



കേരളാ വൈദ്യുതീകരണ ബോർഡ്



# KERALA STATE ELECTRICITY BOARD LIMITED

(Incorporated under the Companies Act, 1956)

Reg. Office: Vidyuthi Bhavanam, Pattom, Thiruvananthapuram - 695 004

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## ABSTRACT

Construction of 3km, 110kV Multi Circuit line from 220kV Substation, Ambalathara to the existing 110kV Kanhangad - Cheruvathur feeder - Expenditure incurred due to technical deviation and excess quantity of line works carried out - Sanction accorded - Orders issued.

### Corporate Office (SBU-T)

B.O.(DB)No. 24/2021/D(T&SO)/T5/Kasaragod SPP/2020-21/Thiruvananthapuram dated. 13.01.2021

- Read: 1. B.O(FTD)No. 2153/2017/(D(T&SO)/T3/Kasargod SPP/2017-18) TVPM\* dated. 19.08.2017
2. BO(DB)No. 1869/2018/D(T&SO)/T3/KasaragodSPP/2017-18 dated. TVPM 20.10.2018
3. Note No. D(T&SO)/T5/Kasaragod SPP/2020-21/1137 dated. 22.12.2020 of the Chairman & Managing Director (Agenda 27-12/2020)

## ORDER

Administrative Sanction was accorded for the work 'Linking of the existing 110kV Kanhangad - Cheruvathur feeder to 220kV Substation, Ambalathara' for an estimate amount of Rs. 33.65 Cr as per BO read as 1<sup>st</sup> above. This project is meant for providing uninterrupted power supply during the execution of Transgrid work 'Conversion of 110kV SC line from 220kV S/S Mylatty to 110kV S/S Mundayad to 220/110 MCMV line' and for the strengthening of the transmission network at the Northern region of Kerala, since 220kV Substation Mylatty is the only source for feeding power to Northern part. The work involves installation of 2 Nos, 220/110kV 100MVA transformers and associated works at 220kV Substation, Ambalathara ( Rs. 24.99 Cr ), 3 km of 110kV OH line ( Rs. 4.6 Cr) and 0.35 km 12 run 110kV UG cable ( Rs. 4.06 Cr). The UG portion was included in the AS because the existing 220kV DC line (Mylatti - Thaliparamba) crosses the proposed 110kV interlinking line

The OH portion of the subject work alone was tendered for a PAC of Rs. 81,79,305/- excluding GST and as per BO read as 2<sup>nd</sup> above, sanction was accorded to award the work to M/s. Astir Power Transmission Pvt. Ltd., Angamaly South, Ernakulam at their quoted amount of Rs.1,21,46,268/- (Rupees One Crore Twenty One Lakh Forty Six Thousand Two Hundred and Sixty Eight only) excl GST which is 48.5% above the PAC.

Even though, initially 110kV cable portion was proposed, later when design of Transgrid upgradation is finalized, it was decided to draw the proposed cable portion also as OH line considering the difficulties in constructing and maintaining short span of 110kV UG cable. Also for achieving mandatory clearance between 220kV and 110kV line the tower locations were required to be changed from the initial survey. Thus a technical deviation has occurred. Accordingly the inceptive proposal of laying 0.35 km, 12 run 110kV XLPE UG cable for crossing the existing 220kV Thaliparamba - Mylatty feeder was revised by incorporating construction of 300m additional OH line, and route approval was accorded by the Chief Engineer (Transmission North). Subsequently,

work to be carried out considering Transgrid project, with an additional financial commitment of Rs. 17,12,947/-.

During the execution of the subject work, additional expenditure incurred to the extend of Rs. 46.95 lakh due to several reasons like variations due to hilly, rocky and sloppy terrain additional revetment required for 7 towers, alteration of towers, relocation of towers to steep terrain considering the suggestions of ADM Kasaragod which caused increase of RCC and foundation costs, factors like change of conductor from AL59 to wolf, material transportation from TC section Kalamassery & from various substations to different work sites, fabrication of tower parts instead of purchase (utilised maximum unused materials (127MT) available at various substations), special foundations and other works.

Thus the total additional cost including the technical deviation comes to Rs. 64.07 lakh, which is 44.7% above the original contract amount incl GST.

The expenditure including material cost incurred for construction of the subject work along with additional OH line for replacing the 110kV UG cable (envisaged in AS) comes to Rs. 4.42 Cr only against estimated cost of Rs. 8.63 Cr.

As per the clause 2.08 of the delegation of power, the FTD can sanction excess quantity for Rs. 5 crore or 25% of the agreed PAC whichever is lower. The Full Time Directors in the meeting held on 16.12.2020 examined the subject matter and recommended to place the same before the Board of Directors for a decision. (Agenda Item No. 50/12/20)

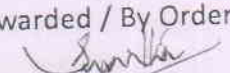
Accordingly the matter was placed before the Board of Directors as per note read 4<sup>th</sup> as above. Having considered the matter in detail, the Board of Directors in the meeting held on 01.01.2021,

Resolved to accord sanction for the expenditure amounting to Rs. 17.13 lakh incl GST incurred due to technical deviation and Rs. 46.95 lakh incl GST in consequent to the excess quantity of line works carried out due to the various reasons, with a total of Rs. 64.07 lakh incl GST (44.7% above the sanctioned contract amount of Rs. 1,21,46,268/- + 18% GST) in connection with the construction of 3km, 110kV multi circuit line from 220kV Solar Substation, Ambalathara to the existing Kanhangad - Cheruvathur feeder, with a further direction that in future technical deviation, executing of extra/excess items etc beyond the delegated powers of the Agreement Authority shall be carried out only with the prior permission of Full Time Directors/Director Board as the case may be.

Orders are issued accordingly.

By Order of the Director Board,  
Sd/-  
LEKHA.G  
Company Secretary (In-Charge)

To : The Chief Engineer (Transmission North )  
Copy to: The Deputy Chief Engineer, Transmission Circle, Kannur  
The Financial Adviser/ The Chief Internal Auditor/ The Company Secretary  
The RAO/ RAO  
The TA to Chairman & MD/D(T&SO)/D(D,IT&HRM)/ D(G-C)/D(G-E& SCM),D(P&S) PA to D(F)  
Fair Copy Superintendent/Library/Stock File

Forwarded / By Order  
  
Assistant Engineer

## Deviation statement

Name of Work: Construction of 3 km 110 kV Multi Circuit line from 220 kV Ambalathara Solar substation to existing 110kV Kanhangad-Cheruvathur feeder

WO No.46/2018-19 dtd 23.10.2018 by the Executive Engineer, Transmission Division, Kasargod

Agreement No: 70/2018-19 dtd 10.12.2018 of the Executive Engineer, Transmission Division, Kasaragod.

Name of Contractor: M/s. Asir Power Transmission Pvt. Ltd., Angamaly

Sl No	Description of work	Rate/unit		Quantity		Value		Deviation		Remarks
		Schld	Exctd	Schld	Exctd	Schld	Exctd	Amount	%	
1a	Transport of materials issued departmentally for the works from dept. stores and distribution to locations for erection including storage, if necessary, loading and unloading charges etc. by head load. : Line conductor and earth conductor	21	31.86	12179.58	18478.16	6298.58	51.71	Change in conductor from AL59 to Wolf		
1b	Insulators and hardware, accessories for power conductor accessories for earth conductor etc.	8	9.90	4216.40	5217.80	1001.40	23.75	Additional material for extended OH line		
1c	Towers, tower extensions and other structure and all other materials including earthing materials.	175	187.88	65229.50	70030.39	4800.89	7.36	Additional material for extended OH line		
2a	Transport of materials issued departmentally for the works from dept. stores and distribution to locations for erection including storage, if necessary, loading and unloading charges etc. by lorry. : Line conductor and earth conductor for an average distance of 10 Km	21	31.86	13706.49	20794.70	7088.21	51.71	Change in conductor from AL59 to Wolf		
2b	Insulators and hardware, accessories for power conductor accessories for earth conductor etc. for an average distance of 10 Km	8	9.90	5788.56	7163.34	1374.78	23.75	Additional material for extended OH line		
2c	Towers, tower extensions and other structure and all other materials including earthing materials for an average distance of 10 Km	175	157.11	77035.00	69159.82	-7875.18	-10.22	Change in tower types		
3a	Transport of materials issued departmentally for the works from dept. stores and distribution to locations for erection including storage, if necessary, loading and unloading charges etc. by lorry. : Line conductor and earth conductor for additional Kms beyond 10 Km	6657	10098.35	86274.72	130874.62	44599.90	51.70	Change in conductor from AL59 to Wolf		
3b	Insulators and hardware, accessories for power conductor accessories for earth conductor etc. for additional Kms beyond 10 Km	2536	1204.51	35884.40	17043.82	-18840.58	-52.50	Change in source of location from Angamaly to Payyanur		
3c	Towers, tower extensions and other structure and all other materials including earthing materials for additional Kms beyond 10 Km	55475	24825.04	485406.25	217219.10	-268187.15	-55.25	Change in source of location from Angamaly to Chakkittappara		
4	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10sqm 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.	5.1	167.28	887.96	29125.12	28237.16	3180.00			
5	Extra for every additional lift of 1.5 m or part thereof in (1.5m to 3m). :All kinds of soil.	5.1	11.66	1252.82	2864.28	1611.46	128.63			
6	Extra for every additional lift of 1.5 m or part thereof in (3m to 4.5m). :All kinds of soil.	1	14.26	317.19	4523.13	4205.94	1326.00			

SI No	Description of work	Rate/unit		Quantity		Value		Deviation		Remarks
		Schld	Exctd	Schld	Exctd	Schld	Exctd	Amount	%	
7	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. : Ordinary rock	305.58 /m3	387.86	101758.14	118522.26	16764.12	16.47			
8	Extra for every additional lift of 1.5 m or part thereof in (1.5m to 3m) : Ordinary rock	433.87 /m3	468.82	144478.71	203406.93	58928.22	40.79			
9	Extra for every additional lift of 1.5 m or part thereof in (3m to 4.5m) : Ordinary rock	562.15 /m3	125.87	34853.30	70757.82	35904.52	103.02			
10	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. Hard rock (Blasting prohibited)	856.81 /m3	556.90	17993.01	477157.49	459164.48	2551.90			1. Change in type of foundation which was approved at the time of execution 2. Change in soil nature due to change in actual final location of tower 3. Excavation for additional towers 4. Additional benching necessitated at location no.7 and 10
11	Extra for every additional lift of 1.5 m or part thereof in (1.5m to 3m) : Hard rock	985.10 /m3	332.39	20687.10	327437.39	306750.29	1482.81			
12	Extra for every additional lift of 1.5 m or part thereof in (3m to 4.5m) : Hard rock	1113.38 /m3	73.12	4453.52	81410.35	76956.83	1728.00			
13	Surveying for marking and pegging of tower locations at site as per the approved tower schedule, stub setting in correct alignment using template of all types of 220 KV DC towers in concrete foundation/ rock foundation excluding excavation, concreting and back filling but including grouting, anchoring, etc. in the case of rock foundation and removing the stub setting template after the expiry of the predetermined time, etc. complete. (RTLTD:12)	8637.96 /No	2.00	17275.92	17275.92	0.00	0.00			
14	Surveying for marking and pegging of tower locations at site as per the approved tower schedule, stub setting in correct alignment using template of all types of 110 KV DC towers in concrete foundation/ rock foundation excluding excavation, concreting and back filling but including grouting, anchoring, etc. in the case of rock foundation and removing the stub setting template after the expiry of the predetermined time, etc. complete. (RTLTD 10)	6855.85 /No	12.00	61703.55	82271.40	20567.85	33.33			Additional tower for extended OH line
15	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size)	7451.76 /m3	169.40	924018.24	1262328.14	338309.90	36.61			1. Change in type of foundation which was approved at the time of execution 2. Special foundation for leg extension at location no.10
16	Cement concrete 1:2.25:3.75 mixture with 20 mm metal for tower footing of 220KV tower in accordance with the specification including the cost of cement to be supplied by the contractor at site, conveyance charges of cement to site of work, all hire and labour for form work, watering, curing, etc. complete.	11096.61 /m3	58.64	33289.83	650705.21	617415.38	1854.67			
17	Cement concrete 1:2.25:3.75 mixture with 20 mm metal for tower footing of 110KV tower in accordance with the specification including the cost of cement to be supplied by the contractor at site, conveyance charges of cement to site of work, all hire and labour for form work, watering, curing, etc. complete.	10810.15 /m3	17.45	140531.95	188637.12	48105.17	34.23			

Sl No	Description of work	Rate/unit		Quantity		Value			Deviation		Remarks
				Schdd	Exctd	Schddd	Exctd	Amount	%		
18	Centering shuttering including strutting, propping etc. and removal of form work for Foundations, footings, bases for columns.	268.12 /m2		407	532.13	109124.84	142674.70	33549.86	30.74		
19	Pipe earthing: Excavation of earth pit of size 0.3 x 0.3 x 3.6 m including over excavation on account of sloping the banks and necessary hire for planks for filling of charcoal, earthing of tower by means of a 50 mm dia, 3 m long pipe and a double run 7/9 S.W.G galvanised steel wire or G.1 tape including cost of charcoal but excluding cost of pipes, steel wire or copper tape with connecting lugs, nuts, etc. which will be supplied at departmental stores (to be specified)	4386.84 /No		6	0.00	26321.04	0.00	-26321.04	-100.00		Deep rod earthing provided alternately
20	Counter poise earthing. Excavation for trench for burying the conductor 450mm below ground level, laying and connecting the conductor on to the tower legs back filling and consolidating the soil after laying the conductor etc. complete.(RTLD 20)	52.78 /m		120	0.00	6333.60	0.00	-6333.60	-100.00		
21	Drilling bore holes of sizes 150mm or nearest in all classes of soil and rock to required depth including hire charges of plant and machinery, cost of oil, fuel, tool etc. and taking all necessary precautions for safety to the substation equipments etc. as per the direction of departmental officers at site.	630.00 /m		264	252.00	166320.00	158760.00	-7560.00	-4.55		
22	Welding of overlapping joints for mat, riser lap joints with 32/25mm MS rod placed in trenches, having 150mm in length 6mm in thick on both sides of the rod and both ends of overlapped MS rods with 6mm welding thickness after cleaning the surfaces neatly. Charges includes cost of low hydrogen DC electrode (No. E7018), hire charges of DC arc welding set and tools and plants required, current charges including labour charges for holding MS rod in position and applying two coats of anti corrosive paints at the welded joints etc. complete as per the directions of department officers.	542.17 /No		44	42.00	23855.48	22771.14	-1084.34	-4.55		
23	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	173.84 /m3		645.2	1547.99	112161.57	269102.58	156941.01	139.92		1. Change in type of foundation which was approved at the time of execution 2. Excavation for additional towers
24	Erection of tower super structure above ground level including erection of normal and special hill side extension members where ever necessary, providing tower accessories like phase, danger and number plates, bird guards, anti climbing devices, etc. complete.(RLTD 18)	8492.52 /MT		179	177.21	1520161.08	1504959.47	-15201.61	-1.00		

Sl No	Description of work	Rate/unit		Quantity		Value		Deviation		Remarks
				Schhd	Exctd	Schhd	Exctd	Amount	%	
25	Paving out, stringing and tensioning as per standard of twelve line ACSR 'WOLF' /equivalent AL 59 conductors including attaching insulator strings (single tension or suspension) with arcing horns or rings on to the tower cross arms, clamping the conductor to the insulator strings using suspension clamps with armour rods and tension clamps, jumpering the conductors at tension points, jointing the conductors and pilot wire where ever necessary, installation of vibration dampers, hire charges of tractor and stringing tools, all hire and labour for protective trestle work, providing suitable back stays at the time of stringing, etc. complete.	180998.74 /km		3	2.83	542996.22	512226.43	-30769.79	-5.67	
26	Paving out, stringing and tensioning as per standard of one 7/10 mm or 7/3.15 stranded steel earth wire including fixing the conductors on to the tower top using tension clamps and suspension clamps, jumpering the conductors at tension points, jointing the conductor wherever necessary, erection of earth bonds, hire charges of tractor and stringing tools, all hire and labour for protective trestles and providing suitable back stays at the time of stringing, etc. complete.(RTLD:30)	12036.44 /km		6	6.78	72218.64	81607.06	9388.42	13.00	Additional for extended OH line
27	Revelment. Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level	5482.39 /m3		250	488.31	1370597.50	2677105.86	1306508.36	95.32	Additional revelment necessitated due to change in actual final position of towers
28	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand)	232.87 /m2		300	415.95	69861.00	96862.28	27001.28	38.65	
29	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto and above plinth level with Thermo-Mechanically Treated bars of grade Fe-500D or more	78.24 /kg		500	3321.39	39120.00	259865.55	220745.55	564.28	1. Change in type of foundation which was approved at the time of execution 2. Special foundation for leg extension, at location no.10
30	Supplying and filling with contractors own earth cut and conveyed from the source of availability including lorry conveyance and filling by layers as per lines and levels as directed by the departmental officers at site etc. complete.	459.72 /m3		200	1293.35	91944.00	594578.86	502634.86	546.68	Additional revelment necessitated due to change in actual final position of towers
31	Drilling holes (labour for drilling 16 holes)(RTLD:45)	84.85 /No		250	1057.00	21212.50	89686.45	68473.95	322.80	Due to old tower parts which had many defects
32	Filing Holes (Enlarging)- Labour for 16 Holes (RTLD:46)	44.41 /No		200	222.00	8882.00	9859.02	977.02	11.00	Due to old tower parts which had many defects
33	Cutting of steel angles (labour for cutting 8 Nos of steel angles)(RTLD:47)	169.70 /No		800	495.00	135760.00	84001.50	-51758.50	-38.13	
34	Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.	5.05 /m2		2000	0.00	10100.00	0.00	-10100.00	-100.00	

Sl No	Description of work	Rate/unit	Quantity		Value		Deviation		Remarks
			Schld	Exctd	Schld	Exctd	Amount	%	
35	Dismantling as per standard of three line ACSR wolf/tiger conductors including winding to conductor drum without damage from existing single circuit towers for erection of the proposed DC towers are to be carried out without causing much interruption to the Substation feeding arrangement, hence at each time work must be completed strictly within the time frame for scheduled shut down period of permit work observing all safety measures including detaching insulator strings with arcing horns or rings from the insulator strings, suspension clamps with armour rods and tension points, taking down of conductors and pilot wires wherever necessary remove the vibration dampers, hire charges of tractor and stringing tools all hire and labour protective trestle works providing suitable back stays at the time of dismantling including keeping the dismantled conductor and all accessories under full responsibility of the contractor etc. complete as per the direction of departmental staffs.	27265.64 /km	3	3.12	81796.92	85068.80	3271.38	4.00	
36	Dismantling as per standard of one 7/9 mm standard steel earth including winding to conductor drum without damage from existing single circuit towers for erection the proposed DC towers are to be carried out without causing much interruption to the Substation feeding arrangement, hence at each time work must be completed strictly within the time frame for scheduled shut down period of permit work, observing all safety measures including detaching the conductors from the tower top like tension clamps and suspension clamps jumpering the conductor at tension points, taking down of conductors where ever necessary, earth bonds, hire charges of tractor and stringing tools all hire and labour for protective trestle works providing suitable back stays at the time of dismantling including keeping the dismantled conductor and all accessories under full responsibility of the contractor etc. complete as per the direction of departmental staffs.	6361.28 /km	3	3.12	19083.84	19847.19	763.35	4.00	
37	Rewinding of ACSR wolf/AL 59 conductor from dilapidated conductor drums unsuitable for transporting/paving out onto serviceable conductor drums issued departmentally incl. all hire charges for tools & plants necessary for rewinding. (RLTD:41)	5427.75 /km	10	2.00	54277.50	10855.50	-43422.00	-80.00	
38	Rewinding of 7/3.15 or 7/10 stranded steel earth wire from dilapidated conductor drums unsuitable for transporting/paving out onto serviceable conductor drums issued departmentally incl. all hire charges for tools & plants necessary for rewinding. (RLTD:44)	4399.69 /km	3	0.00	13199.07	0.00	-13199.07	-100.00	
39	Pumping out water caused by springs, tidal or river seepage broken water mains or drains and the like.	144.18 /KL	500	0.00	72090.00	0.00	-72090.00	-100.00	
40	Arranging scaffolding on either sides of the Main road as per the directions of dept. Officers excluding hire charges of materials. (RLTD for line maintenance work: 6)	3808.28 /loc	4	26.00	15233.12	99015.28	83782.16	550.00	1. Additional for extended OH line 2. Additional scaffolding in roads with increased traffic
41	Clearing jungle including uprooting of thick vegetation grass, brush wood, trees and saplings of girth upto 30cm measured at a height of 1m above ground level and removal of rubbish upto a distance of 50m outside the periphery of the area cleared	9.95 /m2	20000	4930.00	199000.00	49053.50	-149946.50	-75.35	

SI No	Description of work	Rate/unit	Quantity		Value		Deviation		Remarks
			Schdd	Exctd	Schdd	Exctd	Amount	%	
42	Stringing of one km 11kV line with ACSR Raccoon (3 conductors) after fitting insulators and giving jumper connection including cutting and removing removing tree branches wherever necessary	23128.00 /km	2	1.37	46256.00	31685.36	-14570.64	-31.50	
43	Stringing, shackling, fitting cross arms, insulators and binding, giving Jumper connection etc. using ACSR Rabbit for Phase and ACSR Weasel for Neutral, for one km LT three phase 4 wireline including cutting and removing tree branches wherever necessary and conveyance of all materials (except poles) from stacking place.	21250.00 /km	2	1.76	42500.00	37400.00	-5100.00	-12.00	
44	Stringing, shackling, fitting cross arms, insulators and binding, giving Jumper connection etc. using ACSR Rabbit for Phase & Neutral and ACSR Weasel for street main, for one km LT singlephase 3 wire line including cutting and removing tree branches wherever necessary and conveyance of all materials (except poles) from stacking place.	15798.00 /km	2	0.00	31596.00	0.00	-31596.00	-100.00	
45	Dismantling (without damage) one km 11kV line (three conductors) including dismantling cross arm, insulators, disc, disconnecting jumper connection, rolling the conductor and stacking the materials.	9198.00 /km	2	1.37	18396.00	12601.26	-5794.74	-31.50	
46	Dismantling (without damage) one km LT three phase 4 wire OH line conductor by dismantling cross arms, insulators and stacking the conductors in rolls properly.	9401.00 /km	2	1.76	18802.00	16545.76	-2256.24	-12.00	
47	Stringing, shackling, fitting cross arms, insulators and binding, giving jumper connection etc. using ACSR Rabbit for Phase and Neutral, for one km LT single phase 2 wire line including cutting and removing tree branches wherever necessary and conveyance of all materials (except poles) from stacking place. Stringing one km LT 1ph 2 wire line (Rabbit) incl. fitting cross arm etc. removing touchings and conveyance of materials.	11277.00 /km	2	1.12	22554.00	12630.24	-9923.76	-44.00	
48	Dismantling (without damage) one km LT additional conductor line by dismantling cross arms, insulators and stacking the conductors in rolls properly.	2230.00 /km	2	0.00	4460.00	0.00	-4460.00	-100.00	



Sl No	Description of work	Rate/unit		Quantity		Value		Deviation		Remarks
		SchdId	Exctd	SchdId	Exctd	SchdId	Exctd	Amount	%	
49	Paving out, stringing and tensioning as per standard of three line ACSSR 'WOLF' /liger conductors including attaching insulator strings (single tension or suspension) with arcing horns or rings on to the tower cross arms, clamping the conductor to the insulator strings using suspension clamps with armour rods and tension clamps, jumpering the conductors at tension points, jointing the conductors and pilot wire where ever necessary, installation of vibration dampers, hire charges of tractor and stringing tools, all hire and labour for protective trestle work, providing suitable back stays at the time of stringing, etc complete.(RLTD:26)	54551.28 /km	3	3.12	163593.84	170137.59	6543.75	4.00		
50	Dismantling (without damage) one km LT single phase 2 wire OH line conductor,cross arm,insulators,disc and stacking the conductors in rolls properly	4952.00 /km	2	1.12	9904.00	5546.24	-4357.76	-44.00		
51	Assembling of double tension/suspension string using 90 KN/70 KN Disc insulators /composite insulator ,lifting the same using pulleys and ropes ,fixing it on to tower cross arms with care etc.complete	2549.66 /No	252	204.00	642514.32	520130.64	-122383.68	-19.05		
52	Disconnecting and lowering down the single phase WP service connection with guy wire from the OH line and reconnecting the same after completing the line work.	64.00 /No	6	15.00	384.00	960.00	576.00	150.00		AS per actual site
53	Disconnecting and lowering down the three phase WP service connection with guy wire from the OH line and reconnecting the same after completing the line work.	99.00 /No	1	3.00	99.00	297.00	198.00	200.00		AS per actual site
54	Rewinding of 7/9 stranded steel earth wire from dilapidated conductor drums unsuitable for transporting/paving out onto serviceable conductor drums issued departmentally incl. all hire charges for tools & plants necessary for rewinding.(RLTD:43)	4884.97 /km	3	0.00	14654.91	0.00	-14654.91	-100.00		
55	20 mm Cement plaster 1:3 (1 cement :3 coarse sand ) finished with a floating coat of neat cement	433.04 /m2	100	204.07	43304.00	88370.47	45066.47	104.07		Additional reventment necessitated due to change in actual final position of towers
56	Laying of departmentally supplied GI strip/Copper strip of Suitable size including cleaning and neatly bending of strips ,cutting ,removing of metal/earth in the yard and burying earth strip to the required depth refilling the pit as per the direction of the departmental officers.	122.65 /m	77	194.00	9444.05	23794.10	14350.05	151.95		AS per actual site
57	Welding one end of the bended GI strip of size 50x6 mm with the riser of already laid earth mat, welding 150 mm in length 6 mm thick on both sides and end of the strip, and other end of the strip with yard structure at two points, 50 mm apart, each welding points having 50 mm length and 6 mm thick on both sides and end of the strips including the charges for connecting the strip with structure using bolted joints as per the direction of the departmental officers. Charges includes hire charges of DC arc welding set, current charges, cost of low hydrogen content DC arc welding electrodes (No E7018), cost of anti corrosive paint etc .complete (RLTD 44)	456.40 /No	22	17.00	10040.80	7758.80	-2282.00	-22.73		

Sl No	Description of work	Rate/unit		Quantity		Value		Deviation		Remarks
				Schdd	Exctd	Schdd	Exctd	Amount	%	
58	cutting 32 mm MS rod in required length etc complete as per the direction of Dept. officers	62.21 /No		11	28.00	684.31	1741.88	1057.57	154.55	As per actual site requirement
59	Paving out ,stringing and tensioning as per standard of six line ACSR WOLF/EQUIVALENT AL 59 CONDUCTOR conductors including winding to conductor drum without damage from existing single circuit towers for erection of the proposed DC towers are to be carried out without causing much interruption to the Substation feeding arrangement, hence at each time work must be completed strictly within the time frame for scheduled shut down period of permit work, observing all safety measures including detaching insulator strings with arcing horns or rings from the insulator strings, suspension clamps with armour rods and tension points, taking down of conductors and pilot wires, wherever necessary remove the vibration dampers, hire charges of tractor and stringing tools all hire and labour protective trestle works providing suitable back stays at the time of dismantling including keeping the dismantled conductor and all accessories under full responsibility of the contractor etc. complete as per the direction of departmental staffs.	92281.88 /km		0.3	0.70	27684.56	64597.32	36912.75	133.33	Additional for extended OH line
						8177743.85	11834502.15	3656758.30	44.72	Overall increase of 44.72%
	Tender deviation : 48.5% above estimate rate					12143949.61	17574235.69	5430286.07		*Amount without GST
	<b>TOTAL AMOUNT</b>					<b>14329860.545</b>	<b>20737598.112</b>	<b>6407737.567</b>	<b>44.72%</b>	*Amount with GST

Forwarded by Order



Assistant Engineer