

Item Number (upto 200 characters)	Item Description	Quantity (only figures)	UNIT (upto 50 characters)	Tender Rate ( Upto 2 Decimals )	Amount ( Upto 2 Decimals )
1	<p>Providing, erecting, testing &amp; commissioning approved make oil immersed ONAN cooled, double wound, core type indoor / outdoor copper wound 11KV/ 433V step down transformer of following capacities operating on 3 phase, 50 Hz 4 wire &amp; neutral earthed system continuously rated for a full temperature rise in oil not exceeding 45 Deg.C.at maximum ambient temp. of 50 Deg. C. complete with necessary radiator first filling of new transformer oil &amp; standard fitting as below complying with IS 1180( Part 1 ):2014 standards with energy efficiency level 2 Off load tap changing range steps +2.5% to -5% on H.V for variation should be provided. The H.V. shall be connected Delta &amp; Secondary with star connection. The transformer should have cable-end boxes on H.T. side suitable for up to 3 core 150 sq.mm. XLPE cable &amp; on L.T. side suitable for bus duct or cables as per requirement complete with test certificates from manufacturers 1. Oil conservator with filling Hole &amp; Cap - One No. 2. Thermometer pocket with 6" dial type thermometer switch alarm &amp; trip contacts- Two nos. 3. Silica-gel breather with charge- One No. 4. Plain oil level gauge - One No. 5. Drain / Sampling / Filter valve- One No. 6. Top Filter Valve - One No. 7. Explosion vent with Diaphragm - One No. 8. Rating &amp; Diagram plate - One No. 9. Additional neutral bushing for earthing - One No. 10. Bi directional Roller - Four Nos. 11. Earthing terminals - Two Nos. 12. Lifting lugs - Two Nos. 13. Air release plug. - One No. 14. Double float buchholz relay with Alarm and trip contacts. 15. Control cable as required from Transformer to VCB Panel is to be provided with necessary connection to VCB relays for protection. as per IS 1180 level-2 (e) 1000 KVA Max. allowable loses at 50 % of rated load is 2.79 KW and at full load is 7.77 KW Cat.III</p>	2.00	Each	1899315.00	3798630.00
2	<p>Providing and erecting sandwiched type bus duct having following specification : Sandwich type busbar for use as Feeder Busbar for interconnection between separate electrical equipment/ load centers, and for use as Plug in busbar risers. The busbar shall be suitable for operation in a 690V / 1000 V system with frequency of 50 Hz .System can be either earthed or unearthed. Impulse voltage should be 12 KV. Standards: The busbar shall be designed and manufactured in accordance with the following international tandards for busbar trunking. -IS 8623/ 1993 Part I &amp; II ; Particular requirements of busbar trunking System -IEC 61439 Part I &amp; VI ; Particular requirements of busbar trunking System -IEC- 60529 : Degree of protection TESTING The busbars shall be type tested at a reputable national / International test laboratory (ASTA or CPRI) for short circuit withstand. The test shall be for a minimum duration of one second. • Degree of ingress protection (IP rating) shall also be tested at any reputed independent laboratory. This test shall be for IP 55 for Indoor and IP 65 for Outdoor application. • Short circuit and Degree of protection type test reports will be submitted for vThe busbars shall be of high conductivity Copper of 99.9% pure ETP grade and high conductivity Aluminium of 99.59% pure 19501 grade. Where as earth conductor is required, it shall be separate external earth conductor, of high conductivity aluminium. Cross section of Earth Conductor shall be as per IEC 60439. It should be possible to provide a 200% Neutral where specified. Phase cross over box should have busbars crossing over each other not cables. The busbars shall be individually insulated with 2 layers of insulating film. Layers of POLYESTER material class 'F', 155°C. The housing shall be made of 1.6 mm electrogalvanised sheet steel, with an epoxy powder coated paint finish of RAL 7032 grade. Alternatively Aluminum casing of 2.5mm may also be provided. The housings shall be profiled, to provide higher strength and efficient heat dissipation. The width of the housings shall be same for all ratings of busbars, in order to provide interchangeability of tap off boxes. The joints between sections shall be made so as to provide flexibility during installation and expansion / contraction of busbar during operation. The joints shall be of the single bolt type. The joint construction must have the following features. a) Thermal expansion of Busbars at joint of at least 4 mm per joint. b) The joint insulation must be of one piece moulded design and not have any cut edges which can absorb moisture. c) Joint assembly shall be removable as eparate sub-assembly so that it can be inserted or removed without disturbing the adjacent sections. d) The joint system must be designed in a way that the installer cannot insert the busduct length too far and damage the bolt insulator. e) The busbars ends shall not have any holes or slots at the joints – the electrical continuity shall be through pressure plates, achieving a high area of joint cross section and expansion capability. Tap of Units a) Plug in boxes will be draw out type, contacts shall be silver plated and spring loaded. b) The front operating handle will be interlocked with the plug-in boxes cover so that MCCB can be operated only with suitable cover in close position. c) The door shall be provided with the door knobs. d) When the MCCB is in 'ON' position, even with the door knobs unlocked, the operator should not be able to remove the box or open the tap off location cover. e) During insertion, the earth conductor shall make contact first before the phase conductors. This should follow the sequence of first in last out concept. f) When the box is open the live conductors shall be safe guarded by a transparent insulator plate which allows for visible inspection but does not allow touching of the live conductors. g) The tap off unit arrangement must achieve IP 54 without requiring any additional sealing at site. h) The tap off boxes will be suitable for accommodating MCCBs or other accessories, as required. The tap off units should allow the flexibility of accommodating different, reputed MCCB makes, to be mutually agreed depending on the tender requirements. (A) (B) Copper Bus (g) (c)1000 Amp. capacity</p>	42.00	Meter	27099.00	1138158.00

3	Providing and erecting ISI Marked 3core 120 Sq.mm XLPE insulated 11 KV armoured cable Aluminium conductor IS-7098 to be laid on wall with clamps or in provided cable trench / pipe approved manner as directed.	270.00	Meter	1527.00	412290.00
4	Providing and erecting cable end termination kit, heat shrinkable Push on type Densons/ Raychem/ Elastimold make suitable for 11 KV XLPE cable 3core 95 & 120 Sq.mm (A) Outdoor type	5.00	Each	14467.00	72335.00
5	(B) Indoor type	5.00	Each	7925.00	39625.00
6	Supplying and erecting high tension cable end box outdoor type suitable. for 11 KV 240Sq.mm 3core H.T. cable complete with gland bushing and jointing material.	2.00	Each	4154.00	8308.00
7	Supplying and erecting Right angle / straight boot made from Synthetic rubber and suitable for covering of cable up to 400 sq mm & should be installed directly on DIN Bushing on HT VCB or Transformer without bending of boot.	15.00	Each	1527.00	22905.00
8	SITC of Vertical Air Termination Solid aluminium with Base- 10 mm dia and 1000 mm long. Air Termination Base tested for conditioning, Ageing Test & Lightning impulse current withstand test: 100 kA of 10/350µs waveform in an accredited Third party laboratory as per 6.3 & 6.4 of IEC 62561-1 2017 protocol with MAST 34mm dia 3000 mm long- Cold Galvanized	6.00	Each	9223.00	55338.00
9	SITC of Galvanized Steel Flat 25x6 mm thickness from earth electrode directly in ground as required. Zinc coating: 500 g/m square (Approx:70 micron coating) tested and used exclusively for lightning protection earthing system and ring equipotential bonding.	30.00	R.Meter	153.00	4590.00
10	SITC of 14.2 mm dia 3 mtr long Earth electrode of High tensile steel electrode with 250 micron copper bonding & 1 bag of Carbon fill Based environment friendly backfill tested as per IEC 62561-7 in NABL accredited Laboratory and suitable stainless Steel double sided clamp. Eco Friendly rust proof heavy duty weather proof Polyethylene Earth Pit Chamber with following dimensions :254 mm dia (top), 330 mm dia (bottom) & 260 mm (height).	6.00	Per Set	5933.00	35598.00
11	Supplying & erecting in earthpit of minimum bore dia. 225mm size approved make Safe Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free hot dipped G.I.Pipes having Outer pipe dia of 80 mm having 80-200 Micron galvanising, Inner pipe dia of 40 mm having 200-250 Micron galvanising, connection terminal dia of 14 mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications with chamber and heavy duty cover (A)(approved make OEM has to submit test certificate including value of earth resistance of installation duly stamped and signed by agency and officer Incharge has to ensure the value of earthing resistane mentioned in test Certificate) & having back filling compound of (B) Inner chemical (CCM Compound)- Resistivity:- 0.2 ohm / meter testing as per IEC 62561-2017, Voltage drop:- < 1 volt at no load & dry form, Sulphar content:- <2%(C) Back fill Compound :- Earthing compound should be capable to retain moisture for long time Necessary test report must be submitted by Agency. [C] For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like Automation, SCADA)i.e. independent Earthing located in other than normal soil i.e. Soft Rock, Marshy Soil etc.. -Length of Pipe : 3 Mtrs. -Back filling Compound :2 nos Bags of 25 Kg.	18.00	Each	10489.00	188802.00

12	Providing one bag of 25 Kg. Additional Back Filling Compound (BFC) suitable for safe earthing device.	22.50	Each	700.00	15750.00
13	Providing and erecting required size Copper strip for earthing of H.T. OCB / ACB/ Transformer, LT panel board, Motors etc. using copper clamp.	24.66	Kg	787.00	19407.42
14	Design, Supplying, installing, testing of factory fabricated ready made Three phase APFC Panel Cubical Panel fabrication should be type tested as per IEC 61921, 61439:1&2 Capacitor Duty Contactor for switching as per following Steps Incomer Switch of MCCB type Icu=Ics=50KA at 400/440 Volts, with OC, SC, internal earth fault protection Incomer Switch of MCCB type Icu=Ics=50KA at 400/440 Volts, with OC, SC, internal earth fault protection,Copper tinned insulated Busbar,Cubical panel should be indoor type with IP 43 and IK 10,Metalized polypropylene film tye3-phase 550Volt Capacitor,De tuning Reactor for each capacitor,Panel having Short Circuit and Overload protection,Each step Capacitor having suitable MCB with Sc, OL, internal earth fault relay,Each stage having Stage Contactor (Capacitor load rating),PF regulator master controller having suitable steps with LCD display, Rs 485 Communication port, Indication LED Lamps for main incomer and ON-OFF for each capacitor bank,MS Chanel for Floor mounting, Cable entry as per site situation,Cooling fans for panel (g)250KVAR	2.00	Each	711867.00	1423734.00
15	Approved make standard Draw out type 4 Pole Air circuit breaker. Having 50 kA breaking capacity with ICU=ICS=ICW (1 sec)Vsr=690 v, Ui=1kv ,impulse voltage=12 kv with following type of relay and accessories. (2) Add Rs. 30500.00 in above said item for Electrically Draw out type (EDO) type in place of manual draw out (MDO) (B) with microprocessor Release with over load, short circuit, earth fault protection and metering display in modular design with LED display and Test Trip button facility, CTs and auxiliary contacts, of following current ratings. (iv) 1600Amp 50 kA Cat III (2) Add Rs. 30500.00 in above said item for Electrically Draw out type (EDO) type in place of manual draw out (MDO)	3.00	Each	171433.00	514299.00
16	(vii) 3200 Amp 75kA Cat III	1.00	Each	341476.00	341476.00
17	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cables. (F) 3 1/2 core 120 Sq. mm ( 70 Sq. mm 1/2 core)	120.00	Meter	6363.00	763560.00
18	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (E) 3 & 1/2 core 120 Sq. mm	16.00	Each	139.00	2224.00
19	Solder less crimping type Copper lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (H) 120 Sq.mm.	64.00	Each	56.00	3584.00
20	(F) 70 Sq.mm.	16.00	Each	27.00	432.00
21	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 50 KA and above at 415 V having Normal current rating 400A. with variable Thermal & magnetic release suitable to work on A.C.supply 50 c/s. With all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	20.00	Each	24979.00	499580.00

22	(B)Extended operating rotary handle with pad lock with three position trip,off,on suitable for 400A to 630 A panel mounting cat-III	20.00	Each	1298.00	25960.00
23	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.( fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.)(B) Flood Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection. (vii) above 200 to 250 watts	12.00	Each	10711.00	128532.00
24	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/ aluminium die cast powder coated and high U.V. & corrosion resistance with diffuser with company mark/name 160V to 270V, Power Factor more than 0.95, THD < 15%, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt ,LED LED driver efficiency > 85 % ( fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Tube Light with integral driver (v) 36-40 Watts, Surge-2 KV, IP-20, conventional 4 feet	30.00	Each	530.00	15900.00
25	Making trench in soft soil of suitable width of 90 cm deep for laying cable or locating the fault all over the run and back filling the same and making the surface as normal ground.	30.00	R.Meter	55.00	1650.00
26	Providing and erecting iron clad cable route marker duly marked with ELE.CABLE of size 23 cm.X 12 cm. Flushed with ground in cement foundation as directed by Engineer in charge.	20.00	Each	238.00	4760.00
27	Providing & laying approved make ISI marked HDPE 6Kg / cm2 (Class-3) as per IS:4984:1995 PE-80 to be erected at road crossing on or floor as directed for laying of cable. The pipes as following size of dia & weight per 6 mtr. (F) 110 mm inner Dia.	220.00	R.Meter	725.00	159500.00
28	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cable. (C) 3 core 6 Sq. mm	70.00	R.Meter	392.00	27440.00
29	Supplying and Installation of Approved make Integrated LED Solar light fitting comprising in built Poly crystalline solar panel,Lithium-ion 3.7 V battery, LED CRI Greater than 70, CCT-6500K, 80 lum/watt all housed in Extruded Aluminium body,with motion sensor & auto on -off device erected on existing pole with following specifications.	4.00	Each	22137.00	88548.00

30	providing and erecting Cast iron earth plate size 45 X 45 X 0.35 cms. buried in specially prepared 2.5 Mtr. Deep earth Pit complete with necessary G.I. strip in G.I. pipe 2 Mtr. long with coupling and G.I. plug for earthing of switch gear, conduit run or power plug etc	18.00	Each	848.00	15264.00
	<b>TOTAL AMOUNT :</b>				<b>9828179.42</b>