

# Rajasthan Raja Vidyut Prasaran Nigam Limited

(CIN: U40109RJ2000SGC016485)

(An ISO: 9001-2008 Certified Company)

Office of the Executive Engineer (T&C), RRVPNL, Bikaner  
66 KV GSS Premises, Sagar Road, Bikaner Phone No 0151-2226272.

NO: RRVPNL / Executive Engineer (T&C) /Bikaner /Tech. /Estt/D. 768 Dated 28/10/16

To,

M/S A to Z Construction Company, Near Post Office , Anoopgarh  
M/S Bhawani Construction Company, Ward no.-9 Anoopgarh  
M/S Neeta Sales, A-158 Nagnechi Scheme, Bikaner

And other All enlisted contractors of the circle.

Sub.-: Consent for the Construction work of 132 KV GSS, Kitarar

Ref.-: Letter No. RVPN/SE/SSPC/TK/A.1//TN-2975/CLRC/D. 501 Dated 24.05.13 issued by the Superintending Engineer(SSPC), RVPN, Jaipur and further extended vide No. RVPN: SE: SSPC: TK:A.1/TN-2975/CLRC/D. 303 dated 18.05.2015 issued by SE (SSPC), RRVPNL, Jaipur (CLRC)

Dear Sir(s),

In reference to above cited subject and letter under reference, you are requested to give your consent for execution of Construction work of 132 KV GSS, Kitarar on approved CLRC rates, for which the G-Schedule is enclosed herewith. If your consent is not received in this office within 15 days from the issue of this order, it will be presumed that you are not interested to execute the works in the circle.

Enclosed:- As above

(Er. A.K. Malhotra),  
Executive Engineer (T&C),  
R.R.V.P.N.Ltd., Bikaner  
Phone no.:- 0151-2226272, 9414061376  
Email:- xen.cm.bikaner@rvpn.co.in

Copy submitted/forwarded to the following for information and necessary action please.

1. The Zonal Chief Engineer (T&C), RVPN, Jodhpur.
2. The Superintending Engineer (T&C), RVPN, Bikaner
3. The Feeder Manager o/o SE (T&C), Bikaner with request to upload in the RVPN Website
4. The Assistant Engineer-II(T&C), RVPN, Bikaner

Executive Engineer (T&C),  
R.R.V.P.N.Ltd., Bikaner

**"G" Schedule for the construction of 132 KV GSS KITASAR**

CODE NO.	DESCRIPTION	UNIT	RATE	QTY.	AMOUNT
1	2	3	4	5	6
1	<b>EARTH MESH WORK</b>				
A-1	Laying of earthmesh with 25 mm. / 28mm. MS 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 & with earth electrodes as per drawings, application of bitumen compound & covering with bitumen impregnated tape on all welded joints, for the type of soil prevalent at 0.80 meter 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.				
B-1	Laying of earthing risers of 50X10 mm / 50X12 mm. Size M.S. Flat at a depth of 0.80 metre from top level of foundations, including excavation of trench of required depth & 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 & 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 meter 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.				
C-1	(i) Placing / driving of earth electrode of 25/28 mm dia. M.S. Rod of length 3.30 metres (approx.) to a depth of 3.80 metres from the top level of foundations, including excavation of pit as required & 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 meter below top level of foundation (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 soil				
2	<b>ERECTOR OF SUB-STATION STEEL STRUCTURES</b> columns, beams, lighting mast & equipment structures (excluding Circuit breakers & 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 & 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)	MT	1744.00	65	113360.00
	<b>BUS-BAR WORK</b>				
	Stringing of 220 KV, 132 KV, 133KV, 33KV, 11KV busbar of ACSR conductor, including transportation of conductor, disc insulators and tension hardware from site store 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	875.00	5	4375.00
	(ii) Single ACSR Zebra	Section	1019.00	7	7133.00
	(iii) Double ACSR Zebra	Section	1469.00	3	4407.00
B	Jumpers of ACSR conductor (three 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 store 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, tightening of clamps / connectors, dressing, etc. for three phases.				
	(i) Single ACSR Panther / Zebra conductor	Set	250.00	100	25000.00
	(ii) Double ACSR Panther / Zebra conductor	Set	500.00	2	1000.00
	C/F				239825.00
	<b>TOTAL</b>				


B/F		TOTAL			239825.00
4	Stringing of earth wire (size 7/3.15 mm or 7/4.00 mm), including transportation of earth wire, tension hardware etc. from site store to locations, laying and cutting required length of earth wire, 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 earth wire.	Each	219.00	45	9855.00
5	ERECTION OF SUB STATION EQUIPMENTS				
A	Erection of 33/0.4 KV 500 KVA Station Transformer on existing masonry platform including transportation of transforme & accessories from site store to location erection of horn gap fuse set, jumpering from isolator to horn gap to transformer	Each	2981.00	1	2981.00
B	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.				
	(ii)132 KV CT/PT/CVT	Nos.	1063.00	21	22323.00
	(iii)33 KV CT/PT/CVT	Nos.	400.00	24	9600.00
C	Erection of Lightning Arrestor on already erected steel structure including transportation of LA, clamps and connectros, surge counter etc. from site store to locations, fabrication of base frame, fixing of terminal connectors, surge counter, lighting of nuts & bolts etc.				
	(ii)132 KV	Nos.	1069.00	9	9621.00
	(iii) 33 KV	Nos.	238.00	18	4284.00
D	Erection of isolators on already erected steel structure including transportation of base frame, PI's, connectcs, mechnism box, clamps and 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.				
	(ii) 132 KV				
	(a) without earth blade	Nos.	1950.00	9	17550.00
	(b) With EB	Nos.	2288.00	2	4576.00
	(ii) 33 KV				
	(a) with earth blade	Nos.	1025.00	5	5125.00
	(b) without earth blade	Nos.	688.00	16	11008.00
E	Erection of wave trap on already erected beam, including transportation of wave trap, disc insulators, hardware, clamps and connectors, etc. from site store to location, cleaning & assembling of disc insulators alongwith fitting of suspension arrangement and erection, fixing of terminal connectors, etc.				
	II) 132 KV	Nos.	450.00	4	1800.00
G	Erection of 220 KV or 132 KV or 33 KV Circuit Breakers,including transportation of equipment, structure members nuts & bolts, clamps & connectors, accessories etc. from site store to locations, assembly of support structure, their placing of foundation, levelling & preparingfor grouting as required, but excluding grouting, assembly / placing of support columns /poles,mechanism box /control cubicle and other accessories as per manufacturer's drawings, fitting of SF6 gas pipeline fabrication of air / oil pipeline as required, electrical wiring from pole to control cubicle. fixing of terminal connectors as required, but excluding commisioning of CB, for all types of operating mechanism as required.				
	(ii)132 KV Circuit Breaker	Nos.	11438.00	4	45752.00
H	33 KV or 11KV Outdoor Type ( VCB / SF 6 ) 33 KV or 11KV Outdoor Type ( VCB / SF 6 ) 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 Circuit Breaker	Nos.	5563.00	7	38941.00
I	Erection of Post Insulators on already erectedstructures including transportation of P. i.'s nuts & bolts, clapms & connectors etc. from site store to locations, fabrication of base frame & assembly if required, fixing of clamps etc.				
	(i) 132 KV PI	Nos.	500.00	3	1500.00
	(ii) 33 KV PI	Nos.	56.00	6	336.00
				TOTAL	425077.00
C/F					

B/F		TOTAL		425077.00
J	Erection of 132 KV Class EHV Transformer (tank already placed on foundation with wheels) including transportation of accessories from site store to location, erection of HV, IV, LV & Neutral of bushings, erection of cooler bank with associated pipeline radiators, fans, pump, main & OLTC conservator, equalising pipe line, marshalling kiosk etc. as per manufacturer's drawing, preparation of oil, oil filling, dehydration of transformer along with cooler bank & diverter switch (Filter machine, oil tank & operating staff shall be provided by RVPN), electrical wiring from individual equipment e.g. buchholz relay, MORG, OSR, fans, pumps, bushing CT's etc to marshalling kiosk etc. but excluding testing & commissioning of transformer.			
	a) If electricity is available & arranged by RVPN without charges.			
	i) Transformer Received oil filled	Nos.	31625.00	1 31625.00
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 & relay panel as required			
	ii) Duplex Panel	Nos.	950.00	4 3800.00
	iii) Simplex Panel, DC Panel, RTCC Panel, PTCC Panel etc.	Nos.	475.00	7 3325.00
	iv) L.T. Panel	Nos.	1306.00	1 1306.00
7	Erection of Marshalling Kiosk/ Line matching unit (LMU) / Line matching & Distribution unit (LMDU) complete in all respect including transportation from site store to locations, placing on foundation / cable trench as per layout, preparing for grouting of foundation bolts but excluding			
	i) 220/132 KV Marshalling kiosk	Nos.	281.00	4 1124.00
	ii) 33 KV Marshalling kiosk	Nos.	144.00	4 576.00
8	Erection of Battery charger complete in all respect including transportation from site store to location, placing on foundation / cable trench as per layout. Etc.			
	ii) 110 Volt DC, 200 AH	Nos.	950.00	1 950.00
9	BATTERY SET			
B	Assemblu, erection and commissioning of Maintenance free VRLA Battery set including transportation of cells, battery stand, nuts & bolts and accessories from site store to battery room, assembly of stand, placing the cells on stand, making their interconnection, initial charging, discharging and final charging as per procedure recommended by battery manufacturer.			
	a) If electricity is available & arranged by RVPN without charges.			
	ii) 110 Volt DC, 200 AH	Nos.	6031.00	1 6031.00
10	LAYING AND TERMINATION OF CABLES			
A	Control Cables			
	i) Laying of PVC 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			
	a) Unarmoured control cable	Metres	4.00	10000 40000.00
	ii) fixing of control cables in position with single compression nickel plated brass cable glands confirming to IS: 12943 & having three metal washers & one rubber ring including preparation of cable & drilling of corresponding holes in gland plates etc. as required and including post of cable glands, for each cable gland of size.			
	a) 19 mm unarmoured control cable	Nos.	33.00	50 1650.00
	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.			
	b) 3c x 2.5 sq.mm.	Each	24.00	25 600.00
	c) 4c x 2.5 sq. mm	Each	32.00	15 480.00
	f) 12c x 2.5 sq. mm.	Each	96.00	30 2880.00
	g) 18c x 2.5 sq. mm.	Each	143.00	20 2860.00
	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	43.00	90 3870.00
	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.			
A	L.T. Control Cables			
	i) Laying of PVC insulated sheathed armoured / unarmoured L.T. cables of 1.1 KV grade with aluminium conductor as per IS:12355 in ground / cable trenches / well surface including transportation of cable drums from site store to locations, excavation of 30 cm x 75 cm size trenches providing 25 mm thick under layer of sand & 2nd class brick covering & refilling earth in remaining position, fixing as per approved specing by means of M.S.U. clamp etc. as per specification, including making as required of folling sizes.			
	c) 3.5 core x 300 sq mm	Metres	40.00	110 4400.00
	ii) fixing of power cable in position with single compression heavy duty nickle plated brass cable glands as per IS: 12943 & having three metal washers & one rubber ring including preparation of cable & drilling of corresponding holes in gland plates etc. including post of cable glands, if required for each cable gland of size.			
	c) 3.5 core x 300 sq mm cable with material	Nos.	181.00	2 362.00
	iii) Termination of wires of cables with aluminium conductor using aluminium terminal ends as per IS: 8309 duly crimped with crimping tool, including making wire ends ready for crimping, ferruling & dressing of wires, etc. as required, including cost of terminal ends is required, for each cable at (4 Nos. per end) for cables of the following sizes.			
	f) 3.5 core x 300 sq mm cable with material	Nos.	372.00	2 744.00
	<b>TOTAL</b>			531660.00
	Add 50 % above on BSR rates			265830.00
	<b>Grand Total</b>			797490.00

(Rs. Seven Lac Ninety Seven Thousand Four Hundred Ninety Only)

Note- Rates are taken as per new BSR for RVPN 01-01-2011.

CLRC premium are taken on CLRC Order 2013.

  
Executive Engineer (T&C)  
RRVPL, Bikaner

  
Assistant Engineer-II (T&C)  
RRVPL Bikaner