



RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LTD.

Corporate Identity Number (CIN) : L40109RJ2000SGC016485

Regd. Office : Vidyut Bhawan, Jyoti Nagar, Jaipur -302 005

(AN ISO 9001:2015 Certified Company)

OFFICE OF THE SUPERINTENDING ENGINEER (Contracts-II)

MM Building of RVPN, Old Power House Premises, Near Ram Mandir, Banipark, Jaipur-302006
Tele.:- 0141 2208919, Cell 9413382626, Fax No.:- 01412208924 Email - se.contract2@rvpn.co.in

No. RVPN/ SE (Contracts-II)/ XEN-4/F. BSR /D. 844 Dated 26/09/19

The Chief Engineer (T & C),
RVPN, Jaipur.

The Chief Engineer (T & C),
RVPN, Jodhpur.

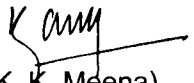
The Chief Engineer (T & C),
RVPN, Ajmer.


Sub: Revised BSR for Construction of EHV Sub- stations on Labour contract basis (Base Date 01.04.2017).

As per decision of the WTD's level Purchase Committee, modifications into the BSR as on 01.04.2017 for carrying out Construction of 220 KV and 132 KV Sub- stations on labour contract basis, have been approved in view of resolve to field constraints for preparing estimate through the BSR. The revised BSR (Base Date 01.04.2017) may kindly be circulated to all the field officers under your control for further needful.

The above BSR is effective from the date of issue of this letter.

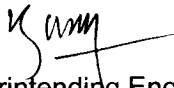
Encl: As Above.


(K. K. Meena)
Superintending Engineer
(Contracts-II)



Copy along with enclosures forwarded to the following for further needful:-

1. The Chief Engineer (Contracts), RVPN, Jaipur.
2. The Superintending Engineer, (_____), RVPN, _____.
3. The Executive Engineer (_____), RVPN, _____.


Superintending Engineer
(Contracts-II)

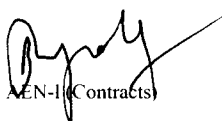
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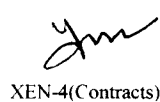
REVISED SCHEDULE OF RATES FOR ERECTION OF UNIT QUANTITY ITEMS OF SUB STATION ON LABOUR CONTRACT BASIS

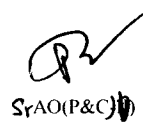
1) The rates for the erection works given in this BSR are inclusive of all types of labour charges, but exclusive of GST & insurance charges etc.

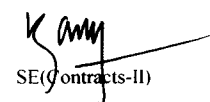
2) The base date for rates given in this schedule is 1.04.2017.

CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
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) Any soil, soft rock other than hard rock	Metres	25.70 ✓
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	54.00 ,
	(b) In case diesel generator is arranged by the Contractor at his own cost.		
	i) Any soil, soft rock other than hard rock	Metres	34.90 †
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	65.00 ,
A-2	Laying of earth mesh with 40 mm. 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) Any soil, soft rock other than hard rock	Metres	50.20 †
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	85.00 ,
	(b) In case diesel generator is arranged by the Contractor at his own cost.		
	i) Any soil, soft rock other than hard rock	Metres	65.10 †
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	101.00 †
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) Any soil, soft rock other than hard rock	Metres	28.40 ✓
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	59.00 ✓
	(b) In case diesel generator is arranged by the Contractor at his own cost.		
	i) Any soil, soft rock other than hard rock	Metres	39.90 †
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	70.00 ✓


XEN-1(Contracts)


XEN-4(Contracts)


SrAO(P&C)


SE(Contracts-II)



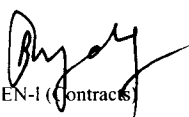
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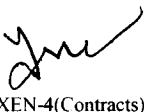
REVISED SCHEDULE OF RATES FOR ERECTION OF UNIT QUANTITY ITEMS OF SUB STATION ON LABOUR CONTRACT BASIS

1) The rates for the erection works given in this BSR are inclusive of all types of labour charges, but exclusive of GST & insurance charges etc.

2) The base date for rates given in this schedule is 1.04.2017.

CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
B-2	Laying of earthing risers of 75 x 12mm 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) Any soil, soft rock other than hard rock	Metres	53.20 ✓
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	89.00 ✓
	(b) In case diesel generator is arranged by the Contractor at his own cost.		
	i) Any soil, soft rock other than hard rock	Metres	69.10 ✓
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	104.00 ✓
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) Any soil, soft rock other than hard rock	Metres	273.10 ✓
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	932.00 ✓
	(b) In case diesel generator is arranged by the Contractor at his own cost.		
	i) Any soil, soft rock other than hard rock	Metres	356.20 ✓
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	1016.00 ✓
C-2	Placing / Driving of earth electrode of 40 mm 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) Any soil, soft rock other than hard rock	Metres	441.60 ✓
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	1246.00 ✓
	(b) In case diesel generator is arranged by the Contractor at his own cost.		
	i) Any soil, soft rock other than hard rock	Metres	552.70 ✓
	ii) Hard rock (with blasting subject to permission or without blasting)	Metres	1356.00 ✓


AEN-I (Contracts)


XEN-4 (Contracts)


AO(P&C-II)


SE(Contracts-II)




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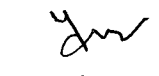
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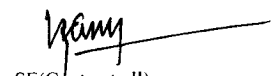
2) The base date for rates given in this schedule is 1.04.2017.

CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
D.1	Placing of earth electrode of 25 / 28mm dia. M. S. Rod of length 7.50 meters (approx.) to a depth of 8.00 meters from the top level of foundations, including drilling of 200 mm dia. earth pit having a throughout bore of 200 mm dia to a depth of 8.00 metres from the top level of the foundations, in all types of rocks by DTH system and overburden, including back filling of pit with Bentonite slurry (with cost of Bentonite slurry), including its preparation, transportation of M. S. Rod and Bentonite from site store to location, cutting of M. S. Rod to desired length, 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 (M. S. Rod of above sizes & M. S. Flat as required shall be made available by RVPN).		
	(i) In case electricity is made available by RVPN without charges.	Nos.	11230.00 ✓
	(ii) In case diesel generator is arranged by the Contractor at his own cost.	Nos.	11312.00 ✓
D.2	Placing of earth electrode of 40 mm dia. M. S. Rod of length 7.50 meters (approx.) to a depth of 8.00 meters from the top level of foundations, including drilling of 200 mm dia. earth pit having a throughout bore of 200 mm dia to a depth of 8.00 metres from the top level of the foundations, in all types of rocks by DTH system and overburden, including back filling of pit with Bentonite slurry (with cost of Bentonite slurry), including its preparation, transportation of M. S. Rod and Bentonite from site store to location, cutting of M. S. Rod to desired length, 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 (M. S. Rod of above sizes & M. S. Flat as required shall be made available by RVPN).		
	(i) In case electricity is made available by RVPN without charges.	Nos.	11230.00 ✓
	(ii) In case diesel generator is arranged by the Contractor at his own cost.	Nos.	11312.00 ✓
E.1	Placing of earth electrode of 25 / 28mm dia. M. S. Rod of length 7.50 meters (approx.) to a depth of 8.00 meters from the top level of foundations in already bored hole, including back filling of pit with Bentonite slurry (with cost of Bentonite slurry), including its preparation, transportation of M. S. Rod and Bentonite from site store to location, cutting of M. S. Rod to desired length, 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 (M. S. Rod of above sizes & M. S. Flat as required shall be made available by RVPN).		
	(i) In case electricity is made available by RVPN without charges.	Nos.	1323.00 ✓
	(ii) In case diesel generator is arranged by the Contractor at his own cost.	Nos.	1405.00 ✓
E.2	Placing of earth electrode of 40 mm dia. M. S. Rod of length 7.50 meters (approx.) to a depth of 8.00 meters from the top level of foundations in already bored hole, including back filling of pit with Bentonite slurry (with cost of Bentonite slurry), including its preparation, transportation of M. S. Rod and Bentonite from site store to location, cutting of M. S. Rod to desired length, 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 (M. S. Rod of above sizes & M. S. Flat as required shall be made available by RVPN).		
	(i) In case electricity is made available by RVPN without charges.	Nos.	1414.00 ✓
	(ii) In case diesel generator is arranged by the Contractor at his own cost.	Nos.	1527.00 ✓
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.	2321.00 ✓


XEN-1(Contracts)


XEN-4(Contracts)


SIAO(P&C)


SE(Contracts-II)

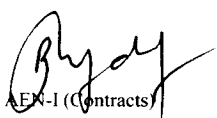
RAJASTHAN RAJYA VIDHUT PRASARAN NIGAM LTD

REVISED SCHEDULE OF RATES FOR ERECTION OF UNIT QUANTITY ITEMS OF SUB STATION ON LABOUR CONTRACT BASIS

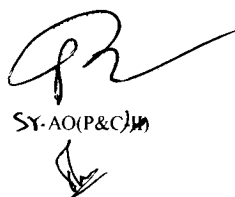
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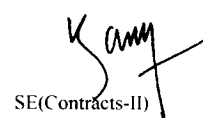
2) The base date for rates given in this schedule is 1.04.2017.

CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
3	BUS-BAR WORK		
A.	STRINGING of 220 KV, 132 KV, 33 KV & 11KV Bus Bar of ACSR & Tarantulla 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, 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.(Per jumper basis)		
	i) Any Single Conductor	Section	1165.00 ₹
	ii) Any Double Conductor	Section	1758.00 ₹
B.	JUMPERS of any 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, tightening of clamps / connectors, dressing, etc., for three phases. (Per jumper basis)		
	i) Any Conductor	Each	111.00 ₹
4	STRINGING of Earth wire (size 7 / 3.15 mm or 7 / 4.00 mm), including transportation of earthwire, tension hardwares, etc., from site store to locations, laying and cutting required length of earthwire, fitting of bolted type or compression type hardware as made available, 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	292.00 ₹
5	ERECTION OF SUB-STATION EQUIPMENTS		
A.	i) Erection of 33/0.4 KV or 11/0.4 KV Station transformer up to 500 KVA on existing masonry platform including transportation of transformer & accessories from site store to location, erection of Horn Gap fuse set, jumpering from isolator to Horn Gap to transformer.	Each	3967.00 ₹
	ii) Filtration of the transformer, if required (Additional cost)	Each	1323.00 ₹
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.		
	i) 220 KV CT / PT / CVT	Nos.	2529.00 ₹
	ii) 132 KV CT / PT / CVT	Nos.	1415.00 ₹
	iii) 33 KV or 11 KV CT / PT	Nos.	532.00 ₹
	iv) 33 KV or 11 KV SR / RVT / NCT	Nos.	1016.00 ₹
C.	Erection of Lightning Arrestor on already erected steel structure including transportation of Lightning Arrestor, clamps & connectors, surge counter, etc. from site store to locations, fabrication of base frame, fixing of terminal connectors, surge counter, tightening of nuts & bolts etc., complete in all respect.		
	i) 220 KV	Nos.	1996.00 ₹
	ii) 132 KV	Nos.	1422.00 ₹
	iii) 33 KV or 11 KV	Nos.	317.00 ₹


XEN-I (Contracts)


XEN-4 (Contracts)


SY-AO (P&C)


SE (Contracts-II)

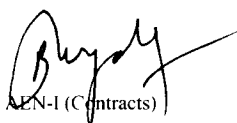
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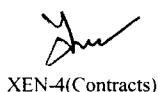
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2) The base date for rates given in this schedule is 1.04.2017.

CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
D.	Erection of Isolators(Motorised/Non motorised) 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 including erection of PI		
	i) 220 KV		
	a) Fixing of Single Earth Blade	Nos.	499.00
	b) Fixing of Double Earth Blade	Nos.	1157.00
	ii) 132 KV		
	a) Fixing of Single Earth Blade	Nos.	449.00
	iii) 33 KV & 11 KV		
a) Fixing of Single Earth Blade	Nos.	448.00	
E.	Erection of Wave trap on already erected structure beam, including transportation of wave trap, disc insulators, hardware, clamps and connectors, etc. from site store to locations, cleaning & assembly of disc insulators alongwith fitting of suspension arrangement and erection, fixing of terminal connectors, etc.		
	i) 220 KV	Nos.	807.00
	ii) 132 KV	Nos.	599.00
F.	Erection of 2x33 KV or 2x11 KV Capacitor Bank, with Series Reactors & Residual Voltage Transformers / Neutral Current Transformers, including transportation of equipments, structure members, nuts & bolts, washers, clamps & connectors etc. from site store to location, assembly of structure, their placing on foundation, levelling 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	18466.00
G.	Erection of 220 KV or 132 KV Circuit Breakers, including transportation of equipment, structure members, nuts & bolts, clamps & connectors, accessories 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 support columns / poles, mechanism box / control cubicle, and other accessories as per manufacturer's drawings, fitting of SF 6 gas pipeline, fabrication of air / oil pipeline as required, electrical wiring from pole to control cubicle, fixing of terminal connectors as required, but excluding commissioning of CB, for all types of operating mechanism, as required.		
	i) 220 KV	Nos.	19216.00
	ii) 132 KV	Nos.	15223.00
H.	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.	7404.00
	ii) 11 KV Kiosk (VCB / SF 6 / MOCB)	Nos.	2620.00
I.	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.		
	i) 220 KV	Nos.	883.00
	ii) 132 KV	Nos.	665.00
	iii) 33 KV or 11 KV	Nos.	75.00


AEN-I (Contracts)


XEN-4(Contracts)


SAO(P&C)


SE(Contracts-II)

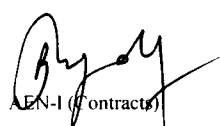
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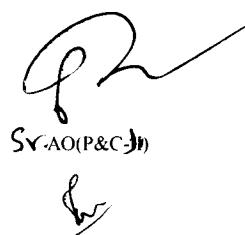
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CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
J.	Erection of 132 KV Class EHV Transformer (tank already placed on foundation with wheels), including transportation of accessories from site store to locations, erection of HV, IV, LV & Neutral bushings, main & OLTC conservators, radiators, equalizing pipe line, marshalling kiosk, etc. as per manufacturer's drawing, preparation of oil, oil filling, dehydration of transformer (filter machine, oil tank & operating staff shall be provided by RVPN), electrical wiring from individual equipment, e.g., Buchholz relay, MOLG, OSR, etc. to marshalling kiosk, etc., but excluding testing & commissioning of transformer.		
	a) If electricity is available & arranged by RVPN without charges.		
	i) Transformers received oil filled	Nos.	42089.00
	ii) Transformers received gas filled	Nos.	52736.00
	b) If electricity is not available & the Contractor is required to arrange diesel generator of appropriate capacity.		
	i) Transformers received oil filled	Nos.	174345.00
	ii) Transformers received gas filled	Nos.	317248.00
K.	Erection of 220 KV Class EHV Transformer (Gas filled tank already placed on foundation with wheels), including transportation of accessories from site store to locations, erection of HV, IV, LV & Neutral bushings, erection of cooler bank with associated pipe line, radiators, fans, pump, main & OLTC conservators, equalizing 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, MOLG, 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.	Nos.	128596.00
	b) If electricity is not available & the Contractor is required to arrange diesel generator of appropriate capacity.	Nos.	525363.00
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.		
	i) 2 x 2 Duplex Panel	Nos.	2521.00
	ii) Duplex Panel	Nos.	1265.00
	iii) Simplex Panel, DC Panel, RTCC Panel, PLCC Panel, etc.	Nos.	632.00
	iv) LT Panel	Nos.	1739.00
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.		
	i) 220 KV or 132 KV Marshalling Kiosk	Nos.	374.00
	ii) 33 KV or 11 KV Marshalling Kiosk	Nos.	192.00
	iii) PLCC LMU / LMDU	Nos.	432.00
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.		
	i) 220 Volt DC, 400 AH	Nos.	1265.00
	ii) 110 Volt DC, 200 AH	Nos.	1265.00
	iii) 48 Volt DC, 600 / 400 / 200 AH	Nos.	1265.00


XEN-1 (Contracts)


XEN-4 (Contracts)


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RAJASTHAN RAJYA VIDHUT PRASARAN NIGAM LTD

REVISED SCHEDULE OF RATES FOR ERECTION OF UNIT QUANTITY ITEMS OF SUB STATION ON LABOUR CONTRACT BASIS

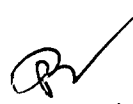

1) The rates for the erection works given in this BSR are inclusive of all types of labour charges, but exclusive of GST & insurance charges etc.

2) The base date for rates given in this schedule is 1.04.2017.

CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
9	BATTERY SET		
A.	Assembly, erection and commissioning of Lead Acid Battery Set including transportation of cells, battery stand, electrolyte, nuts & bolts and accessories from site store to battery room, assembly of wooden stand, placing the cells on stand, making their interconnection, filling of electrolyte, giving two cycle of charge and discharge after initial charging as per procedure recommended by battery manufacturer.		
	a) If electricity is available & arranged by RVPN without charges.		
	i) 220 Volt DC, 400 AH	Nos.	26285.00 ✓
	ii) 110 Volt DC, 200 AH	Nos.	24621.00 ✓
	iii) 48 Volt DC, 600 / 400 / 200 AH	Nos.	22875.00 ✓
	iv) Additional cycle of discharge & charge, if required.	Each	4576.00 ✓
	b) If electricity is not available & the Contractor is required to arrange diesel generator of appropriate capacity.		
	i) 220 Volt DC, 400 AH	Nos.	91083.00 ✓
	ii) 110 Volt DC, 200 AH	Nos.	68125.00 ✓
	iii) 48 Volt DC, 600 / 400 / 200 AH	Nos.	46581.00 ✓
	iv) Additional cycle of charge & discharge, if required.		
	a) 220 Volt DC, 400 AH	Each	9150.00 ✓
	b) 110 Volt DC, 200 AH	Each	7653.00 ✓
	c) 48 Volt DC, 600 / 400 / 200 AH	Each	6322.00 ✓
B.	Assembly, erection and commissioning of Maintenance Free VRLA type Battery Set including transportation of cells, battery stand, nuts & bolts, etc. 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.		
	i) 220 Volt DC, 400 AH	Nos.	9774.00 ✓
	ii) 110 Volt DC, 200 AH	Nos.	8027.00 ✓
	iii) 48 Volt DC, 600 / 400 / 200 AH	Nos.	6613.00 ✓
	iv) Additional cycle of charge & discharge, if required.	Each	4576.00 ✓
	b) If electricity is not available & the Contractor is required to arrange diesel generator of appropriate capacity.		
	i) 220 Volt DC, 400 AH	Nos.	14182.00 ✓
	ii) 110 Volt DC, 200 AH	Nos.	10439.00 ✓
	iii) 48 Volt DC, 600 / 400 / 200 AH	Nos.	9024.00 ✓
	iv) Additional cycle of charge & discharge, if required.		
	a) 220 Volt DC, 400 AH	Each	7653.00 ✓
	b) 110 Volt DC, 200 AH	Each	6322.00 ✓
	c) 48 Volt DC, 600 / 400 / 200 AH	Each	6322.00 ✓
10	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	5.00 ✓
	b) Armoured control cable.	Metres	6.00 ✓


XEN-1 (Contracts)


XEN-4 (Contracts)


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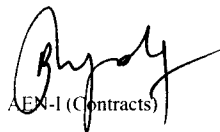
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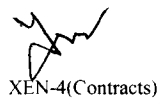
REVISED SCHEDULE OF RATES FOR ERECTION OF UNIT QUANTITY ITEMS OF SUB STATION ON LABOUR CONTRACT BASIS

1) The rates for the erection works given in this BSR are inclusive of all types of labour charges, but exclusive of GST & insurance charges etc.

2) The base date for rates given in this schedule is 1.04.2017.

CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
	ii) Fixing of control cables in position with single compression nickel plated brass cable glands conforming to IS: 12943 & 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.	44.00
	b) 19 mm armoured control cable	Nos.	49.00
	c) 25 mm unarmoured control cable	Nos.	67.00
	d) 25 mm armoured control cable	Nos.	73.00
	e) 32 mm unarmoured control cable	Nos.	96.00
	f) 32 mm armoured control cable	Nos.	106.00
	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.		
	a) 2.5 Sqmm for any number of core	Per Core	11.00
	b) 4 Sqmm for any number of core	Per Core	14.00
	c) 6 Sqmm for any number of core	Per Core	14.00
B.	L.T. Power Cables		
	i) Laying of P. V. C. insulated and P. V. C. sheathed armoured/unarmoured L. T. power cable of 1.1 KV grade with aluminium conductor as per IS: 1255 in ground / cable trench / wall / surface including transportation of cable drums from site store to locations and 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 portion, fixing as per approved / available spacing by means of M. S. U-clamps, etc. as per specification as required, including making necessary connections & testing, etc. as required, of the following sizes.		
	a) 3 ½ core x 70 sq. mm.	Metres	44.00
	b) 3 ½ core x 120 sq. mm.	Metres	44.00
	c) 3 ½ core x 185 sq. mm.	Metres	53.00
	d) 3 ½ core x 300 sq. mm.	Metres	53.00
	ii) Fixing of power cables in position with single compression, heavy duty nickel plated brass cable glands as per IS: 12943 & having three metal washers and one rubber ring, including preparation of cable and drilling of corresponding holes in gland plate, etc., including cost of cable gland if required, for each end of cable of size.		
	a) 38 mm. for 3 ½ core x 70 sq. mm. cable with material	Nos.	116.00
	b) 38 mm. for 3 ½ core x 70 sq. mm. cable without material	Nos.	20.00
	c) 50 mm. for 3 ½ core x 120 sq. mm. cable with material	Nos.	169.00
	d) 50 mm. for 3 ½ core x 120 sq. mm. cable without material	Nos.	22.00
	e) 57 mm. for 3 ½ core x 185 sq. mm. cable with material	Nos.	241.00
	f) 57 mm. for 3 ½ core x 185 sq. mm. cable without material	Nos.	37.00
	g) 75 / 76 mm. for 3 ½ core x 300 sq. mm. cable with material	Nos.	442.00
	h) 75 / 76 mm. for 3 ½ core x 300 sq. mm. cable without material	Nos.	124.00


AEN-1 (Contracts)


XEN-4 (Contracts)


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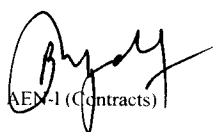
RAJASTHAN RAJYA VIDHUT PRASARAN NIGAM LTD

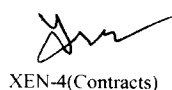
REVISED SCHEDULE OF RATES FOR ERECTION OF UNIT QUANTITY ITEMS OF SUB STATION ON LABOUR CONTRACT BASIS

1) The rates for the erection works given in this BSR are inclusive of all types of labour charges, but exclusive of GST & insurance charges etc.

2) The base date for rates given in this schedule is 1.04.2017.

CODE NO.	DESCRIPTION	UNIT	Rate (Rs); 1.4.2017
	iii) Termination of wires of cables with aluminium conductors using ISI marked tubular aluminium terminal ends as per IS: 8309 duly crimped with crimping tool, including making cable ends ready for crimping and providing insulation tape with colour code, dressing of wires, etc., including cost of terminal ends if required, for each end of cable (4 nos. per end) for the following size of cables.		
	a) 3 ½ core x 70 sq. mm. cable with material	Set	233.00
	b) 3 ½ core x 70 sq. mm. cable without material	Set	147.00
	c) 3 ½ core x 120 sq. mm. cable with material	Set	330.00
	d) 3 ½ core x 120 sq. mm. cable without material	Set	198.00
	e) 3 ½ core x 185 sq. mm. cable with material	Set	495.00
	f) 3 ½ core x 185sq. mm. cable without material	Set	305.00
	g) 3 ½ core x 300 sq. mm. cable with material	Set	820.00
	h) 3 ½ core x 300 sq. mm. cable without material	Set	384.00
11	PAINTING OF SUB-STATION EQUIPMENTS AND STEEL STRUCTURES		
A.	Aluminium painting of new steel structures at the GSS including paint and painting brush, emery paper, cloth & solvent, etc. The surface shall be first rubbed free of dust or any other deposits on erected M. S. steel structures & beams. One coat of red oxide paint shall be applied after carrying out cleaning and allowed to dry. Thereafter two coats of Aluminium paint shall be applied. Each subsequent coat shall be applied only after the previous coat has dried. The paint used shall be out of the following recognized manufacturers only, namely, Asian / Nerolac / Berger / Johnson Nicholson / Dulux.	Sq. Mtr.	35.00
B.	Aluminium painting of old painted steel structures at the GSS including paint and painting brush, emery paper, cloth & solvent, etc. The surface shall be first rubbed free of dust or any other deposits on erected M.S. steel structures & beams. Two coats of Aluminium paint shall be applied. Each subsequent coat shall be applied only after previous coat has dried. The paint used shall be out of the following recognized manufacturers, namely, Asian / Nerolac / Berger / Johnson Nicholson / Dulux.	Sq. Mtr.	26.00
C.	Enamel painting on power transformers and other associated equipments using spray painting set, including supply of paint, emery paper, cloth & solvent etc. at GSS by cleaning surfaces thoroughly with soda / caustic solution to clean oily surfaces & thereafter washing with water. Thereafter two coats of smoke grey synthetic enamel paint shall be applied by spray method. Each coat shall be applied only after the previous coat has dried up. The paint used shall be out of the following recognized manufacturers namely, Asian / Nerolac / Berger / Johnson Nicholson / Dulux. In case of surface area of radiators, the fins will only be considered which are only feasible and approachable for painting by spray or by brush.	Sq. Mtr.	31.00
12	Providing and laying in position specified grade of cement concrete for all RCC structural elements upto plinth level including curing, compaction, finishing with rendering in cement sand mortar 1:3 (1 cement : 3 coarse sand) and making good the joints and cost of plastizers (if required) excluding the cost of centering, shuttering and reinforcement. M20 grade Nominal Mix/ Design Mix. (The rates are as per PWD BSR 2014- Jaipur.)	Cum	4378.00
13	SWITCHYARD ILLUMINATION		As per Terms & Rates in the prevailing/ applicable PWD BSR.


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