

BIIL OF QUANTITY-01

NAME OF THE WORK		Loading ,shifting, installation with repair and maintenance of one old switchgear of type OCB of voltage grade 3.3KVfrom MRSS to Kargali OCP, to make them in operation in respect of Kargali OCP, B&K Area.			
<i>Sl. No.</i>	<i>Description</i>	<i>Qty</i>	<i>Unit</i>	<i>Rate/Unit in Rs.</i>	<i>Amount in Rs.</i>
1	Loading of Switchgear type OCB of 3.3KV from MRSS site (required resources for loading shall be provided by the agency) including movement of OCB in MRSS yard.	1	No.		
2	Transportation of switchgear from MRSS to Gandhinagar substation/site (Truck/ vehicle to be provided by the agency)	1	No.		
3	Unloading of switchgear at Gandhinagar Substation/ site as per instruction of Engineer In-Charge	1	No.		
4	Replacement of tripping coil 110V of standard make	1	No.		
5	Replacement of closing coil 110V of standard make	1	No.		
6	Replacement of electronic/ numerical type Earth Leakage relay operating at 110V of JVS	1	Set		
7	Supply & providing of Electronic type microprocessor for based O/C & E/F relay JVS	1	Set		
8	Supply of push button of suitable size (red/ green)	2	No.		
9	Supply of rotary switch for phase changeover/ Ammeter selector switch (1 pole and 3 way with OFF)	1	No.		
10	Replacement of moving contact of suitable type as per sample	2	No.		
11	Replacement of fixed contact of suitable type as per sample	1	No.		
12	Replacement of Ampere meter of suitable range as per sample size	1	No.		
13	Replacement of Voltmeter of suitable range as per sample size	1	No.		
14	Replacement of Potential Transformer (PT) of suitable type of minimum 100VA 3.3KV/110V with PT Fuse	1	No.		
15	Replacement of suitable type Current Transformer (CT) of	3	No.		

	ratio 100/50/5-5A				
16	Supply of ferrules, lugs and other accessories for connections	1	Set		
17	Replacement of primary Bushing insulator of 3.3 KV grade	3	No.		
18	Complete fixing of operating mechanism including washer, pin and other accessories	1	No.		
19	Labour charges including overhauling, fitting and fixing charges @10% of estimated price of Sl. No. 4 to 18	1	Job		
20	Complete overhauling, cleaning and painting of switchgear with standard paint	1	Job		
21	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. All kinds of soil	6	cum		
22	Supplying and filling in plinth with Jamuna sand under floors, including watering, ramming, consolidating and dressing complete.	2	cum		
23	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	2	cum		
24	12 mm cement plaster finished with a floating coat of neat cement of mix : 1:4 (1 cement: 4 fine sand)	10	sqm		
25	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete. 40 mm thick with 20 mm nominal size stone aggregate	10	sqm		
	GST@18%				
	Total inclusive of GST				

BIIL OF QUANTITY-02

NAME OF THE WORK		Repair maintenance, replacement, erection of damaged pole and conductor ect in different colonies like Rajendra colony, sweeper patti, uppera dhawra, field quarry , banta file , maharani mandir chadra pool etc in respect of Kargali OCP, B&K Area.			
Sl. No.	Description	Qty	Unit	Rate/Unit in Rs.	Amount in Rs.
1	Erection of steel tubular or rail pole strut in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling and secured with holding clamp, bolts, nuts etc. as required.	12	nos		
2	Erection of all aluminium conductor of 7/1.96 mm to 7/3.10 mm diameter including binding etc. as required(44x4x40x.214)	788	kg		
3	Dismantling of OH line comprising of copper ,aluminium over head conductor, GI wire cross arm, isulator etc as required	788	kg		
4	Dismantling of damaged pole /strut embedded in cement concrete foundation etc. as required	10	nos		
5	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per meter) cross arm for 2 wire over head line complete with clamps, bolts, nuts and washer etc including drilling of holes for insulator pins etc (as per drawing) and painting with primer and finished paint as required .	60	set		
6	Supplying and erection of stay set complete (galvanised) with 19/ 20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, turn buckle (20 mm X 60 cm), 7/ 3.15 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.	14	set		
7	Handling of dismantled pole and pole required for erection	10	nos		

	at site				
8	Supplying and erection of 100 mm X 110 mm shackle insulator with G. I. Bolt, nuts and straps etc. as required	160	set		
9	Supplying and erection of 100 mm X 65 mm pin insulator complete with G. I. Spindle and nuts etc. as required	80	set		
10	Supply and providing of 6 SWG GI wire	154.23	Kg		
11	Erection of GI wire no 8 SWG including binding etc as required	154.23	kg		
12	Erection of cradle guard as required	300	nos		
13	Providing and making steel pole collar with cement concrete 1:3:6 (1 cement : 3 coarse sand • 6 graded stone aggregate 20 mm nominal size) of specified size and shape including form work, plastering if specified size and shape including form work, plastering if required, curing etc as required.	7.2	cum		
14	Supply and erection of channel iron 75mm x40 mm x6mm(7.14kg/mtr) cross arm for 3 wire 11KV OH line complete with clamp bolts and for clamping to the pole 50mm x6mm MS flats welded on one side to the channel iron and with bolts and nuts on other side for tying the cross arm together ,including drilling of holes for insulator ,pins(as per drawing) and painting with primer and finish paint as required.	4	set		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP

BIIL OF QUANTITY-03

NAME OF THE WORK		Repair & re-arrangement of Interlocking System in HT GOAB Switch connected with respective switchgear of different place & different colonies under Kargali OCP.			
<i>Sl. No.</i>	<i>Description</i>	<i>Qty</i>	<i>Unit</i>	<i>Rate/Unit in Rs.</i>	<i>Amount in Rs.</i>
1	Providing & fixing of mounting plate for limit switch.	9	No		
2	Providing & fixing of SS Enclosure.	7	No		
3	Providing & fixing of roller assembly DPDT bilet switch.	9	No		
4	Providing & fixing of Auxiliary contractor.	7	No		
5	Providing & fixing of 2 x 2.5 sqmm wire.	242	Mtr		
6	Providing & fixing of stepped cable sealing gland.	6	No		
7	Providing & fixing of 20mm medium class PVC conduit.	211	Mtr		
8	Erection, Commissioning & testing charges.	1	Job		
9	Supervision charge, Overhead exp, tools and tackles and profit @ 15%	1	job		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP

BIIL OF QUANTITY-04

NAME OF THE WORK		Fencing of 630 KVA transformer 3.3KV/415V installed at Ambedkar colony under Kargali OCP, B&K Area			
Sl. No.	Description	Qty	Unit	Rate/Unit in Rs.	Amount in Rs.
1	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.	13.46	cum		
2	Supplying and filling in plinth with Jamuna sand under floors including, watering, ramming consolidating and dressing complete.	3.46	cum		
3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level : 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).	1.68	cum		
4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5.0 in foundation and plinth in : Cement mortar 1:6 (1 cement : 6 coarse sand).	4.35	cum		
5	Brick work with common burnt clay F.P.S.(non modular) bricks of class designation 5.0 in superstructure above plinth level up to floor V level in all shapes and sizes in : Cement mortar 1:6 (1 cement : 6 coarse sand).	4.37	cum		
6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering. All work upto plinth level : 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	6.44	cum		
7	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached plasters butteresses plinth and string courses etc.	6.12	sqm		
8	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting,	548.9	Kg		

	fixing in position and applying a priming coat of approved steel primer all complete.				
9	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 25 x 25mm made of G.I. wire of dia 3mm including strengthening with 2mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.	109	sqmm		
10	Welding by gas or electric plant including transportation of plant at site etc. complete.	2500	cm		
11	12mm cement plaster of mix 1:6 (1 cement : 6 fine sand).	35.1	sqm		
12	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade : Two or more coats on new work.	151.08	sqm		
13	Finishing walls with water proofing cement paint of required shade : New work (Two or more coats applied @ 3.84kg/10sqm)	35.1	sqm		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP

BIIL OF QUANTITY-05

NAME OF THE WORK		" Bush cutting trimming, trimming of tree and uprooted vegetation in 06 nos 3.3KV and 440 colony line, 220 lighting line and cleaning & dressing of installed transformer yard under jurisdiction of Kargali OCP in respect of Kargali OCP, B&K Area(Along HT & LT OH Line)			
Sl. No.	Description	Qty	Unit	Rate/Unit in Rs.	Amount in Rs.
1	clearing jungle including uprooting of rank vegetation , grass, brush wood , trees and saplings of girth up to 30CM measured at a height of 1M above ground level and removal of rubbish up to a distance of 50M outside the periphery of the area cleared for maintenanc	32000	sqm		
2	"felting trees of the girth(measured at a height of 1m above ground level),including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material. "Beyond 30 cm girth upto and including 60 cm girth	250	each		
3	Surface dressing of the ground including removing vegetation and in-equal ities not exceeding 15cm deep and disposal of rubbish, lead upto 50m and lift up to 1.5 m.	3300	sqm		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP

BIIL OF QUANTITY-06

NAME OF THE WORK		"Repair & preventive maintenance of the Horn gap fuse system of 3.3KV/440V at Subhash nagar, Jawahar nagar, Rath Mandir, Cretch house, Birsa nagar, Chandra pool, Ram nagar, Anugrah nagar and Bermo seam under Kargali OCP.			
<i>Sl. No.</i>	<i>Description</i>	<i>Qty</i>	<i>Unit</i>	<i>Rate/Unit in Rs.</i>	<i>Amount in Rs.</i>
1	Supply, providing and fixing of 11KV post insulator for Horn gap switch.	62	nos		
2	Supply and providing of copper flat (50 mm x 6mm) of length 1.5 feet for making Horn of shape L.	62	nos		
3	Supply and fixing of G.I. bolt for tightening of the post insulators.	248	nos		
4	Supply and fixing of brass bolt for tightening of the Horn.	124	nos		
5	Supply and fixing of 16 sqmm insulated copper wire for jumpering.	54	meter		
6	Supplying of two lengths of channel iron 75mm x 40mm x 6mm (7.14kg per metre) double pole cross arm for three wire 11KV overhead line conductors complete with through bolts and nuts for clamping of the poles, 50mm x 6mm N.S. flats welded on one side to the channel iron and with bolts and nuts on the other side for tying the cross arms together, including drilling holes for insulator pins/fittings, bolts, nuts and washers etc. (as per drawing) and painting with primer and finish paint as required (+) Erection of double pole 3 wire cross arm for 11KV/22KV/33KV overhead lines as required.	20	set		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP

BIIL OF QUANTITY-07

NAME OF THE WORK		Repairing and maintenance of 440V, 4wire system overhead line accessories , and cradling in Ghutiyatand village & kadmadih village in respect of kargali OCP			
<i>Sl. No.</i>	<i>Description</i>	<i>Qty</i>	<i>Unit</i>	<i>Rate/Unit in Rs.</i>	<i>Amount in Rs.</i>
1	Erection of steel tubular or rail pole strut in cement concret 1:3:6 (1cement:3coarse and:6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling and secured with bolding clamp, bolts, nuts etc. as required.	7	Each		
2	Erection of all aluminum conductor of 7/1.96 mm to 7/3.10 mm diameter including binding etc. as required.	625	Kg		
3	Supplying of channel iron 75mm X40 mm X6mm (7:14 KG per metre) cross arm for 4 wire over head line complete with clamps, bolts nuts and washer etc including drilling of holes for insulator pins etc (as per drawing) and painting with primer and finished paint as required.	23	set		
4	Supplying of channel iron 75mm X40 mm X6mm (7:14 KG per metre) cross arm for 2 wire over head line complete with clamps, bolts nuts and washer etc including drilling of holes for insulator pins etc (as per drawing) and painting with primer and finished paint as required.	16	Set		
5	Erection of angle iron/ channel iron cross arm on wood /RCC/PCC/Steel tubular/Rail pole etc. as required.	35	Set		
6	Supply and erection of stay set complete (galvanized) with 19/20 mm dia x1.8 mtr long stay rod , anchor plate of size 45 cm x7.5 mm, thimble, stay clamps, turn buckle (20mm x60 cm) 7/4.00 mm dia GI stay wire and strain insulator etc in cement concrete 1:3:6: (1 cement :3 Coarse sand :6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling etc as required.	8	Set		
7	Transportation of pole to site	6	each		
8	S/E of 100 mm x80 mm volt pin insulator complete with GI spindle and nuts etc as required.	32	set		
9	Supplying and erection of 100mm X80mm shackle insulator with G.I Bolts, Nuts and straps etc. as required	22	set		
10	Supply and providing of 6 SWG GI wire	401	kg		

11	Supply and providing of 6 SWG including binding etc as required	401	kg		
12	Erection of cradle guard as required.	810	Each		
13	Dismantling of over head lines comprising of copper/ aluminium over head conductor, G.I Wire cross arms, insulators etc. as required	733	kg		
14	Dismantling of pole /street light standard / strut embedded in cement concrete foundation etc. as required.	6	Each		
15	Providing and fitting Clamps, bolts, nuts etc	26	set		
16	Dismantling of failed light fittings from pole	24	set		
17	Erection of light fitting on pole	24	set		
18	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required. 2x1.5 sq.mm	120	mtr		
19	Providing and fixing MV danger notice plate of 200 mm x150 mm, made of mild steel at least 2 mm thick and vitreous enameled white on both side, and with inscription in single red color on front side as required.	92	each		
20	Providing and making steel pole collar with cement concrete (1 cement: 3 coarse sand : 6 stone aggregate 20mm) of specified size and shape including form work, plastering if required, curing etc as required. (volume of pole/ pipe not to be deducted)	27	cum		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP

BIIL OF QUANTITY-08

NAME OF THE WORK		Installation cum Provision of monitoring panel at 12 site for voltage & Ampere in secondary side of distribution transformer under Kargali OCP.			
Sl. No.	Description	Qty	Unit	Rate/Unit in Rs.	Amount in Rs.
1	Supply & providing of Volt meter Digital (500V).	12	No		
2	Supply & providing of Ampere meter Digital 5 Ampere.	12	No		
3	Supply & providing of C.T.	36	No		
4	Supply & providing of MCB 16 Ampere.	36	No		
5	Supply & providing of Indicator Red, blue & yellow.	36	No		
6	Supply & providing of 12" x 12" x 6" new box fitting.	12	No		
7	Supply & providing of connector.	12	No		
8	Rectification of control tripping circuit wiring including some materials, lugs, clips, socket etc.	12	Set		
9	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required. 25 mm	42	Mtr		
10	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required. 2x 2.5 sqmm	240	Mtr		
11	Labour cost for complete opening, fitting, checking at site etc. @15% of above (1 to 9)	12	Set		
12	Contractor profit with incidental charge, tools and tackles & overhead expenses etc. @15% of above (1 to 9 and 11)	12	Set		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP

BIIL OF QUANTITY-09

NAME OF THE WORK		Onsite preventive maintenance of 17 nos transformers including cleaning of sludge, transformer oil filtration and painting joint box/cable entry box making installed at different location and different capacity under Kargali OCP, BnK Area.			
Sl. No.	Description	Qty	Unit	Rate/Unit in Rs.	Amount in Rs.
1	Complete overhauling/repairing of transformer, draining of oil, lifting and opening of cover and repairing of tap changer 500 KVA and Below 800 kVA	7	No		
2	Replacement of epoxy gasket as per required shape n size 500 KVA and Below 800 Kva	5	No		
3	Replacement of epoxy gasket as per required shape n size 250 KVA and Below 500 kVA	5	No		
4	Replacement of epoxy gasket as per required shape n size Below 250 kVA	4	NO		
5	Painting of transformer body including scraping and removing old paints 500 KVA and Below 800 kVA	4	No		
6	Painting of transformer body including scraping and removing old paints - 250 KVA and Below 500 KVA	2	No		
7	Painting of transformer body including scraping and removing old paints Below 250 KVA	3	No		
8	Replacement of LT side brass stud as per required shape n size	22	No		
9	Replacement of HT side brass stud as per required shape n size	15	No		
10	Replacement of LT side porcelain bushing as per required shape n size	10	No		
11	Replacement of HT side porcelain bushing as per required shape n size	15	No		
12	providing and fixing MS nut bolt with washer of transformer body as per required size	90	No		
13	Online filtration of transformer oil as per instruction of engineer in charge	13950	Liter		
14	Fabrication, Framing and Embedding of Joint box/Cable entry box both side of transformer primary or secondary side through MS plate (including required size nut bolt for fixing of box and cover) as per direction of engineer in charge	9	No		
15	Providing and fixing of drain valve as per required size.	8	No		
16	Providing and fixing of copper busbar as per required shape n size as per direction of engineer in charge including less scrap value.	12	No		

17	Contractor profit, Supervision Charge and other expanses of above work	1	LS		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP

BIIL OF QUANTITY-10

NAME OF THE WORK		Maintenance of 440 volt OH line with Stringing of conductor, cradling arrangement, extension, re- placement of damage pole and lighting arrangement during festive season at SingarBera, Rehwa Ghat, badki tand etc. under Kargali OCP.			
<i>Sl. No.</i>	<i>Description</i>	<i>Qty</i>	<i>Unit</i>	<i>Rate/Unit in Rs.</i>	<i>Amount in Rs.</i>
1	Erection of steel tubular or rail pole strut in cement concrete 1:3:6 (1 cement: 3 coarses and: 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling and secured with holding clamps, bolts, nuts, etc. as required.	5	Each		
2	Erection of all aluminium conductor of 7/1.96 mm to 7/3.10 diameter and above including binding etc. as required. 12 span x 35 mtr = 420 mtr x 4 wire = 1680 mtr= 1.68 km x 214 kg/mtr = 359.52 kg	359.52	Kg		
3	Supplying and erection of stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate of size 45 cm X 45 cm X 7.5 mm, thimble, stay clamps, turn buckle (20 mm X 60 cm), 7/ 4.00 mm dia G.I. stay wire and strain insulator etc in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required	12	Each		
4	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) cross arm for 2 wire over head line complete with clamps, bolts, nuts and washer etc including drilling of holes for insulator pins etc (as per drawing) and painting with primer and finished paint as required.	19	Set		
5	Supplying of channel iron 75 mm X 40 mm X 6 mm (7.14 kg per metre) cross arm for 4 wire over head line complete with clamps, bolts, nuts and washer etc including drilling of holes for insulator pins etc (as per drawing) and painting with primer and finished paint as required.	11	Set		
6	Supplying and erection of 100 mm X 110 mm shackle insulator with G. I. Bolt, nuts and straps etc. as required .	28	Set		
7	Supplying and erection of 100 mm X 80 mm pin insulator complete with G. I. Spindle and nuts etc. as required	24	Set		
8	Supply of 8 SWG GI wire for earth continuity (Cradling 560 m x 3 wire = 1680 mtr x 0.131 kg/mtr = 220.08 kg + lacing 544 nos x 3 mtr = 1584 mtr x 0.131 kg/mtr = 207.5 kg, Total = 427.58 kg)	427.58	Kg		
9	Erection of 8 SWG GI Wire including binding etc as required.	427.58	Kg		
10	Erection of cradle guard as required. 16 Span x 33 nos = 528 nos	528	Each		
11	Erection of angle iron/ channel iron cross arm on wood/ RCC/ PCC/ steel tubular/ rail pole etc. as required.	30	Set		
12	Transporting of pole from Factory to working site.	9	Each		

13	Fitting and fixing of LED light fittings supplied by department.	120	Each		
14	Dismantling of LED light fittings.	120	Each		
15	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/PVC conduit as required. 2 x 1.5 sq. mm	480	Mtr		
16	Dismantling of service connection for re-organization of OH line and re fixing the same after re-organization.	135	Each		
17	Dismantling of over head lines comprising of copper/ aluminium over head conductor, Cl. wire, cross arms, insulators etc. as required.	512	kg		
18	Dismantling of pole/ street light standard/ strut embedded in cement concrete foundation etc. as required	4	Each		
	GST@18%				
	Total inclusive of GST				

PE(E&M)/Kargali OCP