



# BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA

(A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna)

CIN – U74110BR2012SGC018889

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Letter No...../ Patna  
CE./Trans.(O&M)/Misc-15 /2022

Dated .....

From,

S.N. Kumar,  
Chief Engineer (O&M)

To,

GM (F&A), BSPTCL, Patna

Chief Engineer (System Operation )

Chief Engineer (Planning & Engineering)

Chief Engineer (Project-I)

Chief Engineer (Project-II)

Chief Engineer (O&M)

Chief Engineer (Training)

GM-cum-CE, TRZ Patna

GM-cum-CE, TRZ Muzaffarpur

GM-cum-CE, TRZ Bhagalpur

Electrical Superintending Engineer, Transmission Circle, Patna (East)/Patna (West)/Dehri-

on-Sone/Bhojpur/Gaya/Biharsharif/Bhagalpur/Begusarai/Purnea/Muzaffarpur/Hajipur/

Darbhangha/Motihari/Saran/Koshi.

Sub: Revision in Schedule of Rate (SOR) of BSPTCL for the FY 2022-23

Sir,

With reference to above, SOR 2022-23 has been revised in following points:-

S.N.	Revision in SOR 2022-23	Details
1.	Point no-06 & 08 at Page no-62	Related to Transportation of Power Transformer and other associated works.
2.	Point no-23-28 at Page no-60	Maintenance of Transmission line
3.	Point no-1-27 at Page no- 29 to 31	Rate for supply and erection of Relays/Energy meter/Battery/Charger etc.

In addition to above, all rates for turnkey projects/O&M/Telecom/Civil shall remains same. The above revision in SOR 2022-23 has been approved by competent authority. The same is hereby enclosed for reference and further necessary action.

Yours' faithfully,

Sd/-

(S.N. Kumar)

Chief Engineer, Trans. (O&M)

Dated...01/03/2022/

Memo No 552/ ✓

Copy forwarded to DBA/IT, BSPTCL for uploading the revised SOR on BSPTCL website.

(S.N. Kumar)

Chief Engineer, Trans. (O&M)

5

**BIHAR STATE POWER TRANSMISSION COMPANY LIMITED**

**SCHEDULE OF RATES (SUPPLY AND ERECTION) FOR RELAYS, ENERGY METERS, BATTERY, CHARGER ETC.**

**(ALL PRICES ARE WITHOUT TAXES AND GST SHALL BE PAID EXTRA AS APPLICABLE)**

Sl. No	DESCRIPTION	Unit	Unit Supply Price (in Rs.)	Unit Erection Price (in Rs.)
1	Distance to fault locator (off line) with Signature Analyzer System suitable for 66 KV to 400 KV EHT line.	Sets	2,881,900.00	-
2	Numerical type differential protection scheme complete with all materials & relays suitable for :			
	(a) 220 KV			
	(b) 132 KV	Sets	523,638.70	19,260.20
3	Numerical type Distance Protection Scheme with required relays for :	Sets	494,770.25	19,260.20
	(a) 220 KV			
	(b) 132 KV	Sets	354,968.20	16,120.70
4	Electronic/Static type of Trivector Meter of 0.2S Class.	Sets	354,968.20	16,120.70
5	Other Supervision Relay.	Nos.	23,908.50	2,998.05
	(a) D.C. Supervision Relay.			
	(b) A.C. Supervision Relay.	Nos.	7,245.00	456.55
	(c) Trip Circuit Supervision Relay	Nos.	7,245.00	456.55
	(d) Circuit Breaker D.C Supply fail alarm Relay	Nos.	11,845.00	456.55
	(e) Circuit Breaker A.C Supply fail alarm Relay	Nos.	5,060.00	456.55
	(f) VAX-31	Nos.	5,060.00	456.55
	(g) ODS (10 Way)	Nos.	5,060.00	456.55
	(h) Tripping relay	Nos.	8,189.15	456.55
	(i) Under voltage relay	Nos.	11,500.00	456.55
	(j) Under & over frequency relay	Nos.	5,060.00	456.55
	(k) REF relay	Nos.	5,060.00	456.55
	(l) LBB relay	Nos.	5,060.00	456.55
6	Numerical Non-Directional E/F & O/C Relay.	Nos.	46,953.35	7,249.60
7	Numerical type Directional E/F & O/C Relay.	Nos.	62,554.25	7,248.45
8	Master Trip Relay Type:			
	VAJHM - 23	Nos.	7,094.35	456.55
	VAJHM - 33	Nos.	14,795.90	456.55
	VAJHM - 53	Nos.	18,665.65	456.55
9	Aux Relays Type:			
	VAA - 11	Nos.	7,590.00	456.55
	VAA - 12	Nos.	7,590.00	456.55
	VAA - 13	Nos.	7,590.00	456.55
	VAA - 33	Nos.	7,590.00	456.55
10	Electromech Non Directional E/F & O/C Relay CDG-11.	Nos.	7,186.35	652.05
11	Electromech Directional E/F & O/C Relay CDD21	Nos.	25,551.85	652.05
12	TNC Switch.	Nos.	4,899.00	129.95
13	Selector Switch for carrier.	Nos.	1,661.75	129.95
14	Selector Switch for Protection Transfer.	Nos.	8,189.15	129.95
	ABT Meters			



Sl. No	DESCRIPTION	Unit	Unit Supply Price (in Rs.)	Unit Erection Price (in Rs.)
15	3 Phase, 4 wire, 0.2S accuracy class Trivector static Energy ABT Meter (compatible to various protocols like TCP/IP, MODBUS and ICS DLMS)	Nos.	114,568.75	27,149.50
16	3 Phase, 4 wire, 0.2S accuracy class Trivector static Energy non-ABT Meter (compatible to various protocols like TCP/IP, MODBUS and ICS DLMS)	Nos.	114,568.75	27,149.50
17	Metering panel suitable to mount 4 nos of rack mounted meters	Nos.	115,632.50	57,907.26
18	DCU with Box as per specification	Sets	183,827.50	115,433.21
19	Network Switch 8 port 10/100 Mbps	Nos.	12,522.35	1,541.00
20	Router for Grid sub stations	Nos.	112,666.65	18,670.25
21	UPS - 2 KVA online with 60 min back up on 100% load	Nos.	108,668.10	18,317.20
22	Industrial Grade Client PC as per specification	Sets	159,993.75	25,719.75
23	7 core 2.5 sq mm armoured control cable for CT connection	Mtrs.	356.50	63.78
24	4 core 2.5 sq mm armoured control cable for PT connection	Mtrs.	227.47	55.64
25	2 core 2.5 sq mm armoured cable for AC/DC Aux supply	Mtrs.	144.56	51.57
26	Communication cable	Mtrs.	43.82	51.57
27	GPRS Modem suitable for AMR of Existing SEM Type energy meter (DLMS-ICS Compliant)	Nos.	5,232.50	7,637.20
28	<b>BATTERIES</b>			
(i)	250 V, 500 AH VRLA (valve-regulated lead-acid battery) TYPE Battery sets with inter cell, inter row, interbank and take off connector for complete with all accessories as indicated in Clause 2.6	Sets.	979,415.90	56,136.10
(ii)	250 V, 500 AH TUBULAR TYPE Battery sets with first filling electrolyte (10 % extra) with inter cell, inter row, interbank and take off connector for complete with all accessories as indicated in Clause 2.6	Sets.	1,178,922.50	59,878.20
(iii)	250 V, 300 AH VRLA (valve-regulated lead-acid battery) TYPE Battery sets with inter cell, inter row, interbank and take off connector for complete with all accessories as indicated in Clause 2.6	Sets.	629,127.05	56,136.10
(iv)	250 V, 300 AH TUBULAR TYPE Battery sets with first filling electrolyte (10 % extra) with inter cell, inter row, interbank and take off connector for complete with all accessories as indicated in Clause 2.6	Sets.	707,353.50	59,878.20
(v)	48 V, 500 AH VRLA (valve-regulated lead-acid battery) TYPE Battery sets with first filling electrolyte (10 % extra) with inter cell, inter row, interbank and take off connector for complete with all accessories as indicated in Clause 2.6	Sets.	193,085.00	49,898.50
(vi)	48 V, 500 AH TUBULAR TYPE Battery sets with first filling electrolyte (10 % extra) with inter cell, inter row, interbank and take off connector for complete with all accessories as indicated in Clause 2.6	Sets.	226,353.35	49,898.50

Sl. No	DESCRIPTION	Unit	Unit Supply Price (in Rs.)	Unit Erection Price (in Rs.)
(vii)	48 V, 300 AH VRLA (valve-regulated lead-acid battery) TYPE Battery sets with inter cell, inter row, interbank and take off connector for complete with all accessories as indicated in Clause 2.6	Sets.	120,792.55	49,898.50
(viii)	48 V, 300 AH TUBULAR TYPE Battery sets with first filling electrolyte (10 % extra) with inter cell, inter row, interbank and take off connector for complete with all accessories as indicated in Clause 2.6	Sets.	135,811.55	49,898.50
27	<b>BATTERY CHARGER</b>			
(i)	Battery charging equipment comprising of float & float cum boost charger unit for charging 125 nos cells of 2 volt per cell Battery sets.			
A.	Suitable for charging of VRLA Type battery bank			
a.	250V,60/50 A	Sets.	363,493.15	10,603.00
b.	250V, 45/30 A	Sets.	291,031.65	10,603.00
B.	Suitable for charging of Tubular Type battery bank			
a.	250V,60/50 A	Sets.	383,592.85	10,603.00
b.	250V, 45/30 A	Sets.	301,204.55	10,603.00
(ii)	Battery charging equipment comprising of float & float cum boost charger unit for charging 24 nos cells of 2 volt per cell Battery sets.			
A.	Suitable for charging of VRLA Type battery bank			
a.	48 V,60/50 A	Sets.	219,516.60	10,603.00
b.	48 V, 45/30 A	Sets.	206,543.45	10,603.00
B.	Suitable for charging of Tubular Type battery bank			
a.	48 V,60/50 A	Sets.	224,890.55	10,603.00
b.	48 V, 45/30 A	Sets.	208,720.40	10,603.00



10	Replacement of conductor (Including Lowering & Re-stringing and re-sagging work) Per conductor per span		
a	1 no. Moose conductor	per span	15,990
b	1 no. Zebra conductor	per span	12,624
c	1 no. Panther conductor	per span	10,098
11	Stringing and other associated work of Earth wire	per span	7,184
12	Minor repairing of conductors without lowering the conductor	per point of defect	3,231
13a	Mobilisation of Labourers	Per Gang	12,973
13b	Demobilisation of Labourers (One Gang should consists of 40 persons )	Per Gang	12,973
14	Nut-bolts tightening of 220 KV towers	Per Tower	1,831
15	Nut-bolts tightening of 132 KV towers	Per Tower	1,470
16	Tack welding of the 220 KV towers	Per Tower	3,500
17	Tack welding of the 132 KV towers	Per Tower	2,800
18	First coat Painting of tower footings without cost of paint & brush	Per Tower	1,115
19	Second coat Painting of towers without cost of paint & brush	Per Tower	632
20	Rate for ERS installation (Erection, Jointing, Jumpering) per set complete in all respect.	Nos.	237,326
21	Rate for ERS Dismantling including conductor lowering per set complete in all respect.	Nos.	237,326
22	Erection of cable and joints	Job	3,335
23	Lowering of ACSR Moose Conductor		3,198
24	Lowering of ACSR Zebra Conductor	Per	2,525
25	Lowering of ACSR Panther Conductor	Conductor	2,020
26	Raising of ACSR Moose Conductor	per Span	3,838
27	Raising of ACSR Zebra Conductor		3,030
28	Raising of ACSR Panther Conductor		2,424

**NOTE:- 1. All above electrical equipments for which erection, testing , commissioning rate has been mentioned , Erection charges and Testing & Commissioning charges shall be 70% and 30% respectively.**

**2. Dismantling of GSS Equipments like Transformer, Breaker, CT, CVT, PT, LA, Panel etc. shall be 60% of Erection charges**



**BIHAR STATE POWER TRANSMISSION COMPANY LIMITED**  
**RATE FOR TRANSPORTATION OF POWER TRANSFORMERS OF VARIOUS CAPACITIES AND OTHER ASSET INTERWORK.**  
**(ALL PRICES ARE WITHOUT TAXES AND NOT SUBJECT TO PAID EXTRA AS APPLICABLE)**  
 All prices in Rupees

Sl. No.	Description	All prices in Rupees										
		10/12.5 MVA	20 MVA	50 MVA	80 MVA	100 MVA	150 MVA / 160 MVA	200 MVA	300 MVA	400 MVA	500 MVA	
1	Removal from plinth/existing position and dragging of transformer from its position to the point of loading (dragging up to 100 feet).	75,806	79,510	95,171	98,785	102,400	108,523	114,647				
2	Dragging of transformers beyond 100 feet. (Rate per feet)	422	422	482	524	572	572	632				
		(i) Beyond 100 feet upto 300 feet, per feet (a) .....	398	398	452	482	512	512	542			
		(ii) Beyond 300 feet upto 700 feet, per feet (a) .....	373	373	422	452	482	482	512			
3	Unloading of the transformer from Railway wagon and dragging to the point of loading (dragging upto 100 feet).	63,849	63,849	75,896	80,113	84,329	84,329	86,738				
		(i) Beyond 700 feet, per feet (a) .....										
		(ii) Beyond 700 feet, per feet (a) .....										
4	Loading of transformer on low bed Trailer and making arrangement against skidding & tilting of the transformer from its position during transportation.	60,235	60,235	72,282	72,282	72,282	72,282	78,306				
		(i) Beyond 700 feet, per feet (a) .....										
5	Safe transportation of transformer from point of loading to the place of destination (including inter state transportation):	72,282	84,329	106,014	115,651	125,289	138,541	144,564				
		(i) Upto first 50 Kms.	253	313	379	398	422	446	482			
6	Unloading of transformer from low bed trailer and placing safely on wooden sleepers/neatly place.	(ii) Beyond 50 Km upto 150 Kms (rate per Kms).	2,530	3,132	3,795	4,006	4,216	4,457	4,819			
		(iii) Beyond 150 Kms upto 300 Kms (rate per 10 Kms).	4,819	6,024	7,228	7,529	7,831	8,433	9,035			
		(iv) Beyond 300 Kms upto 500 Kms (rate per 20 Kms).	9,638	9,638	11,445	12,047	12,649	13,854	14,456			
		(v) Beyond 500 Kms (rate per 50 Kms).	63,849	67,463	75,896	83,124	90,353	96,376	102,400			
7	Removal of transformer from sleepers, dragging (upto 100 feet) and placing it on plinth including fixing and fitting of wheels etc.	67,463	72,282	85,534	87,943	90,353	102,400	108,423				
		(i) Beyond 100 feet, per feet (a) .....										
8	Transportation of GIS equipments /Transformer's accessories/fitings per truck (9 MT capacity) per Km including loading & unloading as well as packing/unpacking of bushing etc.	350.00	350.00	350.00	350.00	350.00	350.00	350.00	350.00	350.00	350.00	350.00
		(i) In side state (Rate per Km).	375.00	375.00	375.00	375.00	375.00	375.00	375.00	375.00	375.00	375.00
9	Transportation of other GSS equipments, Transmission line materials inclusive ERS including loading, unloading of the equipment/materials	Loading Capacity of Truck/Pick up (Commercial)										
		Upto 6 MT					Upto 3 MT					
9	Inside State	(i) Upto first 50 km	9,497	45	30	4,754	25	18				
		(ii) 50 km < Distance < 500 km (Rate per km)										
		(iii) Beyond 500 km (Rate per km)										