials | | | | 3,573 |
| | **Total Cost in Rs.** | | | | **44,844** |
| | **Or Say** | | | | **44,844** |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. H6 & H8/1981**

**COST DATA FOR RELEASE OF POLY PHASE AGRICULTURAL SERVICE ERECTED ON SUPPORT**

| S. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 3 Phase (5A-20A) Electronic meter with PP Box | 1 | 3,037 | Each | 3,037 |
| 2 | 3 Phase 63 A M.C.B. | 1 | 1477 | Each | 1477 |
| 3 | P.V.C. Cable 6 Sq.mm Single Core | 90 | 8.91 | Each | 802 |
| 4 | Installation of 2 KVAR Capacitor | 1 | 550 | Each | 550 |
| 5 | Misc. items such as Bolts, Nuts & Board etc. | L.S. | 220 | L.S. | 220 |
| | **Total Cost of Material** | | | | **6,086** |
| | 3% Contingencies on Materials | | | | 183 |
| | Labour & Transport | | | | 733 |
| | Service Tax at 14.5 % on L&T | | | | 106 |
| | 10% Estt. & General charges on Materials | | | | 609 |
| | **Total Cost in Rs.** | | | | **7,717** |
| | **Or say** | | | | **7,717** |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. H-1 TO H3/1981**
**COST DATA FOR DOMESTIC AND NON-DOMESTIC SERVICE CONNECTION (SINGLE PHASE) WITH ELECTRONIC METER**

| S. No. | Particulars | Rate | Chargeable to DISCOM | | Chargeable to Consumers | | Amount in Rs. |
|---|---|---|---|---|---|---|---|
| | | | Qty. | Amount | Qty. | Amount | |
| 1 | Single Phase Electronic meter (5 A to 20 A) housed in a PP box | 819 Each | 1 | 819 | | | 819 |
| 2 | M.C.B. 16 A | 200.6 Each | 1 | 201 | | | 201 |
| 3 | P.V.C. Cable Single Core 2.5 Sq.mm | 5 Mts. | | | 60 | 300 | 300 |
| 4 | G.I. Wire No. 6 | 48 Kg | | | 1 | 48 | 48 |
| 5 | P.V.C. Pipe 25 mm | 30.3 Mts. | | | 2 | 61 | 61 |
| 6 | P.V.C. Bends 25 mm | 6.1 Each | | | 2 | 12 | 12 |
| 7 | Misc.items (meter board & bolts & nuts etc.) | L.S. L.S. | | 50 | | 100 | 150 |
| | **Total Cost of Material** | | | **1,070** | | **521** | **1,590** |
| | 3% Contingencies on Materials | | | 32 | | 16 | 48 |
| | Labour & Transport | | | 160 | | 340 | 500 |
| | Service Tax at 14.5 % on L&T | | | 23 | | 49 | 73 |
| | 10% Estt. & General charges on Materials | | | 107 | | 52 | 159 |
| | **Total Cost in Rs.** | | | **1,392** | | **978** | **2,370** |
| | **Or Say** | | | | | | **2,370** |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. H1 TO H3/1981**
**COST DATA FOR DOMESTIC AND NON-DOMESTIC SERVICE CONNECTION**
**(THREE PHASE) (Electronic)**

| S. No. | Particulars | Rate | Chargeable to DISCOM | | Chargeable to Consumers | | Amount in Rs. |
|---|---|---|---|---|---|---|---|
| | | | Qty. | Amount | Qty. | Amount | |
| 1 | 3 Phase Electronic Energy Meter (10 A - 40 A) with PP Box | 1941 Each | 1 | 1,941 | | | 1,941 |
| 2 | 3 Phase 63 A M.C.B. | 1477 Each | 1 | 1,477 | | | 1,477 |
| 3 | P.V.C. Cable Single Core 2.5 Sq.mm | 5 Mts. | | | 120 | 600 | 600 |
| 4 | G.I. Wire No. 8 | 53 Kg | | | 1 | 53 | 53 |
| 5 | P.V.C. Pipe 40 mm | 77.5 Mts. | | | 2 | 155 | 155 |
| 6 | P.V.C. Bends 40 mm | 18.2 Each | | | 2 | 36 | 36 |
| 7 | Misc. | L.S. L.S. | | | | 75 | 75 |
| | **Total Cost of Material** | | | **3,418** | | **919** | **4,337** |
| | 3% Contingencies on Materials | | | 103 | | 28 | 130 |
| | Labour & Transport | | | 320 | | 440 | 760 |
| | Service Tax at 14.5 % on L&T | | | 46 | | 64 | 110 |
| | 10% Estt. & General charges on Materials | | | 342 | | 92 | 434 |
| | **Total Cost in Rs.** | | | **4,229** | | **1,543** | **5,772** |
| | **Or Say** | | | | | | **5,772** |

**Note:** Item Nos. 3 to 7 are to be borne & arranged by the consumer as per latest APTRANSCO rules.

**REC - CONSTRUCTION STANDARD SPECIFICATION No. H-5/1981**
**POLY PHASE SERVICE CONNECTION CHARGES FOR ERECTION OF**
**1 NO. INDUSTRIAL SERVICE (BELOW 20 H.P.) (ELECTRONIC METER)**

| S. No. | Particulars | Rate | Chargeable to DISCOM | | Chargeable to Consumers | | Amount in Rs. |
|---|---|---|---|---|---|---|---|
| | | | Qty. | Amount | Qty. | Amount | |
| 1 | 3-Phase (10 - 40 A) Electronic meter housed in a PP box | 1941 Each | 1 | 1,941 | | | 1,941 |
| 2 | 3 Phase 63 A M.C.B. | 1477 Each | 1 | 1,477 | | | 1,477 |
| 3 | P.V.C. Cable Single Core 10 Sq.mm | 12 Mts. | | | 80 | 960 | 960 |
| 4 | G.I. Wire 8 mm | 48 Kg | | | 1 | 48 | 48 |
| 5 | P.V.C. Pipe 40 mm | 77.5 Mts. | | | 2 | 155 | 155 |
| 6 | P.V.C. Bends 40 mm | 18.2 Each | | | 2 | 36 | 36 |
| 7 | Misc. items viz. link clips, wooden box, bolts & nuts etc. | L.S. L.S. | | 100 | | 200 | 300 |
| | **Total Cost of Material** | | | **3,518** | | **1,399** | **4,917** |
| | 3% Contingencies on Materials | | | 106 | | 42 | 148 |
| | Labour & Transport | | | 320 | | 440 | 760 |
| | Service Tax at 14.5 % on L&T | | | 46 | | 64 | 110 |
| | 10% Estt. & General charges on Materials | | | 352 | | 140 | 492 |
| | **Total Cost in Rs.** | | | **4,342** | | **2,085** | **6,428** |
| | **Or Say** | | | | | | **6,428** |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. H-5/1981**
**POLY PHASE SERVICE CONNECTION CHARGES FOR ERECTION OF**
**1 NO. INDUSTRIAL SERVICE (20 HP & ABOVE) (LT TRIVECTOR METER)**

| S. No. | Particulars | Rate | Chargeable to DISCOM | | Chargeable to Consumers | | Amount in Rs. |
|---|---|---|---|---|---|---|---|
| | | | Qty. | Amount | Qty. | Amount | |
| 1 | LT TVR Meters Cl. 0.5S (Including Box & 4 CTs) | 6177 Each | 1 | 6,177 | | | 6,177 |
| 2 | 3 Phase 63 A M.C.B. | 1477 Each | 1 | 1,477 | | | 1,477 |
| 3 | P.V.C. Cable Single Core 10 Sq.mm | 15 Mts. | | | 80 | 1,200 | 1,200 |
| 4 | G.I. Wire 8 mm | 48 Kg | | | 1 | 48 | 48 |
| 5 | P.V.C. Pipe 40 mm | 77.5 Mts. | | | 2 | 155 | 155 |
| 6 | P.V.C. Bends 40 mm | 18.2 Each | | | 2 | 36 | 36 |
| 7 | Misc. items viz. link clips, wooden box, bolts & nuts etc. | L.S. L.S. | | 100 | | 200 | 300 |
| | **Total Cost of Material** | | | **7,754** | | **1,639** | **9,393** |
| | 3% Contingencies on Materials | | | 233 | | 49 | 282 |
| | Labour & Transport | | | 320 | | 440 | 760 |
| | Service Tax at 14.5 % on L&T | | | 46 | | 64 | 110 |
| | 10% Estt. & General charges on Materials | | | 775 | | 164 | 939 |
| | **Total Cost in Rs.** | | | **9,128** | | **2,356** | **11,485** |
| | **Or Say** | | | | | | **11,485** |

**REC - CONSTRUCTION STANDARD SPECIFICATION No. H-5/1981**
**POLY PHASE SERVICE CONNECTION CHARGES FOR ERECTION OF**
**1 NO. INDUSTRIAL SERVICE (50 HP & UPTO 75 HP) (HT METERING)**

| S. No. | Particulars | Rate | Material | | Labour | | |
|---|---|---|---|---|---|---|---|
| | | | Qty. | Amount | Qty. | Amount | |
| 1 | DP Structure with 9.1 mts. PSCC poles | 13911 Each | 2 | 27,823 | 2 | 15,909 | |
| 2 | 11 KV 400 Amps conventional type AB switch | 10,500 Each | 2 | 21,000 | 2 | 2,984 | |
| 3 | 11 KV HG Fuse set | 1,843 Each | 2 | 3,686 | 2 | 1,438 | |
| 4 | 3x35 sq.mm 11 KV XLPE cable | 317.67 Mts. | 30 | 9,530 | 30 | 14,460 | |
| 5 | End termination suitable for 35 sq.mm XLPE (Cable outdoor type) | 1287 Each | 4 | 5,148 | 4 | 6,544 | |
| 6 | G.I. earthing (3 Nos. GI Pipe) | 4012.8 Nos. | 1 | 4,013 | 1 | 8,982 | |
| 7 | 11 KV CT PT 10-20/5 | 28,979 Each | 1 | 28,979 | 1 | 870 | |
| 8 | HT Trivector Meter (Clause 0.2 S) | 7,997 Each | 1 | 7,997 | 1 | 3,830 | |
| 9 | Special type box for Trivector meter | 5500 Each | 1 | 5,500 | 1 | 200 | |
| 10 | Transport of material | | | | | 1,650 | |
| 11 | Misc. items viz. link clips, wooden box, bolts & nuts etc. | L.S. L.S. | | | | 550 | |
| | **Total Cost of Material** | | | **113,675** | | **57,417** | **-** |
| | 3% Contingencies on Materials | | | 3,410 | | | |
| | Labour & Transport | | | 57,417 | | | |
| | Service Tax at 14.5 % on L&T | | | 8,325 | | | |
| | 10% Estt. & General charges on Materials | | | 11,367 | | | |
| | **Total Cost in Rs.** | | | **194,194** | | | |
| | **Or Say** | | **Rs.** | **194,194.00** | | | |

## COST DATA FOR STREET LIGHT SERVICE CONNECTION (SINGLE PHASE)

| S. No. | Particulars | Qyt. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 1 Phase (5-20A) Electronic Meter housed in a PP box | 1 | 819 | Each | 819 |
| 2 | 1 Phase 16 A M.C.B. | 1 | 201 | Each | 201 |
| 3 | Light sensitive switch | 1 | 400 | Each | 400 |
| 4 | P.V.C. Cable 4 Sq.mm Single Core | 15 | 10 | Mts. | 150 |
| 5 | P.V.C. Pipe 25 mm | 2 | 30 | Mts. | 61 |
| 6 | P.V.C. Bends 25 mm | 2 | 6.10 | Each | 12 |
| 7 | Moulded Distribution Box | 1 | 250 | Each | 250 |
| 8 | Wooden, Plugs, clamps, bolts, nuts, link clips etc. | L.S. | | L.S. | 150 |
| | Total Cost of Material | | | | 2,042 |
| | 3% Contingencies on Materials | | | | 61 |
| | Labour & Transport | | | | 600 |
| | Service Tax at 14.5 % on L&T | | | | 87 |
| | 10% Estt. & General charges on Materials | | | | 204 |
| | **Total Cost in Rs.** | | | | 2,907 |
| | **Or Say** | | | | 2,907 |

**COST ESTIMATE FOR ERECTION OF 1 NO. LT ELECTRONIC TRIVECTOR METERS ON LV SIDE OF DTR**

| Sl. No. | Particulars | Qty. | Unit | Rate per (in Rs.) | Amount (in Rs.) |
|---|---|---|---|---|---|
| 1 | LT 3-Phase class 0.5S Accuracy CT Operated Energy Meter Housed in a box with 3 Nos. CTs | 1 | Each | 6,353.00 | 6,353.00 |
| 2 | 3.5 Core 95 LT XLPE Cable (for 10 meters) to LT side of DTR with cleat wiring. | LS | | | 3,512.79 |
| | **Total** | | | | **9,865.79** |
| | 3% Contingencies | | | | 295.97 |
| | Fixing of CT operated meter on LV side of Distribution transformers with box including cost of lugs, clamps, GI wire and transport from district store to site. | | | | 760.00 |
| | Service Tax at 14.5 % on L&T | | | | 110 |
| | 10% Estt. & Genl. Charges | | | | 986.58 |
| | **Total Cost in Rs.** | | | | **12,018.54** |
| | **Or Say** | | | | **12,019.00** |

**COST DATA FOR ERECTION OF 33/11 KV SUBSTATION WITH 2X8MVA POWER TRANSFORMERS AND NF = 6 NO. 11 KV FEEDERS (WITH OUT 11 KV 2 MVAR CAPACITORS BANK)**

Rs. in Lakhs

| Sl. No | | Qty. | Rate (Rs. in lakhs) | Unit | Amount (Rs. in lakhs) |
|---|---|---|---|---|---|
| 1 (a) | Lands and Rights | LS | As per local conditions | | 50.00 |
| (b) | Plantation of Trees | LS | | LS | 0.15 |
| 2 | Control Room and Consumer service centre (including furniture) | LS | | LS | 12.00 |
| 3 | Station Auxillaries | | | | |
| a) | Peripheral, Security Fencing, Approach road, retaing wall around switchward with gravel filling, gate and bore well | LS | | LS | 16.50 |
| b) | Yard lighting | LS | | LS | 0.80 |
| c) | Fire fighting Equipment | LS | | LS | 0.70 |
| d) | P&T Phone and wireless set | LS | | LS | 0.05 |
| 4 | Foundations for structures, PTRs & breakers | LS | | LS | 3.30 |
| 5 | Bus bars, Jumpers, Connectors claps etc. | LS | | LS | 1.32 |
| 6 | Control Cables | LS | | LS | 1.19 |
| 7 | Structural Steel | 13 | 0.420 | MT | 5.46 |
| 8 | Transformers | | | | |
| a) | 33/11kv **8 MVA** Power Transformer | 2 | 44.352 | Each | 88.70 |
| b) | 11kv / 433 v **25 kva** 3-ph Stn. Transformer (CSP copper) | 1 | 0.612 | Each | 0.61 |
| 9 | Circiut Breakres (including trivector meters) | | | | |
| a) | 33 KV Group control VCB with CTs and panel | 1 | 3.976 | Each | 3.98 |
| b) | 20 KA 11 kv feeder VCB including Control panel and CTs (NF=6) | 6 | 2.488 | Each | 14.93 |
| c) | 20 KA 11 kv LV VCB including Control panel and CTs | 2 | 3.205 | Each | 6.41 |
| 10 | Control Circiut Panels | | | | |
| a) | AC Supply Panel | 1 | 0.330 | Each | 0.33 |
| b) | Alaram Panel | 1 | 0.330 | Each | 0.33 |
| 11 | Instrumnet Transformers | | | | |
| a) | 33KV PT (single unit) | 3 | 0.179 | Each | 0.54 |
| b) | 11kv P.T (3 Phase) | 1 | 0.121 | Each | 0.12 |
| 12 | Lightning Arrestors | | | | |
| a) | 33KV 10KA | 6 | 0.036 | Each | 0.22 |
| b) | 11KV Line Type (NF=6) | 18 | 0.020 | Each | 0.36 |
| c) | 11KV Station Type 10 KA | 6 | 0.020 | Each | 0.12 |
| 13 | Isolating Switches | | | | |
| a) | 33KV 800A AB Switch (Double Breaker) | 3 | 0.290 | Each | 0.87 |
| b) | 11KV 800A AB Switch (Double Breaker) | 3 | 0.151 | Each | 0.45 |
| c) | 11KV 400A AB Switch (Double Breaker) | 12 | 0.105 | Each | 1.26 |
| d) | 11KV 200A AB Switch | 1 | 0.076 | Each | 0.08 |
| e) | 11KV HG fuse Switch | 3 | 0.018 | Each | 0.06 |
| f) | 33KV Horn Gap Fuse Set (1XNT) | 2 | 0.000 | Each | 0.00 |
| 14 | Data Acquisition equipment (SIM, modem, cabling etc) | | | LS | 0.45 |
| 15 | 220 Volts 80 AH SMF Battery Set including Battery Charger and DC DB | 1 | 2.95 | Each | 2.95 |
| 16 | Earthing of Power Transformer VCBs,AB Swicthes,Strucutres with 75x8mm GI Flat | | | LS | 1.98 |
| | **Sub Total** | | | | **216.21** |
| | | | | | |
| | 3% Contingencies on items 7 to 15 | | | | 3.85 |
| | 1% T&P Charges on items No. 7 to 15 | | | | 1.28 |
| | 10% Erection and transport and commissioning charges on items 7 to 15 | | | | 12.82 |
| | Service Tax at 14.5% on L&T | | | | 1.86 |
| | 10% Establishment and General Charges | | | | 21.62 |
| | **Grand Total** | | | | **257.64** |
| | | | Or Say | | **258.00** |

**COST DATA FOR ERECTION OF 33/11 KV SUBSTATION WITH 2X8MVA POWER TRANSFORMERS AND NF = 6 NO. 11 KV FEEDERS (WITH 11 KV 2 MVAR CAPACITORS BANK)**

Rs. in Lakhs

| Sl. No | Particulars | Qty. | Rate (Rs. in | Unit | Amount (Rs. in lakhs) |
|---|---|---|---|---|---|
| 1 (a) | Lands and Rights | LS | As per local conditions | | 50.00 |
| (b) | Plantation of Trees | LS | | LS | 0.15 |
| 2 | Control Room and Consumer service centre (including furniture) | LS | | LS | 12.00 |
| 3 | Station Auxillaries | | | | |
| a) | Peripheral, Security Fencing, Approach road, retaing wall around switchward with gravel filling, gate and bore well | LS | | LS | 16.50 |
| b) | Yard lighting | LS | | LS | 0.80 |
| c) | Fire fighting Equipment | LS | | LS | 0.70 |
| d) | P&T Phone and wireless set | LS | | LS | 0.05 |
| 4 | Foundations for structures, PTRs & breakers | LS | | LS | 3.30 |
| 5 | Bus bars, Jumpers, Connectors claps etc. | LS | | LS | 1.32 |
| 6 | Control Cables | LS | | LS | 1.19 |
| 7 | Structural Steel | 20 | 0.420 | MT | 8.40 |
| 8 | Transformers | | | | |
| a) | 33/11kv 8 MVA Power Transformer | 2 | 44.352 | Each | 88.70 |
| b) | 11kv / 433 v 25 kva 3-ph Stn. Transformer | 1 | 0.612 | Each | 0.61 |
| 9 | Circiut Breakres (including trivector meters) | | | | |
| a) | 33 KV Group control VCB with CTs and panel | 1 | 3.976 | Each | 3.98 |
| b) | 20 KA 11 kv feeder VCB including Control panel and CTs (NF=6) | 6 | 2.488 | Each | 14.93 |
| c) | 20 KA 11 kv LV VCB including Control panel and CTs | 2 | 3.205 | Each | 6.41 |
| 10 | Control Circiut Panels | | | | |
| a) | AC Supply Panel | 1 | 0.330 | Each | 0.33 |
| b) | Alaram Panel | 1 | 0.330 | Each | 0.33 |
| 11 | Instrumnet Transformers | | | | |
| a) | 33KV PT (single unit) | 3 | 0.179 | Each | 0.54 |
| b) | 11kv P.T (3 Phase) | 1 | 0.121 | Each | 0.12 |
| 12 | Lightning Arrestors | | | | |
| a) | 33KV 10KA | 6 | 0.036 | Each | 0.22 |
| b) | 11KV Line Type (NF=6) | 18 | 0.020 | Each | 0.36 |
| c) | 11KV Station Type 10 KA | 6 | 0.020 | Each | 0.12 |
| 13 | Isolating Switches (Double Breaker) | | | | |
| a) | 33KV 800A AB Switch (Double Breaker) | 3 | 0.290 | Each | 0.87 |
| b) | 11KV 800A AB Switch (Double Breaker) | 3 | 0.151 | Each | 0.45 |
| c) | 11KV 400A AB Switch (Double Breaker) | 12 | 0.105 | Each | 1.26 |
| d) | 11KV 200A AB Switch | 1 | 0.076 | Each | 0.08 |
| e) | 11KV HG fuse Switch | 3 | 0.018 | Each | 0.06 |
| f) | 33KV Horn Gap Fuse Set (1XNT) | 2 | 0.000 | Each | 0.00 |
| 14 | 2MVAR 11KV Capacitor Bank along with Associated Equipment (Type A) | 1 | 8.700 | Each | 8.70 |
| 15 | 220 Volts 80 AH Battery Set including Battery Charger and DC DB | 1 | 2.946 | Each | 2.95 |
| 16 | Earthing of Power Transformer VCBs,AB Swicthes,Strucutres with 75x8mm GI Flat | | | LS | 1.98 |
| | **Sub Total** | | | | **227.40** |
| | | | | | |
| | 3% Contingencies on items 7 to 15 | | | | 4.18 |
| | 1% T&P Charges on items No. 7 to 15 | | | | 1.39 |
| | 10% Erection and transport and commissioning charges on items 7 to 15 | | | | 13.94 |
| | Service Tax at 14.5% on L&T | | | | 2.02 |
| | 10% Establishment and General Charges | | | | 22.74 |
| | **Grand Total** | | | | **271.68** |
| | | | Or Say | | **272.00** |

**COST DATA FOR ERECTION OF 33/11KV INDOOR SUBSTATION WITH 2 Nos. 8MVA POWER TRANSFORMERS & 6 Nos. 11KV FEEDERS**

| Sl. No. | PARTICULARS | QTY | RATE | UNIT | AMOUNT Rs in Lakhs |
|---|---|---|---|---|---|
| **1 a)** | Lands and rights | Ls | As per local conditions | | 50.00 |
| **b)** | Plantation of Trees | Ls | 0.15 | LS | 0.15 |
| **2** | **Civil Works** | | | | |
| i | Construction of Control room | LS | 22.00 | LS | 22.00 |
| ii | Compound wall, Gate,levelling of site and Borewell | LS | 4.95 | LS | 4.95 |
| iii | special foundations | | | | |
| iv | Laying of Cable Trench | LS | 3.03 | LS | 3.03 |
| v | Electrification and sanitation arrangements | LS | 0.83 | LS | 0.83 |
| vi | Construction of Transformer plinth | LS | 0.83 | LS | 0.83 |
| **3** | **Station Auxillaries** | | | | 0.00 |
| a) | Yard lighting | Ls | 0.55 | LS | 0.55 |
| b) | Spreading of Metal | Ls | 0.11 | LS | 0.11 |
| c) | Telephone (P &T) and wireless set | Ls | 1.38 | LS | 1.38 |
| d) | Fire fighting Equipment, Miscellenous items like Rubber Mats, Earth rods, Helmets, Gloves, Furniture, T&P etc | Ls | 1.10 | LS | 1.10 |
| e) | Water supply arrangements | Ls | 0.55 | LS | 0.55 |
| **4** | Foundations for breakers etc. | Ls | 0.66 | LS | 0.66 |
| **5** | Bus bar arrangements | Ls | 2.75 | LS | 2.75 |
| **6** | Control cables | Ls | 1.10 | LS | 1.10 |
| **7** | **Power and Distribution Transformers** | | | | |
| a) | 33/11 KV, 8 MVA Power Transformers | 2 | 44.352 | E | 88.70 |
| b) | 25KVA 11/04KV Station Transformer | 1 | 0.612 | E | 0.61 |
| **8** | **Indoor switch gear & Control panels** | | | | |
| a) | 33 KV, 25 KVA, 1250 A, 8 Panels SF-6, GIS Switch gear consisting of the following | 1 | 150.75 | E | 150.75 |
| i | 1250 A Transformers control cubicals 2 Nos. | | | | |
| ii | 1250 - A Incoming feeder cubicals - 3 Nos. | | | | |
| iii | 1250 - A Bus coupler - 1 No. | | | | |
| b) | 11 KV, 20 KVA, 1250 A ,14 panels SF6 GIS switch gear consisting the following equipments | | | | |
| i | 1250 A Transformers control cubicals 2 Nos. | | | | |
| ii | 1250 - A feeder cubicals - 6 Nos. | | | | |
| iii | 1250 - A Bus coupler - 1 No. | | | | |
| iv | Bus transformers panel - 1 No. | | | | |
| v | Adopter for station transformer - 1 No. | | | | |
| **9** | **Alaram and Annunciation Panel** | 1 | 0.31 | E | 0.31 |
| 10 | AC Panel | 1 | 0.33 | E | 0.33 |
| 11 | 220 Volts, 200 AH, Battery with trickle charger | 1 | 2.95 | E | 2.95 |
| 12 | Data Acquisition equipment (SIM, modem, cabling etc) | | | LS | 0.45 |
| 13 | **Earthing Arrangements** | | | | |
| a) | MS Flat75x8 mm for providing earthing matting complete | 2 | 0.415 | MT | 0.58 |
| b) | MS Flat 50x6 mm for earthing the equipment | 2 | 0.415 | MT | 0.58 |
| c) | Earthing electrodes & GI pipes | LS | 0.90 | LS | 0.90 |
| **14** | RS Joist 175x85/150x150(Girder poles) for base of switch gear | 1.5 | 0.3990 | MT | 0.60 |
| | | | **Total** | | **336.73** |
| | 3% Contingencies on Items 7 To 14 | | | | 7.40 |
| | 10% Transport, Erection and Commissioning charges on items 7 To 14 | | | | 24.68 |
| | Service Tax at 14.5% on L&T | | | | 3.58 |
| | 10% Establishment and General Charges | | | | 33.67 |
| | **Grand Total** | | | | **406.07** |

**COST DATA FOR ERECTION OF 33/11 KV SUBSTATION WITH 9.1 Mtrs PSCC POLES, 2 X 5 MVA POWER TRANSFORMERS AND 5 NO. 11 KV FEEDERS (WITH 11 KV 2 MVAR CAPACITORS BANK)**

Rs. in Lakhs

| Sl. No | Particulars | Qty. | Rate (Rs. in lakhs) | Unit | Amount (Rs. in lakhs) |
|---|---|---|---|---|---|
| 1 (a | Lands and Rights | LS | As per local conditions | | 11.00 |
| (b) | Plantation of Trees | LS | | LS | 0.15 |
| 2 | Control Room and Consumer service centre (including furniture) | LS | | LS | 12.00 |
| 3 | Station Auxillaries | | | | |
| a) | Peripheral, Security Fencing, Approach road, retaing wall around switchward with gravel filling, gate and bore well | LS | | LS | 11.00 |
| b) | Yard lighting | LS | | LS | 0.80 |
| c) | Fire fighting Equipment | LS | | LS | 0.70 |
| d) | P&T Phone and wireless set | LS | | LS | 0.05 |
| 4 | Foundations for structures, PTRs & breakers | LS | | LS | 3.30 |
| 5 | Bus bars, Jumpers, Connectors claps etc. | LS | | LS | 1.32 |
| 6 | Control Cables | LS | | LS | 1.19 |
| 7 | Structural Steel | 4.5 | 0.420 | MT | 1.89 |
| 8 | 9.1 meters PSCC poles | 30 | 0.03 | Each | 1.04 |
| 9 | Transformers | | | | |
| a) | 33/11kv 5 MVA Power Transformer | 2 | 32.70 | Each | 65.40 |
| b) | 11kv / 433 v 16 kva Stn. Transformer | 1 | 0.655 | Each | 0.66 |
| 10 | Circiut Breakres (including trivector meters) | | | | |
| a) | 20 KA 11 kv feeder VCB including Control panel and CTs (NF=5) | 5 | 2.488 | Each | 12.44 |
| b) | 20 KA 11 kv LV VCB including Control panel and CTs | 2 | 3.205 | Each | 6.41 |
| 11 | Control Circiut Panels | | | | |
| a) | AC Supply Panel | 1 | 0.303 | Each | 0.30 |
| b) | Alaram Panel | 1 | 0.303 | Each | 0.30 |
| 12 | Instrumnet Transformers | | | | |
| a) | 11kv P.T (3 Phase) | 1 | 0.121 | Each | 0.12 |
| 13 | Lightning Arrestors | | | | |
| a) | 33KV 10KA | 6 | 0.036 | Each | 0.22 |
| b) | 11KV Line Type (NF=5) | 15 | 0.020 | Each | 0.30 |
| c) | 11KV Station Type 10 KA | 6 | 0.020 | Each | 0.12 |
| 14 | Isolating Switches | | | | |
| a) | 33KV 800A AB Switch (Double Break) | 3 | 0.290 | Each | 0.87 |
| b) | 11KV 800A AB Switch (NT X 1+1) (Double Break) | 3 | 0.151 | Each | 0.45 |
| c) | 11KV 400A AB Switch (NF X 2+2) (Double Break) | 12 | 0.105 | Each | 1.26 |
| d) | 33KV Horn Gap Fuse Set (1XNT) | 2 | 0.000 | Each | 0.00 |
| 15 | Data Acquisition equipment (SIM, modem, cabling etc) | | | LS | 0.40 |
| 16 | 24 Volts 40 AH Battery Set including Battery Charger | 7 | 0.172 | Each | 1.20 |
| 17 | 2MVAR 11KV Capacitor Bank along with Associated Equipment | 1 | 8.700 | Each | 8.70 |
| 18 | Earthing of Power Transformer VCBs,AB Swicthes,Strucutres with 75x8mm GI Flat | | | LS | 1.98 |
| | **Sub Total** | | | | **145.58** |
| | | | | | |
| | 3% Contingencies on items 7 to 17 | | | | 3.06 |
| | 1% T&P Charges on items No. 7 to 17 | | | | 1.02 |
| | Erection and transport and commissioning charges on items 7 to 17 at 10% | | | | 10.21 |
| | Service Tax at 14.5% on L&T | | | | 1.480 |
| | 10% Establishment and General Charges | | | | 14.56 |
| | **Total** | | | | **175.91** |
| | | | Or say | | **176.00** |

**Note** : NF = No. of 11 KV Feeders, The number of outgoing feeders at substation limited to the demand in MVA i.e. if substation demand is 5 MVA, the number of feeders should not exceed five.

In GHMC area include 33 KV group control VCB

**COST DATA FOR ERECTION OF 33/11 KV SUBSTATION WITH 9.1 Mtrs PSCC POLES, 2 X 5 MVA POWER TRANSFORMERS AND 5 NO. 11 KV FEEDERS (WITH OUT 11 KV 2 MVAR CAPACITORS BANK)**

Rs. in Lakhs

| Sl. No | Particulars | Qty. | Rate (Rs. in lakhs) | Unit | Amount (Rs. in lakhs) |
|---|---|---|---|---|---|
| 1 (a) | Lands and Rights | LS | As per local conditions | | 11.00 |
| (b) | Plantation of Trees | LS | | LS | 0.15 |
| 2 | Control Room and Consumer service centre (including furniture) | LS | | LS | 12.00 |
| 3 | Station Auxillaries | | | | |
| a) | Peripheral, Security Fencing, Approach road, retaing wall around switchward with gravel filling, gate and bore well | LS | | LS | 11.00 |
| b) | Yard lighting | LS | | LS | 0.80 |
| c) | Fire fighting Equipment | LS | | LS | 0.70 |
| d) | P&T Phone and wireless set | LS | | LS | 0.00 |
| 4 | Foundations for structures, PTRs & breakers | LS | | LS | 3.30 |
| 5 | Bus bars, Jumpers, Connectors claps etc. | LS | | LS | 1.32 |
| 6 | Control Cables | LS | | LS | 1.19 |
| 7 | Structural Steel | 6 | 0.420 | MT | 2.52 |
| 8 | 9.1 meters PSCC poles | 38 | 0.035 | Each | 1.32 |
| 9 | Transformers | | | | |
| a) | 33/11kv 5 MVA Power Transformer | 2 | 32.70 | Each | 65.40 |
| b) | 11kv / 433 v 16 kva Stn. Transformer | 1 | 0.655 | Each | 0.66 |
| 10 | Circiut Breakres (including trivector meters) | | | | |
| a) | 20 KA 11 kv feeder VCB including Control panel and CTs (NF=5) | 5 | 2.488 | Each | 12.44 |
| b) | 20 KA 11 kv LV VCB including Control panel and CTs | 2 | 2.249 | Each | 4.50 |
| 11 | Control Circiut Panels | | | | |
| a) | AC Supply Panel | 1 | 0.303 | Each | 0.30 |
| b) | Alaram Panel | 1 | 0.303 | Each | 0.30 |
| 12 | Instrumnet Transformers | | | | |
| a) | 11kv P.T (3 Phase) | 1 | 0.121 | Each | 0.12 |
| 13 | Lightning Arrestors | | | | |
| a) | 33KV 10KA | 6 | 0.036 | Each | 0.22 |
| b) | 11KV Line Type (NF=5) | 15 | 0.020 | Each | 0.30 |
| c) | 11KV Station Type 10 KA | 6 | 0.020 | Each | 0.12 |
| 14 | Isolating Switches | | | | |
| a) | 33KV 800A AB Switch (Double Breaker) | 3 | 0.290 | Each | 0.87 |
| b) | 11KV 800A AB Switch (NT X 1+1) (Double Breaker) | 3 | 0.151 | Each | 0.45 |
| c) | 11KV 400A AB Switch (NF X 2+2) (Double Breaker) | 12 | 0.105 | Each | 1.26 |
| d) | 33KV Horn Gap Fuse Set (1XNT) | 2 | 0.000 | Each | 0.00 |
| 15 | Data Acquisition equipment (SIM, modem, cabling etc) | | | LS | 0.40 |
| 16 | 24 Volts 40 AH Battery Set including Battery Charger | 7 | 0.172 | Each | 1.20 |
| 17 | Earthing of Power Transformer VCBs,AB Swicthes,Strucutres with 75x8mm GI Flat | | | LS | 1.80 |
| | **Sub Total** | | | | **135.64** |
| | | | | | |
| | 3% Contingencies on items 7 to 16 | | | | 2.77 |
| | 1% T&P Charges on items No. 7 to 16 | | | | 0.92 |
| | Erection and transport and commissioning charges on items 7 to 16 at 10% | | | | 9.24 |
| | Service Tax at 14.5% on L&T | | | | 1.340 |
| | 10% Establishment and General Charges | | | | 13.56 |
| | **Total** | | | | **163.48** |
| | | | Or say | | **163.48** |

**Note :** NF = No. of 11 KV Feeders, The number of outgoing feeders at substation limited to the demand in MVA i.e. if substation demand is 5 MVA, the number of feeders should not exceed five.

**COST DATA FOR ERECTION OF 33/11 KV SUBSTATION WITH PSCC POLES, 1 X 5 MVA POWER TRANSFORMERS and 3 NO. 11 KV FEEDERS WITH 11 KV 2 MVAR CAPACITORS BANK**

Rs. in Lakhs

| Sl. No | Particulars | Qty. | Rate (Rs. in lakhs) | Unit | Amount (Rs. in lakhs) |
|---|---|---|---|---|---|
| 1 (a) | Lands and Rights | LS | 11.00 | | 11.00 |
| (b) | Plantation of Trees | LS | | LS | 0.15 |
| 2 | Control Room and Consumer service centre (including furniture) | LS | | LS | 12.00 |
| 3 | Station Auxillaries | | | | |
| a) | Peripheral, Security Fencing, Approach road, retaing wall around switchward with gravel filling, gate and bore well | LS | | LS | 11.00 |
| b) | Yard lighting | | | | 0.80 |
| c) | Fire fighting Equipment | LS | | LS | 0.70 |
| d) | P&T Phone and wireless set | LS | | LS | 0.05 |
| 4 | Foundations for structures, PTRs & breakers | LS | | LS | 3.30 |
| 5 | Bus bars, Jumpers, Connectors claps etc. | LS | | LS | 1.32 |
| 6 | Control Cables | LS | | LS | 1.19 |
| 7 | Structural Steel | 5.5 | 0.420 | MT | 2.31 |
| 8 | 9.1 meters PSCC poles | 23 | 0.035 | Each | 0.80 |
| 9 | 8 meters PSCC poles | 8 | 0.016 | Each | 0.13 |
| 10 | Transformers | | | | |
| a) | 33/11kv 5 MVA Power Transformer | 1 | 32.70 | Each | 32.70 |
| b) | 11kv / 433 v 16 kva Stn. Transformer | 1 | 0.655 | Each | 0.66 |
| 11 | Circiut Breakres (including trivector meters) | | | | |
| a) | 20 KA 11 kv feeder VCB including Control panel and CTs (NF=3) | 3 | 2.488 | Each | 7.46 |
| b) | 20 KA 11 kv LV VCB including Control panel and CTs | 1 | 2.249 | Each | 2.25 |
| 12 | Control Circiut Panels | | | | |
| a) | AC Supply Panel | 1 | 0.303 | Each | 0.30 |
| b) | Alaram Panel | 1 | 0.303 | Each | 0.30 |
| 13 | Instrumnet Transformers | | | | |
| a) | 11kv P.T (3 Phase) | 1 | 0.121 | Each | 0.12 |
| 14 | Lightning Arrestors | | | | |
| a) | 33KV 10KA | 6 | 0.036 | Each | 0.22 |
| b) | 11KV Line Type (NF=3) | 9 | 0.020 | Each | 0.18 |
| c) | 11KV Station Type 10 KA | 3 | 0.020 | Each | 0.06 |
| 15 | Isolating Switches | | | | |
| a) | 33KV 800A AB Switch | 3 | 0.290 | Each | 0.87 |
| b) | 11KV 800A AB Switch (NT X 1+1) | 2 | 0.151 | Each | 0.30 |
| c) | 11KV 400A AB Switch (NF X 2+2) | 8 | 0.105 | Each | 0.84 |
| d) | 33KV Horn Gap Fuse Set (1XNT) | 1 | 0.000 | Each | 0.00 |
| 16 | Data Acquisition equipment (SIM, modem, cabling etc) | | | LS | 0.30 |
| 17 | 24 Volts 40 AH Battery Set including Battery Charger | 4 | 0.172 | Each | 0.69 |
| 18 | 2MVAR 11KV Capacitor Bank along with Associated Equipment | 1 | 8.700 | Each | 8.70 |
| 19 | Earthing of Power Transformer VCBs,AB Swicthes,Strucutres with 75x8mm GI Flat | | | LS | 1.80 |
| | **Sub Total** | | | | **102.50** |
| | | | | | |
| | 3% Contingencies on items 7 to 17 | | | | 1.78 |
| | 1% T&P Charges on items No. 7 to 17 | | | | 0.59 |
| | 10% Erection and transport and commissioning charges on items 7 to 17 | | | | 5.92 |
| | Service Tax at 14.5% on L&T | | | | 0.858 |
| | 10% Establishment and General Charges | | | | 10.25 |
| | **Total** | | | | **121.89** |
| | | | Or say | | **121.90** |

**Note :** NF = No. of 11 KV Feeders, The number of outgoing feeders at substation limited to the demand in MVA i.e. if substation demand is 5 MVA, the number of feeders should not exceed five.

**Cost data for erection of 11 KV Bay Extension in existing 33/11 KV sub-station (with RS Joist)**

| S. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 150X150 mm H type beam of 8.5 mts length (2 Nos. RS Joist) | 0.5984 | 42,000.00 | MT | 25133.00 |
| 2 | 100x50 mm Channel | 0.1659 | 34,650.00 | MT | 5748.00 |
| 3 | MS flat 75x8 mm | 0.05 | 41,475.00 | MT | 2074.00 |
| 4 | AB switch 400 Amps conventional type | 1 | 10,500.00 | Each | 10500.00 |
| 5 | 200 sqmm ACSR Conductor (Panther-conductor) | 0.02 | 143,869.12 | KM | 2598.00 |
| 6 | Disc type Insulator with metal parts | 18 | 269 | Each | 4842.00 |
| 7 | Earthing arrangement (20 mts length with 75x8 MS flat (20x4.7=94) | 94 | 41.48 | KG | 3899.00 |
| 8 | Pad clamps, bolts & nuts & Miscellaneous items | LS | | | 1650.00 |
| | | | | | |
| | **Sub-Total** | | | | **56444.00** |
| | | | | | |
| | 3% Contingencies | | | | 1693.32 |
| | Labour & Transport | | | | 14413.30 |
| | Service Tax at 14.5% on L&T | | | | 2089.929 |
| | 10% Establishment & General charges | | | | 5644.400 |
| | **Grand Total** | | | | **80284.95** |
| | | | | | |
| | | | **or say** | | **80285.00** |

**Cost data for erection of 11 KV Bay Extension in existing 33/11 KV sub-station (with 9.1 mts PSCC poles)**

| S. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 9.1 mts. PSCC poles | 2 | 3,478 | Each | 6957.00 |
| 2 | 100x50 mm Channel | 0.1659 | 34,650.00 | MT | 5748.00 |
| 3 | MS flat 75x8 mm | 0.05 | 41,475.00 | MT | 2074.00 |
| 4 | AB switch 400 Amps conventional type | 1 | 10,500.00 | Each | 10500.00 |
| 5 | 200 sqmm ACSR Conductor (Panther conductor) | 0.02 | 143,869.12 | KM | 2598.00 |
| 6 | Disc type Insulator with metal parts | 18 | 269 | Each | 4842.00 |
| 7 | Earthing arrangement (20 mts length with 75x8 MS flat (20x4.7=94) | 94 | 41.48 | KG | 3899.00 |
| 8 | Pad clamps, bolts & nuts & Miscellaneous items | LS | | | 1650.00 |
| | | | | | |
| | **Sub-Total** | | | | **38268.00** |
| | | | | | |
| | 3% Contingencies | | | | 1148.04 |
| | Labour & Transport | | | | 14413.30 |
| | Service Tax at 14.5% on L&T | | | | 2089.929 |
| | 10% Establishment & General charges | | | | 3826.800 |
| | **Grand Total** | | | | **59746.07** |
| | | | | | |
| | | | **or say** | | **59746.00** |

# Cost Data for 33 KV Bay Extension in 33/11 KV substation

| Sl.No | Description of Material | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|
| 1 | 150 x 150 RSJ pole (8m) | 0.6 | MT | 42,000.00 | 25200 |
| 2 | 100 x 50 mm MS channel | 0.27 | MT | 34,650.00 | 9356 |
| 3 | 75 x 8mm flat for clamps & earthing | 0.2 | MT | 41,475.00 | 8295 |
| 4 | 200 sqmm Panther conductor | 0.02 | KM | 143,869.12 | 2877.3824 |
| 5 | Strain Insulator set with metal parts<br>(each set consists 3 Nos 11 KV strain insulators) | 6 | Set | 706 | 4234 |
| 6 | Erection of 33 KV AB switch (800 Amps, Conventional) | 1 | Each | 28,999.00 | 28999 |
| 7 | Miscelleneous items like fabrication of channels & pad clamps etc. | | LS | | 2750 |
| | **Sub-Total** | | | | **81711** |
| | 3% Contingencies | | | | 2451.34 |
| | 3% S&H charges | | | | 2451.34 |
| | Labour & Transport | | | | 13985.40 |
| | Service Tax at 14.5% on L&T | | | | 2027.883 |
| | 10% Estt & General charges on material | | | | 8171.13 |
| | | | **Total** | | **110798.42** |
| | | | **Or Say Rs** | | **110800.00** |

## Cost-Data for Extention of 33KV Bay at 132/33KV Sub-station

| Sl.No. | Description | Qty | Rate | Per | Amount |
|---|---|---|---|---|---|
| 1 | Galvanised steel such as M.S.angles, flats, channels for TC & TD towers. (Master Plan pg 41) | 5.00 | 57487 | MT | 287435 |
| 2 | Spacer clamps for 33KV bus (SMR 40012, MP pg no.17) | 9 | 508 | Each | 4572 |
| 3 | Spacer clamp with T off zebra for one feeder | 3 | 788 | Each | 2364 |
| 4 | 33 KV Polymer String Insulator (B&S) | 8 | 299 | Each | 2390 |
| 5 | Tension hardware for twin zebra ( SMR40016) | 6 | 2,512 | Each | 15072 |
| 6 | Zebra condutor | 0.150 | 143869 | KM | 21580 |
| 7 | 33KV AB Switch 800 A | 1 | 28999 | Each | 28999 |
| 8 | Twin Zebra connector | 12 | 600 | Each | 7200 |
| 9 | T Clamps | 12 | 500 | Each | 6000 |
| 10 | MS.Flat 100x16 | 0.63 | 46904 | MT | 29550 |
| 11 | MS.Flat 50X8 | 0.62 | 51817 | MT | 32127 |
| 12 | GI Flat 100X16 | 0.151 | 63235 | MT | 9548 |
| 13 | GI Flat 50X8 | 0.155 | 63478 | MT | 9839 |
| 14 | Civil works for erection of towers in sub-station yard and other miscellaneous items. | | | LS | 100000 |
| | **Sub-Total** | | | | **556676** |
| | 3% S&H charges on Material | | | | 13700 |
| | 3% Contingencies on Material | | | | 13700 |
| | Labour & Transport | | | | 112121 |
| | Service Tax at 14.5% on L&T | | | | 16257.545 |
| | 10% Estt. & Gen. Chargtes | | | | 55668 |
| | | | | **Gross Total** | **768123** |
| | | | | **Or Say in Rs.** | **768123** |

## Cost Data for erection of 11 KV breaker in sub-station

| Sl.No | Description of work | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|
| 1 | 11 KV VCB along with all Accessories Including CTs | 1 | Each | 248764 | 242909.44 |
| 2 | 4x2.5 sqmm Control cable | 0.05 | KM | 65500 | 3275 |
| 3 | Earthing arrangements | LS | | | 1650 |
| 4 | Miscellenous items like conductor and clamps etc | LS | | | 1650 |
| | **Sub-Total** | | | | **249484** |
| | 3% Contingencies | | | | 7485 |
| | 3% S&H charges | | | | 7485 |
| | Labour & Transport | | | | 27349 |
| | Service Tax at 14.5% on L&T | | | | 3965.594 |
| | 10% Estt & General charges | | | | 24948 |
| | | | **Total** | | **320716** |
| | | | **Or Say Rs** | | **320716** |

**Cost-Data for erection of 33 KV VCB and Twin feeder Control Pannel at 132/33KV Sub-stations**

| S.No. | Description of work | Qty | Rate | Per | Amont |
|---|---|---|---|---|---|
| 1 | 33 KV VCB with relay& CTs (400-200-100/1-1-1A) | 1 | 397,638.09 | Each | 397638 |
| 2 | LT PVC Copper Control Cable 10 C x2.5 Sq.mm | 0.75 | 141,500.00 | KM | 106125 |
| 3 | LT PVC Copper Control Cable 4 C x2.5 Sq.mm | 0.75 | 65,500.00 | KM | 49125 |
| 4 | 33KV LAS line type | 3 | 3,640.87 | Each | 10923 |
| 5 | 33 KV Twin feeder control panel | 1 | 374,650.47 | No | 374650.47 |
| 6 | Miscellenous items | | | LS | 1100 |

| | | |
|---|---|---|
| **Sub-Total** | | **939561** |
| 3% S&H charges | | 28187 |
| 3% Contingencies on material | | 28187 |
| Labour & Transport | | 77606 |
| Service Tax at 14.5% on L&T | | 11252.916 |
| 10% Estt. & General Charges | | 93956 |
| | **Gross Total** | **1178750** |
| | **Or Say Rs.** | **1178750** |

## Cost data for erection of 2 MVAR Capacitor Bank

| S. No. | Particulars | Qty. | Rate in Rs. | Per Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 2 MVAR 11KV Capacitor Bank along with associated Equipment (Capactors, Structure and VCB ) (Type A) | 1 | 870,000.00 | Each | 870000 |
| 2 | 24 volts 40AH Battery Set including Battery Charger | 1 | 17,150.00 | Each | 17150 |
| 3 | M.S.Flat 50x6mm | 0.36 | 41,475.00 | MT | 14931 |
| 4 | Panther Conductor | 0.05 | 143,869.12 | KM | 6494 |
| 5 | 4 Core 2.5 Sqmm PVC Copper Control Cable | 0.05 | 65,500.00 | KM | 3275 |
| 6 | 10 Core 2.5 Sqmm PVC Copper Control Cable | 0.1 | 141,500.00 | KM | 14150 |
| 7 | 2 Core 2.5 Sqmm PVC Copper Control Cable | 0.06 | 36,900.00 | KM | 2214 |
| 8 | 11KV Post type insulators | 3 | 252.00 | Each | 756 |
| 9 | Cost of CI pipe of 100 mm dia, 8 mm thick and 2.75 Mts long | 2 | 3328 | Each | 6656 |
| 10 | 11KV H.G. Fuse Set with Insulators | 1 | 1,842.75 | Each | 1843 |
| 11 | 11KV LA's Station type | 3 | 2,016.70 | Each | 6050 |
| 12 | M.S. Channel 100x50mm | 0.24 | 34,650.00 | MT | 8316 |
| 13 | Miscellaneous items | LS | | | 550.00 |

| | | |
|---|---|---|
| **Sub-Total** | | **952385.40** |
| 3% Contingencies | | 28571.56 |
| Labour ,Transport & Commsioning charges | | 68164.07 |
| Service Tax at 14.5% on L&T | | 9883.791 |
| 10% Establishment & General charges | | 95238.54 |
| | **Grand Total** | **1154243.37** |
| | **or say** | **1154243.00** |

**Cost Data for Enhancement of capacity of existing Power Transformer from 5 MVA to 8 MVA.**

| Sl.No. | Particulars | Qty | Rate in Rs. | Unit | Amount in Rs. |
|---|---|---|---|---|---|
| 1 | 33/11 KV 8 MVA Power Transformer | 1 | 4435200.00 | Each | 4435200 |
| 2 | Erection of 33 KV VCB with directional relay | 1 | 397,638.09 | Each | 397638 |
| 3 | Miscellneous Items | | | LS | 50000 |
| | | | **Sub-Total** | | 4882838 |
| | 3 % Storage & Handling charges | | | | 146485 |
| | 3% Contingencies on material | | | | 146485 |
| | Labour & Transport | | | | 120000 |
| | Service Tax at 14.5% on L&T | | | | 17400.000 |
| | 10% Estt & General charges on material | | | | 488284 |
| | Add: Dismantling charges | | | | 50000 |
| | | | **Grand Total** | | 5851492 |
| | | Or say | | | 5851492 |
| | Less Credit | | | | |
| | Less Credit has to be valued as per the respective PTR book value in SAP, if data is not available in SAP, the following value may be considered. | | | | |
| 1 | 33/11KV 5 MVA Power Transformer | 1 | 3263180.76 | Each | 3263181 |
| | Depreciation 40% (Variable as per life served) | | 1305272.00 | | 1305272 |
| | | | | Net | 1957909 |
| | Original erection charges (SWR 21275 MP) | | | | 32000 |
| | Original dismantling charges | | | | 16000 |
| | 10% Estt. & General charges | | | | 195791 |
| | | | Total | | 2201700 |
| | | | Or Say | Rs. | 2201700 |
| | Net Amount = Grand total - Less credit | | 5851492 | 2201700 | 3649792 |

# Cost data for laying of 3 core 300 Sq.mm 11 KV UG Cable

| Sl. No. | Description of the material | Qty | Rate | Unit | Amount |
|---|---|---|---|---|---|
| 1 | Laying 11 KV 3 core 300Sq.mm UG Cable at depth of 1.20mtrs along CC road | 1.03 | 1064010.25 | KM | 1095930.56 |
| 2 | Erection of 3 way RMU (SF6) outdoor type | 1 | 462883.95 | Each | 462,883.95 |
| 3 | Straight through joints for 3 core 11KV 300Sq.mm UG Cable (SWR 10384) | 1 | 3300 | Each | 3300.00 |
| 4 | End termination suitable for 3 core 300 Sq.mm UG cable (SWR 10389) | 4 | 2200 | Each | 8800.00 |
| 5 | Earthing of Cable with GI pipe of 2mt length | 3 | 666.00 | Nos | 1998.00 |

| | |
|---|---|
| **Sub-Total** | **1572912.51** |
| 3 % storage & handling charges | 32877.92 |
| 3 % contingencies | 32877.92 |
| Labour and Transport | 446026.90 |
| Service Tax at 14.5% on L&T | 64673.901 |
| 10 % Estt & General charges | 157291.25 |
| **Grand Total** | **2306660.39** |
| **Or Say Rs** | **2306660** |

# Cost data for laying of 3 core 400Sq.mm 33KV UG Cable

| Sl. No. | Description of the material | Qty | Rate | Unit | Amount |
|---|---|---|---|---|---|
| 1 | Laying 33 KV 3 core 400Sq.mm UG Cable at depth of 1.20mtrs along CC road | 1.03 | 2167700.00 | KM | 2232731.00 |
| 2 | Straight through joints and end terminators suitable for 3 core 33KV 400Sq.mm UG Cable and Hume pipes and GI pipe (15% of cost cable) | 1 | 24700 | Each | 24700.00 |
| 3 | End termination suitable for 400 Sq.mm (outdoor type) | 2 | 14716 | Nos | 29432.00 |
| 4 | Earthing of Cable with GI pipe of 2mt length (SMR 11480 RZ PG.NO.119) | 2 | 666.00 | Nos | 1332.00 |

| | | |
|---|---|---|
| **Sub-Total** | | **2288195.00** |
| 3 % Storage & handling charges | | 66981.93 |
| 3 % Contingencies | | 66981.93 |
| Labour and Transport | | 516118.90 |
| Service Tax at 14.5% on L&T | | 74837.241 |
| 10 % Estt & General charges | | 228819.50 |
| | **Grand Total** | **3241934.50** |
| | **Or Say Rs** | **3241935** |

**Erection of Non-Galvanised M+3 Tower as per ASCI Standard**

| S. No. | Particulars | Qty. | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 1 | Supply of Non-Galvanised M+3 type tower as per Specification. (MP SSR) | 1.34 | MT | 46904.00 | 62851.36 |
| 2 | Supply of Suitable Hot dip Galvanised, Zinc coated Nuts and bolts with suitable plain and spring washers. (MP SSR) | 158 | KG | 87.00 | 13746.00 |
| 3 | Provision of wastage of Tower parts @ 10% | 0.134 | MT | 46904.00 | 6285.14 |
| 4 | Fabrication of tower Parts as per Specification | 1.34 | MT | 5500.00 | 7370.00 |
| 5 | Excavation of pit including dewatering, planking,showring and shuttering(where ever necessary) and leveling in all types of soils such as BC, red earth,hard gravel etc.,(size 2.6x2.6x3.3 mtr i.e 22.308 cum (MP SSR) | 4.752 | CUM | 264.00 | 1254.53 |
| 6 | Setting of stubs in position for laying of foundation of towers with 1:2:4 cc mix using 40 mm HBG metal including cost of all concreting materials, form boxes and cement and curing for 14 days (40 mm HBG metal for pyramid portion and 20 mm HBG metal for chimney portion) i.e 4.434 cu.mts (MP SSR) | 4.752 | CUM | 5963.00 | 28336.18 |
| 7 | Erection of tower parts completely as per specifications including erection of insulators with all accessories, jumpering,transport of meterial and bolts and nuts etc., | 1.34 | MT | 6500.00 | 8710.00 |
| 8 | Tack welding of total tower nuts and bolts | 1 | Job | 1500.00 | 1500.00 |
| 9 | Pipe earthing of towers with 40mm dia GI pipe, including cost of pipe, bentonite powder and running of GI flat etc., (MP SSR) | 2 | Each | 1479.50 | 2959.00 |
| 10 | Transport of Material to site including loading and unloading | 1.498 | MT | 2000.00 | 2996.00 |

| S. No. | Particulars | Qty. | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 11 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Material for First coat of 1st Grade Aluminium Paint, paint, brushes etc. | 1.34 | MT | 1884.00 | 2524.56 |
| b | Labour charges for painting including scratching and cleaning of tower | 1.34 | MT | 734.00 | 983.56 |
| c | Material for Second coat of 1st Grade Aluminium Paint, brushes, etc,. | 1.34 | MT | 1116.00 | 1495.44 |
| d | Labour charges for painting including scratching and cleaning of tower | 1.34 | MT | 416.00 | 557.44 |
| | | | | **Total:** | **141569.20** |

(*) Note:-The requirement of 2nd coat is to be justified by the concerned Divisional Engineer /Executive Engineer before execution of this work

**Tower details**

| | | |
|---|---|---|
| 1 | Weight of M type tower | 1.133 MT |
| 2 | Weight of 1 No. extension of 3 Mts | 0.364 MT |
| 3 | Weight of M+3 tower | 1.497 |
| 4 | Weight of M+6 tower | 1.861 |
| 5 | Weight of M+9 | 2.225 |
| 6 | Weight of each arm | 0.091 MT |
| **stubs** | 110X110X8 = 4.56 mts | |
| | 100X100X8=1.998 mts | |
| | 80X80X8 =1.898 mtrs | |
| | 65X65X6 = 2.274 mts | |
| | 45X45X5=2.761 mtrs | |
| | Total height 13.5 mts | |
| | Depth of tower below ground level : 3.2 mts | |
| | Height of tower above ground level : 10.3 mts. | |

**Erection of Non-Galvanised L+3 Tower as per ASCI Standard**

| S. No. | Particulars | Qty. | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 1 | Supply of L+3 type tower as per Specification. (MP SSR) | 1.05 | MT | 46904.00 | 49249.20 |
| 2 | Supply of Suitable Hot dip Galvanised, Zinc coated Nuts and bolts with suitable plain and spring washers. (MP SSR) | 168 | KG | 87.00 | 14616.00 |
| 3 | Provision of wastage of Tower parts @ 10% | 0.105 | MT | 46904.00 | 4924.92 |
| 4 | Fabrication of tower Parts as per Specification | 1.05 | MT | 5500.00 | 5775.00 |
| 5 | Excavation of pit including dewatering, planking,showring and shuttering(where ever necessary) and leveling in all types of soils such as BC, red earth,hard gravel etc.,(size 2.3x2.3x3.0 mtr i.e 15.87 cum (MP SSR) | 15.87 | CUM | 264.00 | 4189.68 |
| 6 | Setting of stubs in position for laying of foundation of towers with 1:2:4 cc mix using 40 mm HBG metal including cost of all concreting materials, form boxes and cement and curing for 14 days (40 mm HBG metal for pyramid portion and 20 mm HBG metal for chimney portion) i.e 2.573 cu.mts (MP SSR) | 2.57 | CUM | 5963.00 | 15324.91 |
| 7 | Erection of tower parts completely as per specifications including erection of insulators with all accessories, jumpering,transport of meterial and bolts and nuts etc., | 1.05 | MT | 6500.00 | 6825.00 |
| 8 | Tack welding of total tower nuts and bolts | 1 | Job | 1500.00 | 1500.00 |
| 9 | Pipe earthing of towers with 40mm dia GI pipe, including cost of pipe, bentonite powder and running of GI flat etc., (MP SSR) | 2 | Each | 1479.50 | 2959.00 |
| 10 | Transport of Material to site including loading and unloading | 1.22 | MT | 2000.00 | 2440.00 |

| S. No. | Particulars | Qty. | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 11 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Material for First coat of 1st Grade Aluminium Paint, paint, brushes etc. | 1.05 | MT | 1884.00 | 1978.20 |
| b | Labour charges for painting including scratching and cleaning of tower | 1.05 | MT | 734.00 | 770.70 |
| c | Material for Second coat of 1st Grade Aluminium Paint, brushes, etc,. | 1.05 | MT | 1116.00 | 1171.80 |
| d | Labour charges for painting including scratching and cleaning of tower | 1.05 | MT | 416.00 | 436.80 |
| | | | | **Total:** | **112161.21** |

(*) Note:-The requirement of 2nd coat is to be justified by the concerned Divisional Engineer /Executive Engineer before execution of this work

**Tower details**

| | | |
|---|---|---|
| 1 | Weight of L type tower including nuts&bolts | 0.9565 MT |
| 2 | Weight of 1 No. extension of 3 Mts | 0.26325 MT |
| 3 | Weight of L+3 tower | 1.219 |
| 4 | Weight of L+6 tower | 1.483 |
| 5 | Weight of L+9 | 1.746 |
| 6 | Weight of each arm | 0.084 MT |

**stubs** 90X90X8 = 4.256 mts

80X80X8=1.998 mts

65X65X6 =2.898 mtrs

50X50X5 = 1.274 mts

45X45X5=2.726 mtrs

Total height 13.15 mts

Depth of tower below ground level : 2.9 mts

Height of tower above ground level : 10.25mts.

**Erection of Non-Galvanised K+3 Tower as per ASCI Standard**

| S. No. | Particulars | Qty | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 1 | Supply of Non Galvanised K+3 type tower as per Specification. (MP SSR) | 0.75 | MT | 46904.00 | 35178.00 |
| 2 | Supply of Suitable Hot dip Galvanised, Zinc coated Nuts and bolts with suitable plain and spring washers.(MP SSR) | 118.27 | KG | 87.00 | 10289.49 |
| 3 | Provision of wastage of Tower parts @ 10% (MP SSR) | 0.075 | MT | 46904.00 | 3517.80 |
| 4 | Fabrication of tower Parts as per Specification | 0.75 | MT | 5500.00 | 4125.00 |
| 5 | Excavation of pit including dewatering, planking,showring and shuttering(where ever necessary) and leveling in all types of soils such as BC, red earth,hard gravel etc.,(size 1.8x1.8x2.5 mtr i.e 8.1 cum (MP SSR) | 8.1 | CUM | 264.00 | 2138.40 |
| 6 | Setting of stubs in position for laying of foundation of towers with 1:2:4 cc mix using 40 mm HBG metal including cost of all concreting materials and cement, form boxes and curing for 14 days (40 mm HBG metal for pyramid portion and 20 mm HBG metal for chimney portion) i.e 1.636 cu.mts (MP SSR) | 1.636 | CUM | 5963.00 | 9755.47 |
| 7 | Erection of tower parts completely as per specification including erection of insulators with all accessories, jumpering and bolts and nuts etc., | 0.75 | MT | 6500.00 | 4875.00 |
| 8 | Tack welding of total tower nuts and bolts | 1 | Job | 1500.00 | 1500.00 |
| 9 | Pipe earthing of towers with 40mm dia GI pipe, including cost of pipe, bentonite powder and running of GI flat etc., (MP SSR) | 2 | Each | 1479.50 | 2959.00 |
| 10 | Transport of Material to site including loading and unloading | 0.87 | MT | 2000.00 | 1740.00 |

| S. No. | Particulars | Qty | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 11 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Material for First coat of 1st Grade Aluminium Paint, paint, brushes etc. | 0.75 | MT | 1884.00 | 1413.00 |
| b | Labour charges for painting including scratching and cleaning of tower | 0.75 | MT | 734.00 | 550.50 |
| c | Material for Second coat of 1st Grade Aluminium Paint, brushes, etc,. | 0.75 | MT | 1116.00 | 837.00 |
| d | Labour charges for painting including scratching and cleaning of tower | 0.75 | MT | 416.00 | 312.00 |
| | | | | **Total:** | **79190.66** |

(*) Note:-The requirement of 2nd coat is to be justified by the concerned Divisional Engineer /Executive Engineer before execution of this work

**Tower details**

| | | |
|---|---|---|
| 1 | Weight of K type tower including nuts&bolts | 0.705 MT |
| 2 | Weight of 1 No. extension of 3 Mts | 0.163 MT |
| 3 | Weight of K+3 tower | 0.867 |
| 4 | Weight of K+6 tower | 1.03 |
| 5 | Weight of K+9 | 1.193 |
| 6 | Weight of each arm | 0.103 MT |
| **stubs** | 75X75X6 = 3.76 mts | |
| | 65X65X6=1.054 mts | |
| | 50X50X5 =1.103 mtrs | |
| | 45X45X5 = 3.883 mts | |
| | 45X45X5=4.817 mtrs | |
| | Total height 14.6 mts | |
| | Depth of tower below ground level : 2.4 mts | |
| | Height of tower above ground level : 12.2 mts. | |

**DATA-VIII**

**Extension of 3mtrs for K+3 Tower as per ASCI Standard**

| S. No | Description | Qty | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| | **Material** | | | | |
| 1 | Supply of Non Galvanised K+3 type tower as per Specification. (MP SSR) | 0.14 | MT | 46904.00 | 6474.36 |
| 2 | Supply of Suitable Hot dip Galvanised, Zinc coated Nuts and bolts with suitable plain and spring washers. (MP SSR) | 24.96 | KG | 87.00 | 2171.90 |
| 3 | Provision of wastage of Tower parts @ 10% (MP SSR) | 0.01 | MT | 46904.00 | 647.44 |
| 4 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Material for First coat of 1st Grade Aluminium Paint, paint, brushes etc. | 0.14 | MT | 1884.00 | 260.06 |
| b | Material for Second coat of 1st Grade Aluminium Paint, brushes, etc,. | 0.14 | MT | 1116.00 | 154.05 |
| | | | | **Total:** | **9707.80** |
| | **Labour** | | | | |
| 1 | Fabrication of tower Parts as per Specification | 0.14 | MT | 5500.00 | 759.19 |
| 2 | Erection of tower parts completely as per specification including erection of insulators with all accessories, jumpering and bolts and nuts etc., | 0.14 | MT | 6500.00 | 897.22 |
| 3 | Transport of Material to site including loading and unloading | 0.16 | MT | 2000.00 | 326.00 |

| S. No | Description | Qty | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 4 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Labour charges for painting including scratching and cleaning of tower | 0.14 | MT | 734.00 | 101.32 |
| b | Labour charges for painting including scratching and cleaning of tower | 0.14 | MT | 416.00 | 57.42 |
| | | | | **Total:** | **2141.15** |

(*) Note:-The requirement of 2nd coat is to be justified by the concerned Divisional Engineer /Executive Engineer before execution of this work

**Tower details**

| | | |
|---|---|---|
| 1 | Weight of K type tower including nuts&bolts | 0.705 MT |
| 2 | Weight of 1 No. extension of 3 Mts | 0.163 MT |
| 3 | Weight of K+3 tower | 0.867 |
| 4 | Weight of K+6 tower | 1.03 |
| 5 | Weight of K+9 | 1.193 |
| 6 | Weight of each arm | 0.103 MT |

**stubs** 75X75X6 = 3.76 mts

65X65X6=1.054 mts

50X50X5 =1.103 mtrs

45X45X5 = 3.883 mts

45X45X5=4.817 mtrs

Total height 14.6 mts

Depth of tower below ground level : 2.4 mts

Height of tower above ground level : 12.2 mts.

**DATA-IX**

**Extension of 3mtrs for L+3 Tower as per ASCI Standard**

| S. No | Description | Qty. | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| | **Material** | | | | |
| 1 | Supply of L+3 type tower as per Specification.(MP SSR) | 0.24 | MT | 46904.00 | 11231.02 |
| 2 | Supply of Suitable Hot dip Galvanised, Zinc coated Nuts and bolts with suitable plain and spring washers. (MP SSR) | 23.81 | KG | 87.00 | 2071.21 |
| 3 | Provision of wastage of Tower parts @ 10% (MP SSR) | 0.02 | MT | 46904.00 | 1123.10 |
| 11 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Material for First coat of 1st Grade Aluminium Paint, paint, brushes etc. | 0.24 | MT | 1884.00 | 451.12 |
| b | Material for Second coat of 1st Grade Aluminium Paint, brushes, etc,. | 0.24 | MT | 1116.00 | 267.22 |
| | | | | **Total:** | **15143.67** |
| | **Labour** | | | | |
| 1 | Fabrication of tower Parts as per Specification | 0.24 | MT | 5500.00 | 1316.96 |
| 2 | Erection of tower parts completely as per specifications including erection of insulators with all accessories, jumpering,transport of meterial and bolts and nuts etc., | 0.24 | MT | 6500.00 | 1556.41 |
| 3 | Transport of Material to site including loading and unloading | 0.26 | MT | 2000.00 | 526.51 |

| S. No | Description | Qty. | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 4 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Labour charges for painting including scratching and cleaning of tower | 0.24 | MT | 734.00 | 175.75 |
| b | Labour charges for painting including scratching and cleaning of tower | 0.24 | MT | 416.00 | 99.61 |
| | | | | **Total:** | **3675.24** |

(*) Note:-The requirement of 2nd coat is to be justified by the concerned Divisional Engineer /Executive Engineer before execution of this work

**Tower details**

| | | |
|---|---|---|
| 1 | Weight of L type tower including nuts&bolts | 0.9565 MT |
| 2 | Weight of 1 No. extension of 3 Mts | 0.26325 MT |
| 3 | Weight of L+3 tower | 1.219 |
| 4 | Weight of L+6 tower | 1.483 |
| 5 | Weight of L+9 | 1.746 |
| 6 | Weight of each arm | 0.084 MT |
| **stubs** | 90X90X8 = 4.256 mts | |
| | 80X80X8=1.998 mts | |
| | 65X65X6 =2.898 mtrs | |
| | 50X50X5 = 1.274 mts | |
| | 45X45X5=2.726 mtrs | |
| | Total height 13.15 mts | |
| | Depth of tower below ground level : 2.9 mts | |
| | Height of tower above ground level : 10.25mts. | |

**DATA-X**

**Extension of 3mtrs for M+3 Tower as per ASCI Standard**

| S. No | Description | Qty. | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| | **Material** | | | | |
| 1 | Supply of Non-Galvanised M+3 type tower as per Specification. (MP SSR) | 0.33 | MT | 46904.00 | 15668.98 |
| 2 | Supply of Suitable Hot dip Galvanised, Zinc coated Nuts and bolts with suitable plain and spring washers. (MP SSR) | 30.23 | KG | 87.00 | 2629.75 |
| 3 | Provision of wastage of Tower parts @ 10% (MP SSR) | 0.03 | MT | 46904.00 | 1566.90 |
| 4 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Material for First coat of 1st Grade Aluminium Paint, paint, brushes etc. | 0.33 | MT | 1884.00 | 629.38 |
| b | Material for Second coat of 1st Grade Aluminium Paint, brushes, etc,. | 0.33 | MT | 1116.00 | 372.82 |
| | | | | **Total:** | **20867.83** |
| | **Labour** | | | | |
| 1 | Fabrication of tower Parts as per Specification | 0.33 | MT | 5500.00 | 1837.36 |
| 2 | Erection of tower parts completely as per specifications including erection of insulators with all accessories, jumpering,transport of meterial and bolts and nuts etc., | 0.33 | MT | 6500.00 | 2171.42 |
| 3 | Transport of Material to site including loading and unloading | 0.36 | MT | 2000.00 | 728.58 |

| S. No | Description | Qty. | Per Unit | Rate | Amount |
|---|---|---|---|---|---|
| 4 | Painting of sub-station structures with two coats of Aluminium paint using Aluminium paint 1st grade containing 3.6 kg of Aluminium paste for 18 litres of thinner 1st coat is to be applied before erection of tower and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete. | | | | |
| a | Labour charges for painting including scratching and cleaning of tower | 0.33 | MT | 734.00 | 245.20 |
| b | Labour charges for painting including scratching and cleaning of tower | 0.33 | MT | 416.00 | 138.97 |
| | | | | **Total:** | **5121.54** |

(*) Note:-The requirement of 2nd coat is to be justified by the concerned Divisional Engineer /Executive Engineer before execution of this work

**Tower details**

| | | |
|---|---|---|
| 1 | Weight of M type tower | 1.133 MT |
| 2 | Weight of 1 No. extension of 3 Mts | 0.364 MT |
| 3 | Weight of M+3 tower | 1.497 |
| 4 | Weight of M+6 tower | 1.861 |
| 5 | Weight of M+9 | 2.225 |
| 6 | Weight of each arm | 0.091 MT |

**stubs** 110X110X8 = 4.56 mts

100X100X8=1.998 mts

80X80X8 =1.898 mtrs

65X65X6 = 2.274 mts

45X45X5=2.761 mtrs

Total height 13.5 mts

Depth of tower below ground level : 3.2 mts

Height of tower above ground level : 10.3 mts.

## Cost Data for Erection of 5MVA Additional Power Transformer with 33 KV Bay Extension in 33/11 KV substation

| Sl.No | Description of Material | Qty | Unit | Rate | Amount |
|---|---|---|---|---|---|
| 1 | 150 x 150 RSJ pole (8m) | 0.6 | MT | 42,000.00 | 25200 |
| 2 | 100 x 50 mm MS channel | 0.27 | MT | 34,650.00 | 9356 |
| 3 | 75 x 8mm flat for clamps & earthing | 0.4 | MT | 41,475.00 | 16590 |
| 4 | 200 sqmm Panther conductor | 0.02 | KM | 143,869.12 | 2877.3824 |
| 5 | Strain Insulator set with metal parts<br>(each set consists 3 Nos 11 KV strain insulators) | 6 | Set | 269 | 1614 |
| 5 | Erection of 33 KV AB swithch | 1 | Each | 28,999.00 | 28999 |
| 6 | 5 MVA Power Transformer | 1 | Each | 3270000 | 3270000 |
| 7 | Foundation of Power Transformer | 1 | LS | 50000 | 50000 |
| 8 | Miscelleneous items like fabrication of channels & pad clamps etc. | | LS | | 5000 |
| | **Sub-Total** | | | | **3409635.882** |
| | 3% Contingencies | | | | 102289.08 |
| | 3% S&H charges | | | | 102289.08 |
| | Labour & Transport | | | | 249363.40 |
| | Service Tax at 14.5% on L&T | | | | 36157.693 |
| | 10% Estt & General charges on material | | | | 340963.59 |
| | | | **Total** | | **4240698.72** |
| | | | **Or Say Rs** | | **4240700.00** |

## REC- CONSTRUCTION STANDARD NOS. OTHER THAN THE ITEMS INCLUDED IN THE 33 KV 11 KV & LT LINES ERECTION AND CENTRALISED MATERIAL

| S. No. | Particulars | REC Construction Standard No./ Specification No. | Remarks/ Notes |
|---|---|---|---|
| 1 | 1.53 Mts. Cross arm (Channel) | M-1/1981 | 33 KV line |
| 2 | Top clamp with cleat | M-4/1984 | 33 KV line |
| 3 | Back clamp | K-1/1972 | 33 KV line & 11 KV line |
| 4 | Base concreting | K-2/1972 (R-1987) | 33 KV line & 11 KV line |
| 5 | Stay sets complete with concreting | G-1/1972 | 33 KV line & 11 KV line |
| 6 | Coil earthing | J-1/1972 | 33 KV line & 11 KV line |
| 7 | Pipe earthing | J-2/1972 | 33 KV line & 11 KV line |
| 8 | Concreting of poles | K-1/1972 | All lines |
| 9 | 8 M PSCC poles | 15/1979 | 11 KV line |
| 10 | 1.07 M Cross arm (Channel) | A-6/1972 | 11 KV line |
| 11 | Top clamp with cleat | A-7/1972 | 11 KV line |
| 12 | Bracing set with double cross arm | A-12/1972 | H.T. line |
| 13 | Guy grip dead end | G-1/1972 & SP.No.25/1983 | H.T. line |
| 14 | C.I. Knob | 31/1983 | L.T. lines |
| 15 | L.T. conductor dead end | G-2/1984 | L.T. lines |
| 16 | Guy grip dead end | G-2/1984 | L.T. lines |
| 17 | L.T. Spares | 29/1983 (R-1987) | L.T. lines |
| 18 | Spool for shackle insulator tieing | D-6/1984 | L.T. lines |
| 19 | D.P. Structure for distribution substation | F-1/1981 (R-1993) | L.T. lines |
| 20 | HT and LT conductor dead end fittings | Sp. No. 25/1983 | All lines |
| 21 | Side tie for pin insulator tieing | Sp. No. 25/1983 | All lines |
| 22 | Fibre Reinforced Plastic Cross Arms | 40/1987 | |