

RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED

" G " SCHEDULE FOR CONSTRUCTION WORK OF CAPACITOR BANK at 132KV GSS, JOJAWAR

S.N	DESCRIPTION	UNIT	SAP Code	Rate	Qty	Amount
1	2	3		4	5	6
1	EARTH MESH WORK					
A-1	Laying of earth mesh with 25mm / 28mm dia M.S. Rod at a depth of 0.80 metre from top level of foundations, including excavation of trench of required depth and backfilling of the same, transportation of M.S. Rods from site store to locations, welding of M.S. Rod to M.S. Rod along the length, at crossings and with earth electrodes as per drawing, application of bitumen compound and covering with bitumen impregnated tape on all welded joints, for the type of soil prevalent at 0.80 metre below top level of foundations (M.S. Rod of above sizes & M.S. Flat as required shall be made available by RVPN)					
	(a) In case electricity is made available by RVPN without charges					
	i) Normal dry soil	Metres	PRJ1238	24.0	100	2400.00
	ii) Hard soil / Murram / Black cotton soil	Metres	PRJ1239	26.0	100	2600.00
	iii) Soft rock	Metres	PRJ1240	35.0	25	875.00
B-1	Laying of earthing risers of 50x6mm / 50x10mm / 50x12mm size M.S. Flat at a depth of 0.80 metre from top level of foundations, including excavation of trench of required depth and backfilling of the same, transportation of M.S. Flat from site store to locations, preparation of risers, bending as per requirement (after heating if necessary), fixing on and welding / bolting to equipment / structure and peaks of structures, laying in the trench, welding to the earth mesh of M.S. Rod as per drawing, including welding of extra length of M.S. Flat if required, application of bitumen compound and covering with bitumen impregnated tape on all welded joints, painting of all surfaces of risers above ground level with red oxide and green paint, for the type of soil prevalent at 0.80 metre below top level of foundations (M.S. Rod of above sizes & M.S. Flat as required shall be made available by RVPN)					
	(a) In case electricity is made available by RVPN without charges					
	i) Normal dry soil	Metres	PRJ1258	27.0	100	2700.00
	ii) Hard soil / Murram / Black cotton soil	Metres	PRJ1259	28.0	75	2100.00
	iii) Soft rock	Metres	PRJ1260	38.0	25	950.00
C-1	Placing / Driving of earth electrode of 25 / 28mm dia M.S. Rod of length 3.30 meters (approx) to a depth of 3.80 meters from the top level of foundations, including excavation of pit as required and back filling of the same, transportation of M.S. Rod from site store to locations, cutting of M.S. Rod to desired length, preparation of one end as spike if necessary, welding of earth electrode to earth mesh of M.S. Rod as per drawing, application of bitumen compound and covering with bitumen impregnated tape on all welded joints, for the type of soil prevalent at 3.80 metres below top level of foundations (M.S. Rod of above sizes & M.S. Flat as required shall be made available by RVPN)					
	(a) In case electricity is made available by RVPN without charges					
	i) Normal dry soil	Nos	PRJ1278	200.0	6	1200.00
	ii) Hard soil / Murram / Black cotton soil	Nos	PRJ1279	333.0	6	1998.00
	iii) Soft rock	Nos	PRJ1280	532.0	3	1596.00
2	ERECTION OF SUB-STATION STEEL STRUCTURES columns, beams, lighting mast and equipment structures (excluding Circuit Breakers and Capacitor Banks) of all types including transportation of structure members, nuts & bolts, washers, etc. from site store to locations, their assembly, placing on foundation, fixing of template, with foundation bolts as required, levelling and preparing for grouting as required, but excluding grouting, erection after grouting and tightening & punching of nuts & bolts. (Maximum height of structures up to 20 meters)	M.T	PRJ1306	2321.0	7	16247
3	BUS-BAR WORK					
A:	STRINGING of 220 KV, 132 KV, 33 KV & 11KV Bus Bar of ACSR conductor, including transportation of conductor, disc insulators and tension hardware from site stores to location, laying and cutting required length of conductor, cleaning and assembly of disc insulators as required along with fitting of bolted type or compression type tension hardware as made available (compression machine shall be provided by RVPN on rent free basis), making up at one end, stringing of conductors between the beams with specified sag and tension, also equalizing sag and fitting spacers and spacer T-clamps for twin conductor, for three phases of conductors in each bus-section					
	i) Single ACSR Panther	Section	PRJ1307	1165.0	1	1165.00

N	DESCRIPTION	UNIT	SAP Code	Rate	Qty	Amount
1	2	3		4	5	6
B.	JUMPERS of ACSR conductor (3 nos Y- type) between bus to equipment, or between equipment to equipment or between bus to bus, including transportation of conductor, disc insulators and hardware from site stores to locations, cleaning and assembly of disc insulators as required along with fitting of suspension hardware and erection as required, cutting required length of conductor, making connections, fixing of spacers & spacer T-clamps as required, lightening of clamps / connectors, dressing, etc , for three phases					
	i) Single ACSR Zebra / Panther conductor	Set	PRJ1312	333 0	20	6660 00
4	STRINGING of Earth wire (size 7 / 3 15 mm or 7 / 4 00 mm), including transportation of earthwire, tension hardware, etc . from site store to locations, laying and cutting required length of earthwire, fitting of bolted type or compression type hardware as made available (compression machine shall be provided by RVPN on rent free basis), making up at one end, stringing of earthwire between structure peaks with specified sag and tension, jumpering and connecting earth bonds, for single earthwire	Each	PRJ1316	292 0	3	876 00
5	ERECTION OF SUB-STATION EQUIPMENTS					
A	Erection of Current Transformer / Potential Transformer / Capacitive voltage Transformer / Series Reactor / Residual Voltage Transformer / Neutral Current Transformer with clamps & connectors, on already erected steel structure including transportation from site store to locations, fabrication of base frame, fixing of terminal connectors, tightening of nuts & bolts etc, complete in all respects.					
	iii) 33 KV or 11 KV CT / PT	Nos.	PR1321	532 0	3	1596 00
B	Erection of Isolators on already erected steel structure including transportation of base frame, P I 's, contacts, mechanism box, clamps & connectors, etc from site store to locations, minor fabrication as required, and fixing of terminal connectors, etc , adjustment/ alignment of isolator and its earth blade, if provided, for their smooth operation and final adjustment if required after jumpering					
	iii) 33 KV & 11 KV					
	a) Without Earth Blade	Nos.	PR1333	916 0	1	916 00
	b) With Single Earth Blade	Nos.	PRJ1334	1364 0	2	2728 00
C	Erection of 2x33 KV or 2x11KV Capacitor Bank, with Series Reactors & Residual Voltage Transformers/Neutral Current Transformers, including transportation of equipment, structure Site store to location, assembly of structure, their placing on Foundation leveling and preparing for grouting as required, but Excluding grouting, assembly of capacitor bank cells on frames As required & their connections as per manufacturer's drawings, Fixing of terminal connectors etc	Each	PR1337	18466 0	1	18466 00
D	Erection of 33 KV or 11 KV Circuit Breakers including transportation of equipment, structure members, nuts & bolts, clamps & connectors, etc from site store to location, assembly of support structure, their placing on foundation, levelling and preparing for grouting as required, but excluding grouting assembly / placing of poles, mechanism box, etc on support structure as per manufacturer's drawings, fitting of terminal connectors, etc but excluding commissioning of CB					
	i) 33 KV or 11KV Outdoor Type (VCB / SF 6)	Nos.	PRJ1340	7404 0	1	7404 00
E	Erection of Post Insulators on already erected structures including transportation of P I 's, nuts & bolts, clamps & connectors, etc from site store to locations, fabrication of base frame & assembly if required, fixing of clamps, etc					
	iii) 33 KV or 11 KV	Nos.	PRJ1344	75 0	6	450 00
6	Erection of Control & Relay Panels complete in all respects including transportation from site store to control room, placing on foundation / cable trench as per layout, interconnection between Control & Relay panels and with existing panels, fixing of side / top covers and doors, earthing to existing earth strip in control room, connection of bus wiring to existing panel and between control and relay panel, as required					
	iii) Simplex Panel, DC Panel, RTCC Panel, PLCC Panel, etc	Nos.	PRJ1353	632 0	1	632 00
7	Erection of Marshalling Kiosk/ Line Matching Unit (LMU) / Line Matching & Distribution Unit (LMDU) complete in all respect including transportation from site store to location, placing on foundation / cable trench as per layout, preparing for grouting of foundation bolts but excluding grouting, etc					
	ii) 33 KV or 11 KV Marshalling Kiosk	Nos.	PRJ1356	192 0	1	192 00

N	DESCRIPTION	UNIT	SAP Code	Rate	Qty	Amount
I	2	3		4	5	6
8	LAYING AND TERMINATION OF CABLES					
A	Control Cables (i) Laying of P.V.C. insulated unarmoured / armoured control cables of 1.1 KV grade with copper conductor in cable trenches as per specification as required, including transportation of cable drums from site store to locations, laying in cable trenches, cutting to required length, placing them on cable racks / cable trays / cable batten & dressing, including removing and re-fixing trench covers as required, making necessary connections, testing, cable marking on both the terminating ends, etc., as required for all sizes from 2c x 2.5 sq. mm. to 20c x 2.5 sq. mm., 4c x 4 sq. mm. and 4c x 6 sq. mm.					
	a) Unarmoured control cable	Metres	PRJ1381	5.0	1800	9000.00
B	(ii) Fixing of control cables in position with single compression nickel plated brass cable glands conforming to IS-12043 & having three metal washers and one rubber ring, including preparation of cable and drilling of corresponding holes in gland plates, etc. as required, & including cost of cable glands for each cable gland of size:					
	a) 19 mm unarmoured control cable	Nos	PRJ1383	44.0	20	880.00
	c) 23 mm unarmoured control cable	Nos	PRJ1385	67.0	8	536.00
	e) 32 mm unarmoured control cable	Nos	PRJ1387	96.0	2	192.00
C	(iii) Termination of wires of cables with copper conductor using copper terminal ends (pin or ring type as required of Dowell's or equivalent make as approved by the Engineer - in - Charge) duly crimped with crimping tool, including making wire ends ready for crimping, ferruling & dressing of wires, etc., as required, including cost of terminal ends for all wires, for each cable at both ends for cables of the following sizes:					
	a) 2c x 2.5 sq. mm.	Each	PRJ1389	21.0	4	84.00
	b) 3c x 2.5 sq. mm.	Each	PRJ1390	32.0	4	128.00
	c) 4c x 2.5 sq. mm.	Each	PRJ1391	43.0	6	258.00
	f) 12c x 2.5 sq. mm.	Each	PRJ1394	128.0	2	256.00
	h) 18c x 2.5 sq. mm.	Each	PRJ1396	191.0	2	382.00
	In case all the wires of any cable are not got terminated, then a deduction at the rate of Rs 4.00 shall be made for each end of the wires not terminated.					
	i) 4c x 4.0 sq. mm.	Each	PRJ1397	57.0	12	684.00
	In case all the wires of any cable are not got terminated, then a deduction at the rate of Rs 5.00 shall be made for each end of the wires not terminated.					
					TOTAL	86151.00

Note:- (1) "G"- Schedule prepared as per sanctioned estimate
(2) "G"- Schedule prepared as per BSR 01/04/2017


Assistant Engineer
(T&C) RVPN, PALI