ODISHA ELECTRICITY REGULATORY COMMISSION PLOT NO. 4, CHUNOKOLI, SHAILASHREE VIHAR, BHUBANESWAR – 751021 Tel. No. (0674) 2721048/ 2721049 (PBX), Fax : (0674) 2721053/2721057 E-mail : <u>orierc@gmail.com</u> Website : <u>www.orierc.org</u> *********

PUBLIC NOTICE

Case No. 82 of 2023

Hearing of Application for approval of Capital Expenditure for improvement of reliability in Berhampur City in compliance to the directions of the Commission in the vesting order dated 28.12.2020 passed in Case No.83 of 2020 as well as the OERC (Terms and Conditions for determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2022.

M/s. TP Southern Odisha Distribution Ltd. (**TPSODL**) has filed an application before this Commission for approval of Capital Expenditure for improvement of reliability in Berhampur City in its Licensed area of supply. The Commission has registered it as **Case No.82 of 2023** and has decided to dispose of this case through a public hearing. The petition along with all Annexures submitted by M/s. TPSODL in this regard is available in OERC website (www.orierc.org) and also in TPSODL's website www.tpsouthernodisha.com. The persons/ organizations those who are interested to participate in the above proceeding may file their objections/suggestions, if any, on the present petition of M/s. TPSODL by07.10.2023 with a copy to the petitioner. M/s. TPSODL is directed to file its rejoinder to the objections/suggestions of the Respondents by16.10.2023 with a copy to the Respondents.The Commission will hear the matter on 17.10.2023 at 11.00A.M.

By Order of the Commission

Dated. .09.2023

-Sd-

S E C R E T A R Y

BEFORE THE ODISHA ELECTRICITY REGULATORY COMMISSION, **BIDYUT NIYAMAK BHAWAN.** T No-4, CHUNOKOLI, SHAILASHREE VIHAR, BHUBANESWAR-751021

Reliability in Berhampur City

Case No: / 2023

File No TPSODL/Regulatory /2023/70/____

Petition for Approval of the Capital Expenditure for improving

And

IN THE MATTER OF:

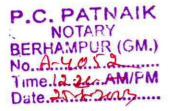
ATTER OF:

TP Southern Odisha Distribution Ltd. (Formerly Southco), Corporate Office, Kamapally, Courtpeta, Berhampur, Ganjam Petitioner District, Odisha 760004.

AFFIDAVIT

I Vidyadhar Hari Wagle, aged about 56 years, S/o. Late Hari Prabhakar Wagle working as the Chief Regulatory Affairs, do hereby solemnly affirm and state as follows:

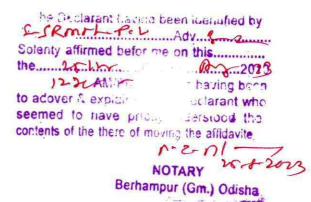
- a) That, I am an authorized representative of the TPSODL, the Petitioner in the instant case and competent to swear this affidavit for and on behalf of the Petitioner.
- b) That, I have gone through the contentions in this application and understood the contents thereof.
- c) That, the facts stated in the application are true to the best of my knowledge and behalf.



Deponent

Verified that the contents of above affidavit are true and correct, no part it is false and nothing material has been concealed there-form.

Deponent



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August 2**5**, 2023 File No TPSODL/Regulatory / 2023/<u>70 / チョ</u>ニフ

Secretary Odisha Electricity Regulatory Commission Bidyut Niyamak Bhawan Plot No 4, Chunokoli Shailashree Vihar Bhubaneshwar 751021

Dear Sir

Sub: Petition for Approval of the Capital Expenditure for improving Reliability in Berhampur City

The City of Berhampur in TPSODL Licensed Area has witnessed a substantial growth in load this year and such growth rate is expected to continue even in the next summer.

Further, the network of TPSODL in the city area is not adequately strengthened to meet its load and this has put the reliability of power supply in jeopardy. In pursuit of mitigating the power interruption, meeting the load growth in the next two to three years, TPSODL is filing a petition to incur capital investment towards improvement of reliability in Berhampur City, for the approval of the Hon'ble Commission. The petition is provided in the **Appendix**

We trust our submissions are in order

Yours faithfully

VHWage

(Vidyadhar H Wagle) Chief Regulatory Affairs

TP SOUTHERN ODISHA DISTRIBUTION LIMITED (A Tata Power and Odisha Government Joint Venture) Regd./Corp Office: Kamapally, Courtpeta, Berhampur, Ganjam, Odisha- 760004 Website: <u>www.tpsouthernodisha.com</u> Email: <u>tpsodl@tpsouthernodisha.com</u> Corporate Identity Number (CIN)- U40109OR2020PLC035195

TPSØDL

BEFORE THE ODISHA ELECTRICITY REGULATORY COMMISSION, BIDYUT NIYAMAK BHAWAN. PLOT No-4, CHUNOKOLI, SHAILASHREE VIHAR, BHUBANESWAR-751021

Appendix

Case No:____/2023

IN THE MATTER OF: Application for approval of Capital Investment Plan in for Network Strengthening in Berhampur City in the Licensed Area of TP Southern Odisha Distribution Ltd.

And

IN THE MATTER OF: TP Southern Odisha Distribution Ltd. (Formerly Southco Utility), Corporate Office, represented by its Chief Regulatory Affairs , Registered Officer at Kamapally, Courtpeta, Berhampur, Ganjam, Odisha 760004

Petitioner

IN THE MATTER OF:	All Concerned Stake Holders.	Respondents
IN THE MATTER OF:	All Concerned Stake Holders.	Respondents

A. Background for Submission of the Petition

1. TPSODL has been from time to time submitting its Capital Investment Plan to be executed in its entire Licensed Area to the Hon'ble Commission. However, it is noticed that the load growth of Berhampur city has been substantial in the current year of 2023. As the existing network of TPSODL in the city area is not adequately equipped at present, the reliability in the city was compromised. It is expected that such load growth would continue in the next two to three years too

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- 2. TPSODL had submitted the Capital Investment Plan for FY 2023-24 in January 2023 i.e much prior to summer of 2023. Such capital expenditure included schemes to improve the reliability and meet load growth to the extent of Rs 147 Crores across Licensed Area. A part of such schemes was towards improvement of reliability in the City area too.
- 3. However keeping in mind the importance of Berhmapur City, its expected load growth in the near future, the preparedness of the present condition of the network in the city, TPSODL is proposing to incur additional capital expenditure towards meeting the load of Berhmapur City and towards the same. In this regard, TPSODL is filing this present petition for an amount of Capital Expenditure to the extent of **Rs 69.05 Crores**. This also include an amount of **Rs 1.39** Crores towards capital expenditure required to meet the unprecedented demand of the summer of 2023.
- 4. The summary of the Capital Investment Proposal is as given in the table below

Table 1 Summary of the Capital Investment Proposal

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. No.	Capex Head	Activity	UoM	Quantity	Total proposed Cos (Rs. Cr)
1	Network Reliability	33 KV New Lines for reliable power supply	Ckm	0.65	D.36
		Upgradation of 33 KV Line	Ckm	22.8	4.27
		11 KV New Lines for reliable power supply	Ckm	8.17	3.22
		Upgradation of 11 KV Line	Ckm	49.6	4.58
		AB Switch for 33 KV & 11 KV Lines, PSS Refurbishment(Isolator) & DSS Refurbishment (AB Switch, HG Fuse, LA) & Installation of LV protection at DSS			6.80
		Network refurbishment for safety Enhancement (Intermediate poles for vulnerable location, provision for Earthing & Cradle guard at major road crossings, Populated area, School area)			2.58
		Sub-Total Network Reliability (2)	8.8		21.81
2	Load Growth	Augmentation of Power Transformer	Nos.	5	9.22
		Augmentation / addition of Distribution Transformer and 11 KV Line Extension for New DTRs	Nos.	101	13.36
		Augmentation and addition of LT ABC line	Km.	207.17	23.28
		Sub Total- Load Growth (3)	3 3 9 9 9		45.85
3		Emergency CAPEX			1.39
		Total (1+2+3)			69.05

- 5. The detailed justification for the above schemes along with the breakup of the expenditure is given in Annexure 1- Detailed Project Report
- 6. The Bill of Quantities (BOQ) is given in Annexure 2- Bill of Quantities

B. Employee Costs and Interest During Construction to be capitalised

- 7. It is submitted that Employee Cost associated with the projects or capex schemes would also form a part of the Capex and would be eventually capitalized with the capital expenditure scheme. The above cost submitted for approval does not include such Employee Costs capitalised or Interest During Construction. We wish to submit that the Employee Costs to be capitalized would in term depend on the employees working on the scheme and the time spent by them on the same.
- 8. Considering the Capitalisation for FY 2022-23, we have worked out the share of Employee Costs to be capitalized and also the IDC to be capitalized. The same are as shown in the table below:



Table 2 Employee Cost Capitalisation and IDC for FY 2022-23

Sr No	Particulars	Rs Cr	% of Base Capitalisation
1	Base Capitalisation (i.e without EDC and IDC)	315.02	
2	Employee Cost Capitalisation (EDC)	28.37	9.0%
3	Interest During Construction	0.78	0.2%

9. On the basis of the above, the estimated capitalization from the above scheme is as given in the table below:

Sr No	Particulars	Amt (Rs Cr)	
1	Capex without Employee Costs	69.05	
	and IDC		
	Add		
2	Employee Costs	6.22	
3	IDC	0.17	
4	Total Including Employee Costs	75.44	
	and IDC		

Table 3: Total Capital Cost including EDC and IDC

C. Basis for estimation of Cost

10. The estimation of capital costs for large number of items have been made on the basis of Cost Data Book (CDB) published by the Government of Odisha for various items. The CDB has been published by the Government of Odisha for the FY 2018-19. Subsequently, in the meeting dated 23rd November 2021, it was decided that 6% p.a towards escalation may be considered till the rates are revised. The relevant extracts from the Minutes of the meeting are as given below



- E. A Technical Committee to be constituted under the Chairmanship of EICcum- PCEI, to look into the revision of rates. EIC(Electricity) clarified that pending finalization of the rates, price escalation of 6% per year may be allowed.
- 11. Accordingly, the escalation rate of 6% p.a from FY 2018-19 i.e a total escalation of 30 % till FY 2023-24 has been considered for estimation of capital expenditure for items covered by the CDB. For items, which are not covered by the CDB, the rates discovered by TPSODL through the last competitive bidding conducted has been considered. The rates so discovered have been escalated suitably to reflect the present market conditions. The expenditure of items which do not have the reference of the discovered rates since the same are being placed for the first time, budgetary quotes have been used.
- 12. For a few items where the above references are not available, engineering estimates have been made by TPSODL to arrive at the capital expenditure.
- 13. The Hon'ble Commission in their letter No OERC/Engg-09/2022/893 dated 3rd July 2023 had clarified that 6% supervision charges cannot levied for schemes which are executed by the Discoms for themselves (i.e not on behalf of consumers). Accordingly, TPSODL has not considered such charges while preparation of the scheme value.

D. Proposed Funding of the Capex

14. The Capital Expenditure is proposed to be funded through a Debt to Equity mix in the ratio of 70:30. The Debt raised for this Capital Expenditure would be long term debt and the Equity would be subscribed by Tata Power and Gridco in the ratio of 51% and 49% respectively. Further, Gridco is expected to subscribe to its share of 49% through transfer of assets owned by the Government i.e make contribution in kind and Tata Power would subscribe in the form of cash to the extent of its share of 51%. Accordingly, since cash resources need to be raised in the form of cash to meet the expenditure, the resources need to be raised additionally for compensating the Gridco Equity in Kind. Accordingly, the Debt and Equity



required for meeting the capital expenditure (without considering employee cost and IDC that would be capitalized is as follows:

Sr No	Particulars	Amount (Cr)
1	A. Proposed Capex Plan –	75.44
2	B. Add- GRIDCO capex (in Kind) (i.e. equivalent	13.00
	to GRIDCO share of 49% in 30% Equity) @ 17.23	
	% of Sr No 1	
3	Total Capex (A+B)	88.44
	Funding of the above Capex	
4	70% through Debt	61.9
5	30% through Equity	26.5
5a	TPC share @ 51%	13.531
5b	GRIDCO share @ 49%	13.00

Table 4 : Proposed funding of Capital Expenditure

E. Approval of the Board

15. TPSODL is in the process of obtaining the Board Approval and will submit the same to the Hon'ble Commission. The next Board meeting is scheduled in October 2023. In light of the urgency of this Capital Expenditure required to be completed, the Hon'ble Commission is requested to approve the proposal in this petition on the basis that such Board Approval would be obtained by TPSODL

F. Prayers to the Hon'ble Commission

16. TPSODL prays for the following to the Hon'ble Commission

- Approve the Capital Expenditure plan and breakup as proposed in Table 1 Summary of the Capital Investment Proposal i.e for an amount of Rs 69.05 Crores (excluding IDC and Employee Cost Capitalisation) for executing schemes envisaged for improvement of reliability in Berhampur City.
- ii. Pass any other orders as the Hon'ble Commission may think appropriate

TPSØDL

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IE	Annexus 2- Bill of Quantities	2
۲2	Summary of various activities	II.C.I
97	33 KV & II KV Isolator & Line AB Switch	01.2.1
97	Intermediate poles for unsafe to safe location	2.9.2.1
יי)	Cradle Guard (At Major Road crossings, in Populated area, School area	1.5.2.1
52	Safety Improvement in the City	6. <u></u> .1
54	LV Protection at DSS	8.č.1
	səniJ AA TJ fo noitibbs bns noitstnəmzuA	7. 5 .1
	Augmentation/Addition of Distribution Transformer	9.2.I
61	Upgradation of 11 KV Lines.	2.2.I
8L	New 11 KV Lines	₽.2.I
	Upgradation 33 KV Lines	£.ट.1
	33 KV New Line proposal	2.2.I
	Augmentation of Power Transformers.	1.5.1
	Schemes further planned to be undertaken to meet the future require	S.I
¥I	Schemes already undertaken in 2023.	₽.I
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01	Key Information about TPSODL including City Circle	2.1
01	TPSODL Network Overview	1.1
01	Annexure 1- Detailed Project Report	I

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	Table 17 : LT Protection on DSS (1/2)
	Table 15 : Upgradation of 11 KV Lines (2/2)
12	Table 14 : Upgradation of 11 KV Lines (2/2)
	Table 13 : Upgradation of 11 KV Lines (1/2)
	Table 12 : New II KV Lines planned in Berhampur City
	Table II : Upgradation of 33 KV Lines
Areas and	Table 10 : New 33 KV Lines for Berhampur city
	Table 9: Augmentation of Power Transformers
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01	Table 5 : Details of Distribution lines (Ckt Km)
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g	Table 3 : Total Capital Cost including EDC and IDC
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TP SOUTHERN ODISHA DISTRIBUTION LIMITED

Regd./Corp Office: Kamapally, Courtpeta, Berhampur, Ganjam, Odisha- 760004 (A Tata Power and Odisha Government Joint Venture)

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Website: www.tpsouthernodisha.com Email: tpsodl@tpsouthernodisha.com

Corporate Identity Number (CIN)- U401090R2020PLC035195

TPSØDL

Table 18 : LT Protection on DSS (2/2)	25
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Table 20 : AB Switches and Isolators at 33 KV and 11 KV	
Table 21 : Summary of Activities (1/3)	
Table 22 : Summary of Activities (2/3)	
Table 23 : Summary of Activities (3/3)	

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1 Annexure 1 - Detailed Project Report

1.1 TPSODL Network Overview

17. TPSODL has a wide geographical area of 48,751 Sq KM. spread across 8 districts of Odisha state namely Ganjam, Gajapati, Boudh, Kandhamala, Rayagada, Koraput, Nabarangpur and Malkangiri and serves the consumer base of about 24.13 Lakhs. For operational simplicity the area is divided into 6 Circles viz. City, Berhampur, Aska, Bhanjanagar, Jeypore & Rayagada Circles. In order to have the smooth operation of electrical network and to provide satisfactory services to its consumers, above circles are further sub divided into 19 Divisions and 51 Sub-division.

1.2 Key Information about TPSODL including City Circle

18. The information of TPSODL in terms of its Assets used for consumers are given in the following tables

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Table 5 : Details of Distribution lines (Ckt Km)

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Table 6 : Details of Power Transformers (PTR)

Sr No	Circle	Units	10 MVA	8 MVA	7.5 MVA	5 MVA	3.15 MVA	1.6 MVA	Total
1	City	No.	3	12	1	23	6	2	47
2	Berhampur	No.	0	14	0	47	11	1	73
3	Aska	No.	1	5	0	40	9	3	58
4	Bhanjanagar	No.	C	7	0	57	27	6	97
5	Jeypore	No.	0	8	0	88	48	15	159
6	Rayagada	Nc.	0	9	1	60	24	7	101
7	TOTAL QUANTITY	No.	4	55	2	315	125	34	535
8	TOTAL CAPACITY	MVA	40	440	15	1575	393.8	54.4	2518.

Table 7 : Information on Berhampur City Circle

District –	Ganjam
Circle –	Berhampur City
Division –	03 – (BED-I, BED-II & BED-III)
Sub-Division-	07 – (Medical, Gopalpur, Industrial, SSD-I, SSD-III, SSD-IV & Kanisi)
Total Sections –	18
Total FCC -	62
Total Area-	591 Sq. <u>kM</u>
Total PSS-	20
Total 11 kV Feeders-	83 – (Urban – 41, Semi Urban/Rural – 42)
Total DT-	2528 - (3Ph - 2216, 1Ph - 312)
Total Consumers-	231242

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Figure 1: Layout of Berhampur City

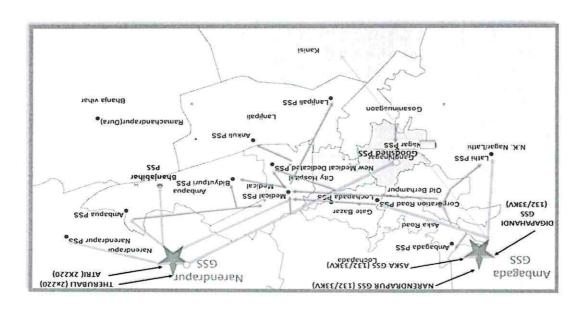


Figure 2: Location of Berhmapur City from sea

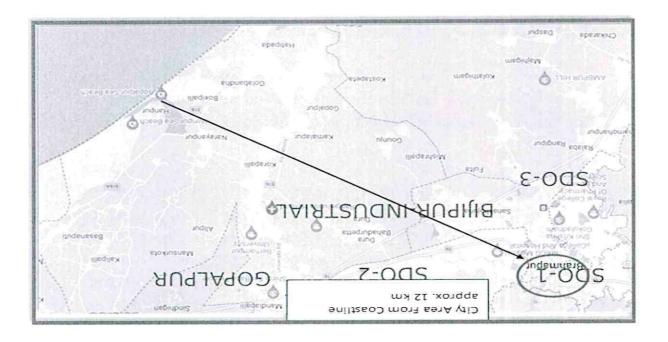
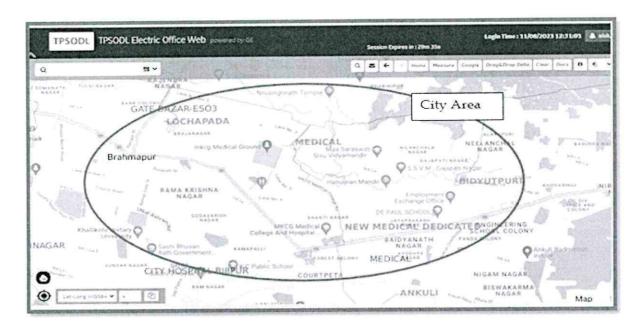


Figure 3: Location of Berhmapur City in Google Map

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1.3 Issues identified in Berhampur City Area

- 19. There was a sudden load growth observed in summer'23 which caused frequent interruption of power supply to consumers. Overloading conditions in electrical networks during this summer and expected load growth in Summer'24 can lead to a variety of issues, primarily stemming from increased demand for electricity due to higher temperatures and increased use of cooling systems. During site visits, it has been observed that conductor of multiple sizes is used in different section which restricts the circuit capacity. This also leads to conductor heating and high losses.
- 20. It is observed that some sections of lines are of undersized conductor of 34 &55 sq.mm and there are multiple joints in the run of the line. Such de rated old conductor cause conductor snapping.
- 21. Hence to meet current load and anticipated future load growth, upgradation of only part of section which has undersized conductor is proposed. The size of the conducted is proposed to be enhanced to 100 and 148 sq.mm for identified sections of the lines. Further, refurbishment of the lines is also planned.

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22. To mitigate the above mentioned issues, several schemes were identified and only prioritized schemes are proposed in this petition .

1.4 Schemes already undertaken in 2023

- 23. TPSODL had proposed a Capital Expenditure of Rs 338.34 Crore for FY 2023- 24 and the Hon'ble commission in its order dated 19.06.2023 had approved an amojnt of Rs. 338.33 Crore.
- 24. During Summer of 2023, we had to undertake few urgent measures to address overloading and reliability issues. These measures required an additional budget of Rs. 1.39 Cr. as per details given below.

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1000 Aug 107 Aug 1			Structure to Delhi Public School		1.020	Q
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0'43	6 6		11KV Link Line in Halidiapadar to			
		10000	Randha Feeder	ττ	111-038	Q
			*Including 100mtr. NH Crossing			
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Table 8 : Expenditure incurred to meet the urgent requirement in 2023

25. Out of the above 8 schemes, one of them is completed and the balance of 7 schemes are under progress . We request Honorable commission to kindly approve additional Capex of **Rs. 1.39 Cr**. incurred in addition to Rs 338.34 Cr already approved for FY24.

1.5 Schemes further planned to be undertaken to meet the future requirement

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1.5.1 Augmentation of Power Transformers

- 26. There is an exorbitantly high load growth observed this summer and some of the Power Transformers are expected to further experience load growth in Summer'24. To avoid these overloading issues, TPSODL had undertaken the assessment of the loading of the Power Transformers and found that some of the Power Transformers are overloaded & to meet the estimated peak load, it is required to augment few of the overloaded Transformers. In addition, few new Power Transformer are also Proposed considering the current peak and load growth for the next two years.
- 27. To carry out the detailed Study of the power transformer loadings, inputs were collected from each of the 33/11 kV substations and loading pattern of PTR were analyzed. Future load growth has also been considered and Power Transformers with peak load more than 80% capacity have been identified for planning of mitigation strategies. In some of the PSS, the percentage loading on Power Transformers is not uniform. Though one transformer is overloaded, another transformer is partly loaded. In such cases, it is planned to shift load from overloaded transformer to other transformer with lower load. Augmentation of Power Transformer is planned where spare capacity is not available with other Transformers in the same PSS.
- 28. The Augmentation of PTR proposed is as given below

Activity	Location	Qty in Nos.	Cost -Rs Lakh/ Transfomer	Estimated Cost in Rs. Cr
Augmentation of PTR to 12.5 MVA	1)N.K Nagar PSS-01 Nos.	1	184.37	1.84
(from 8 MVA)	2)Nimakhandi PSS-01 Nos.	1	184.37	1.84
	3)Goodshed PSS-01 Nos.	1	184.37	1.84
	4) Medical Old PSS-01 Nos.	1	184.37	1.84
	5) Corporation Road-01 Nos.	1	184.37	1.84
	Total	5		9.22

Table 9: Augmentation of Power Transformers

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29. The augmentation of PTR will help consumers as mentioned below:

- Reduce over-burdening of existing PTRs thereby reducing forced outages.
- Optimization of PTR loading.
- Reduction of technical loss.
- Reduction of PTR failure which is costly asset.
- Improve the operational efficiency.
- Reliable power supply by ensuring N-1 capacity at PSS level.
- Existing PTR freed after Augmentation will be reused at other location of PSS for mitigation of old and overloaded PTR after necessary testing & life-enhancement measures as per requirement. This will help in Multiple swapping and Cost optimization.

1.5.2 33 KV New Line proposal

30. In TPSODL, 33kV network is the back bone of power supply system and spread across vast area of TPSODL and connected with various 33/11kV PSS from where the power is transformed at 11kV for further distribution. 33kV network is lengthy and radial in nature at most of the places. To summarize, we found following issues which needs to be addressed to strengthen the existing network.

- Lengthy and radial connectivity of the network.
- Absence of N-1 redundancy at least to critical installations.
- Circuit capacity restricted to lower size of conductor in existing line.

31. Due to lack of alternate source, it is not possible for the field teams to transfer the load during shutdown of radial feeder and thus all consumers connected to the affected feeders remain out of service till the field team locate and repair the fault. Further while considering the proposal for 33kV new line, RLP pole is considered for providing cyclone resilient infrastructure within 0-60 km of the coastal belt.

32. The new lines identified are as follows

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Table 10: New 33 KV Lines for Berhampur city

Division	33 kV Feeder	Location From	Location To	Length (CKM)	Proposed Conductor Size (Sq.mm)	Cost per unit- Line (Rs Lakh /Km)	Civil (Rs Lakhs)	Estimated Cost of Line in Rs. Cr.
BED-2	33 kV	Shubham	Rama	0.35	148	31.75		0.11
	Berhapur-1	Vihar	Krushna					
			Nagar					
BED-3	33 kV Kanisi	Shree	Near New	0.30	148	31.75	15	0.25
*******	Total			0.65				0.36
	BED-2	BED-2 33 kV Berhapur-1 BED-3 33 kV Kanisi	From BED-2 33 kV Shubham Berhapur-1 Vihar BED-3 33 kV Kanisi Shree	From BED-2 33 kV Shubham Rama Berhapur-1 Vihar Krushna Nagar BED-3 33 kV Kanisi Shree Near New	From (CKM) BED-2 33 kV Shubham Rama 0.35 Berhapur-1 Vihar Krushna Nagar BED-3 33 kV Kanisi Shree Near New 0.30	From (CKM) Conductor BED-2 33 kV Shubham Rama 0.35 148 Berhapur-1 Vihar Krushna Nagar BED-3 33 kV Kanisi Shree Near New 0.30 148	From (CKM) Conductor unit- Line Size (Sq.mm) (Rs Lakh /Km) BED-2 33 kV Shubham Rama 0.35 148 31.75 Berhapur-1 Vihar Krushna Nagar BED-3 33 kV Kanisi Shree Near New 0.30 148 31.75	From (CKM) Conductor unit- Line Lakhs) Size (Sq.mm) (Rs Lakh /Km) BED-2 33 kV Shubham Rama 0.35 148 31.75 Berhapur-1 Vihar Krushna Nagar BED-3 33 kV Kanisi Shree Near New 0.30 148 31.75 15

1.5.3 Upgradation 33 KV Lines

33. During site visits, it has been observed that conductor of multiple sizes is existing in different sections of the lines which restricts the circuit capacity. This also leads to conductor heating and high losses. Hence it is required to upgrade the conductor size for the identified lines to carry the present as well as anticipated loading considering load growth for future. The following lines on 33 KV have been identified for upgradation

Sr No	Circle	Division	33 kV Feeder	Location From	Location To	Length (CKM)	Proposed Conductor Size (Sq.mm)	No. of Bay	Cost per unit- Line (Rs Lakh /Km)	Cost per Bay (Rs Lakh/Bay)	Estimated Cost of Line in Rs. Cr.
1	City	BED-2	Berhampur-II	Nk Nagar PSS	Goodshed	7	148	2	15.83	33.12	1.77
2	City	BED-2	Berhampur-II	Ambagada	Nk Nagar PSS	6.2	148		15.83		0.98
3	CITY	BED-3	Kanisi	Andhapasara Road	Nk Nagar PSS	1.4	148		15.83		0.22
4	CITY	BED-3	Kanisi	Back Side Of Spectrum Appartment	33 Kv Four Pole Structure,	0.2	148		15.83		0.03
5	CITY	GSED	Chikiti	Barahi 4-Pole Structure	Chikiti PSS	8	148		15.83		1.27
6					Total	22.8					4.270

Table 11 : Upgradation of 33 KV Lines

Benefits of New lines and upgradation

- Improve 11KV Network Reliability.
- Minimize Breakdown
- Reduced Technical Losses.

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1.5.4 New II KV Lines

34. In TPSODL, 11kV feeders are important asset for a distribution utility which are feeding to various 11/0.415kV DSS from where the power is distributed to end per the site survey it is found that the 11kV feeders under its operational area. As nature. Due to lack of availability of alternate 11kV feeder connectivity, it is not possible for the field teams to transfer the load during shutdown of radial feeder and thus all consumers connected to the affected feeders remain out of service till the field be planned in phased manner to provide N-1 arrangement for critical 11kV feeder in Urban areas. This will also help in diversion of load of overloaded feeders for optimal use of the network. One Number Ring Main Units(RMU) is planned for ease of use of the network. One Number Ring Main Units(RMU) is planned for ease of operation and faster restoration.

35. The new 11 KV Lines (along with RMU or Bay) at certain places is as provided in the following table

Table 12 : New II KV Lines planned in Berhampur City

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Sr No	Division	11kV Feeder	Location From	Location To	Length (CKM)	Proposed Conductor Size (Sq.mm)	No. of Bay/RMU	Cost (Rs Lakh /Km)	Cost (Rs/Bay or Rs/RMU)	Cost (Rs Cr)
1	BED-1	Lanjipalli	Chandan Nagar 5Th Ln Tapping	Chandan Nagar 500KVA DSS	0.8	100		26.79		0.21
2	BED-1	Courtpeta	Courtpeta	Mkcg Fdr	1.5	100		26.79		0.40
3	8ED-1	Gopalpur	Baxipall	Panthaniwas	1	100		26.79		0.27
4	BED-1	Siddharthnagar	Back Side Of Boys Hostel 100KVA DSS	Siddharth Nagar Colony	0.05	100		26.79		0.01
5	BED-1	City Hospital Medical		Medical Padia 500KVA DSS	1	100	1	26.79	18.478	0.45
6	BED-1	Nilanchal Nagar	Bidyutpuri PSS	14Th Lane	0.5	100		26.79		0.13
7	BED-1	Nilanchal Nagar	Bidyutpuri PSS	Nilachalnagar II Lane	0.5	100	1	26.79	24.32	0.38
8	BED-1	Ayodhyanagar	New Medical PSS	Medical Square	0.5	100		26.79		0.13
9	BED-2	Old Berhampur	Haridakhan di Petrol Pump	Binayak Acharya College T-Off Point	0.6	100		26.79		0.15
10	BED-2	Gosani Nuagam	Back Side New Police Station	Ray Project Neherunagar	0.32	100		26.79		0.09
11	BED-2	Gosani Nuagam	Near Fisheries S/S 500 kVA	Goodshed Htc 1402/120/17	1	100		26.79		0.27
12	BED-2	HIG	NK Nagar	Near PSS	0.1	UG 3C+400 Sq. mm XLPE		110.30		0.13
13	BED-2	Gosani Nuagam		Goodshed(Rai Iway crossing)	0.3	UG 3C* 400 Sq. mm XLPE using HDD method		110.30		0.58
*******	Total				8.1					3,22

Note: The estimated Cost for Sr No 12 and Sr No 13 includes the approx. cost for ROW permission of Rs 2 Lakhs (Sr No 12) for National Highway and Rs 25 Lakhs (Sr No 13) for Railway Crossing

1.5.5 Upgradation of 11 KV Lines

36. It is observed that many of 11kV feeder lines are having some sections with 34 Sqmm Conductor. These sections restrict the loading capacities of these feeders and also results into frequent conductor snapping due to ageing and multiple joints. There are also issues observed such as tilted pole, low clearance due to high span, damaged insulators etc. Hence network refurbishment and upgradation is planned as under in identified part of the section of the lines

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Table 13 : Upgradation of 11 KV Lines (1/2)

estimated Cos of Line in Rs. Cr.	(mא) אאס) נאא) נאא) נאפן	Proposed Conductor Size	(CKM) (CKM)	Location To	morf noiteool	11kV Feeder	noisivia	oN 1
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0'40	L1.2	00T.	4'40	iegeN idbrieD	Ane8 etet2	Medical 11 KV CITY Medical	8ED-T	٤
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60.0	L1.6	007.	00°I	Chhak Kathamentu	yeyeni8 eytedaA	BERHAMPUR 11 KV OLD Gosaninuagam	8ED-3	S
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0'0 1 0'14	ZT 6	00T. 00T.	0'40 1'20	ide2 eqsedi	Prem Nagar 3Rd Line		860-3	° Z
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¢1'0	LT.e	00T.	05'I	าอฐอN ธาธศารธH	ibneddebiaeH YlbneM (led	ΕΕΕΟΕΥ ΒΕΧΗΡΜΒΠΥ 11 ΚΛ ΟΓΟ 11 ΕΕΩΕΥ	860-2	50

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Table 14 : Upgradation of 11 KV Lines (2/2)

Sr No	Division	11kV Feeder	Location From	Location To	Length (CKM)	Proposed Conductor Size (Sq.mm)	Cost (Rs Lakh /Km)	Estimated Cos of Line in Rs. Cr.
21	BED-2	11KV Gosaninuagam	LIC SSTN	Neherunagar 13	0.40	100	9.17	0.04
22	BED-2	ASKAROAD	Binayak High School	Aga Sahi	0.75	100	9.17	0.07
23	BED-2	CITY HOSPITAL Ambagada	Raja Sahi	Vegetable Market	0.60	100	9.17	0.06
24	8ED-1	Gopalpur	PSS	Penha Niwas	4.00	100	9.17	0.37
25	BED-1	ANKULI	Industrial Chowk	Nigam Nagar Tapping Point Dp	0.30	100	9.17	0.03
26	BED-1	ANKULI	Industrial Chowk	Paschimeswar Temple Via Kumbharapali, Laxmi Nagar & High School Rd	2.50	100	9.17	0.23
27	BED-1	Courtpeta	Chakk	Govt Office	4.00	100	9.17	0.37
28	BED-1	HILL PATNA	Railway Crossing	Bazar Chakk	0.40	100	9.17	0.04
29	BED-1	⊤ata Benz	New Bus-Stand	Six Pole(Rmu)	1.00	100	9.17	0.09
30	BED-1	Tata Benz	Kəli Məndir	Natabar Nagar Line	1.00	100	9.17	0.09
31	BED-1	11 KV CITY HOSPITAL Medical	Microwave	Six Pole(Rmu)	1.50	100	9.17	0.14
32	BED-1	11 KV CITY HOSPITAL Medical	Rmu	Four Pole(Stv) Babaji Tota Sahi	0.80	100	9.17	0.07
33	BED-1	11 KV CITY HOSPITAL Medical	Four Pole	Swarnamayee Nagar	1.50	100	9.17	0.14
34	BED-1	11 KV CITY HOSPITAL Medical	Four Pole (Babaji Tota Sahi)	Congress Office	0.50	100	9.17	0.05
35	BED-1	OLD BUSSTAND	Medical Psc	New Bus-Stand	0.80	100	9.17	0.07
36	8ED-1	OLD BUSSTAND	Chandramani Peta	Telephone Bhawan	0.70	100	9.17	0.06
37	BED-1	OLD BUSSTAND	Vishal Mart	Spectrum Hotel	0.40	100	9.17	0.04
38	BED-1	OLD BUSSTAND	Telephone Bhawan	Khalasi Sahi	1.00	100	9.17	0.09
39	BED-1	KAMPALLI	Phd Campus Tapping	Towards Bda Complex	0.20	100	9.17	0.02
40	BED-1	SIDDHARTHNAGA R	Vijay Vihar Taping	Nanda Factory. Bhabinipur Rd	1.80	100	9.17	0.17
	Total		(10 m)		49.60			4.58

Benefits of New lines and upgradation

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- Improve 11KV Network Reliability.
- Minimize Breakdown
- Reduced Technical Losses.

1.5.6 Augmentation/Anoitation of Distribution Transformer

37. To cater to increasing load demand, DTR augmentation and new DSS at load center is required to avoid overloading of transformer which can lead to transformer failures and power interruptions. Also, to ensure reliable power supply to our consumers, Distribution Transformers need to be kept at optimum loading to avoid any mechanical stress on the transformers due to overloading.

- 38. As per standard practice, DTR need to be loaded up to 80% and any DTR above 80% loading needs to be considered for mitigation. To avoid these overloading issues where the load growth is high, it is required to augment/new DSS in identified location. It will provide benefit to consumers by providing reliable power supply due to reduction in forced Outages.
- 39. In this proposal, TPSODL intends to carry out Distribution Transformer's augmentation and introduce new DSS for those DTRs where LT network lengths are high resulting into under voltages at customer end. In addition to New Distribution transformer new 11 kV Line Extension for New DTRs is also required along with LT Cable.

40. The Augmentation of DTs and also the Addition of DTs along with 11 KV extension and LT Cable extension/ Augmentation is as given in the table below

Table 15 : Upgradation of 11 KV Lines (2/2)



Sr No	Activity	Qty in Nos.	11 KV Line Extension for New DTRs (CKM)	Cost of Transformer	Cost (Rs/Km) for 11 KV	Estimated Cost in Cr.
1	Augmentation of DTR -Aug to 100 KVA	11		5.31	16.95	0.58
2	Augmentation of DTR-Aug to 250 KVA	2		9.07	16.95	0.18
3	Augmentation of DTR-Aug to 500 KVA	19		15.99	16.95	3.04
4	Addition of New DTR - 100 KVA	31	10.7	6.60	16.95	3.86
5	Addition of New DTR - 250 KVA	34	9.45	9.68	16.95	4.89
6	Addition of New DTR - 500 KVA	4	0.67	17.23	16.95	0.80
	Total		20.82			13.36

Benefits of Distribution Transformer proposals

- The proposal will help in Mitigation of overloading DTRs. Thus, it will lead into lower interruption and good quality power hence leading to satisfaction of our consumers in upcoming Summer'24
- Improve Voltage Profile at consumer end.
- Reduction of technical loss
- Improve the operational efficiency

1.5.7 Augmentation and addition of LT AB Lines

41. The LT AB cable has been proposed for augmentation to address addition of LT feeders due to DTR augmentation or new addition. The augmentation of DTR requires augmentation of associated LT AB cable to cater the additional load to be served to consumers seamlessly.

Table 16 : Augmentation and addition of LT Cables

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Benefits from Augmentation and addition of LT Cables

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Reliability Improvement

7.5.8 LV Protection at DSS

- 42. Analysis of distribution transformer's failure data for the last few years suggest that effective HV & LV protection might have reduced the transformer failures. For example, if there is no effective protection on LV side, during fault on the load side, the fault current will pass through the transformer for a longer duration till the fault is isolated by upstream network. Since the magnitude of the fault current is high, it is likely to produce mechanical and thermal stresses in the transformer causing premature failure of the transformer.
- 43. During site visit it was observed that there are no LT Protection at DTR secondary side for majority of DTRs so any fault occurred during in LT shifts to 11kV System tripping 11kV feeder. The Tripping on 11kV feeders impacts reliability indices SAIFI and SAIDI and all connected consumers are also affected due to shut down.
- 44. LT protection is being provided since last two years in Berhampur urban area and the same is proposed under this Capex proposal for few balance DTRs to improve reliability of respective 11kV feeders as below.

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Sr No	Activity	Unit Cost(Rs lakhs)	Total Qty	Estimated Cost in Cr.
1	DSS Refurbishment	3.67	12	0.44
2	11 KV A B Switch	0.38	148	0.56
3	11 KV LA	0.26	155	0.41
4	11 KV HG Fuse	0.36	122	0.44
5	LT Feeder Pillar	1.00	9	0.09
6	Total			1.93

Table 18 : LT Protection on DSS (2/2)

Sr No	Activity	Unit Cost (Rs Lakhs)		Total Cost in Cr.
1	LV Protection for 100 KVA	0.71	50	0.36
	Distribution Sub-Station			
2	LV Protection for 250 KVA	1.57	40	0.63
	Distribution Sub-Station			
3	LV Protection for 500 KVA	2.66	50	1.33
	Distribution Sub-Station			
		Total	140	2.31

1.5.9 Safety Improvement in the City

1.5.9.1 Cradle Guard (At Major Road crossings, in Populated area, School area.)

- 45. Cradle guards are provided in overhead MV/HV/LV feeders, by which a live conductor, when accidentally gets broken, is prevented to come in contact with public or animals and vehicles. With cradle guards in place, whenever a live conductor breaks, it first touches the cradle guard thus completing the electrical circuits necessary for the operation of the protection relays installed at substations. This inturn trips the circuit breaker and danger to any living object is averted.
- 46. At present, most of the network is overhead and there is no provision of guard or cradle wire installed beneath the overhead conductors for most of the feeders. This poses serious safety threat to the general public and possibility of conductor parting cannot be ruled out. In such a scenario, cradle guard will help in avoiding accidents

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caused by snapping of conductors of overhead MV feeders. TPSODL proposes to put in place the cradle wire/guard wire at public places, road crossings etc.

1.5.9.2 Intermediate poles for unsafe to safe location

47. There have been several irregularities in the span length of present networks where the span length also found more at some places. These large span lengths have resulted in:

- Sagging of conductors.
- Low ground clearances vertical clearance of conductor from ground is lower than the permissible limits of 5.5 m (for LT Lines) and 5.8 m (for HT Lines).
- Accidents due to sagging & low ground clearances.
- 48. To overcome such scenarios, where the span length is on the higher side, it is of utmost importance to provide intermediate poles in between the spans. The addition of intermediate poles will address the issue of sagging, low ground clearances & accidents caused due to this.
- 49. To ensure safe and reliable power supply to end consumers TPSODL proposes addition of intermediate poles in 33kV and 11kV lines in phased manner emphasizing critical areas such as schools, hospitals, markets and other key installations.

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St.0	Z6.0	97	Cradle Guard	Ţ
0.24	<i>₽</i> ∠"0	32	33KV Intermediate Pole	7
20.2	09'0	339	TIKV Intermediate Pole	3
2.70			Total	

Table 19 : Equipment for Safety in City Area

1.5.10 33 KV & II KV Isolator & Line AB Switch

50. AB switch is an essential element of any overhead power line, used to connect or disconnect the power system when tripped, for maintenance, to isolate the faulty

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section, and to restore the supply to healthy section to improve reliability. There is also requirement of 33KV and 11KV Isolator in PSS.

- 51. The major advantage of installing Isolators and AB switches in 33kV and 11kV feeders is that field engineers would have flexibility to isolate the section locally instead of switching off entire feeder. In case of any tripping, maintenance engineer can isolate the faulty section and restore the supply of remaining consumers thereby improving the reliability.
- 52. The AB Switches and Isolators to be installed at 33 KV and 11 KV in the city area are as follows:

Sr No	Particulars	No	Unit Rate	Amount (Rs Cr)
			(Rs Lakhs)	
1	33 KV AB Switches	5	3.69	0.18
2	11 KV AB Switches	61	2.67	1.63
3	33 KV Isolators	5	4,41	0.22
4	11 KV Isolators	10	2.80	0.28
	Total			2.31

Table 20: AB Switches and Isolators at 33 KV and 11 KV

1.5.11 Summary of various activities

53. The Summary of proposals is as provided in the tables below

Table 21 : Summary of Activities (1/3)



ON .	Capex Head	Activity	ytivit>A-du2	tsoO tinU sdAsJ 28 nl)	won	YJD letoT	Total Costing (.12) .28
7	Vatilidaila9 VovtaN	33 KV New Lines for reliable power supply	- 918 senil Vy 25 wev	52.18	Ckm	S9'0	98.0
6	Network Reliability	and civil works of Rs 0.15 Crores Upgradation of SS KV Line	14850 MW 897 36 767 -H- 14850 MW 897 36 767 -H-	33'13	'SON	3	99'0
2	Automotion Nicoscon		Pole	*****			0010
£	Vetwork Reliability	enil VX 86 to noitebergqU	anij VXSE Augmentation -	58°ST	ωąე	578	19'6
		330	ump2841	3 60	5 <u>57</u>		8.0
7	Vilideile8 אוסעיסאע אפווסט	28 Switch for 33 KV & 11 KV Lines , 93 Refurbishment(isolator) & 025 Refurbishment (Replacement of daamaged A8 Switch, HG Fuse, LA) & Installation of LV Protection at 025	HJJIW2 BA VASE	69°E	195	S	81.0
S	viiidsilag Arowian	229 , Switch for SS KV & I J KV Lines , PS2 Befurbishment(isoistor) & DS3 Refurbishment (Replacement of daminkauf) Switch, HG Fuse, LA) & Installation of LV VJ for of SS (SS)	30161021 VX 55	ק'קז	135	s	22.0
9	ytilidailəA ArovitəN ArovitəN	Network refurbishment for safety Enhancement (intermediate poles for vuinerable location, provision for Earthing & Cradle guard area,School area)	Intermediate Pole 13 Mtr-33 KV	7∠°0	SON	25	÷7.0
L	Vetwork Reliability	TT KN New Lines for reliable power supply	11 KV New Link Line-RLP	62'97	Ckm	LĽL	5.08
8	Vetwork Reliability	11 KV New Lines for reliable power supply	TT KA NG C9PI4 TOO 2000	110.30	шy	0'7	٥.71
6	Vetwork Reliability	TT KA New Fines for reliable power supply	דד גא גאוח	85.81	SON	7	81.0
01	ytilideileg ArowreN	28, Switch for SS KV & II KV Lines, 92 Refurbisment(isolator) & DSS Refurbisment(isolator) & DSS Refurbisment (Reps, LA) & Installation of LV Switch, HG Fuse, LA) & Installation of LV	11 KV Isolator	08.2	135	01	82.0
11	vilideilsA krowseN	TT KV New Lines for reliable power supply	TT KA B9A	54'85	50N	1	0'34
15	Vetwork Reliability	Upgradation of 11 KV Line	Upgradation of 11 KV Line-100sqmm	LT.2	шяр	71.60	76.A
13	yrilideiləs Arowran	Upgradation of 11 KV Line	Upgradation of 11 KV Line-148sqmm	10'87	Ckm	5'00	0'55
Ĩ¢	Vilideileg Vrowrek	AB Switch for 33 KV & 11 KV Lines , P55 Refurbisinent(isolator) & D55 Refurbisinent (Replacement of damaged AB	T IKA 88 SWEEP	29.2	132	19	£9°T
		Switch, HG Fuse, LA) & Installation of LV protection at OSS					

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SON

97

26'0

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> Enhancement (intermediate poles for vuinerable location, provision for Earthing & Cradle guard at major road crossings, Populated area, School area)

Vtates tot them deturbed shows a fety

Vetwork Reliability

51



Table 22 : Summary of Activities (2/3)

Sr No	Capex Head	Activity	Sub-Activity	Unit Cost (In Rs)	UOM	Total Qty	Total Costin Rs. (Cr.)
16	Network Reliability	Network refurbishment for safety Enhancement (intermediate poles for vulnerable location, provision for Earthing & Cradle guard at major road crossings, Populated area, School area)	Intermediate Pole 11 mtr-11 KV	0.60	Nos	336	2.02
17	Network Reliability	Network refurbishment for safety Enhancement (intermediate poles for vulnerable location, provision for Earthing & Cradle guard at major road crossings, Populated area, School area)	11 KV Pole Earthing	0.0044	No	695	0.03
18	Network Reflability	Network refurbishment for safety Enhancement (intermediate poles for vulnerable location, provision for Earthing & Cradle guard at major road crossings, Populated area, School area)	11 KV Pole Couping	0.0112	No	751	0.08
19	Network Re ^r lability	AB Switch for 33 KV & 11 KV Lines , PSS Refurbishment(Isolator) & DSS Refurbishment (Replacement of damaged AB Switch, HG Fuse, LA) & Installation of LV protection at DSS	LV Protection for 100 KVA Distribution Sub- Station	0.71	Nos	50	0.36
20	Network Reliability	AB Switch for 33 KV & 11 KV Lines , PSS Refurbishment(Isolator) & DSS Refurbishment (Replacement of damaged AB Switch, HG Fuse, LA) & Installation of LV protection at DSS	LV Protection for 250 KVA Distribution Sub- Station	1.57	Nos.	40	C.63
21	Network Reliability	AB Switch for 33 KV & 11 KV Lines , PSS Refurbishment(isolator) & DSS Refurbishment (Replacement of damaged AB Switch, HG Fuse, LA) & Installation of LV protection at DSS	LV Protection for 500 KVA Distribution Sub- Station	2.66	No	50	1.33
22	Network Reliability	AB Switch for 33 KV & 11 KV Lines , PSS Refurbishment(Isolator) & DSS Refurbishment (Replacement of damaged AB Switch, HG Fuse, LA) & Installation of LV protection at DSS	DSS Refurbishment	3.67	Nos.	12	0,44
23	Network Reliability	AB Switch for 33 KV & 11 KV Lines . PSS Refurbishment(isolator) & DSS Refurbishment (Replacement of damaged AB Switch, HG Fuse, LA) & installation of LV protection at DSS	11 KV A85 400 Amp	C.38	Nos.	148	0.56
24	Network Reliability	AB Switch for 33 KV & 11 KV Lines , PSS Refurbishment(Isolator) & DSS Refurbishment (Replacement of damaged AB Switch, HG Fuse, LA) & Installation of LV protection at DSS	11 KV LA DH Class	0.26	Nos.	155	0.41
25	Network Reliability	AB Switch for 33 KV & 11 KV Lines , PSS Refurbishment(Isolator) & DSS Refurbishment (Replacement of damaged AB Switch, HG Fuse, LA) & Installation of LV protection at DSS	11 KV 400 Amp HG Fuse	0.36	Nos.	122	0.44
26	Network Reliability	AB Switch for 33 KV & 11 KV Lines , PSS Refurbishment(isolator) & DSS Refurbishment (Replacement of damaged AB Switch, HG Fuse, LA) & Installation of LV protection at DSS	LT Feeder Pillar	1.00		9	0.09
27	Load Growth	Augmentation of Power Transformer	Augmentation of PTR- 12.5 MVA	184	Nos.	5	9,22
28	Load Growth	Augmentation / addition of Distribution Transformer and 11 KV Line Extension for New DTRs	11 KV Line Extension for New DTRs WP8 Pole	16.95	Ckm	20.82	3.53
29	Load Growth	Augmentation / addition of Distribution Transformer and 11 KV Line Extension for New DTRs	Augmentation of LT ABC line(35 to 50 sqmm)	5.76	Ckm	0.70	0.04
30	Load Growth	Augmentation / addition of Distribution Transformer and 11 KV Line Extension for	Augmentation of LT ABC line(50 to 95 sqmm)	8.19	Ckm	89.91	7.36

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Table 23 : Summary of Activities (3/3)

Total Costing Rs. (Cr.)	YtD lefoT	won	teo2 tinU (In Rs)	Ytivit>A-du2	Ativity	bsəH xəqsD	٨
97'0	50°#	ωąρ	87.11	02)284 TJ }o noi3ibbA	noitudintel0 foincitabs \ noitetnemguA	dīworð beol	34
				(wwbs	Transformer and 11 KV Line Extension for		
75,42	19011		01.81	30 (080 1130 doithbh	2870 Wew DRA	denois brot	
-	15.211	шяр	02.51	28)284 TJ to noisibbA (mmpa	Augmentation / addition of Distribution Transformer and 11 KV Line Extension for	UTWO12 DECL	25
				(in the	New DTRs		
85.0	II	.soN	18.2	- ATO to noisesnemguA	A Distribution / addition of Distribution	Load Growth	33
			10.000	AVA ODI to BUA	Transformer and 22 KV Line Extension for		10010
					2810 Wew		
81.0	7	.soM	70.6	-ATO to noitetnemguA	noitudintaiO to noitibbe \ noitetnemguA	Load Growth	34
				AVX 025 of guA	Transformer and 11 KV Line Extension for		
					SATO WeN		
3.04	61	SON	66 ST	-ATO io noitetnemguA	noitudintai0 foinoitibbe \ noitetnemguA	Load Growth	58
				AVX 002 of guA	Transformer and 11 KV Line Extension for		
24.5					s8TO weN		
50'7	τs	SON	09'9	- ATO weN to noitibbA	noituditizi di to noitibbe \ noitetriemguA	diword beal	98
				100 KAN	Transformer and 11 KV Line Extension for		
3,29	34	2010	0 60	oro will to cottibby	New DTRs		
67.6		'SON	89'6	- ATO WéN of Néw DTR - 250 KVA	noisudivisia to noisibbe \ noisesnemguA	diwora beal	2٤
				NAN 067	Transformer and 11 KV Line Extension for New DTRs		
69'0	4	.20N	21	- ATO weN to noitibbA	notation of Distribution of Distribution	Load Growth	88
				500 KVA	Transformer and 11 KV Line Extension for	104010 0007	
					Néw DTRs		
99.78				letoT briero			

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2 Annexure 2- Bill of Quantities

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(BOG) BILL OF QUANTITIES

Power Transformer-12.5 MVA

1,54,93,136.27	Sub-Total C				
97,230.00	Total Civil Part				
9,660.00	2,415.00	4	EA	ITC of Earthing pipe with E/C	
7,875.00	78.75	100	KG	Dismantling of Steel Structure and Nut & Bolts	
79,695.00	79,695.00	1	EA	Dismantling of 5/7.5/8 MVA Power TRF	
				Civil & Services	
1.53.95.906.27	Sub Total B				
	Erection PSC Pole @ 20%				
5.122.68	Erection Other @ 10%.				
6,52,474.62	Erection Transformer/Breaker/WPB/H Pole/Joist Poles @ 5%				
9,82,553.93	Transportation @ 7.5%				
2,62,014.38	100ls & Plants @ 2%				Γ
3,93,021.57	Contigency @ 3%				Γ
1,31,00,719.09	Sub Total A				
3,81,574.34	Stock, Storage & Insurance i.e 3%				
1,27,19,144.75	Total Cost of materials				
6,162.00	2,054.00	3	No	33KV Post Insulator	∞
ŝ	Х	5		earthing device with 3 mtr .Long	
5,460.00	1,365.00	4	No	40mm nominal bore GI pipe (medium gauge)	
3,120.00	97.50	32	Kg	50x6 mm GI flat	6
2,028.00	101.40	20.00	Kg	GI Nut , Bolt & Washer of different sizes	S
7,488.00	1,248.00	6.00	No	12 bolted (M-12) "T" clamp for 232 mm ² conductor	4
22,425.00	1,495.00	15.00	No	CLAMP PG FOR 232 SQMM AAA COND	ω
3,051.75	203.45	15.00	Mtr	CONDUCTOR AAA 232 SQMM	2
1,26,69,410.00	1,26,69,410.00	1	EA	12.5MVA 33/11KV Power Transformer with OLTC	ч
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SINO
	Augmentation of Old PTR	1		Cost Estimate for PTR-12.5 MVA	

	Cost Estimate for PTR-12.5 MVA		1	Augmentation of Old PTR	
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
				Other Over Head (Including Supervision charges	
)@ 6%	
				Sub-Total D	1,54,93,136.27
				GST @ 18% of Sub-Total	27,88,764.53
				CESS @ 1% of Sub-Total	1,54,931.36
				Sub-Total E	1,84,36,832.17
				Inspection Fee	
				Drawing Approval	
				Grand Total	1,84,36,832.17

33kV, RLP Pole AAAC

	Cuk Total B				
	Erection PSC Pole @ 20%				
82.707.13	Erection Other @ 10%.				
	Erection Transformer/Breaker/WPB/H Pole/Joist Poles @ 5%				
1,50,814.09	Transportation @ 7.5%				
40,217.09	Tools & Plants @ 2%				
60,325.64	Contigency @ 3%				
20,10,854.58	Sub Total A				
58,568.58	Stock, Storage & Insurance i.e 3%				
19,52,286.00	Total Cost of materials		-		
9,880.00	260.00	38	١tr	Yellow Colour Paint for Background	31
5,434.00	286.00	19	F	Black Paint	30
4,680.00	97.50	48	Kg	50x6 mm GI flat	1. 12
3,29,394.00	106.60	3090.00	Mtr	CONDUCTOR 148 SQ.MM. AAA	28
-		,		with 3 mtr 1 ong	
1 365 00	00 595 1	1 071	NB	1/8 SWG Stay Wire	47
11 700 00	01 20	aT	NO	H.I Stay insulator	1
10,920.00	1,365.00	~ ~	Set	H.T 33kV Stay set (Complete)	
1,300.00	162.50	8	Pair	H.T. Stay clamp	
2,232.73	101.40	22.02	KR	GI Nut, Bolt & Washer of different sizes	1
14,508.00	806.00	18	No	CLAMP PG FOR 148 SQMM AAA COND	1
536.45	97.50	5.50	Kg	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	20
4,531.80	215.80	21	No	Earthing of Support (Coil Type)	19
2,58,336.00	1,872.00	138	No	33kV Disc insulator (B&S) 120KN polymer	18
1,06,243.20	2,083.20	51	EA	Hardware fitting (suspension clamp, D shackle)	12.22
11,700.00	650.00	18	Set	33kV H/W fitting(B&S) 120KN,4 Bolt	1971
35,568.00	624.00	57	No	33kV.10kN pin insulator polymer	
1,994.97	97.50	20.46	K _R	Back Clamp for Barbed wire anticlimbing device for RLP	14
469.40	97.50	4.81	Kg	Back Clamp for Barbed wire anticlimbing device 25X3mm.	13
1,248.00	104.00	12	Kg	GI barbed wire anticlimbing device	1
498.74	97.50	5.12	Kg	Back Clamp for danger Plate, 1 no for RLP	11
00,111		1.20	26	back Clamp for danger Mate 25x3 mm. nat, length of 0.510mit 1 no	OT
416.00	104.00	4	-	Danger Plate, 1 no	
1,200.11	97.50	12.31	Kg	Fish Plate 50X8 mm.,each 0.280 mtr. Length	00
1,140.03	00.76	11.70	5	Straight Cross Arm Top Channel 100X50X5mm,each channel length 0.306 Mtr.	1
4 4 4 0 00		:	:	1.7 Mtr.	
6,338.28	97.50	65.01	Ā	Straight Cross Arm Channel 100X50X5mm, each channel length	6
6,023.16	97.50	61.78	Kg	50X50X6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length	Ś
9,746.10	97.50	99.96	Kg	Double Pole Belting Channel 75X40X4.8mm., each channel length 2.8 Mtr	4
6,058.65	97.50	62.14	Kg	Top Channel 100X50X5mm,each channel length 3.25 mtr	ω
1,61,708.00	40,427.00	4	EA	POLE WPB GI 160X160 13 MTR	2
9,45,957.18	55,644.54	17	EA	RLP - Suspension Type 10.478Mtr. Long 514.31KG	1
Amount(In Rs.)	Unit Rate(In Rs.)	Unit Quantity	Unit		SI No
		1		Cost Estimate for 33kV New Line with RLP pole	

SI No	Description of Item	Unit	Unit Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
	Civil & Services				
	Installation of WPB 160X 152, 13Mtr pole	EA	4	7,980.00	31,920.00
	Fixing of 33KV Stav set with Concreting	EA	80	2,362.50	18,900.00
	Excavation by mechanical means	M3	18.7	315.00	5,890.50
	Reinforcement Steel for piles	Kg	765	73.17	55,975.05
	Metal sheet liner for Pile	89	850	00.76	82,450.00
	Providing and laying Reinforced Cement Concrete(RCC)	M3	119	10500.00	1,24,950.00
	Nut bolting of foundation and installation of insulators	No.	17	47.25	803.25
	ITC of Earthing pipe with E/C	EA	-	2,415,00	2,415.00
		_		Total Civil Part	3.23.303.80
				Sub-Total C	26,68,222.33
				Other Over Head (Including Supervision charges)@ 6%	
				Sub-Total D	26,68,222.33
		_		GST @ 18% of Sub-Total	4,80,280.02
				CESS @ 1% of Sub-Total	26,682.22
				Sub-Total E	31,75,184.58
				Inspection Fee	
				Drawing Approval	
				Grand Total	31,75,184.58

33kV Bay at Existing PSS

1,77,02,804.94

1,872.00 8,970.00 17,40,294.08 1,36,558.25 21.64.384.18 49,017.15 61,283.25 49,413.34 36,192.68 2,10,000.00 17,92,502.90 53,775.09 35,850.06 15,960.00 13,860.00 16,905.00 31,511.03 22,464.00 7,800.00 7,488.00 50,960.00 70,980.00 83,850.00 52,208.82 1.34,437.72 11,260.17 Amount(In Rs.) 735.00 291.90 7,084.35 1,248.00 236.60 286.00 7,980.00 2,415.00 8,400.00 5,386.50 624.00 145.60 13,860.00 5,250.00 335.40 1.872.00 650.00 1.495.00 260.00 Erection Transformer/Breaker/WPB/H Stock, Storage & Insurance i.e 3% Unit Rate(In Rs. Erection PSC Pole @ 20% Transportation @ 7.5% Erection Other @ 10%. **Total Cost of materials** Pole/Joist Poles @ 5% Tools & Plants @ 2% Contigency @ 3% Sub Total A Sub Total Quantity 7.295625 300.00 250.00 123.99 350.00 66.69 6.975 5.85 12 40 12 9 2 -9 2 m No Ltr M3 M3 Set No Sqm Mtr Mtr Mtr EA Ma M3 M2 Ltr EA EA No Providing and laying Reinforced Cement Concrete (RCC) Cost Estimate for Bay 33kV at Existing PSS 12 bolted (M-12) "T" clamp for 232 mm² conductor Description of Item Installation of WPB 160X 152 , 13Mtr pole 33kV Disc insulator (B&S) 120KN polymer ITC of VCB with CT, PT & CRP for 33kV CLAMP PG FOR 232 SQMM AAA COND 33kV H/W fitting(B&S) 120KN,4 Bolt Yellow Colour Paint for Background 12 mm Cement Plaster of mix - 1:6 Chequered plate for Cable Trench 33kV,10kN pin insulator polymer Brick work with F.P.S. bricks ITC of Earthing Pipe with EC EXCATON OF CBL TRENCH 34 10 Core x 2.5 mm2 4 Core x 2.5 mm2 33 7 Core x 2.5 mm2 **Civil & Services** Black Paint PCC 1:3:6 SI No 27 29 35 36 30 31 26 32 28

286.00

520.00

33kV Bay at Existing PSS

									_		SITC of of pr	SI No		
											SITC of of prefabricated RCC Slabs (950x450x75)M30	Description of Item	Cost Estimate for Bay 33kV at Existing PSS	
											EA	Unit		
											67	Quantity	1	
Grand Total	Drawing Approval	Inspection Fee	Sub-Grand Total	CESS @ 1% of Sub-Total	GST @ 18% of Sub-Total	Sub-total	charges)@ 6%	Other Over Head (Including Supervision	Sub-Total B	Total Civil Part	5,150.25	Unit Rate(In Rs.)		
33 12 476 12			33,12,476.12	27,835.93	5,01,046.81	27,83,593.38		•	27,83,593.38	6,19,209.20	3,45,066.75	Amount(In Rs.)		

33kV Bay at Existing PSS

SI No So 1 1 2 2 3 2 4 2 5 5 6 2	Source RC POLE WPI	Description of Item	Unit	Quantity		
					Unit Rate(In Rs.)	Amount(In Rs.)
		POLE WPB GI 160X160 13 MTR	EA	13	40,427.00	5,25,551.00
		Straight Cross Arm Channel 100X50X5mm, each channel length 1.7 Mtr	Kg	97.51	97.50	9,507.42
	CDB Straight C	Straight Cross Arm Top Channel 100X50X5mm,each channel length 0.30	Kg	17.55	97.50	1,711.34
		Fish Plate 50X8 mm.,each 0.280 mtr. Length	Kg	3.26	97.50	317.77
	CDB Danger Pl	Danger Plate, 1 no	No	13	104.00	1,352.00
		Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	Kg	3.91	97.50	381.39
7 C	1	GI barbed wire anticlimbing device	Kg	39	104.00	4,056.00
8	CDB Back Clarr	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, length of	Kg	15.65	97.50	1,525.56
	<u> </u>	33kV,10kN pin insulator polymer	No	38	624.00	23,712.00
10 C		33kV V cross Arm (GI) for WPB Pole	No	10	2,340.00	23,400.00
11 C		GI Back Clamp for 33kV 'V' Cros Arm for WPB Pole	No	10	195.00	1,950.00
12 C	CDB Top brack	Top bracket 100X50X5mm GI channel for 33kV	No	12	195.00	2,340.00
13 C	CDB 33kV H/W	33kV H/W fitting(B&S) 120KN,4 Bolt	Set	12	650.00	7,800.00
14 C	CDB 33kV Disc	33kV Disc insulator (B&S) 120KN polymer	No	12	1,872.00	22,464.00
15 C	CDB Earthing o	Earthing of Support (Coil Type)	No	13	215.80	2,805.40
16 C	CDB No-8 GI W	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	3.41	97.50	332.09
17 C	CDB CLAMP P(CLAMP PG FOR 148 SQMM AAA COND	No	12	806.00	9,672.00
18 C		Gi Nut , Bolt & Washer of different sizes	Kg	96.5	101.40	9,785.10
19 C	CDB H.T. Stay clamp	clamp	Pair	4	162.50	650.00
-	CDB H.T 33kV	H.T 33kV Stay set (Complete)	Set	4	1,365.00	5,460.00
21 C	CDB H.T Stay Insulator	Insulator	No	8	65.00	520.00
22 C		7/8 SWG Stay Wire	Kg	60	97.50	5,850.00
23 C		CONDUCTOR 148 SQ.MM. AAA	Mtr	3090	106.60	3,29,394.00
		nt	Ltr	6.5	286.00	1,859.00
25 C	CDB Yellow Co	Yellow Colour Paint for Background	Ltr	13	260.00	3,380.00
					Total Cost of materials	9,95,776.07
					Stock, Storage & Insurance i.e 3%	29,873.28
					Sub Total A	10,25,649.35
					Contigency @ 3%	30,769.48
					Tools & Plants @ 2%	20,512.99
					Transportation @ 7.5%	76,923.70
					Erection Transformer/Breaker/WPB/H Pole/Joist	
					Erection Other @ 10%.	46,608.12
					Erection PSC Pole @ 20%	
					Sub Total B	12,00,463.64

SI No	Source	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
		Civil & Services				
		Installation of WPB 160X 152, 13Mtr pole	EA	13	7,980.00	1,03,740.00
		Fixing of 33KV Stay set with Concreting	EA	4	2,362.50	9,450.00
		Dismantling of RSJ/ WPB pole(150x150mm/R	EA	2	1,417.50	2,835.00
		Dismantling/ Removal of Insulators with All Fittings	EA	20	105.00	2,100.00
		Dismantling of 11KV 'V' Cross arm & retu	ΕA	2	43.47	86.94
		Dismantling of Steel Structure and Nut & Bolts	KG	50	78.75	3,937.50
		Dismantling of 80/100 mm2 AAA Conductor& retu	Kg	461.028	15.75	7,261.19
					Total Civil Part	1,29,410.63
					Sub-Total C	13,29,874.27
					Other Over Head (Including Supervision charges))@ 6%	ł
					Sub-Total D	13,29,874.27
					GST @ 18% of Sub-Total	2,39,377.37
					CESS @ 1% of Sub-Total	13,298.74
					Sub-Total E	15,82,550.38
					Inspection Fee	
					Drawing Approval	
					Grand Total	15,82,550.38

	Cost Estimate for 33kV Line AB Switch, 400 Amp		1		
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
1 POLE W	POLE WPB GI 160X160 13 MTR	EA	2	40,427.00	0 80,854.00
	Top Channel 100X50X5mm, each channel length 4.3 mtr.	Kg	82.22	97.50	0 8,016.06
3 AB Swite	AB Switch mounting Channel 100X50X5mm GI channel 3.5mtr long	Kg	66.92	97.50	0 6,524.70
4 Double Mtr	Double Pole Belting Channel 75X40X4.8mm., each channel length 4.3 Mtr	Kg	122.81	97.50	0 11,973.78
5 50X50X(50X50X6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr.	Kg	88.69	97.50	8,646.89
6 AB Switt	AB Switch Side Support Channel 100X50X5mm, each channel length 0.35	Kg	6.69	67.9	0 652.47
	Channel Support for down Pipe 75X40X4.8mm., each channel length 0.8		5.71	97.50	
8 Fish Plat	Fish Plate 50X8 mm.,each 0.280 mtr. Length	-	5.28	97.50	0 514.33
	Danger Plate, 1 no	No	2	104.00	0 208.00
10 Back Cla	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	Kg	0.60	97.50	
	GI barbed wire anticlimbing device	Kg	9	104.00	0 624.00
12 Back Clarr	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, length of	Kg	2.41	97.50	0 234.70
13 33kV,10	33kV.10kN pin insulator polymer	No	3	624.00	0 1,872.00
-	33kV H/W fitting(B&S) 90kN,4 Bolt	Set	9	650.00	0 3,900.00
-	33kV Disc insulator (B&S) 90 KN polymer	No	9	1,495.00	
16 33kV AB	33kV AB Switch 400A 3Pole 50Hz Horizontal Type	Set	1	24,791.00	
17 Lightnin	Lightning Arrester (30kV,10kA) (Station Class,Class 2)	No	З	13,455.00	0 40,365.00
18 Earthing	Earthing of Support (Coil Type)	No	2	215.80	0 431.60
19 No-8 GI	No-8 Gl wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	0.52	97.50	
20 CLAMP	CLAMP PG FOR 148 SQMM AAA COND	No	6	806.00	
21 GI Nut ,	GI Nut , Bolt & Washer of different sizes	Кg	96.5	101.40	0 9,785.10
22 H.T. Stay clamp	y clamp	Pair	4	162.50	
23 H.T 33k	H.T 33kV Stay set (Complete)	Set	4	1,365.00	S
· · · · · ·	H.T Stay Insulator	No	8	65.00	0 520.00
25 7/8 SWG	7/8 SWG Stay Wire	Kg	60	97.50	0 5,850.00
26 40mm n Long	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	No	1	1,365.00	00 1,365.00
27 CONDU	CONDUCTOR 148 SQ.MM. AAA	Mtr	20.00	106.60	0 2,132.00
28 50x6 mr	50x6 mm GI flat	Kg	9	97.50	585.00
29 Black Paint	aint	Ltr	1	286.00	
da na si	Yellow Colour Paint for Background	Ltr	2	260.00	00 520.00
				Total Cost of materials	7 31 734 31

33kV AB Switch 400 Amp

3,68,599.98	Grand Total			
	Drawing Approval			
	Inspection Fee			
3,68,599.98	Sub-Total E			
3,097.48	CESS @ 1% of Sub-Total			
55,754.62	GST @ 18% of Sub-Total			
3,09,747.88	Sub-Total D			
	charges)@ 6%			
	Other Over Head (Including Supervision			
3,09,747.88	Sub-Total C			
27,825.00	Total Civil Part			
2,415.00	2,415.00	1	ITC of Earthing pipe with E/C EA	ITC of Earthir
9,450.00	2,362.50	4	Fixing of 33KV Stay set with Concreting EA	Fixing of 33K
15,960.00	7,980.00	2	Installation of WPB 160X 152 , 13Mtr pole EA	Installation o
				Civil & Services
2.81.922.88	Sub Total B			
	Erection PSC Pole @ 20%			
13,980.12	Erection Other @ 10%.			
	Pole/Joist Poles @ 5%			
	Erection Transformer/Breaker/WPB/H			5
17,862.85	Transportation @ 7.5%			
4,763.43	Tools & Plants @ 2%			
7,145.14	Contigency @ 3%			
2,38,171.34	Sub Total A			
6,937.03	Stock, Storage & Insurance i.e 3%			
Amount(In Rs.)	Unit Rate(In Rs.)	Unit Quantity	Description of Item	SI No
The second secon				

33kV AB Switch 400 Amp

	COST ESTIMATE TOT 33KY CITIE ISOTATOT WITH TOTATIC WALP DOTE		7		
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
-	WPB 160x152 (30.44KG/Mtr.),13 mtr	No	2	40,427.20	80,854.40
2	Top Channel 100X50X5mm, 9.56 KG/Mtr., each channel length 4.3 mtr.	Kg	82.22	97.50	8,016.06
m	Insulator Support Channel 75X40X4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 1 no's channel required	Kg	30.70	05-76	2,993.45
4	Isolator Support Channel 75X40X4.8mm., 7.14KG/Mtr., each channel length 4.3 Mtr., 2 no's channel required	Kg	61.40	97.50	5,986.89
S.	Double Pole Beltine Channel 75X40X4.8mm 7.14KG/Mtr each channel leneth 4.3 Mtr	Ϋ́	122.81	97.50	11,973.78
9	50X50X6mm.Gl Bracing Angle, 4.5Kg./mtr., each angle length 4.927 mtr.	ж	88.69	97.50	8,646.89
2	Isolator Operating Down Pipe Support Channel 75X40X4.8mm7.14KG/Mtreach channel length 0.8 Mtr.1 no regu	Жя	5.71	97.50	556.92
00	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos angle required	ж В	1.75	97.50	170.24
6	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle required	Кg	1.53	05.79	149.18
10		Kg	9.56	97.50	932.10
11	Fish Plate 50X8 mm., 0.97kg/Mtr., each 0.280 mtr. Length	Kg	1.63	97.50	158.89
12	Danger Plate, 1 no	No	2	104.00	208.00
13	_	Kg	0.60	97.50	58.68
14	GI barbed wire anticlimbing device	Å	9	104.00	624.00
15		Kg	2.41	97.50	234.70
16	Earthing of Support (Coil Type)	EA	2	215.80	431.60
17	33kV H/W fitting(B&S) 90kN,4 Bolt	Set	9	650.00	3,900.00
18	33kV Disc insulator (8&S) 90 KN polymer	No	9	1,495.00	8,970.00
19	33kV-800A Double Break (Turn and Twist center rotating)isolator without earth switch with PI(Polymer)	Set	1	1,09,915.00	1,09,915.00
20		EA	ß	3,379.00	10,137.00
21	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr 2 Mtr. For connecting pole with Coil earthing	Kg	0.524	97.50	51.09
22	PG Clamp for 148 mm2 AAAC conductor	No	9	806.00	4,836.00
23	Gl Nut , Bolt & Washer of different sizes	Kg	25	101.40	2,535.00
24	H.T. Stay clamp	Pair	4	162.50	650.00
25	H.T. Stay set (Complete)	Set	4	1,365.00	5,460.00
26	_	No	4	65.00	260.00
27	7/8 SWG Stay Wire	Kg	60	97.50	5,850.00
28	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr. Long	No	-1	1,365.00	1,365.00
29	AAA conductor,148 mm2	Кm	0.02	1,06,600.00	2,132.00
30	50x6 mm GI flat	Kg	9	97.50	585.00
31	_	Ltr	1	286.00	286.00
32	Yellow Colour Paint for Background	Ltr	2	220.00	440.00
				Total Cost of materials	2,79,367.84
				Stock, Storage & Insurance i.e 3%	8,381.04
				Sub Total	2,87,748.88
				Contigency @ 3%	8,632.47
				Tools & Plants @ 2%	5,754.98
				Transportation @ 7.5%	21,581.17
				Erection Transformer/Breaker/WPB/H	
				Land Other O they	10 010 01

33kV Line Isolator-13mtr

Cost Estimate for 33M Une Isolator with 31mt, WPB pole Unit Rate(In Rs.) Amount(In Rs.) Addition (In Complete 31M)	4,40,913.25	Grand Total			
Unit Quantity Unit Rate(In Rs.) Amoun Image:		Drawing Approval			
Unit Quantity Unit Rate(In Rs.) Amoun Image:		Inspection Fee			
Unit Quantity Unit Rate(In Rs.) Amoun I Immition Sub Total 3 No. 4 2,362.50 3 No 2 7,980.00 1 It, No 1 2,415.00 It, No 1 7,415.00 It, No 1 10tal Civil Part It, Sub-Total 3,3 It, Other Over Head (Including Supervision charges)@ 6% 3,3 Ith Sub-total 3,4 Ith CESS @ 1% of Sub-Total 3,5	4,40,913.25	Sub-Grand Total			
Unit Quantity Unit Rate(In Rs.) Amoun Imm Sub Total 3 No. 4 2,362.50 No 2 7,980.00 It, No 1 2,415.00 It, Sub-Total 3,1 Other Over Head (Including Supervision charges)@ 6%. 3,1 Sub-Total Sub-Total 3,1	3,705.15	CESS @ 1% of Sub-Total			
Unit Quantity Unit Rate(In Rs.) Amoun Image:	66,692.76	GST @ 18% of Sub-Total			
Unit Quantity Unit Rate(In Rs.) Amoun Image: Image of the image	3,70,515.34	Sub-total			
Unit Quantity Unit Rate(In Rs.) Amoun Image:		charges)@ 6%			
Unit Quantity Unit Rate(In Rs.) Amoun Image: I	2	Other Over Head (Including Supervision			
Unit Quantity Unit Rate(In Rs.) Amoun Vnit Quantity Erection PSC Pole @ 20% 3 No. Sub Total 3 No. 4 2,362.50 No 2 7,980.00 It, No 1 2,415.00 It, Total Civil Part 2,415.00 1	3,70,515.34	Sub-Total			
Unit Quantity Unit Rate(In Rs.) Amou Unit Quantity Erection PSC Pole @ 20% 4 No. Sub Total 2,362.50 4 No. 4 2,362.50 7,980.00 It, No 1 2,415.00 2	27,825.00	Total Civil Part			
Unit Quantity Unit Rate(In Rs.) Amount Unit Quantity Erection PSC Pole @ 20% Amount No. 4 Sub Total 2,362.50 2,362.50 No. 4 2,362.50 7,980.00 2 No 2 7,980.00 2,415.00 2					cover
Unit Quantity Unit Rate(In Rs.) Amount Unit Quantity Erection PSC Pole @ 20% Amount No. Sub Total Sub Total Sub Total No. 4 2,362.50 7,980.00 No 2 7,980.00 7,980.00			ŀ	2	Installation or Earthing pipe with 40mm one .3 min long of ripe a include supply of an reduced material incertain incertain. Charcoal, Nuts-Bolt, PVC Pipe PCC & brick work for earthing chamber (Size: 2 x2') & RCC or other suitable slab
Unit Quantity Unit Rate(In Rs.) Amount Unit Quantity Erection PSC Pole @ 20% Amount No. 4 Sub Total 2,362.50 No 2 7,980.00	2415 NO	2 415 00	-	No	Installation of Epstein animo with 10mm dia 3 Mtr Iona 61 Dia 8, include supply of all required material like Salt
Unit Quantity Unit Rate(In Rs.) Amount Unit Guantity Erection PSC Pole @ 20% 20% Sub Total Sub Total 2,362.50	15960.00	7,980.00	2	No	Erection of 13 Mtr long WPB Pole including providing & laying of 1:1.5:3,M20 Grade C.C-500x500X2200mm & cooping of 500x500x450 mm,zebra painting (In Black & Yellow Strips/Zebra)
Init Quantity Unit Rate(In Rs.) Amound Visit Erection PSC Pole @ 20% Sub Total Sub Total No.: 4 2,362.50					
Unit Quantity Unit Rate(In Rs.) Amor Unit Quantity Unit Rate(In Rs.) Amor Sub Total Sub Total 2,362.50					Wire, Stay clamps with Nuts & bolts.BA will do the excavation, C.C foundation 1:2:4 size (500mmx500mmx800mm)
Cost Estimate for 33kV line Isolator with 13mtr. WPB pole 1 Unit Quantity Unit Rate(In Rs.) Amon Description of Item Unit Quantity Erection PSC Pole @ 20% 4 4 5	9450.00	2,362.50	4	No.	Fixing of complete 33kV line stay set includes Turn Buckle Assembly,Stay Rod & Stay plate,Stay Insulator,Stay
Image: scale of the scale o			100 St 10		Civil & Services
Unit Quantity Unit Rate(In Rs.)	3,42,690.34	Sub Total			
Unit Quantity Unit Rate(In Rs.)					
Cost Estimate for 33kV Line Isolator with 13mtr. WPB pole	Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item
			4		Cost Estimate for 33kV Line Isolator with 13mtr. WPB pole

33kV Line Isolator-13mtr

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622.98 74,135.03

74,135.03

62,298.34 11,213.70

7,980.00

62,298.34

571.97

54.318.34

7,980.00

SI No	lo Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
đ	POLE WPB GI 160X160 13 MTR	EA	1	40,427.00	40,427.00
2	33kV V cross Arm (GI) for WPB Pole	No	1.00	2,340.00	2,340.00
m	GI Back Clamp for 33kV 'V' Cros Arm for WPB Pole	No	1.00	195.00	195.00
4	Top bracket 100X50X5mm GI channel for 33kV	No	1.00	195.00	195.00
S	Danger Plate, 1 no	No	1	104.00	104.00
9	-	Kg	0.30	97.50	29.34
7	GI barbed wire anticlimbing device	Kg	3	104.00	312.00
80	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, length of 0.510m	Kg	1.20	97.50	117.35
6	1	No	3	624.00	1,872.00
10		No	1	215.80	215.80
11	. No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	0.262	97.50	25.55
12	[GI Nut , Bolt & Washer of different sizes	Kg	1.45	101.40	147.03
13	Black Paint	Ltr	0.5	286.00	143.00
14	I Yellow Colour Paint for Background	Ltr	1	260.00	260.00
				Total Cost of materials	46,383.06
				Stock, Storage & Insurance i.e 3%	1,391.49
				Sub Total A	47,774.56
				Contigency @ 3%	1,433.24
				Tools & Plants @ 2%	955.49
				Transportation @ 7.5%	3,583.09
				Erection Transformer/Breaker/WPB/H Pole/Joist	
				roles @ 3%	.0 16.2
				Erection Uther @ 10%.	E-17C
				Sub Total R	54 318 34
	Civil & Services				
	Installation of WPB 160X 152 , 13Mtr pole	EA	.	7,980.00	7,980.00
				Total Civil Part	7,980.00
				Sub-Total C	62,298.34
				Other Over Head (Including Supervision charges	
				11@ 6%	
				Sub-lotal U	b2,298.34
				(451 @ 18% of Sub-Lotal	11,213./0
				CESS @ 1% of Sub-Total	622.98
				Sub-Total E	74,135.03
				Inspection Fee	
				Drawing Approval	
				Grand Total	74,135.03

25.55 147.03 143.00 260.00 **46,383.06 1,391.49 47,774.56 1,433.24 955.49 955.49**

40,427.00 2,340.00 195.00

Cost Estimate for 33kV Intermediate Pole

195.00

104.00 29.34 312.00 117.35 1,872.00 215.80

				Civil & Services	
19,34,698.28	Sub Total B				
	Erection PSC Pole @ 20%				
62,949.34	Erection Other @ 10%.				
	Pole/Joist Poles @ 5%				
1,24,703.20	Fransportation @ 7.3%		1		
7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Transmortation @ 7 5%				
33 375 54	Tools & Diants @ 1%				
49.913.31	Contigency @ 3%				
16 63 776 84					
48,459.52	Stock, Storage & Insurance i.e 3%				
16,15,317.32	Total Cost of materials			G	
9,880.00	260.00	38	F	Yellow Colour Paint for Background	31
5,434.00	286.00	19	Ŧ	Black Paint	30
4,680.00	97.50	48	Kg	50x6 mm GI flat	29
2,20,935.00	71.50	3090.00	Mtr	CONDUCTOR 100 SQMM AAA	28
1,365.00	1,365.00	н	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	27
11,700.00	97.50	120	Kg	7/10 SWG Stay Wire	26
1,040.00	65.00	16	No	H.T Stay Insulator	25
10,920.00	1,365.00	8	Set	H.T 11kV Stay set (Complete)	24
1,300.00	162.50		Pair	H.T Stay clamp	23
1,979.73	101.40	19	Kg	GI Nut , Bolt & Washer of different sizes	22
13,572.00	/54.00	18	No	CLAMP PG FOR 100 SQMM CONDUCTOR	21
536.45	97.50	5.50	Kg	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	20
4,531.80	215.80	21	No	Earthing of Support (Coil Type)	19
2,06,310.00	1,495.00	138	No	11kV Disc insulator (B&S) 70KN polymer	18
1,06,243.20	2,083.20	51	EA	Hardware fitting (suspension clamp, D shackle)	17
8,190.00	455.00	18	Set	11kV H/W fitting(B&S) 70KN,3 Bolt	16
14,820.00	260.00	57	No	11kV,5kN pin insulator polymer	15
1,994.97	97.50	20.46		Back Clamp for Barbed wire anticlimbing device for RLP	14
469.40	97.50	4.81		Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, length of 0.510m	13
1,248.00	104.00	12	Kg	GI barbed wire anticlimbing device	12
498.74	97.50	5.12	Kg	Back Clamp for danger Plate, 1 no for RLP	11
117.35	97.50	1.20	Kg	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	10
416.00	104.00	4	No	Danger Plate, 1 no	9
1,200.11	97.50	12.31	Kg	Fish Plate 50X8 mm., each 0.280 mtr. Length	∞
1,140.89	97.50	11.70	Kg	Straight Cross Arm Top Channel 100X50X5mm, each channel length 0.306 Mtr.	7
6,338.28	97.50	65.01	Kg	Straight Cross Arm Channel 100X50X5mm, each channel length 1.2 mtr.	6
4,687.61	97.50	48.08	Kg	50X50X6mm.GI Bracing Angle, each angle length 2.671 mtr	5
6,961.50	97.50	71.40	Kg	Double Pole Bracing Channel 75X40X4.8mm, each channel length 2.0 Mtr.	4
4,287.66	97.50	43.98	Kg	Top Channel 100X50X5mm, each channel length 2.3 mtr.	з
1,37,286.08	34,321.52	4	EA	POLE WPB GI 160X160 11 MTR	2
8,25,233.55	48,543.15	17	EA	RLP - Suspension Type 9.978Mtr. Long 449.14KG	н
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No
		در		Cost Estimate for 11kV New Line with RLP pole	

si No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
	Installation of WPB 160 X152, 11Mtr pole	EA	4	6,300.00	25,200.00
	Inst 11KVcomplte stay set with concrete	EA	∞	2,362.50	18,900.00
	Excavation by mechanical means	M3	18.7	315.00	5,890.50
	Reinforcement Steel for piles	Kg	765	73.17	55,975.05
	Metal sheet liner for Pile	Kg	850	97.00	82,450.00
	Providing and laying Reinforced Cement Concrete(RCC)	M3	11.9	10500.00	1,24,950.00
	Nut bolting of foundation and installation of insulators	No	17	47.25	803.25
	ITC of Earthing pipe with E/C	EA	1	2,415.00	2,415.00
				Total Civil Part	3,16,583.80
		_		Sub-Total C	22,51,282.08
				Other Over Head (Including Supervision	
		_		charges)@ 6%	Ē
				Sub-Total D	22,51,282.08
		_		GST @ 18% of Sub-Total	4,05,230.78
				CESS @ 1% of Sub-Total	22,512.82
		-		Sub-Total E	26,79,025.68
				Inspection Fee	
				Drawing Approval	
				Grand Total	26,79,025.68

45,26,834.11

	Standard BoQ and Estimate for 11kV 3C, 400sqmm UG Cable along with 11kV RM	vith 11	(V RMU		
Supply Portion	Portion				
SI. No.	Description of items	Unit	Quantity	Rate (in Rs.)	Amount (in Rs.)
1	Supply of materials for 11kV, 3Core, 400sqmm, XLPE insulation armoured UG cable with		4		
a	Lenath of 11kV 3C, 400samm cable (open trench)	km	0		
d	Length of 11kV 3C, 400sqmm cable (HDD)	km	1		
1.1	Supply of 11kV, 3Core, 400sqmm, XLPE insulation armoured UG cable (SC rating of cable in kA-	km	2.00	23,65,250.00	47,30,500.00
	37.7kA and SC rating of Armour in kA- 15kA)				
1.2	Supply of Straight through jointing kits Heat Shrinkable type suitable for 11kV, 3Core, 400 sqmm,	Set	6	32,912.10	1,97,472.60
	Aluminium UG cable for 3Core (Set)	6	I.		
1.3	Supply of Indoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400 sqmm, HT UG cable for 3Core (Set)	Set	0	12,456.60	Ŧ
1.4	Supply of Outdoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400 sqmm, HT UG cable for 3Core (Set)	Set	4	18,075.20	72,300.80
1.5	Supply of HDPE PE 80-PN8 pipe of 160mm diameter (for 400sqmm HT cable laying)	km	-0.13	7,75,400.00	(99,251.20)
2	Supply of 11kV RMU				
۵	No. of 11kV 3Way RMU (LLV)	nos.	0		
9	No. of 11kV 4Way RMU (LLVV)	nos.			
n	No. of 11kV 3Way RMU (LLV+M)	nos.			
٩	No. of 11kV 4Way RMU (LLVV+M)	nos.			
2.1	Supply of 11kV RMU 3 Way, 2 Iso & 1 Brk 630A (LLV)	Nos.	0	3,99,034.00	
2.2	Supply of 11kV RMU 4 Way, 2 Iso & 2 Brk 630A (LLVV)	Nos.	0	5,57,710.00	80.5
2.3	Supply of RMU 3W 11kV 630A with metering unit (LLV+M)	Nos.	0	5,76,739.00	
2.4	Supply of RMU 4W 11kV 630A with metering unit (LLVV+M)	Nos.	0	8,13,749.00	1
ω	Earthing				
3.1	Earthing Conductor: 50X6 mm (2.4kg./mtr.) GI Flat for equipment, structure etc.)	kg	0.00	97.50	5 1 0
3.2	Pipe Earthing 40mm. GI Pipe	Nos.	0	1,365.00	
4	FRTU and OFC for RMU SCADA Automation				
4.1	Supply of 12 core fibre optic cable single mode, duct type, fibre armoured laid along UG cable.	km		56,515.00	я
4.2	Supply of HDPE PLB duct of size 32/26mm for laying of OFC Cables.	km		77,990.00	31
4.3	Supply of Straight through connectors (Plastic coupler) and accessories for OFC connection.	Set		6,766.00	â.
11kv	11kV Underground Cable				

11kV Underground Cable

(26,653.36) 28,00,000.00 15,206.40 49,01,022.20 28,800.00 Amount (in Rs.) Amount (in Rs.) 4,35,542.00 28,00,000.00 15,000.00 27,296.35 1,900.80 9,639.00 9,639.00 15,000.00 7,535.00 94,500.00 2,400.00 1,900.80 1,04,114.67 (in Rs.) (in Rs.) Rate Rate Quantity Quantity -0.26 0.00 0.0 12 0 0 0 00 , -1 0 0 0 0 Unit Unit Nos. Nos. Ę Nos. Nos. km Set Set Set ka Nos. кя Set Erection of Straight through jointing kits Heat Shrinkable type suitable for 11kV, 3Core, 400sqmm, Laying of 12 core fibre optic cable single mode, duct type, fibre armoured in HDPE PLB duct of size Laying, Commissioning, Testing of 11kV, 3core, 400sqmm, aluminium, XLPE insulation armoured KLPE insulation armoured (extruded type) UG cable in HDD method with HDPE pipe (160mm dia, Supply of Standard FRTU 4Way with FRTU networking Equipment consisting of Fibre Optic switch Supply, Installation, Laying, Commissioning, Testing of 11kV, 3core, 1Run, 400sqmm, aluminium, Laying, Commissioning, Testing of 11kV, 3core, 400sqmm, aluminium, XLPE insulation armoured Erection of Outdoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400sqmm, (Mono mode along wilh associate LIU unit for connection of FO Cable. for 3 Way & 4 way RMU. Erection of Indoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400sqmm, PN8 PE80) for laying of individual run of UG cable at main road and unaccessable place. Sub Total (Supply Portion) (in Rs.) 32/26mm for laying of OFC Cables.laid along 11kV UG cable. through open trench Supply of end Connector and accessories for OFC connection at RMU, extruded type) UG cable by open trench method and HDD method Laying of 160mm dia PE 80-PN8, HDPE pipe inside open trench. Erection of RMU 4W 11kV 630A with metering unit (LLVV+M) Erection of RMU 3W 11kV 630A with metering unit (LLV+M) Erection, Commissioning, Wiring and Testing of 11kV RMU Erection of 11kV RMU 4 Way, 2 Iso & 2 Brk 630A (LLVV) Erection of 11kV RMU 3 Way, 2 Iso & 1 Brk 630A (LLV) extruded type) UG cable by open trench method. FRTU and OFC for RMU SCADA Automation aluminium UG cable kits for 3core (set) aluminium UG cable kits for 3core (set) aluminium UG cable kits for 3core (set) Sl. No. Description of items SI. No. Description of items **Erection Portion** 2.2 2.3 4.4 4.5 1.6 2.4 1.5 2.1 1.1 1.3 1.4 3.1 1.2 2 m

11kV Underground Cable

				(in Be)	lin Re l
3.2	in HDPE PLB duct of size	km	0.0	1,22,488.27	X
3.3	Erection of Slraight through connectors (Plastic coupler) and	Set	0.0	612.54	10
Γ			\$		
3.4		Set	0.0	1,225.07	
3.5 2.5	nit for connection of FO Cable.	Nos.	0.0	6,124.36	
	TOT 3 WAY & 4 WAY KIVID. Sub Total (Erection Portion) (in Rs.)				28,17,353.04
Civil Portion	r ortion				
SI. No	SI. No. Description of items	Unit	Quantity	Rate (in Rs.)	Amount (in Rs.)
1	Civil works with supply of all materials like cement, MS tor rod, brick, coarse & fine aggregates and labour. T&P ate for HG Cable Trench				
1.1	Earth work excavation of soil (1mtr. width X 1mtr. depth)				
1.1.a	Earth work excavation of soil	Cum	ō	700.00	
1.1.b	Earth work excavation of hard rock	Cum	0	1,720.00	
1.2	Shifting of excavated soil to a lead distance of 10km	Cum		171.55	
1.3	Filling with fine river sand after laying of cable inside the trench	Cum		2,500.00	3
1.4	Back filling with excavated soil outside and above the trench	Cum	0	202.00	241.
1.5	ies and reconstructing to bring to its original shape after	ĥ	0.3	26,43,670.63	7,93,101.19
N	Civil works for Prefabricated RCC foundation with supply of all materials				
2.1		Nos.	0	23,145.30	
sω	Supply of GI Fencing with Gate around each RMU science of earthing chamber (Size: 2'x2') science of the second state of the se	sqmtr	00	3,600.00	30: 14
	and RCC slab cover			2	
ъ	\vdash	Mtr	64	1,463.40	93,657.60
6	oute at an interval of 30mtrs with civil	Nos.	66	1,012.00	66,792.00
	Sub Total (Civil Portion) (in Rs.)				9,53,550.79

SI. No.	Sl. No. Description of items	Unit	Quantity	Rate	Amount
A	Sub Total (Supply Portion)	1		(IN KS.)	49,01,022.20
æ	Stock, Storage & Insurance @ 3 % of A				1,47,030.67
U	Sub Total (A+B)				50,48,052.87
٥	Contingency @ 3 % of C				1,51,441.59
ш	Tools & Plants Charges @ 2% of C (considered for earthing items)				
œ	Transportation @ 7.5% of C	1011			3,78,603.96
IJ	Erection Charges @ 10% of earthing items				ā
т	Total (C+D+E+F+G)				55,78,098.42
-	Sub Total (Erection Portion + Civil Portion)				37,70,903.83
-	Total Cost (H+I)				93,49,002.25
×	Other Overhead /(including Supervision Charges) @ 6 % of J				Ť
L	Total Estimated Capital Cost i.e. (J+K)				93,49,002.25
Σ	GST @ 18% of L				16,82,820.41
z	Grand Total (L+M)				1,10,31,822.66
0	Inspection Fee of UG Line (HT) - Rs. 250/ km.				
٩	Inspection Fee of UG Line (HT) - Rs. 100/ Additional Km				
σ	Inspection Fee of RMU - Rs. 2000/ RMU				
8	Inspection Fee of Drawing Checking and Approval				
S	Final decision by electrical Inspector				
T	Gross Total Material, Services and Inspection Fees (N+O+P+Q+R+S)				1,10,31,822.66

		Standard Boo for 11kV AWAY RMII				
SI. No.	Code	Description of items	Unit	Quantity	Rate (in Rs.)	Amount (in Rs.)
1.3	401000858	Supply of Indoor termination kits Heat Shrinkable type suitable for 11kV, 3Core. 400 samm. HT UG cable for 3Core (Set)	Set	4	12,456.60	49,826.40
1.4	401000859	Supply of Outdoor termination kits Heat Shrinkable type suitable for 11kV, 3Core, 400 sqmm, HT UG cable for 3Core (Set)	Set	4	18,075.20	72,300.80
2		Supply of 11kV RMU				
q		No. of 11kV 4Way RMU (LLVV)	nos.	1		
2.2	601001132	Supply of 11kV RMU 4 Way, 2 Iso & 2 Brk 630A (LLVV)	Nos.	ц	6,97,696.00	6,97,696.00
З		Earthing				
3.1	601000679	Earthing Conductor: 50X6 mm (2.4kg./mtr.) GI Flat for equipment, structure etc.)	kg	13.20	97.50	1,287.00
3.2	601001158	Pipe Earthing 40mm. GI Pipe	Nos.	2	1,365.00	2,730.00
4		FRTU for RMU SCADA Automation				
۵		No. of FRTU	nos.	1		
4.1	101001412	Pre-Wired FRTU Panel with FRTU	No.	4	1,21,744.00	1,21,744.00
4.2	101001422	Managed Layer2 Ethernet Switch (FRTU Panel)	No.	1	1,00,000.00	1,00,000.00
4.3	101000995	Networking Accessories	No.	н	72.00	72.00
4.4	101001388	CMR with Mounting Base for Digital Inputs	Nos.	32	650.00	20,800.00
4.5	301002481	Interposing Relay for Digital Output	Nos.	16	467.94	7,487.04
4.6	101001389	Battery Charger	Nos.	1	15,385.00	15,385.00
4.7	101001390	Battery	Nos.	1	8,333.00	8,333.00
4.8	701002061	4G Modem cum Router	Nos.	1	18,500.00	18,500.00
4.9	401001331	Instrumentation Cable 12 C X 0.5 mm2, Armored cable for Status and Indications	Mtr.	40	204.87	8,194.80
4.10	401001333	Instrumentation Cable 7 C X 1.5 mm2, Armored for Control Output	Mtr.	40	305.58	12,223.20
4.11	401001334	ed Pair Sh 1.0 mm2,	Mtr.	40	275.23	11,009.20
Revise	Revised 11kV 4WAY RMU	Y RMU				

23,145.30 72,000.00 917.40 7,603.20 7,603.20 9,639.00 16,000.00 40,845.40 1,789.00 37,302.00 11,95,370.44 3,305.00 2,968.60 1,500.00 Amount (in Rs.) Amount Amount (in Rs.) (in Rs.) 23,145.30 89.45 3,600.00 165.25 150.00 148.43 45.87 1,900.80 1,900.80 9,639.00 16,000.00 18,651.00 (in Rs.) (in Rs.) (in Rs.) Rate Rate Rate Quantity Quantity Quantity 20.0 1.0 20 10 20 20 4 -20 2 4 sqmtr Unit Nos. Unit Unit Nos. Mtr. EA Mtr. Mtr. Mtr. Nos. Mtr. Set Set Erection of Indoor termination kits Heat Shrinkable type suitable for 11kV, Sub Total (Erection Portion) (in Rs.) Civil works for Prefabricated RCC foundation with supply of all materials Sub Total (Supply Portion) (in Rs.) Erection of Outdoor termination kits Heat Shrinkable type suitable for Services of FRTU Panel, Communication and Other Supplied System 11kV, 3Core, 400sqmm, aluminium UG cable kits for 3core (set) Erection, Commissioning, Wiring and Testing of 11kV RMU 3Core, 400sqmm, aluminium UG cable kits for 3core (set) 401001339 4P X 0.36 mm2, Armored Communication Cable for MFM Erection of 11kV RMU 4 Way, 2 Iso & 2 Brk 630A (LLVV) 401001338 4 C X 2.5 mm2 Copper cable for extension of CT & PT Supply of GI Fencing with Gate around each RMU FRTU and OFC for RMU SCADA Automation Prefabricated RCC foundation of 11kV RMU 401001362 2 C X 4 mm2 Cable for DC Power Supply 401001340 Un-Armored CAT6 SFTP Cable 401001335 Armored CAT6 SFTP Cable 201000441 Multi Function Meter Description of items Description of items Description of items SAP Code SAP Code SAP Code 900054 900027 200106 800020 900027 600048 **Erection Portion Civil Portion** SI. No. SI. No. SI. No. 4.13 4.17 4.12 4.14 4.15 4.16 2.1 1.3 1.4 2.2 3.1 2 2 m m

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No.</td></tr>					Other Overhead /(including Supervision Charges) @ 6 % of J		*	g chamber including installation of earthing g chamber including excavation , soil treatment with calculation of earth nstallation of 3Mtr GI Pipe 40mm/50mm includingUnitQuantity(in Rs.)(in Rs.)of GI Pipe of dia. 150mm, Class-B (8Mtr.)Mtr321,463.4046of GI Pipe of dia. 150mm, Class-B (8Mtr.)Mtr321,463.4046of GI Pipe of dia. 150mm, Class-B (8Mtr.)Mtr321,463.4046of GI Pipe of dia. 150mm, Class-B (8Mtr.)I1,491,49sub Total (Civil Portion) (in Rs.)I1,4935ortion)II11,9535or CSo of A353535urance @ 3 % of C (considered for earthing items)I3232se@ 2% of C (considered for earthing items)92323210% of earthing itemsI3631,60of CI13,601,9010% of earthing itemsI31,6013,60I1,90	15,50,889.44				Total Cost (H+I)		-	g chamber including installation of earthing g chamber including excavation , soil treatment with calculation of earth runstallation of aMtr GI Pipe 40mm/S0mm including unit Quantity (in Rs.) 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624.00 22,165.00 17,940.00 5,460.00 780.00 556.92 170.24 149.18 932.10 29,250.00 7,796.88 2,088.45 208.00 117.35 234.70 10.140.00 87,902.55 3,57,571.00 29,250.00 56,212.00 9,555.00 68,643.04 5,592.60 4,687.61 Amount(In Rs.) 13,845.00 1,96,000.00 487.31 455.00 97.50 104.00 71.50 1,495.00 97.50 408.00 97.50 97.50 97.50 97.50 97.50 97.50 104.00 97.50 260.00 97.50 101.40 4,615.00 1,96,000.00 29,300.85 3,57,571.00 9,750.00 56,212.00 1,365.00 34,321.52 97.50 97.50 Unit Rate(In Rs.) Quantity 100.00 79.968 12.00 12.00 57.36 48.078 4.998 310.00 21.42 5.712 9.56 1.20 3.00 7.00 1.75 2.41 3.00 1.00 1.53 1.00 1.00300 0 9 ŝ ŝ 2 Unit No Mtr No No Set ¥ 100 No No Kg No EA K B ž Kg ¥ 8 Kg No Ā EA EA Kg ₹ 80 Kg Kg Ka Ke Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, length of 0.510mtr Isolator Operating Down Pipe Support Channel 75X40X4.8mm., of length 0.8 mtr. 40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr. Long Down Pipe Diagonal Support Angle 50X50X6mm, each angle length 0.388mtr. AB Switch Side Support Channel 100X50X5mm, each channel length 0.35 mtr. Isolator Support Side Channel 100X50X5mm, each channel length 0.5 mtr. Double Pole Belting Channel 75X40X4.8mm., each channel length 2.8 Mtr Down Pipe Base Support Angle 50X50X6mm, each angle length 0.34mtr. Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no AB Switch mounting Channel 100X50X5mm GI channel 3.0mtr long 11 KV multi core 1 PH CT with CTR (800-400-200/1-1-1)A 3 Core Cost Estimate for Bay 11kV at Existing PSS 11KV 630 Amp Isolator without earth switch with PI(Porcelain) 50X50X6mm.GI Bracing Angle, each angle length 2.671 mtr Top Channel 100X50X5mm, each channel length 3.0 mtr. Lightning Arrester (11kV,10kA) (Station Class, Class 2) **Description of Item** GI Nut, Bolt & Washer of different sizes 11kV Disc insulator (B&S) 70KN polymer 11kV H/W fitting(B&S) 70KN,3 Bolt GI barbed wire anticlimbing device CRP with O/C & E/F relay for 11kV 11kV,5kN pin insulator polymer 11 KV IVT(11 KV/V 3/110 V/V 3) POLE WPB GI 160X160 11 MTR CONDUCTOR 100 SQMM AAA 11kV 1250 Amp Outdoor VCB Danger Plate, 1 no 50x6 mm GI flat **RCC base Plate** SI No 2 m 15 16 22 28 ч 4 S 9 00 10 12 13 14 1.7 18 19 20 21 24 25 26 27 ~ σ 11

11kV Bay at Existing PSS

11k∨ Bay at Existing PSS

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32,942.23	7,084.35	4.650	M3	Brick work with F.P.S. bricks	
21,007.35	5,386.50	3.900	MЗ	PCC 1:3:6	
41,123.25	8,400.00	4.896	MЗ	Providing and laying Reinforced Cement Concrete (RCC)	
32,678.10	735.00	44.46	M3	EXCATON OF CBL TRENCH	
16,905.00	2,415.00	7.00	EA	ITC of Earthing pipe with E/C	
13,860.00	13,860.00	1.00	EA	ITC of VCB with CT, PT & CRP for 11kV	
12,600.00	6,300.00	2	EA	Installation of WPB 160 X152, 11Mtr pole	
				Civil & Services	ſ
16,09,485.28	Sub Total A				
	Erection PSC Pole @ 20%				
1,04,549.42	Erection Other @ 10%.				
	Pole/Joist Poles @ 5%				
	Transformer/Breaker/WPB/H				
10,094.00	Erection				
99,656.12	Transportation @ 7.5%				
26,574.97	Tools & Plants @ 2%				
39,862.45	Contigency @ 3%				
13,28,748.32	Sub Total				
38,701.41	Stock, Storage & Insurance i.e 3%				
12,90,046.91	Total Cost of materials				
520.00	260.00	2	Ltr	Yellow Colour Paint for Background	36
286.00	286.00	1	Ltr	Black Paint	35
83,850.00	335.40	250.00	Mtr	10 Core x 2.5 mm2	34
82,810.00	236.60	350.00	Mtr	7 Core x 2.5 mm2	33
50,960.00	145.60	350.00	Mtr	4 Core x 2.5 mm2	32
1,31,250.00	5,250.00	25.00	Sqm	Chequered plate for Cable Trench	31
7,488.00	1,248.00	6.00	No	12 bolted (M-12) "T" clamp for 232 mm ² conductor	30
4,524.00	754.00	6.00	No	CLAMP PG FOR 100 SQMM CONDUCTOR	29
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No

SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
	12 mm Cement Plaster of mix - 1:6	M2	123.99	591.90	36,192.68
	SITC of of prefabricated RCC Slabs (950x450x75)M30	EA	44	5,150.25	2,26,611.00
				Total Civil Part	4.33.919.61
				Sub-Total B	20,43,404.88
				Other Over Head (Including	
				Supervision charges)@ 6%	and the second
				Sub-total	20,43,404.88
				GST @ 18% of Sub-Total	3,67,812.88
				CESS @ 1% of Sub-Total	20,434.05
				Sub-Grand Total	24,31,651.81
				Inspection Fee	
				Drawing Approval	
				Grand Total	74 31 651 81

5.361.10	Contigency @ 3%				
1,78,703.32	Sub Total				
5,204.95	Stock, Storage & Insurance i.e 3%				
1,73,498.37	Total Cost of materials		Γ		
440.00	220.00	2.00	Ltr	Yellow Colour Paint for Background	31
286.00	286.00	1.00	Ltr	Black Paint	30
1,430.00	71,500.00	0.02	Km	AAA conductor,100 mm2	29
1,365.00	1,365.00	1.00	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	28
780.00	260.00	3.00	No	11kV,5kN pin insulator polymer	27
39,793.00	39,793.00	1.00	Set	11KV,400 Amp without earth switch with PI(Polymer)	26
3,780.00	1,260.00	3.00	No	Lightning Arrester (9kV,10kA) DH Class	25
3,900.00	97.50	40.00	Kg	7/10 SWG Stay Wire	24
260.00	65.00	4.00	No	H.T. Stay Insulator	23
5,460.00	1,365.00	4.00	Set	H.T. Stay set (Complete)	22
650.00	162.50	4.00	Pair	H.T. Stay clamp	21
1,391.21	101.40	13.72	Kg	GI Nut , Bolt & Washer of different sizes	20
4,524.00	754.00	6.00	No	PG Clamp for 100 mm2 AAAC conductor	19
		0.04	175	earthing	OT
51 09	07 SU	0 43	Ka	Large initia of support (con type /	
431.60	215.80	2.00	FA	Earthing of Cumport (Coil Type)	17
8,970.00	1,495.00	6.00	No	11kV Disc insulator (B&S) 70KN nolvmer	16
2,730.00	455.00	6.00	Set	H/W fitting/B&S) 70KN.3 Bolt	5
4,717.05	97.50	48.38	Kg	50x6 mm GI flat	14
01.766	0C. / C	9.90	700	Isolator Support Side Channel 100X50X5mm, 9.56 KG/Mtr., each channel length 0.5 mtr - 7 no's channel required	13
		2	2	Irequired	
149.18	97.50	1.53	Kg	Down Pipe Base Support Angle, 4.5Kg./mtr., each angle length 0.34mtr., 1 nos angle	12
				angle required	
170.24	97.50	1.75	Kg	Down Pipe Diagonal Support Angle, 4.5Kg./mtr., each angle length 0.388mtr., 1 nos	H
556.92	97.50	5.71	Kg	Isolator Operating Down Pipe Support Channel 75X40X4.8mm.,7.14KG/Mtr.,each	10
				0.510 mtr length 4 no's	
234.70	97.50	2.41	Kg	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, 0.59Kg/Mtr. Flat of	
624.00	104.00	6.00	Kg	GI barbed wire anticlimbing device	∞
58.68	97.50	0.60	Kg	Back Clamp for danger Plate 25X3 mm. flat, 0.59Kg/Mtr. Flat of 0.510mtr 1 no	7
208.00	104.00	2.00	No	Danger Plate, 1 no	1.220
386.57	97.50	3.96	Kg	Fish Plate 50X8 mm., 0.97kg/Mtr., each 0.280 mtr. Length	ო
6,163.56	97.50	63.22	Kg	S0X50X6mm.GI Bracing Angle, 4.5Kg./mtr., each angle length 3.512 mtr., 4 nos angle required	4
8,353.80	97.50	85.68	Kg	Double Pole Belting Channel 75X40X 4.8mm.,7.14KG/Mtr.,each channel length 3.0 Mtr.,4 no's channel required	ω
6,058.65	97.50	62.14	Kg	Top Channel 100X50X5mm, 9.56 KG/Mtr., each channel length 3.25 mtr.	2
68,643.04	34,321.52	2.00	No	WPB 160x152 (30.44KG/Mtr.),11 mtr	1
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit		SI No
		1		Cost Estimate for 11kV Line isolator with 11mtr. wrb pole	

SINO	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
				Tools & Plants @ 2%	3,574.07
				Transportation @ 7.5%	13,402.75
				Erection Transformer/ Breaker/	
				WPB/ H Pole/ Joist Poles @ 5%	
				Erection Other @ 10%.	9,526.92
				Erection PSC Pole @ 20%	
				Sub Total	2,10,568.16
	Civil & Services				
	Fixing of complete 11KV line stay set includes Turn Buckle Assembly, Stay Rod & Stay	No.	4	2,362.50	9,450.00
	plate,Stay Insulator,Stay Wire,Stay clamps with Nuts & bolts.BA will do the exacvation,				
	Exertion of 11 Mtr Ione WPB Pole including providing & laving of 1-1 5-3 M20	N	6	6 300 00	12.600.00
	Grade,C.C.500x500X1800mm & cooping of 500x500x450mm,zebra painting (In Black &	1	i.		
	Yellow Strips/Zebra)				
	Installation of Earthing pipe with 40mm dia. 3 Mtr long GI Pipe & include supply of all	No	Ч	2,415.00	2,415.00
	required material like Salt, Charcoal, Nuts-Bolt , PVC Pipe PCC & brick work for earthing				
	chamber (Size: 2'x2') & RCC or other suitable slab cover				
				Total Civil Part	24,465.00
				Sub-Total	2,35,033.16
				Other Over Head (Including	
			and the second se	Supervision charges)@ 6%	
				Sub-total	2,35,033.16
				GST @ 18% of Sub-Total	42,305.97
				CESS @ 1% of Sub-Total	2,350.33
				Sub-Grand Total	2,79,689.46
				Inspection Fee	
				Drawing Approval	
				Grand Total	2,79,689.46

	Cost Estimate for 11kV Intermediate Pole		1		
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
-	POLE WPB GI 160X160 11 MTR	EA	1	34,321.52	34,321.52
1		EA	0	408.00	102
	11kV V cross Arm (GI) for WPB Pole	No	1.00	1,053.00	1,053.00
4		° N	1.00	104.00	104.00
2	Top bracket 100X50X5mm Gl channel for 11kV	° Z	1.00	195.00	195.00
9	Danger Plate, 1 no	No	1	104.00	104.00
7	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1	Kg	0.30	05.79	29.34
~	GI barbed wire anticlimbing device	Kg	e S	104.00	312.00
6	Back Clamp for Barbed wire anticlimbing device 25X3mm.	Kg	1.20	97.50	117.35
10	11kV 5kN pin insulator polymer	No		260.00	780.00
11	Farthing of Support (Coil Type)	No	ļ	215.80	215.80
12	No-8 Gl wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	0.262	97.50	25.55
13		Kg	1.45	101.40	147.03
14		Ltr	0.5	286.00	143.00
15	Yellow Colour Paint for Background	Ltr	1	260.00	260.00
				Total Cost of materials	37,807.58
				Stock, Storage & Insurance i.e 3%	1,134.23
				Sub Total A	38,941.81
				Contigency @ 3%	1,168.25
				Tools & Plants @ 2%	778.84
				Transportation @ 7.5%	2,920.64
				Erection	
				Pole/Inist Poles @ 5%	
				Erection Other @ 10%.	317.56
				Erection PSC Pole @ 20%	
				Sub Total B	44.127.09
	Civil & Services				
	Installation of WPB 160 X152, 11Mtr pole	EA	1	6,300.00	6,300.00
				Total Civil Part	6.300.00
				Sub-Total C	50,427.09

60.008.24	Grand Total				
	Drawing Approval				
	Inspection Fee				
60,008.24	Sub-Grand Total				
504.27	CESS @ 1% of Sub-Total				
9,076.88	GST @ 18% of Sub-Total				
50,427.09	Sub-Total D				
	Supervision charges)@ 6%				
	Other Over Head (Including				
Amount(In Rs.)	Unit Rate(In Rs.)	Unit Quantity	Unit	Description of Item	SI No

Civil & ServicesCivil & ServicesS + 400.00945.Providing Couping to existing supportCUM0.1138,400.00945.Providing Couping to existing supportCUM0.113945.Providing Couping to existing supportCUMCUM945.Providing Couping to existing supportNote Head (Including Supervision945.Providing Couping to existing supportNote Head (Including Supervision945.Providing Couping to existing supervisionNote Head (Including Supervision945.Providing to existing supportNote Head (Including Supervision945.Providing to existing supervisionNote Head (In	Cost Estimate	Cost Estimate for Couping to Existing Pole		1		
CUM 0.113 8,400.00 9 Total Civil Part 8,400.00 9 Total Civil Part 0ther Over Head (Including Supervision 9 Date Over Head (Including Supervision 6% 9 Date Over Head (Including Supervision 6% 1 Date Over Head (Including Supervision 1 1 Drawing Approval 1 1 Drawing Approval 1 1	Civil & Service	S				
id (Including Supervision d) (Including Supervision b) (Including Supe	Providing Coup	oing to existing support	CUM	0.113	8,400.00	945.00
id (Including Supervision iub-Total A ub-Total A ub-Total A val					Total Civil Part	945.00
ub-Total A ub-Total A val					Other Over Head (Including Supervision	
of Sub-Total A of Sub-Total A ee oroval					charges)@ 6%	
of Sub-Total A of Sub-Total A ee ee					Sub-Total A	945.00
of Sub-Total A ee oroval			1		GST @ 18% of Sub-Total A	170.10
ee oroval					CESS @ 1% of Sub-Total A	9.45
ee oroval					Sub-Total E	1,124.55
proval					Inspection Fee	
					Drawing Approval	
					Grand Total	1,124.55

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Earthing in Existing Pole

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738 20	Grand Total		-		
	Drawing Approval				
	Inspection Fee				
438.50	Sub-Total D				
3.68	CESS @ 1% of Sub-Total				
66.33	GST @ 18% of Sub-Total				
368.49	Sub-Total C				
	Supervision charges)@ 6%		-		
	Other Over Head (Including				
368.49	Sub-Total C				
	Total Civil Part				
18	2,415.00	0.00	EA	ITC of Earthing pipe with E/C	
			+	Civil & Services	
368.49	Sub Total B				
	Erection PSC Pole @ 20%				
30.08	Erection Other @ 10%.				
	Pole/Joist Poles @ 5%				
	Transformer/Breaker/WPB/H				
	Erection				
22.56	Transportation @ 7.5%				
6.02	Tools & Plants @ 2%				
9.02	Contigency @ 3%				
300.81	Sub Total A				
8.76	Stock, Storage & Insurance i.e 3%				
292.05	Total Cost of materials				
50.70	101.40	0.50	Kg	GI Nut, Bolt & Washer of different sizes	5
C.	1,365.00	0.00	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	4
1	97.50	0.00	Kg	25x6 mm Gl flat	3
25.55	97.50	0.26	Kg	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	2
215.80	215.80	1.00	No	Earthing of Support (Coil Type)	1
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No
		ц	۶Þ	Cost Estimate for Earthing of Existing Pole	

	Cost Estimate for 11kV Line with 11mtr. WPB pole		1		
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
1	POLE WPB GI 160X160 11 MTR	EA	20	34,321.52	6,86,430.40
2	Top Channel 100X50X5mm, each channel length 2.3 mtr.	Kg	43.98	97.50	4,287.66
m	Double Pole Bracing Channel 75X40X4.8mm, each channel length 2.0 Mtr.	Kg	71.40	97.50	6,961.50
4	50X50X6mm.GI Bracing Angle, each angle length 2.671 mtr	Kg	48.08	97.50	4,687.61
2	Straight Cross Arm Channel 100X50X5mm, each channel length 1.2 mtr.	Кg	68.83	97.50	6,711.12
9	Straight Cross Arm Top Channel 100X50X5mm,each channel length 0.306 Mtr.	Кg	17.55	97.50	1,711.34
7	Fish Plate 50X8 mm.,each 0.280 mtr. Length	Kg	15.83	97.50	1,543.00
∞	Danger Plate, 1 no	No	20	104.00	2,080.00
6	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	Кg	6.02	97.50	586.76
10	GI barbed wire anticlimbing device	Кg	60	104.00	6,240.00
11	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, length of 0.510mtr	Kg	24.07	97.50	2,347.02
12	11kV,5kN pin insulator polymer	No	59	260.00	15,340.00
13	11kV V cross Arm (GI) for WPB Pole	No	16	1,053.00	16,848.00
14	GI Back Clamp for 11kV 'V' Cros Arm for WPB Pole	No	16	104.00	1,664.00
15	Top bracket 100X50X5mm GI channel for 11kV	No	18	195.00	3,510.00
16	11kV H/W fitting(B&S) 70KN,3 Bolt	Set	18	455.00	8,190.00
17	11kV Disc insulator (B&S) 70KN polymer	Ň	18	1,495.00	26,910.00
18	Earthing of Support (Coil Type)	°N N	20	215.80	4,316.00
19	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	5.24	97.50	510.90
20	CLAMP PG FOR 100 SQMM CONDUCTOR	No	18	754.00	13,572.00
21	GI Nut , Bolt & Washer of different sizes	Kg	46.5	101.40	4,714.19
22	H.T Stay clamp	Pair	80	162.50	1,300.00
23	H.T 11kV Stay set (Complete)	Set	8	1,365.00	10,920.00
24	H.T Stay Insulator	No	8	65.00	520.00
25	7/10 SWG Stay Wire	Kg	80	97.50	7,800.00
26	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	No	1	1,365.00	1,365.00
27	CONDUCTOR 100 SQMM AAA	Mtr	3090.00	71.50	2,20,935.00
28	50x6 mm Gl flat	Kg	9	97.50	585.00
29	Black Paint	Ltr	10	286.00	2,860.00
30	Yellow Colour Paint for Background	Ltr	20	260.00	5,200.00
				Total Cost of materials	10,70,646.48
				Stock, Storage & Insurance i.e 3%	32,119.39
				Sub Total A	11,02,765.87
11kV 11m	111kV 11mtH WPB AAAC			Contigency @ 3%	33,082.98

16,95,053.22	Grand Total				
	Drawing Approval				
	Inspection Fee				
16,95,053.22	Sub-Total E				
14,244.14	CESS @ 1% of Sub-Total				
2,56,394.60	GST @ 18% of Sub-Total				
14,24,414.47	Sub-Total D				
1	charges)@ 6%				
	Other Over Head (Including Supervision				
14,24,414.47	Sub-Total C				
1,47,315.00	Total Civil Part				
2,415.00	2,415.00	P	EA	ITC of Earthing pipe with E/C	
18,900.00	2,362.50	8	EA	Inst 11KVcomplte stay set with concrete	
1,26,000.00	6,300.00	20	EA	Installation of WPB 160 X152, 11Mtr pole	
				Civil & Services	
12,77,099.47	Sub Total B				
	Erection PSC Pole @ 20%				
36,487.86	Erection Other @ 10%.				
	Pole/Joist Poles @ 5%				
	Erection Transformer/Breaker/WPB/H				
82,707.44	Transportation @ 7.5%				
22,055.32	Tools & Plants @ 2%				
Amount(In Rs.)	Unit Rate(In Rs.)	Unit Quantity	Unit	Description of Item	SI No
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11kV,11mtr WPB AAAC

	Cost Estimate for 11kV Line Upgradation-100 Sqmm AAAC				
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
-	POLE WPB GI 160X160 11 MTR	EA	8	34,321.52	2,74,572.16
2	RCC base Plate	EA	0	408.00	
m	Straight Cross Arm Channel 100X50X5mm, each channel length 1.2 mtr.	Kg	97.51	97.50	9,507.42
4	Straight Cross Arm Top Channel 100X50X5mm,each channel length	Кg	17.55	97.50	1,711.34
Ś	Fish Plate 50X8 mm.,each 0.280 mtr. Length	Kg	3.26	97.50	317.77
9	Danger Plate, 1 no	No	8	104.00	832.00
2	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	Kg	2.41	97.50	234.70
∞	GI barbed wire anticlimbing device	Kg	24	104.00	2,496.00
6	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, lengt	Kg	9.63	97.50	938.81
10	11kV,5kN pin insulator polymer	No	26	260.00	6,760.00
11	11kV V cross Arm (GI) for WPB Pole	No	9	1,053.00	6,318.00
12	GI Back Clamp for 11kV 'V' Cros Arm for WPB Pole	No	9	104.00	624.00
13	Top bracket 100X50X5mm GI channel for 11kV	No	8	195.00	1,560.00
14	11kV H/W fitting(B&S) 70KN,3 Bolt	Set	12	455.00	5,460.00
15	-	No	12	1,495.00	17,940.00
16	Earthing of Support (Coil Type)	No	8	215.80	1,726.40
17	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	2.10	97.50	204.36
18	CLAMP PG FOR 100 SQMM CONDUCTOR	No	12	754.00	9,048.00
19	GI Nut , Bolt & Washer of different sizes	Кg	96.5	101.40	9,785.10
20	20 H.T Stay clamp	Pair	4	162.50	650.00
21	H.T 11kV Stay set (Complete)	Set	4	1,365.00	5,460.00
22	H.T Stay Insulator	No	8	65.00	520.00
23	7/10 SWG Stay Wire	Kg	60	97.50	5,850.00
24	CONDUCTOR 100 SQMM AAA	Mtr	3090	71.50	2,20,935.00
25	Black Paint	Ltr	4	286.00	1,144.00
26	Yellow Colour Paint for Background	Ltr	8	260.00	2,080.00
				Total Cost of materials	5,86,675.06
				Stock, Storage & Insurance i.e 3%	17,600.25
				Sub Total A	6,04,275.31
				Contigency @ 3%	18,128.26
				Tools & Plants @ 2%	12,085.51
				Transportation @ 7.5%	45,320.65
				Erection Transformer/Breaker/WPB/H	
				Pole/Joist Poles @ 5%	
				Erection Other @ 10%.	30,529.09

11kV Upgrad AAA Cond. 100mm

																					SI No	
											Dismantling of 80/100 mm2 AAA Conductor& retu	Dismantling of Steel Structure and Nut & Bolts	Dismantling of 11KV 'V' Cross arm & retu	Dismantling/ Removal of Insulators with All Fittings	Dismantling of RSJ/ WPB pole(150x150mm/R	Inst 11KVcomplte stay set with concrete	Installation of WPB 160 X152, 11Mtr pole	Civil & Services			Description of Item	Cost Estimate for 11kV Line Upgradation-100 Sqmm AAAC
				-							Kg	KG	EA	EA	EA	EA	EA				Unit	
											461.028	50	2	20	2	8	4				Unit Quantity	
Grand Total	Drawing Approval	Inspection Fee	Sub-Total E	CESS @ 1% of Sub-Total	GST @ 18% of Sub-Total	Sub-Total D	charges)@ 6%	Other Over Head (Including Supervision	Sub-Total C	Total Civil Part	15.75	78.75	43.47	105.00	1,417.50	2,362.50	6,300.00		Sub Total B	Erection PSC Pole @ 20%	Unit Rate(In Rs.)	
9,17,084.73			9,17,084.73	7,706.59	1,38,718.70	7,70,659.44			7,70,659.44	60,320.63		3,937.50	86.94		2,835.00	18,900.00	25,200.00		7,10,338.81		Amount(In Rs.)	

11kV Upgrad AAA Cond. 100mm

	Cost Estimate for 11kV Line Upgradation			Stringing of 148sqmm Conductor	
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(in Rs.)
1	POLE WPB GI 160X160 11 MTR	EA	8	34,321.52	2,74,572.16
2	RCC base Plate	EA	0	408.00	
m	Straight Cross Arm Channel 100X50X5mm, each channel length 1.2 mtr.	Kg	97.51	97.50	9,507.42
4	Straight Cross Arm Top Channel 100X50X5mm,each channel length	Kg	17.55	97.50	1,711.34
S	Fish Plate 50X8 mm.,each 0.280 mtr. Length	Kg	3.26	97.50	317.77
9	Danger Plate, 1 no	No	8	104.00	832.00
2	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	Kg	2.41	97.50	234.70
00	GI barbed wire anticlimbing device	Kg	24	104.00	2,496.00
6	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, lengt	Kg	9.63	97.50	938.81
10	11kV,5kN pin insulator polymer	No	26	260.00	6,760.00
11	11kV V cross Arm (GI) for WPB Pole	No	9	1,053.00	6,318.00
12	GI Back Clamp for 11kV 'V' Cros Arm for WPB Pole	No	9	104.00	624.00
13	Top bracket 100X50X5mm Gl channel for 11kV	No	8	195.00	1,560.00
14	11kV H/W fitting(B&S) 70kN,3 Bolt	Set	12	455.00	5,460.00
15	11kV Disc insulator (B&S) 70KN polymer	No	12	1,495.00	17,940.00
16	Earthing of Support (Coil Type)	No	8	215.80	1,726.40
17	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	2.10	97.50	204.36
18	CLAMP PG FOR 148 SQMM AAA COND	No	12	806.00	9,672.00
19	GI Nut , Bolt & Washer of different sizes	Kg	96.5	101.40	9,785.10
20	H.T Stay clamp	Pair	4	162.50	650.00
21	H.T 11kV Stay set (Complete)	Set	4	1,365.00	5,460.00
22	H.T Stay Insulator	No	80	65.00	520.00
23	7/10 SWG Stay Wire	Kg	60	97.50	5,850.00
24	CONDUCTOR 148 SQ.MM. AAA	Mtr	3090	106.60	3,29,394.00
25	Black Paint	E	4	286.00	1,144.00
26	Yellow Colour Paint for Background	Ę	∞	260.00	2,080.00
6				Total Cost of materials	6,95,758.06
				Stock, Storage & Insurance i.e 3%	20,872.74
				Sub Total A	7,16,630.80
				Contigency @ 3%	21,498.92
				Tools & Plants @ 2%	14,332.62
				Transportation @ 7.5%	53,747.31

11kV Upgradation AAA Cond.-148

10,80,870.95	Grand Total				
	Drawing Approval				
	Inspection Fee				
10,80,870.95	Sub-Total E				
9,082.95	CESS @ 1% of Sub-Total				
1,63,493.08	GST @ 18% of Sub-Total				
9,08,294.92	Sub-Total D				
	charges)@ 6%				
	Other Over Head (Including Supervision				
9,08,294.92	Sub-Total C				
60,320.63	Total Civil Part				2
7,261.19	15.75	461.028	Kg	Dismantling of 80/100 mm2 AAA Conductor& retu	
3,937.50	78.75	50	KG	Dismantling of Steel Structure and Nut & Bolts	
86.94	43.47	2	EA	Dismantling of 11KV 'V' Cross arm & retu	
2,100.00	105.00	20	EA	Dismantling/ Removal of Insulators with All Fittings	
2,835.00	1,417.50	2	EA	Dismantling of RSJ/ WPB pole(150x150mm/R	
18,900.00	2,362.50	∞	EA	Inst 11KV complte stay set with concrete	
25,200.00	6,300.00	4	EA	Installation of WPB 160 X152, 11Mtr pole	
				Civil & Services	
8,47,974.28	Sub Total B				
	Erection PSC Pole @ 20%				
41,764.64	Erection Other @ 10%.				
	Erection Transformer/Breaker/WPB/H Pole/Joist Poles @ 5%				
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No

L	Cost Estimate for 11kV line AB Switch, 200 Amp	POLE WPB GI 160X160 11 MTR		1		
SI No	lo Description of Item	Short Text	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
5	POLE WPB GI 160X160 11 MTR	POLE WPB GI 160X160 11 MTR	EA	2	34,321.52	68,643.04
2	RCC base Plate	BASE PLATE FOR PSC POLE	EA	0	408.00	
m		100x50x6mm GI Channel	Kg	62.14	97.50	6,058.65
4	AB Switch mounting Channel 100X50X5mm GI channel 3.0mtr long	100x50x6mm GI Channel	Kg	57.36	97.50	5,592.60
2		75x40x6mm Gi Channel	Kg	85.68	97.50	8,353.80
9		50x50x6mm GI Angle	Kg	63.22	97.50	6,163.56
٢		100x50x6mm Gl Channel	Kg	6.69	97.50	652.47
90	17	75x40x6mm Gi Channel	Kg	5.71	97.50	556.92
6	-	50x50x6mm GI Angle	Kg	5.28	97.50	514.33
10) Danger Plate, 1 no	Danger plate	No	2	104.00	208.00
11		75x40x6mm Gi Channel	Kg	0.60	97.50	58.68
12	GI barbed wire anticlimbing device	GI Barbed wire	Kg	9	104.00	624.00
13		75x40x6mm Gi Channel	Кg	2.41	97.50	234.70
14	14 11kV,5kN pin insulator polymer	11KV Pin Insulator, Polymer	No	3	260.00	780.00
15	11kV H/W fitting(B&S) 70KN,3 Bolt	H W fitting(B&S) 70KN,3 bolt	Set	9	455.00	2,730.00
16	5 11kV Disc insulator (B&S) 70KN polymer	Disc Insulator(B&S),70KN,Polymer	No	6	1,495.00	8,970.00
17	114V AB Switch 400A 3pole 50Hz Horizontal Type	AB Switch(11KV,400A,3Pole,50 HZ)	Set	1	15,405.00	15,405.00
18		Lightning Arrester(9KV,10KA) Station Class	No	3	1,300.00	3,900.00
19	Earthing of Support (Coil Type)	Earthing Coil	No	2	215.80	431.60
20	20 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	No-8 GI wire(Dia 4.6 mm)	Kg	0.52	97.50	51.09
21		PG clamp for 100 mm ² AAA conductor	No	6	754.00	4,524.00
22	GI Nut , Bolt & Washer of different sizes	GI Nuts & Bolts of Assorted size	Kg	96.5	101.40	9, /85.10
23	H.T Stay clamp	HT stay clamp(1.9Kg/pair)	Pair	4	162.50	650.00
24	24 H.T 11kV Stay set (Complete)	HT stay set complete	Set	4	1,365.00	5,460.00
25	H.T Stay Insulator	HT Stay Insulator(Type C)	No	4	65.00	260.00
26		7/10 SWG G1 stay wire, Grade-2	Кg	40	97.50	3,900.00
27		40mm nominal bore GI pipe (medium gauge) earthing device with 40mm nominal bore GI pipe(medium gauge)earthing device with 3 mtr 3 mtr 1000	No	1	1,365.00	1,365.00
28		100mm2 All Allov Aluminium Conductor	Mtr	20.00	71.50	1,430.00
29	t S0x6 mm GI flat	GI Flat 50x6mm	Kg	9	05.79	585.00
30	30 Black Paint	Black paint	Ltr	1	286.00	286.00
31	Yellow Colour Paint for Background	Aluminium paint	Ltr	2	260.00	520.00
1					Total Cost of materials	1,58,693.54
					Stock, Storage & Insurance i.e 3%	4,760.81
					Sub Total A	1,63,454.35
					Contigency @ 3%	4,903.63
					Tools & Plants @ 2%	3,269.09
					Transportation @ 7.5%	12,259.08
s =					Erection	
					Transformer/Breaker/WPB/H	
-					Pole/Joist Poles @ 5%	

11kV AB Switch 200 Amp

2,66,821.70	Grand Total				
	Drawing Approval				
	Inspection Fee				
2,66,821.70	Sub-Total E				
2,242.20	CESS @ 1% of Sub-Total				
40,359.59	GST @ 18% of Sub-Total				
2,24,219.92	Sub-Total D				
	Supervision charges)@ 6%				
	Other Over Head (Including				
2,24,219.92	Sub-Total C				
32,340.00	Total Civil Part				
2,415.00	2,415.00	щ	EA	Installation of Earthing pipe with 40mm dia 3 Mtr long Class-B GI Pipe(Iindal/Tata/Sail/Rinl) with earth chamber as per TPSODL specification and drawing (Each pit resistance will be measured and recorded and shall be as per IS). Scope include supply of all required material like Salt, Charcoal, Nuts-Bolt, PVC Pipe PCC ,and brick work for earthing chamber (Size: 2'x2') and RCC or other suitable slab cover(earth resistance measurement and with in limit to be achieved by BA). Scope of work also includes leveling & ramming of earth and removal of extra malba. Earting Pipe is to be issued by TPSODL.	ITC of Earthing pipe with E/C
4,725.00	2,362.50	2	EA	 Fixing of complete 11KV line Complete stay set includes 1) Turn Buckle Assembly 2) Stay Rod & Stay plate 3) Stay insulator 4) Stay Wire. 5)Stay clamps with Nuts & bolts BA will do the excvation including excvation, supply of 0.5Cum cement concrete foundation 1.2:4 size (500mmx500mmx800mm) using 20mm BHG metal with all labour and material as per TPSODL Drawing & Standard. 	Inst 11KVcomplte stay set with concrete
25,200.00	6,300.00	4	EA	Installation/Erection of 11 Mtr long, RS JOIST/WPB Pole including loading and unloading, transportation from site/tent upto 10 Km., excavation, refilling, flooding with water, ramming/compacting of foundation as per TPSODL specifications and drawing including removal & disposal of extra malba as per instruction of EIC. The scope of work include providing & laying of 1:1.5:3 , M20, concrete of size - 500(B)x500(W)X1800(H) , and cooping of 500(B)x500(W)x450(H), Scope of work also includes 5 days curing and zebra painting (In Black & Yellow Strips/Zebra) .As per drawing.	Installation of WPB 160 X152, 11Mtr pole
					Civil & Services
1,91,879.92	Sub Total B				
7,993.78	Erection Other @ 10%.	daman da			
Amount(In Re)	Unit Rate(In Rs.)	Quantity	Unit	Short Text	SI No Description of Item

	Cost Estimate for 11kV Cradie Guard in Existing Line	POLE WPB GI 160X160 11 MTR		1		
SINO	Des	Short Text	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
1		POLE WPB GI 160X160 11 MTR	EA	1	34,321.52	34,321.52
2		BASE PLATE FOR PSC POLE	EA	0	408.00	
е	Cross arm of 75X40X4.8mm GI Channel 2.2 mtr long 4Nos	75x40x6mm GI Channel	Kg	62.83	97.50	6,126.12
4	wire cross lacing (0.08Kg/mtr)	No-6 Gl wire (Dia 4.8 mm)	Kg	1.78	97.50	173.16
S			Kg	33.26	97.50	3,243.05
9		11KV V cross arm(10.2Kg each)	No	1.00	1,053.00	1,053.00
2	GI Back Clamp for 11kV 'V' Cros Arm for WPB Pole	Gi Back Clamp for V cross arm(11KV)(0.85 kg each)	No	1.00	104.00	104.00
00	Top bracket 100X50X5mm Gl channel for 11kV	Top bracket 100x50mm MS channel(2kg each)	No	1.00	195.00	195.00
6	Danger Plate, 1 no	Danger plate	No	1	104.00	104.00
10	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	75x40x6mm GI Channel	Kg	0.30	97.50	29.34
11	Gl barbed wire anticlimbing device	GI Barbed wire	Kg	3	104.00	312.00
12	Back Clamp for Barbed wire anticlimbing device 75x40x6mm GI Channel 25X3mm. flat.leneth of 0.510mtr	75x40x6mm GI Channel	Kg	1.20	97.50	117.35
13		11KV Pin Insulator, Polymer	No	3	260.00	780.00
14		EYE hook for XLPE Aerial bunched Cable	No	4	78.00	312.00
15	Earthing of Support (Coil Type)	Earthing Coil	No	1	215.80	215.80
16	ent sizes	GI Nuts & Bolts of Assorted size	Kg	12	101.40	1,216.80
17	H.T Stay clamp	HT stay clamp(1.9Kg/pair)	Pair	2	162.50	325.00
18	et (Complete)	HT stay set complete	Set	2	1,365.00	2,730.00
19		HT Stay Insulator(Type C)	No	4	65.00	260.00
20		7/10 SWG G1 stay wire, Grade-2	Kg	30	97.50	2,925.00
21	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr. Long	40mm nominal bore GI pipe(medium gauge)earthing device with 3 mtr Long	No	ı	1,365.00	1,365.00
22		GI Flat 50x6mm	Kg	12	97.50	1,170.00
23	Black Paint	Black paint	Ltr	0.5	286.00	143.00
24	Yellow Colour Paint for Background	Aluminium paint	Ltr	1	260.00	260.00
				Te	Total Cost of materials	57,481.13
				St	Stock, Storage & Insurance i.e 3%	1,724.43
				SI	Sub Total A	59,205.57
				Ŭ	Contigency @ 3%	1,776.17
				T	Tools & Plants @ 2%	1,184.11
				7	Transportation @ 7.5%	4,440.42
				<u>ت</u>	Erection	
					Transformer/Breaker/WPB/H	
T					Erection Other @ 10%.	1,560.62
Γ				Ē	Erection PSC Pole @ 20%	
				Si	Sub Total B	68,166.88

11kV Guarding Existing Pole

11kV Guarding Existing Pole

Grand Total	Gra			
Drawing Approval	Dra			
nspection Fee	Ins			
Sub-Total E	Sub			
CESS @ 1% of Sub-Total	CES			
GST @ 18% of Sub-Total	GSI			
Sub-Total D	Sub			
Supervision charges)@ 6%	Sup			
Other Over Head (Including	Oth			
Sub-Total C	Sub			
Total Civil Part	Tot			
2,415.00	٣	EA	Installation of Earthing pipe with 40mm dia 3 Mtr long Class-B GI Pipe(Jindal/Tata/Sail/Rinl) with earth chamber as per TPSODL specification and drawing (Each pit resistance will be measured and recorded and shall be as per IS). Scope include supply of all required material like Salt, Charcoal, Nuts-Bolt ,PVC Pipe PCC ,and brick work for earthing chamber (Size: 2'x2') and RCC or other suitable slab cover(earth resistance measurement and with in limit to be achieved by BA).Scope of work also includes leveling & ramming of earth and removal of extra malba. Earting Pipe is to be issued by TPSODL.	ITC of Earthing pipe with E/C
2,362.50	2	Ë	Fixing of complete 11KV line Complete stay set includes 1) Turn Buckle Assembly 2) Stay Roud & Stay plate 3) Stay Insulator e 4) Stay Wire. 5)Stay clamps with Nuts & bolts BA will do the excvation including excvation, supply of 0.5Cum cement concrete foundation 1:2:4 size (500mmx500mmx800mm) using 20mm BHG metal with all labour and material as per TPSODL Drawing & Standard.	Inst 11KVcomplte stay set with concrete
6,300.00		EA	Installation/Erection of 11 Mtr long, RS JOIST/WPB Pole including loading and unloading, transportation from site/tent upto 10 Km., excavation, refilling, flooding with water, ramming/compacting of foundation as per TPSODL specifications and drawing including removal & disposal of extra malba as per instruction of EIC. The scope of work include providing & laying of 1:1.5:3 , M20, concrete of size - 500(B)x500(W)X1800(H) , and cooping of 500(B)x500(W)x450(H), Scope of work also includes 5 days curing and zebra painting (In Black & Yellow Strips/Zebra). As per drawing.	Installation of WPB 160 X152, 11Mtr pole
Unit Rate(In Rs.)	Quantity	Unit	Short Text	SI No Description of Item

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1,950.00 960.00 240.00 240.00 202.80 405.60 14,560.00 628.24 234.70 2,496.00 234.70 5,904.56 248.04 24,674.00 3,900.00 12.025.00 1,962.68 7,106.32 2,03,958.55 3,264.00 2,080.00 204.36 ,296.00 31,200.00 3,536.00 1.726.40 Amount(In Rs.) 101.40 145.60 97.50 152.00 80.00 80.00 136.66 15.60 19.50 78.00 676.00 143.00 97.50 80.00 1,476.14 4.77 19.50 97.50 104.00 97.50 260.00 84.50 39.00 215.80 949.00 3,900.00 408.00 78.53 442.00 925.00 490.67 1,98,018.01 Unit Rate(In Rs. Quantity 24.00 8.00 0.00 8.00 8.00 0.00 2.41 8.00 100 100 1.03 2.41 52 200 13 0 0 0 0 00 13 48 12 m m 4 4 52 4 8 2 Pair Pair Unit No No No EA EA Кg Mtr Mtr Mtr EA No No EA No No х В Kg Pair Set ¥ EA EA EA EA Σ KM Ke K⁸ EA Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 2C X 10sq. mm. Armoured Aluminium Cable - XLPE Insulated 4C X 10sq. mm. Armoured Aluminium Cable - XLPE Insulated 2C X 4sq. mm. Armoured Aluminium Cable - XLPE Insulated Back Clamp for Barbed wire anticlimbing device 25X3mm. Pole clamp for EYE hook for XLPE Aerial bunched Cable IPC EP 95 LT ABC 16-95 & 1.5-16 SQMM ST.LT Type C IPC KZ 2X150 LTABC 25-150 & 6-35(50) sqmm Type B Cost Estimate for LT Line 4X50+1X50+1X16 mm2 BUCKLES FOR STEEL STRAP (1 EA = 100 NOS) Lug AL Crimping 25 Sqmm XLPE Single hole Description of Item 1.1KV LT AB Cable 4x50+1x50+1x16mm2 No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr. IPC 50-150, 50-150 SQ.MM ST.LT Type A GI Nut, Bolt & Washer of different sizes Cable 1.1kV Al 4CX25 Sq.mm Armoured STEEL STRAP SIZE 20 MMX50 M LONG GI barbed wire anticlimbing device LT Distribution Box Polycarbonate Gland for 1.1kV Al 4CX25 Sq.mm FRP CROSS ARM 1070MM 415V Earthing of Support (Coil Type BOARD DANGER 400/440 VOLT Conductor Dead End Clamp POLE PSC 9 METER 300 KG flat, length of 0.510mtr LT Stay Set (Complete 7/12 SWG Stay Wire Suspension Clamp LT Stay Insulator LT Stay clamp **RCC base Plate** Cap cable end Eye hook 1 no SI No 24 32 10 14 16 19 Ч 4 S 9 6 11 12 13 15 17 18 20 21 22 23 26 28 30 31 2 -00 m

Aug- ABC-4X50+1X50+1X16mm2

Ine Pastic Black site 7 forms/380mm EA 40 40 565 Amount(The Pastic Site 9 mn/255mm EA 60 22.33 26.00 22.33 26.00 22.33 26.00 22.33 26.00 22.33 26.00 22.33 26.00 22.33 26.00 22.33 26.00 22.33 26.00	5,75,507.62	Grand Total				
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Description of ItemUnitQuantityUnit Rate(In Rs.)Amount[InTie Plastic Black size 7.6mmX380mmEA40 6.65 6.65 1.65 Black PaintLtr4 60 2.33 2.600 2.33 Black Paint for BackgroundLtr8 $7 total Cost of materials28.0028.00Vellow Colour Paint for BackgroundLtr87 total Cost of materials28.0038.00Vellow Colour Paint for BackgroundJJJ5 tock, Storage & Insurance i.e 3%38.00Vellow Colour Paint for BackgroundJJJ5 tock, Storage & Insurance i.e 3%38.00Vellow Colour Paint for BackgroundJJJ5 tock, Storage & Insurance i.e 3%38.00Vellow Colour Paint for BackgroundJJJ5 tock, Storage & Insurance i.e 3%38.00Vellow Colour Paint for BackgroundJJJ5 tock, Storage & Insurance i.e 3%38.00Vellow Colour Paint for BackgroundJJ7 total Background38.00.00Vellow Colour Paint for BackgroundJJ5 total B5.00.00Vellow Colour PSC Pole, 9MtrFeretion Transformer/Breaker/WPB/H6.300.0038.00.00$		2,362.50	o	SET	Fixing of LT stay set with Concreting	
Description of ItemUnitQuantityUnit Rate(In Rs.)Amount[InTie Plastic Black size 7.6mmX380mmEA60 22.33 Black PaintLr460 22.33 Black PaintLr8Total Cost of materials 286.00 Yellow Colour Paint for BackgroundLr8Total Cost of materials 36.00 Yellow Colour Paint for BackgroundIStock, Storage & Insurance i.e 3% 36.00 Yellow Colour Paint for BackgroundIContigency @ 3% 36.00 Yellow Colour Paint for BackgroundIStock, Storage & Insurance i.e 3% 36.00 Yellow Colour Paint for BackgroundIStock, Storage & Insurance i.e 3% 36.00 Yellow Colour Paint for BackgroundISub Total A 36.00 36.00 Yellow Colour Paint for BackgroundISub Total A 36.00 36.00 Yellow Colour Paint for BackgroundISub Total A 36.00 36.00 Yellow Colour Paint for BackgroundISub Total A 36.00 36.00 Yellow Colour Paint for BackgroundIFrection Transformer/Breaker/WPB/H 36.00 36.00 Yellow Colour BackgroundIIFrection Other @ 10% 36.00 36.00 Yellow Colour BackgroundISub Total B 36.00 36.00 36.00 Yellow Colour BackgroundIISub Total B 36.00	50,400.00	6,300.00	∞	EA	Installation of PSC pole , 9Mtr	
Image: Description of ItemUnitQuantityUnit Rate(In Rs.)Amount(InTie Plastic Black size 7.6mmX380mmEA40 6.6 22.33 Tie Plastic size 9mmX265mmItr4 60 22.33 Black PaintLtr8Itr4 286.00 Plow Colour Paint for BackgroundLtr8Total Cost of materials 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & Insurance i.e 3% 260.00 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & Insurance i.e 3% 260.00 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & Insurance i.e 3% 260.00 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & Insurance i.e 3% 260.00 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & Insurance i.e 3% 260.00 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & Insurance i.e 3% 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & Insurance i.e 3% 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & S% 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & S% 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & S% 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & S% 260.00 Image: Plant for BackgroundImage: Plant Stock, Storage & S% 260.00 Image: Plant for BackgroundImage: Plant Stock, Stock, Stock, Stock, Stock					Civil & Services	
Description of ItemUnitQuantityUnit Rate(In Rs.)Amount(In RTie Plastic Black size 7.5mmX380mmEA40 22.33 Tie Plastic size 9mmX265mmLtr4 286.00 286.00 Black PaintLtr8Total Cost of materials 286.00 $3,33$ Vellow Colour Paint for BackgroundLtr8Total Cost of materials $3,3$ IJJStock, Storage & Insurance i.e 3% $3,34$ IJJStock, Storage & Insurance i.e 3% $3,4$ IJJTotals Q 3% $3,4$ IJJTotals 2% $3,4$ IJJTotals 2% $3,4$ IJJFrection Transformer/Breaker/WPB/H 20 IJJErection Other @ 10% . 20%	4,06,051.09	Sub Total B				
Image: Description of ItemUnitQuantityUnit Rate(In Rs.)Amount(In R 1000000000000000000000000000000000000	6,427.20	Erection PSC Pole @ 20%				
Image: Description of ItemUnitQuantityUnit Rate(In Rs.)Amount(ITie Plastic Black size 7.6mmX380mmEA406.6522.33Tie Plastic size 9mmX265mmLtr4286.00286.00Black PaintLtr8Total Cost of materials260.00Yellow Colour Paint for BackgroundLtr8Stock, Storage & Insurance i.e 3%260.009Stock, Storage & Insurance i.e 3%Sub Total ASub Total A9Stock Storage & Insurance i.e 3%Sub Total AStools & Plants @ 2%9Stock Storage & S%Stock Storage & S%Stock Storage & S%	8,598.58	Erection Other @ 10%.				
Image: Constraint of the systemUnitQuantityUnit Rate(In Rs.)Amount(ITie Plastic Black size 7.6mmX380mmEA 40 6.65 22.33 Tie Plastic size 9mmX265mmEA 60 22.33 286.00 Black PaintLtr4 4 286.00 286.00 Vellow Colour Paint for BackgroundLtr8Total Cost of materials 260.00 Vellow Colour Paint for BackgroundJStock, Storage & Insurance i.e 3% 260.00 Vellow Colour Paint for BackgroundJContigency @ 3% $3%$ Vellow Colour Paint for BackgroundJTransportation @ 7.5% $3%$ Vellow Colour Paint for BackgroundJSub Total A $3%$ Vellow Colour Paint for BackgroundJSub Total A $3%$ Vellow Colour Paint for BackgroundJTransportation @ 7.5% $3%$ Vellow Colour Paint for BackgroundJSub Total A $3%$ Vell						
Image: problemUnitQuantityUnit Rate(In Rs.)Amount(ITie Plastic Black size 7.6mmX380mmEA 40 6.65 22.33 Tie Plastic size 9mmX265mmEA 60 22.33 22.33 Black PaintLtr4 4 286.00 286.00 Yellow Colour Paint for BackgroundLtr8Total Cost of materials 260.00 99Stock, Storage & Insurance i.e 3% 3% 3% 9910Contigency @ 3% 3% 3% 991008 & Plants @ 2% 3.5% 3.5%	1,606.80					
Image: constraint of the constr	25,961.23	Transportation @ 7.5%				
Image: Construction of ItemUnitQuantityUnit Rate(In Rs.)Amount(ITie Plastic Black size 7.6mmX380mmEA406.65Tie Plastic size 9mmX265mmEA6022.33Black PaintLtr4286.00Yellow Colour Paint for BackgroundLtr8Total Cost of materials9Stock, Storage & Insurance I.e. 3%5.005.009Contigency @ 3%1Contigency @ 3%	6,923.00	Tools & Plants @ 2%				
Image: Description of ItemUnitQuantityUnit Rate(In Rs.)Amount(ITie Plastic Black size 7.6mmX380mmEA406.65Tie Plastic size 9mmX265mmEA6022.33Black PaintLtr4286.00286.00Yellow Colour Paint for BackgroundLtr8Total Cost of materials9Stock, Storage & Insurance i.e 3%5591Sub Total A5	10,384.49	Contigency @ 3%				
Image: Description of ItemUnitQuantityUnit Rate(In Rs.)Amount(ITie Plastic Black size 7.6mmX380mmEA406.65Tie Plastic size 9mmX265mmEA6022.33Black PaintLtr4286.00Yellow Colour Paint for BackgroundLtr8Total Cost of materialsYellow Colour Paint for BackgroundLtr8260.00Yellow Colour Paint for BackgroundLtr8Yotal Cost of materials	3,46,149.79	Sub Total A				
Description of ItemUnitQuantityUnit Rate(In Rs.)Amount(ITie Plastic Black size 7.6mmX380mmEA406.65Tie Plastic size 9mmX265mmEA6022.33Black PaintLtr4286.00Yellow Colour Paint for BackgroundLtr8Total Cost of materials1Total Cost of materials	10,082.03	Stock, Storage & Insurance i.e 3%				
Description of ItemUnitQuantityUnit Rate(In Rs.)Amount(In RTie Plastic Black size 7.6mmX380mmEA406.65Tie Plastic size 9mmX265mmEA6022.33Black PaintLtr4286.00Yellow Colour Paint for BackgroundLtr8260.00	3,36,067.75	Total Cost of materials				
Image: Description of Item Unit Quantity Unit Rate(In Rs.) Amount(In R Tie Plastic Black size 7.6mmX380mm EA 40 6.65 22.33 Tie Plastic size 9mmX265mm EA 60 22.33 286.00 Black Paint Ltr 4 286.00 286.00 286.00	2,080.00	260.00	8	Ltr	Yellow Colour Paint for Background	36
Description of Item Unit Quantity Unit Rate(In Rs.) Amount(In R Tie Plastic Black size 7.6mmX380mm EA 40 6.65 Tie Plastic size 9mmX265mm EA 60 22.33	1,144.00	286.00	4	Ę	Black Paint	35
Description of Item Unit Quantity Unit Rate(In Rs.) Amount(In Rs.) Tie Plastic Black size 7.6mmX380mm EA 40 6.65	1,339.80	22.33	60	EA	Tie Plastic size 9mmX265mm	34
Description of Item Unit Quantity Unit Rate(In Rs.)	266.00		40	EA		33
	Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit		SI No

Aug- ABC-4X50+1X50+1X16mm2

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		Cost Estimate for LT Line 4X50+1X50+1X16 mm2		1		
SINO	Source	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
H	CDB	POLE PSC 9 METER 300 KG	No	33	3,900.00	1,28,700.00
2	RC	1.1KV LT AB Cable 4x50+1x50+1x16mm2	KM	1.03	1,98,018.01	2,03,958.55
3	RC	RCC base Plate	EA	33.00	408.00	13,464.00
4	RC	BOARD DANGER 400/440 VOLT	EA	33.00	78,53	2,591.49
ഹ	CDB	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	Kg	6.93	97.50	968.15
9	CDB	GI barbed wire anticlimbing device	Kg	00.66	104.00	10,296.00
7	CDB	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat,length of 0.510mtr	kg	9.93	97.50	968.15
ø	CDB	Pole clamp for EYE hook for XLPE Aerial bunched Cable	Pair	33.00	260.00	8,580.00
ŋ	CDB	Suspension Clamp	Pair	23.00	442.00	10,166.00
10	CDB	Eye hook	No	10.00	78.00	780.00
11	CDB	Conductor Dead End Clamp	No	10.00	84.50	845.00
12	CDB	LT Stay Set (Complete)	Set	10	676.00	6,760.00
13	CDB	LT Stay Insulator	No	10	39.00	390.00
14	CDB	LT Stay clamp	Pair	10	143.00	1,430.00
15	CDB	7/12 SWG Stay Wire	Kg	100	97.50	9,750.00
16	CDB	Earthing of Support (Coil Type)	No	33	215.80	7,121.40
17	CDB	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	6	97.50	842.99
18	RC	LT Distribution Box Polycarbonate	EA	17	925.00	15,725.00
19	CDB	Cap cable end	EA	258	152.00	39,216.00
20	CDB	IPC 50-150, 50-150 SQ.MM ST.LT Type A	EA	12	80.00	960.00
21	CDB	IPC EP 95 LT ABC 16-95 & 1.5-16 SQMM ST.LT Type C	EA	3	80.00	240.00
22	CDB	IPC KZ 2X150 LTABC 25-150 & 6-35(50) sqmm Type B	EA	с	80.00	240.00
23	CDB	STEEL STRAP SIZE 20 MMX50 M LONG	EA	4	1,476.14	5,904.56
24	CDB	BUCKLES FOR STEEL STRAP (1 EA = 100 NOS)	EA	4	490.67	1,962.68
25	RC	Cable 1.1kV Al 4CX25 Sq.mm Armoured	Σ	68	136.66	9,292.88
26	CDB	Gland for 1.1kV AI 4CX25 Sq.mm.	No	17	15.60	265.20
27	CDB	GI Nut , Bolt & Washer of different sizes	Kg	16.5	101.40	1,673.10
28	RC	Lug AL Crimping 25 Sqmm XLPE Single hole	EA	68	4.77	324.36
29	CDB	FRP CROSS ARM 1070MM 415V	No	34	949.00	ers
30	CDB	2C X 4sq. mm. Armoured Aluminium Cable - XLPE Insulated	Mtr	200	19.50	3,900.00

New ABC-4X50+1X50+1X16mm2

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CINO	Course	Description of Item	Unit	Quantity	Unit Rate(In Rc.)	Amount(In Rs.)
31	CDB	2C X 10sq. mm. Armoured Aluminium Cable - XLPE Insulated	Mtr	100	19.50	1,950.00
32	CDB	4C X 10sq. mm. Armoured Aluminium Cable - XLPE Insulated	Mtr	100	145.60	14,560.00
33	CDB	Tie Plastic Black size 7.6mmX380mm	EA	40	6.65	266.00
34	CDB	Tie Plastic size 9mmX265mm	ΕA	60	22.33	1,339.80
35	CDB	Black Paint	Ltr	16.5	286.00	4,719.00
36	CDB	Yellow Colour Paint for Background	Ltr	33	260.00	8,580.00
					Total Cost of materials	5,50,996.30
					Stock, Storage & Insurance i.e 3%	16,529.89
					Sub Total A	5,67,526.19
					Contigency @ 3%	17,025.79
					Tools & Plants @ 2%	11,350.52
					Transportation @ 7.5%	42,564.46
					Erection Transformer/Breaker/WPB/H Pole/Joist Poles @ 5%	6,628.05
					Erection Other @ 10%.	17,641.33
					Erection PSC Pole @ 20%	26,512.20
					Sub Total B	6,89,248.53
		Civil & Services				
		Installation of PSC pole , 9Mtr	EA	33	6,300.00	2,07,900.00
		Fixing of LT stay set with Concreting	SET	10	2,362.50	23,625.00
		Dismantling of PSC pole (9mtr) & Return	EA	ω	945.00	2,835.00
		Dismantling of LT ABC Cable with accesso	Z	1030	23.63	24,333.75
Π					Total Civil Part	2,58,693.75
					Sub-Total C	9,47,942.28
					Other Over Head (Including Supervision charges)@ 6%	-
			T			1 70 202 21
					CESS @ 1% of Sub-Total D	1,70,629.61 9,479.42
					Sub-Total E	11,28,051.32
New A	BC-4X50	New ABC-4X50+1X50+1X16mm2				

Amount(In Rs.)			11,28,051.32
Unit Rate(In Rs.)	Inspection Fee	Drawing Approval	Grand Total
Quantity			
Unit			
Description of Item			
Source			
SI No			

New ABC-4X50+1X50+1X16mm2

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24,674.00	949.00	26	No	9 FRP CROSS ARM 1070MM 415V	29
248.04	4.77	52	EA		28
405.60	101.40	4	Kg	7 GI Nut , Bolt & Washer of different sizes	27
202.80	15.60	13	No	6 Gland for 1.1kV Al 4CX25 Sq.mm	26
7,106.32	136.66	52	Ζ	Cable 1.1kV Al 4CX25 Sq.mm Armoured	25
1,962.68	490.67	4	EA	-	24
5,904.56	1,476.14	4	EA	3 STEEL STRAP SIZE 20 MMX50 M LONG	23
240.00	80.00	3	ΕA	2 IPC KZ 2X150 LTABC 25-150 & 6-35(50) sqmm Type B	22
240.00	80.00	ω	EA	1 IPC EP 95 LT ABC 16-95 & 1.5-16 SQMM ST.LT Type C	21
960.00	80.00	12	EA	-	20
7,296.00	152.00	48	EA		19
12,025.00	925.00	13	EA		18
204.36	97.50	2	Kg		17
1,726.40	215.80	8	No	_	16
	97.50	0	Kg	-	15
	143.00	0	Pair	-	14
	39.00	0	No	-	13
12	676.00	0	Set	2 LT Stay Set (Complete)	12
	84.50	0.00	No	1 Conductor Dead End Clamp	11
624.00	78.00	8.00	No		10
3,536.00	442.00	8.00	Pair	Suspension Clamp	9
2,080.00	260.00	8.00	Pair	Pole clamp for EYE hook for XLPE Aerial bunched Cable	00
234.70	97.50	2.41	Kg		٤
2,496.00	104.00	24.00	Kg		6
234.70	97.50	2.41	Kg		S
628.24	78.53	8.00	EA	BOARD DANGER 400/440 VOLT	4
3,264.00	408.00	8.00	EA		3
3,79,696.99	3,68,637.85	1.03	KM	1.1KV LT AB Cable 4x95+1x95+1x16mm2	2
31,200.00	3,900.00	8	No	POLE PSC 9 METER 300 KG	ц
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Vo Description of Item	SI No
		1		Cost Estimate for LT Line 4X95+1X95+1X16 mm2	

SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
30	2C X 4sq. mm. Armoured Aluminium Cable - XLPE Insulated	Mtr	200	19.50	3,900.00
31	2C X 10sq. mm. Armoured Aluminium Cable - XLPE Insulated	Mtr	100	19.50	1,950.00
32	4C X 10sq. mm. Armoured Aluminium Cable - XLPE Insulated	Mtr	100	145.60	14,560.00
33	Tie Plastic Black size 7.6mmX380mm	EA	40	6.65	266.00
34	-	EA	60	22.33	1,339.80
35	1	Ltr	4	286.00	1,144.00
36	Yellow Colour Paint for Background	Ltr	8	260.00	2,080.00
				Total Cost of materials	5,12,430.19
				Stock, Storage & Insurance i.e 3%	15,372.91
				Sub Total A	5,27,803.10
				Contigency @ 3%	15,834.09
				Tools & Plants @ 2%	10,556.06
				Transportation @ 7.5%	39,585.23
				Erection Transformer/Breaker/WPB/H Pole/Joist Poles @	1,606.80
				5/0 Frontion Othor @ 10%	8 667 86
					00.200,0
				Erection PSC Pole @ 20%	C 10 421.20
				Sub lotal B	PC.C/4/UL(0
	Civil & Services				
	Installation of PSC pole , 9Mtr	EA	80	6,300.00	50,400.00
	Fixing of LT stay set with Concreting	SET	0	2,362.50	2
	Dismantling of PSC pole (9mtr) & Return	EA	3	945.00	2,835.00
	Dismantling of LT ABC Cable with accesso	Σ	1030	23.63	24,333.75
				Total Civil Part	77,568.75
				Sub-Total C	6,88,044.09
		1		Other Over Head (Including Supervision charges)@ 6%	x
				Sub-Total D	6,88,044.09
				GST @ 18% of Sub-Total D	1,23,847.94
				CESS @ 1% of Sub-Total D	6,880.44
		10		Sub-Total E	8,18,772.47

Aug- ABC-4X95+1X95+1X16mm2

Aug- ABC-4X95+1X95+1X16mm2

0 10 777 AT	Grand Total				
	Drawing Approval				
	Inspection Fee				
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No

	Cost Estimate for LT Line 4X95+1X95+1X16 mm2		1		
SI No	o Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
-	POLE PSC 9 METER 300 KG	No	33	3,900.00	1,28,700.00
2	1.1KV LT AB Cable 4x95+1x95+1x16mm2	KM	1.03	3,68,637.85	3,79,696.99
m	RCC base Plate	EA	33.00	408.00	13,464.00
4	BOARD DANGER 400/440 VOLT	EA	33.00	78.53	2,591.49
S	Back Clamp for danger Plate 25X3 mm. flat, length of 0.510mtr 1 no	Kg	9.93	97.50	968.15
9	GI barbed wire anticlimbing device	Kg	00.66	104.00	10,296.00
2	Back Clamp for Barbed wire anticlimbing device 25X3mm. flat, length of 0.510mtr	Kg	9.93	97.50	968.15
00	Pole clamp for EYE hook for XLPE Aerial bunched Cable	Pair	33.00	260.00	8,580.00
6	Suspension Clamp	Pair	23.00	442.00	10,166.00
10	Eye hook	No	10.00	78.00	780.00
11	Conductor Dead End Clamp	No	10.00	84.50	845.00
12	LT Stay Set (Complete)	Set	10	676.00	6,760.00
13		No	10	39.00	
14	LT Stay clamp	Pair	10	143.00	
15	7/12 SWG Stay Wire	Kg	100	97.50	
16	Earthing of Support (Coil Type)	No	33	215.80	7,121.40
17	No-8 GI wire (Dia 4.6mm) 0.131 KG/ Mtr.	Kg	6	97.50	
18	LT Distribution Box Polycarbonate	EA	17	925.00	15,725.00
19		EA	258	152.00	39,216.00
20	IPC 50-150, 50-150 SQ.MM ST.LT Type A	EA	12	80.00	960.00
21	IPC EP 95 LT ABC 16-95 & 1.5-16 SQMM ST.LT Type C	EA	3	80.00	240.00
22	IPC KZ 2X150 LTABC 25-150 & 6-35(50) sqmm Type B	EA	æ	80.00	240.00
23	STEEL STRAP SIZE 20 MMX50 M LONG	EA	4	1,476.14	5,904.56
24	BUCKLES FOR STEEL STRAP (1 EA = 100 NOS)	EA	4	490.67	1,962.68
25	Cable 1.1kV Al 4CX25 Sq.mm Armoured	Σ	68	136.66	9,292.88
26	Gland for 1.1kV Al 4CX25 Sq.mm	No	17	15.60	
27		Kg	16.5	101.40	1
28		EA	68	4.77	324.36
29	FRP CROSS ARM 1070MM 415V	No	34	949.00	32,266.00
New	30 2CX 489, mm, Armoured Aluminium Cable - XLPE Insulated New ABC-4X95+1X95+1X16mm2 (2)	Mtr	200	19.50	3,900.00

New ABC-4X95+1X95+1X16mm2 (2)

	Constant Table		•		
	Drawing Approval				
	Inspection Fee				
13,70,379.24	Sub-Total E				
11,515.79	CESS @ 1% of Sub-Total D				
2,07,284.26	GST @ 18% of Sub-Total D				
11,51,579.20	Sub-Total D				
3465	Other Over Head (Including Supervision charges)@ 6%				
11,51,579.20	Sub-Total C				
2,58,693.75	Total Civil Part				Π
24,333.75	23.63	1030	Σ	Dismantling of LT ABC Cable with accesso	
2,835.00	945.00	ω	EA	Dismantling of PSC pole (9mtr) & Return	
23,625.00	2,362.50	10	SET	Fixing of LT stay set with Concreting	
2,07,900.00	6,300.00	33	EA	Installation of PSC pole , 9Mtr	
				Civil & Services	
8,92,885.45	Sub Total B				
26,512.20	Erection PSC Pole @ 20%				
17,641.33	Erection Other @ 10%.				
6,628.05	Erection Transformer/Breaker/WPB/H Pole/Joist Poles @ 5%				
56,140.26	Transportation @ 7.5%				
14,970.74	Tools & Plants @ 2%				
22,456.10	Contigency @ 3%				
7,48,536.77	Sub Total A				
21,802.04	Stock, Storage & Insurance i.e 3%				
7,26,734.73	Total Cost of materials			_	_
8,580.00	260.00	33	Ltr		
4,719.00	286.00	16.5	Ltr	-	
1,339.80	22.33	60	EA	_	34
266.00	6.65	40	EA		33
14,560.00	145.60	100	Mtr		32
1,950.00	19.50	100	Mtr	2C X 10sq. mm. Arm Insulated	31
Amount(In Rs.)	Unit Rate(In Rs.)	Unit Quantity	Unit	o Description of Item	SI No

0.14

	Cost Estimate for 250kVA Distribution Transformer(3-ph)		1		
SI No		Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
-	250 KVA,11/0.43KV(Al) Transformer	No	0	3,48,985.00	
2	POLE WPB GI 160X160 11 MTR	EA	0	34,321.52	
m	RCC base Plate	EA	0	408.00	6
4	Top Channel 100X50X5mm, each channel length 2.8 mtr.	Kg	53.54	97.50	5,219.76
2	AB Switch Mounting Channel 75X40X4.8mm GI Channel 2.8 mtr lon	Kg	39.98	97.50	3,898.44
9	HG Fuse mounting channel 75X40X4.8mm of length 2.8 mtr	Kg	39.98	97.50	3,898.44
2	AB Switch Operating Pipe Channel Support 75X40X4.8 mm.,of llength 0.625mtr	Kg	4.46	97.50	435.09
∞	AB Switch Bottom Support Channel 75X40X4.8 mm of length 0.330 mtr.	Кg	4.71	97.50	459.46
6	Braking Support Channel for operating pipe 50X8mm of length 0.5 mtr.	Åg	1.57	97.50	153.08
10	Support Channel for TPMO operating Rod 75X40X4.8mm of length 0.388 mtr	Åg	5.54	97.50	540.21
11	LTDB supporting channel 75X40X4.8mm of length 3.0 mtr	Кв	21.42	97.50	2,088.45
12	Lightning Arrester (9kV,10kA) DH Class	No	m	1,300.00	3,900.00
13	11kV AB Switch 400A 3pole 50Hz Horizontal Type	Set	1	15,405.00	15,405.00
14	HG Fuse(11KV,400A,3 Pole,50Hz) with PI	Set	1	14,989.00	14,989.00
15	LT Distribution Box with MCCB for 250KVA S/S	No	Ч	62,400.00	62,400.00
16	H.T Stav clamp	Pair	0	162.50	
17	H.T 11kV Stay set (Complete)	Set	0	1,365.00	ì
18	H.T Stay Insulator	No	0	65.00	θ.
19	7/10 SWG Stay Wire	Kg	0	97.50	
20	1.1kV AI 1CX300 Sq.mm Un-armoured Cable	Mtr	64	496.60	31,782.40
21	Gland for 1.1kV AI 1CX300 Sq.mm	No	8	67.60	540.80
22	Lug AL Crimping 300 Sqmm XLPE Single hole	EA	8	750.00	6,000.00
23	11kV Disc insulator (B&S) 70KN polymer	No	3	1,495.00	4,485.00
24	11kV H/W fitting(B&S) 70KN,3 Bolt	Set	3	455.00	1,365.00
25	CLAMP PG FOR 100 SQMM CONDUCTOR	No	3	754.00	2,262.00
26	CONDUCTOR 100 SQMM AAA	Mtr	15	71.50	1,072.50
27	GI Nut , Bolt & Washer of different sizes	Kg	20	101.40	2,028.00
28	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr . Long	No	2	1,365.00	6,825.00
29	25x6 mm Gl flat	Kg	9	97.50	585.00
30	Black Paint	Ltr	0	286.00	
31	Yellow Colour Paint for Background	Ltr	0	260.00	
				Total Cost of materials	1,70,332.63
				Stock, Storage & Insurance i.e 3%	5,109.98
				Sub Total A	1,75,442.61
				Contigency @ 3%	5,263.28
			I	Tools & Plants @ 2%	3,508.85
				Transportation @ 7.5%	13,158.20
Total C				Erection Transformer/Breaker/WPB/H Pole/Joist Poles @	
UIST. ITAIIS	UIST. I ransiprimer-250KVA-USS			5%	

3,66,745.17	Grand Total			
	Drawing Approval			
	Inspection Fee			
3,66,745.17	Sub-Total E			
3,081.89	CESS @ 1% of Sub-Total			
55,474.06	GST @ 18% of Sub-Total			
3,08,189.22	Sub-Total D			
	Other Over Head (Including Supervision charges)@ 6%			
3,08,189.22	Sub-Total C			
93,975.00	Total Civil Part			
12,075.00	2,415.00	v	ITC of Earthing pipe with E/C EA	
81,900.00	4,095.00	20	Construction of FRP fencing	
1	31,878.00	0	Constr of TRF Plinth for 250-1000KVA EA	
10	2,362.50	0	Inst 11KVcomplte stay set with concrete EA	
	6,300.00	0	Installation of WPB 160 X152, 11Mtr pole EA	
			Civil & Services	
2,14,214.22	Sub Total B			
	Erection PSC Pole @ 20%			
16,841.29	Erection Other @ 10%.			

	Lost Estimate for 250KVA Distribution Iransformer(3-pn)		1		
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
-	250 KVA, 11/0.43KV(Al) Transformer	No	1	3,48,985.00	3,48,985.00
2	POLE WPB GI 160X160 11 MTR	EA	0	34,321.52	•
æ	RCC base Plate	EA	0	408.00	
4	Top Channel 100X50X5mm, each channel length 2.8 mtr.	Kg	53.54	97.50	5,219.76
2	AB Switch Mounting Channel 75X40X4.8mm GI Channel 2.8 mtr Ion	Kg	39.98	97.50	3,898.44
9	HG Fuse mounting channel 75X40X4.8mm of length 2.8 mtr	Kg	39.98	97.50	3,898.44
7	AB Switch Operating Pipe Channel Support 75X40X4.8 mm.,of length 0.625mtr	Kg	4,46	97.50	435.09
∞	AB Switch Bottom Support Channel 75X40X4.8 mm of length 0.330 mtr.	Kg	4.71	97.50	459.46
б	Braking Support Channel for operating pipe 50X8mm of length 0.5 mtr.	Kg	1.57	97.50	153.08
10	Support Channel for TPMO operating Rod 75X40X4.8mm of length 0.388 mtr.	Kg	5.54	97.50	540.21
11	LTDB supporting channel 75X40X4.8mm of length 3.0 mtr	Kg	21.42	97.50	2,088.45
12	Lightning Arrester (9kV,10kA) DH Class	No	3	1,300.00	3,900.00
13	11kV AB Switch 400A 3pole 50Hz Horizontal Type	Set	1	15,405.00	15,405.00
14	HG Fuse(11KV,400A,3 Pole,50Hz) with PI	Set	1	14,989.00	14,989.00
15	LT Distribution Box with MCCB for 250KVA S/S	No	H	62,400.00	62,400.00
16	H.T Stay clamp	Pair	0	162.50	•
17	H.T 11kV Stay set (Complete)	Set	0	1,365.00	10
18	H.T Stay Insulator	No	0	65.00	
19	7/10 SWG Stay Wire	ВХ	0	97.50	Ē
20	1.1kV Al 1CX300 Sq.mm Un-armoured Cable	Mtr	64	496.60	31,782.40
21	Gland for 1.1kV AI 1CX300 Sq.mm	No	8	67.60	540.80
22	Lug AL Crimping 300 Sqmm XLPE Single hole	EA	80	750.00	6,000.00
23	111kV Disc insulator (B&S) 70KN polymer	No	3	1,495.00	4,485.00
24	111kV H/W fitting(B&S) 70KN,3 Bolt	Set	3	455.00	1,365.00
25	CLAMP PG FOR 100 SQMM CONDUCTOR	No	Э	754.00	2,262.00
26	CONDUCTOR 100 SQMM AAA	Mtr	15	71.50	1,072.50
27	GI Nut , Bolt & Washer of different sizes	Kg	20	101.40	2,028.00
28	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr. I one	No	2	1,365.00	6,825.00
29	25x6 mm GI flat	Kg	9	97.50	585.00
30	Black Paint	Ltr	0	286.00	51

Dist. Transformer-250kVA-Aug

Dist. Transformer-250kVA-Aug

9.07.287.32	Sub-Total E				
7,624.26	CESS @ 1% of Sub-Total				
1,37,236.74	GST @ 18% of Sub-Total				
7,62,426.32	Sub-Total D				
	(Including Supervision charges)@ 6%				
	Other Over Head				
7,62,426.32	Sub-Total C				
1,25,853.00	Total Civil Part				
12,075.00	2,415.00	5	EA	ITC of Earthing pipe with E/C	
81,900.00	4,095.00	20	Sqm	Construction of FRP fencing	
31,878.00	31,878.00	1	EA	Constr of TRF Plinth for 250-1000KVA	
1	2,362.50	0	EA	Inst 11KVcomplte stay set with concrete	
Ľ	6,300.00	0	EA	Installation of WPB 160 X152, 11Mtr pole	1
				Civil & Services	
6,36,573.32	Sub Total B				
	Erection PSC Pole @ 20%				
16,841.29	Erection Other @ 10%.				
17,972.73	Erection Transformer/Breaker/WP B/H Pole/Joist Poles @ 5%				
40,117.29	Transportation @ 7.5%				
10,697.94	Tools & Plants @ 2%				
16,046.91	Contigency @ 3%				
5,34,897.16	Sub Total A				
15,579.53	Stock, Storage & Insurance i.e 3%				
5,19,317.63	Total Cost of materials				
	260.00	0	Ltr	Yellow Colour Paint for Background	31
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No

-	Amount(In Rs.)			9,07,287.32
	Unit Rate(In Rs.)	Inspection Fee	Drawing Approval	Grand Total
	Quantity			
	Unit			
	Description of Item			
	SI No			

Dist. Transformer-250kVA-Aug

Dist. Transformer-250kVA-New

10.00	00.00	4	INC	עראטרב טראואט רטה אל א דשט שליואואו רלימר	10
0,332.00	00 85	0T	NIC	CABLE 1.1KV AL 4CX 150 SQMM XLPE ARMUKED	36
00 000 00		10,	141		2
5.410.00	5,410.00	1	EA	METER SMART 3DAW/ ITCT 200/5A	25
529.00	529.00	1	EA	THREE PHASE WHOLE CURRENT MTR BOX	34
5,901.00	5,901.00	1	EA	Three Phase DT(3 phase 4 wire LTCT Mtr)	33
4,725.00	4,725.00	4	ΕA	Supply & Erection G.I Fencing with Gate	32
520.00	260.00	2	Ltr	Yellow Colour Paint for Background	31
286.00	286.00	1	Ltr	Black Paint	30
585.00	97.50	6	Kg	25x6 mm Gl flat	29
6,825.00	1,365.00	J	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	28
2,028.00	101.40	20	Kg	GI Nut, Bolt & Washer of different sizes	27
1,072.50	71.50	15	Mtr	CONDUCTOR 100 SQMM AAA	26
2,262.00	754.00	ω	No	CLAMP PG FOR 100 SQMM CONDUCTOR	25
1,365.00	455.00	ω	Set	11kV H/W fitting(B&S) 70KN,3 Bolt	24
4,485.00	1,495.00	3	No	11kV Disc insulator (B&S) 70KN polymer	23
6,000.00	750.00	80	EA	Lug AL Crimping 300 Sqmm XLPE Single hole	22
540.80	67.60	∞	No	Gland for 1.1kV AI 1CX300 Sq.mm	21
31,782.40	496.60	64	Mtr	1.1kV AI 1CX300 Sq.mm Un-armoured Cable	20
1,950.00	97.50	20	Kg	7/10 SWG Stay Wire	19
130.00	65.00	2	No	H.T Stay Insulator	18
2,730.00	1,365.00	2	Set	H.T 11kV Stay set (Complete)	17
325.00	162.50	2	Pair	H.T Stay clamp	16
62,400.00	62,400.00	L	No	LT Distribution Box with MCCB for 250KVA S/S	15
14,989.00	14,989.00	1	Set	HG Fuse(11KV,400A,3 Pole,50Hz) with PI	14
15,405.00	15,405.00	1	Set	11kV AB Switch 400A 3pole 50Hz Horizontal Type	13
3,900.00	1,300.00	ω	No	Lightning Arrester (9kV,10kA) DH Class	12
2,088.45	97.50	21.42	Kg	LTDB supporting channel 75X40X4.8mm of length 3.0 mtr	11
540.21	97.50	5.54	Kg	Support Channel for TPMO operating Rod 75X40X4.8mm of length 0.388 mtr.	10
153.08	97.50	1.57	Kg	Braking Support Channel for operating pipe 50X8mm of length 0.5 mtr.	9
459.46	97.50	4.71	Kg	AB Switch Bottom Support Channel 75X40X4.8 mm of length 0.330 mtr.	80
435.09	97.50	4.46	Kg	length 0.625mtr	7
3,898.44	05.76	39.98	Ng	HG Fuse mounting channel /SX4UX4.8mm of length 2.8 mtr	6
3,090.44	02.25	39.90	Ng	AB Switch Mounting Channel /SX40X4.8mm GI Channel 2.8 mtr Ion	, v
5,219.76	97.50	53.54	Kg	Top Channel 100X50X5mm, each channel length 2.8 mtr.	4
	408.00	0	EA	RCC base Plate	ω
68,643.04	34,321.52	2	EA	POLE WPB GI 160X160 11 MTR	2
3,48,985.00	3,48,985.00	1	No	250 KVA, 11/0.43KV(AI) Transformer	1
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SINO
		1		Cost Estimate for 250kVA Distribution Transformer(3-ph)	

Amount(In Rs.)	6,17,174.67	18,515.24	6,35,689.91	19,070.70	12,713.80	47,676.74		17,972.73		19,238.40		7,52,362.28		12,600.00	4,725.00	31,878.00	12,075.00	61,278.00	8,13,640.28		2000 (C	8,13,640.28	1,46,455.25	8,136.40	9,68,231.93	9,68,231.93
Unit Rate(In Rs.)	Total Cost of materials	Stock, Storage & Insurance i.e 3%	Sub Total A	Contigency @ 3%	Tools & Plants @ 2%	Transportation @ 7.5%	Erection	Transformer/Breaker/WPB/H	Pole/Joist Poles @ 5%	Erection Other @ 10%.	Erection PSC Pole @ 20%	Sub Total B		6,300.00	2,362.50	31,878.00	2,415.00	Total Civil Part	Sub-Total C	Other Over Head (Including	Supervision charges)@ 6%	Sub-Total D	GST @ 18% of Sub-Total	CESS @ 1% of Sub-Total	Sub-Total E	Grand Total
Quantity														2	2	1	5									
Unit														EA	EA	EA	EA									
Description of Item													Civil & Services	installation of WPB 160 X152, 11Mtr pole	Inst 11KV complte stay set with concrete	Constr of TRF Plinth for 250-1000KVA	ITC of Earthing pipe with E/C									
SI No														1												

9,96,571.03	Total Cost of materials				
t	260.00	0	Ltr	Yellow Colour Paint for Background	31
t	286.00	0	Ltr	Black Paint	30
585.00	97.50	6	Kg	25x6 mm GI flat	29
6,825.00	1,365.00	ъ	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	28
2,028.00	101.40	20	Kg	GI Nut, Bolt & Washer of different sizes	27
1,072.50	71.50	15	Mtr	CONDUCTOR 100 SQMM AAA	26
2,262.00	754.00	ω	No	CLAMP PG FOR 100 SQMM CONDUCTOR	25
1,365.00	455.00	ω	Set	11kV H/W fitting(B&S) 70KN,3 Bolt	24
4,485.00	1,495.00	з	No	11kV Disc insulator (B&S) 70KN polymer	23
6,000.00	750.00	∞	EA	Lug AL Crimping 630 Sqmm XLPE Single hole	22
540.80	67.60	80	No	Gland for 1.1kV Al 1CX630 Sq.mm	21
39,852.80	622.70	64	Mtr	1.1kV Al 1CX630 Sq.mm Un-armoured Cable	20
1	97.50	0	Kg	7/10 SWG Stay Wire	19
1	65.00	0	No	H.T Stay Insulator	18
-	1,365.00	0	Set	H.T 11kV Stay set (Complete)	17
1	162.50	0	Pair	H.T Stay clamp	16
1,26,568.00	1,26,568.00	1	No	LT Distribution Box with MCCB for 500KVA S/S	15
14,989.00	14,989.00	1	Set	HG Fuse(11KV,400A,3 Pole,50Hz) with PI	14
15,405.00	15,405.00	1	Set	11kV AB Switch 400A 3pole 50Hz Horizontal Type	13
3,900.00	1,300.00	з	No	Lightning Arrester (9kV,10kA) DH Class	12
2,088.45	97.50	21.42	Kg	LTDB supporting channel 75X40X4.8mm of length 3.0 mtr	11
540.21	97.50	5.54	Kg	Support Channel for TPMO operating Rod 75X40X4.8mm of length 0.388 mtr.	10
153.08	97.50	1.57	Kg	Braking Support Channel for operating pipe 50X8mm of length 0.5 mtr.	9
459.46	97.50	4.71	Kg	AB Switch Bottom Support Channel 75X40X4.8 mm of length 0.330 mtr.	ø
435.09	97.50	4.46	Kg	AB Switch Operating Pipe Channel Support 75X40X4.8 mm., of length 0.625mtr	7
3,898.44	97.50	39.98	Kg	HG Fuse mounting channel 75X40X4.8mm of length 2.8 mtr	6
3,898.44	97.50	39.98	Kg	AB Switch Mounting Channel 75X40X4.8mm GI Channel 2.8 mtr long	5
5,219.76	97.50	53.54	Kg	Top Channel 100X50X5mm, each channel length 2.8 mtr.	4
	408.00	0	EA	RCC base Plate	з
	34,321.52	0	EA	POLE WPB GI 160X160 11 MTR	2
7,54,000.00	7,54,000.00	н	No	500 KVA,11/0.43KV(Al) Transformer	
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No
	Augumentation	1		Cost Estimate for 500kVA Distribution Transformer(3-ph)	

Dist. Transformer-500kVA-Aug

SI No Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
			Stock, Storage & Insurance i.e 3%	29,897.13
			Sub Total A	10,26,468.16
			Contigency @ 3%	30,794.04
			Tools & Plants @ 2%	20,529.36
			Transportation @ 7.5%	76,985.11
			Erection	
			Transformer/Breaker/WPB/H	38,831.00
			Pole/Joist Poles @ 5%	
			Erection Other @ 10%.	24,281.84
			Erection PSC Pole @ 20%	
			Sub Total B	12,17,889.52
Civil & Services				
Installation of WPB 160 X152, 11Mtr pole	EA	0	6,300.00	Ĩ
Inst 11KVcomplte stay set with concrete	EA	0	2,362.50	a
Constr of TRF Plinth for 250-1000KVA	EA	-	31,878.00	31,878.00
Construction of FRP fencing	Sqm	50	4,095.00	81,900.00
ITC of Earthing pipe with E/C	EA	2	2,415.00	12,075.00
			Total Civil Part	1,25,853.00
			Sub-Total C	13,43,742.52
			Other Over Head (Including	
			Supervision charges)@ 6%	•
			Sub-Total D	13,43,742.52
			GST @ 18% of Sub-Total	2,41,873.65
			CESS @ 1% of Sub-Total	13,437.43
			Sub-Total E	15,99,053.60
			Inspection Fee	
			Drawing Approval	
			Crond Total	15.99.053.60

10 1,072,50 10 2,028,00 10 6,825,00 10 585,00 10 286,00 10 286,00 10 32,134,65 11,03,289,72 33,098,69	Contigency @ 3%		\square		
10,71 11,03			F		
10,71 32	Sub Total A				
10,71	Stock, Storage & Insurance i.e 3%				
6 2 1	Total Cost of materials				
6 2 1	260.00	2	Æ	. Yellow Colour Paint for Background	31
6 2 1	286.00	1	Ŧ	Black Paint	30
	97.50	σ	Kg		29
	1,365.00	5	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	28
	101.40	20	Kg		27
	71.50	15	Mtr	CONDUCTOR 100 SQMM AAA	26
2,262.00	754.00	ω	No	10.1	25
1,365.00	455.00	ω	Set	11kV H/W fitting(B&S) 70KN,3 Bolt	24
	1,495.00	ω	No		23
	750.00	00	EA		22
	67.60	8	No	Gland for 1.1kV Al 1CX630 Sq.mm	21
39	622.70	64	Mtr	1.1kV Al 1CX630 Sq.mm Un-armoured Cable	20
50 1,950.00	97.50	20	Kg	1	19
130.00	65.0	2	No	H.T Stay Insulator	18
2	1,365.00	2	Set		17
0 325.00	162.50	2	Pair	H.T Stay clamp	16
1,26,568.00	1,26,568.00	1	No	LT Distribution Box with MCCB for 500KVA S/S	15
14,989.00	14,989.00	-	Set	HG Fuse(11KV,400A,3 Pole,50Hz) with PI	14
15,405.00	15,405.00	1	Set		13
3,900.00	1,300.00	ω	No		12
2,088.45	97.50	21.42	Kg		11
50 540.21	97.50	5.54	Kg	Support Channel for TPMO operating Rod 75X40X4.8mm of length 0.388 mtr.	10
50 153.08	97.50	1.57	Kg	Braking Support Channel for operating pipe 50X8mm of length 0.5 mtr.	9
459,46	97.50	4.71	Kg	AB Switch Bottom Support Channel 75X40X4.8 mm of length 0.330 mtr.	00
435.09	97.50	4.46	Kg	AB Switch Operating Pipe Channel Support 75X40X4.8 mm.,of length 0.625mtr	7
	97.50	39.98	-	HG Fuse mounting channel 75X40X4.8mm of length 2.8 mtr	6
3,898.44	97.50	39.98	Kg	AB Switch Mounting Channel 75X40X4.8mm GI Channel 2.8 mtr long	S
	97.50	53.54	Kgq	Top Channel 100X50X5mm, each channel length 2.8 mtr.	4
	408.00	0	EA	RCC base Plate	з
	34,321.52	2	EA	POLE WPB GI 160X160 11 MTR	2
	7,	1	No	500 KVA, 11/0.43KV(AI) T	Ч
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	<u></u>	SI No
	New DT	1		Cost Estimate for S00kVA Distribution Transformer(3-ph)	

17,22,515.22	Grand Total			
	Drawing Approval		_	
	Inspection Fee			
17,22,515.22	Sub-Total E			
14,474.92	CESS @ 1% of Sub-Total			
2,60,548.52	GST @ 18% of Sub-Total			
14,47,491.78	Sub-Total D			
	charges)@ 6%		-	
,	Other Over Head (Including Supervision		-	
14,47,491.78	Sub-Total C			
1,43,178.00	Total Civil Part		F	
12,075.00	2,415.00	5	EA	ITC of Earthing pipe with E/C
81,900.00	4,095.00	20	Sqm	Construction of FRP fencing
31,878.00	31,878.00	1	EA	Constr of TRF Plinth for 250-1000KVA
4,725.00	2,362.50	2	EA	inst 11KVcompite stay set with concrete
12,600.00	6,300.00	2	EA	Installation of WPB 160 X152, 11Mtr pole
				Civil & Services
13,04,313.78	Sub Total B			
	Erection PSC Pole @ 20%			
24,281.84	Erection Other @ 10%.			
38,831.00	Erection Transformer/Breaker/WPB/H Pole/Joist Poles @ 5%			
82,146.13	Transportation @ 7.5%			

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Dist. Transformer-500kVA new

3,34,995.96	Total Cost of materials				0100.110
520.00	260.00	2	Ltr	n:-1341 Yellow Colour Rain (fer Background	n:-34
286.00	286.00	1	Ltr	Black Paint	55
585.00	97.50	6	Kg	25x6 mm GI flat	32
6,825.00	1,365.00	5	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	31
2,028.00	101.40	20	Kg	GI Nut , Bolt & Washer of different sizes	30
1,072.50	71.50	15	Mtr	CONDUCTOR 100 SQMM AAA	29
2,262.00	754.00	3	No	CLAMP PG FOR 100 SQMM CONDUCTOR	28
1,365.00	455.00	3	Set	11kV H/W fitting(B&S) 70KN,3 Bolt	27
4,485.00	1,495.00	3	No	11kV Disc insulator (B&S) 70KN polymer	26
3,000.00	750.00	4	EA	Lug AL Crimping 150 Sqmm XLPE Single hole	25
156.00	39.00	4	No	Gland for 1.1kV Al 1CX150 Sq.mm	24
8,736.00	273.00	32	Mtr	1.1kV AI 1CX150 Sq.mm Un-armoured Cable	23
1,950.00	97.50	20	Kg	7/10 SWG Stay Wire	22
130.00	65.00	2	No	H.T Stay Insulator	21
2,730.00	1,365.00	2	Set	H.T 11kV Stay set (Complete)	20
325.00	162.50	2	Pair	H.T Stay clamp	19
31,744.70	31,744.70	1	No	LT Distribution Box with MCCB for 100KVA S/S	18
7,956.00	7,956.00	1	Set	HG Fuse(11KV,200A,3 Pole,50Hz) with Pl	17
9,555.00	9,555.00	1	Set	11kV AB Switch 200A 3pole 50Hz Horizontal Type	16
3,900.00	1,300.00	з	No	Lightning Arrester (9kV, 10kA) DH Class	15
2,088.45	97.50	21.42	Kg	LTDB supporting channel 75X40X4.8mm of length 3.0 mtr	14
540.21	97.50	5.54	Kg	Support Channel for TPMO operating Rod 75X40X4.8mm of length 0.388 mtr.	13
153.08	97.50	1.57	Kg	Braking Support Channel for operating pipe 50X8mm of length 0.5 mtr.	12
459.46	97.50	4.71	Kg	AB Switch Bottom Support Channel 75X40X4.8 mm of length 0.330 mtr.	11
435.09	97.50	4.46	Kg	AB Switch Operating Pipe Channel Support 75X40X4.8 mm., of length 0.625mtr	10
272.03	97.50	2.79	Kg	Transformer Bottom fixing angle 50X50X6mm,each angle length 0.310 mtr	9
2,457.00	97.50	25.20	Kg	Transformer Belting angle 50X50X6mm of length 2.8mtr with side angle	8
3,898.44	97.50	39.98	Kg	HG Fuse mounting channel 75X40X4.8mm of length 2.8 mtr	7
3,898.44	97.50	39.98	Kg	AB Switch Mounting Channel 75X40X4.8mm GI Channel 2.8 mtr long	6
5,219.76	97.50	53.54	Kg	Transformer Base Channel 100X50X5mm,each channel length 2.8 mtr	S
5,219.76	97.50	53.54	Kg	Top Channel 100X50X5mm, each channel length 2.8 mtr.	4
	408.00	0	EA	RCC base Plate	3
68,643.04	34,321.52	2	EA	POLE WPB GI 160X160 11 MTR	2
1,52,100.00	1,52,100.00	1	No	100 KVA,11/0.43KV(AI) Transformer	1
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No
		1		Cost Estimate for 100kVA Distribution Transformer(3-ph)	

SI No	Description of Item	Unit	Unit Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
				Stock, Storage & Insurance i.e 3%	10,049.88
				Sub Total A	3,45,045.83
				Contigency @ 3%	10,351.38
				Tools & Plants @ 2%	6,900.92
				Transportation @ 7.5%	25,878.44
				Erection	
				Transformer/Breaker/WPB/H	7,833.15
		_		Pole/Joist Poles @ 5%	
		_		Erection Other @ 10%.	10,453.15
		-		Erection PSC Pole @ 20%	
				Sub Total B	4,06,462.87
	Civil & Services				
	Installation of WPB 160 X152, 11Mtr pole	EA	2	6,300.00	12,600.00
	inst 11KVcomplte stay set with concrete	EA	2	2,362.50	4,725.00
	ITC of Earthing pipe with E/C	EA	2	2,415.00	12,075.00
	Constr of TRF Plinth for 250-1000KVA	EA	1	31,878.00	31,878.00
	Construction of FRP fencing	Sqm	20	4,095.00	81,900.00
	Supply & Erection G.I Fencing with Gate	EA	1	4,725.00	4,725.00
				Total Civil Part	1,47,903.00
				Sub-Total C	5,54,365.87
				Other Over Head (Including	
				Supervision charges)@ 6%	
				Sub-Total D	5,54,365.87
		_		GST @ 18% of Sub-Total	99,785.86
				CESS @ 1% of Sub-Total	5,543.66
				Sub-Total E	6,59,695.38
				Inspection Fee	
				Drawing Approval	
				Grand Total	6,59,695.38

Dist. Transformer-100kVA-NEW

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	260.00	0	4	Yellow Colour Paint for Background	34
	286.00	0	Lŧr	Black Paint	33
585.00	97.50	6	Kg	25x6 mm Gl flat	32
6,825.00	1,365.00	л	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	31
2,028.00	101.40	20	Kg	GI Nut , Bolt & Washer of different sizes	30
1,072.50	71.50	15	Mtr	CONDUCTOR 100 SQMM AAA	29
2,262.00	754.00	ω	No	CTOR	28
1,365.00	455.00	ω	Set	11kV H/W fitting(B&S) 70KN,3 Bolt	27
4,485.00	1,495.00	З	No	11kV Disc insulator (B&S) 70KN polymer	26
3,000.00	750.00	4	EA	Lug AL Crimping 150 Sqmm XLPE Single hole	25
156.00	39.00	4	No	Gland for 1.1kV AI 1CX150 Sq.mm	24
8,736.00	273.00	32	Mtr	nm Un-armoured Cable	23
51	97.50	0	Kg	7/10 SWG Stay Wire	22
-	65.00	0	No	H.T Stay Insulator	21
	1,365.00	0	Set	H.T 11kV Stay set (Complete)	20
	162.50	0	Pair	H.T Stay clamp	19
31,744.70	31,744.70	1	No	LT Distribution Box with MCCB for 100KVA S/S	18
7,956.00	7,956.00	ц Ц	Set	HG Fuse(11KV,200A,3 Pole,50Hz) with Pl	17
9,555.00	9,555.00		Set	11kV AB Switch 200A 3pole 50Hz Horizontal Type	16
3,900.00	1,300.00	ω	No	Lightning Arrester (9kV,10kA) DH Class	15
2,088.45	97.50	21.42	Kg 2	LTDB supporting channel 75X40X4.8mm of length 3.0 mtr	14
540.21	97.50	5.54	Kg	Support Channel for TPMO operating Rod 75X40X4.8mm of length 0.388 mtr.	13
153.08	97.50	1.57	Kg	Braking Support Channel for operating pipe S0X8mm of length 0.5 mtr.	12
459.46	97.50	4.71	Kg 2	AB Switch Bottom Support Channel 75X40X4.8 mm of length 0.330 mtr.	H
435.09	97.50	4,46	Kg 4	AB Switch Operating Pipe Channel Support 75X40X4.8 mm., of length 0.625mtr	10
272.03	97.50	2.79	Kg 2	Transformer Bottom fixing angle 50X50X6mm,each angle length 0.310 mtr	9
2,457.00	97.50	25.20	Kg 2	Transformer Belting angle 50X50X6mm of length 2.8mtr with side angle	00
3,898.44	97.50	39.98		HG Fuse mounting channel 75X40X4.8mm of length 2.8 mtr	7
3,898.44	97.50	39.98	-	AB Switch Mounting Channel 75X40X4.8mm GI Channel 2.8 mtr long	б
5,219.76	97.50	53.54	-	Transformer Base Channel 100X50X5mm,each channel length 2.8 mtr	S
5,219.76	97.50	53.54	Kg 5	Top Channel 100X50X5mm, each channel length 2.8 mtr.	4
	408.00	0	EA	RCC base Plate	ω
	34,321.52	0	EA	POLE WPB GI 160X160 11 MTR	2
1,52,100.00	1,52,100.00	1	No	100 KVA,11/0.43KV(Al) Transformer	-
Amount(In Rs.)	ate(In Rs.)	Unit Quantity Unit Rate(In Rs.)	Jnit Qu	Description of Item	SI No
		1		Lost Estimate for LUUKVA Distribution Transformer(3-pn)	

SI No	Description of Item	Unit	Uantity	Unit Quantity Unit Rate(In Rs.)	Amount(In Rs.)
				Total Cost of materials	2,60,411.92
				Stock, Storage & Insurance i.e 3%	7,812.36
				Sub Total A	2,68,224.27
			1	Contigency @ 3%	8,046.73
				Tools & Plants @ 2%	5,364.49
				Transportation @ 7.5%	20,116.82
				Erection Transformer/Breaker/WPB/H Pole/Joist Poles @ 5%	7,833.15
				Erection Other @ 10%.	10,453.15
				Erection PSC Pole @ 20%	
				Sub Total B	3,20,038.61
	Civil & Services				
	Installation of WPB 160 X152, 11Mtr pole	EA	0	6,300.00	1. L
	Inst 11KVcomplte stay set with concrete	EA	0	2,362.50	7982
	ITC of Earthing pipe with E/C	EA	'n	2,415.00	12,075.00
	Constr of TRF Plinth for 250-1000KVA	EA	1	31,878.00	31,878.00
	Construction of FRP fencing	Sqm	20	4,095.00	81,900.00
	Supply & Erection G.I Fencing with Gate	EA	0	4,725.00	L.
				Total Civil Part	1,25,853.00
				Sub-Total C	4,45,891.61
				Other Over Head (Including Supervision charges)@ 6%	Ĩ
				Sub-Total D	4,45,891.61
				GST @ 18% of Sub-Total	80,260.49
				CESS @ 1% of Sub-Total	4,458.92
				Sub-Total E	5,30,611.01
				Inspection Fee	
				Drawing Approval	
				Grand Total	5.30.611.01

DSS AB Switch-400Amp

				1												Γ							6	σ	4	з	2	Ч	SI No	
								unloading and staking at a proper place in TPSODL store	Dismantling of 11 kV GO/AB Switch including removal of all	material at a proper place in TPSODL store	Dismantling of Steel Structure, Nuts & solt including loading, transportation, unloading & staking of dismantled	Civil & Services											AB Switch Operating Pipe Diagonal Base Angle Support 50X50X6mm (340 mm long) Gl(4.5Kg./Mtr)	AB Switch Operating Pipe Diagonal Angle Support 50X50X6mm GI(388 mm long)(4.5Kg./Mtr)	AB Switch Side Support Channel 75X40X4.8 mm GI Channel(330 mm long)(7.14Kg./Mtr)	AB Switch Operating Pipe Channel Support 75X40X4.8 mm Gl Channel (625 mm long)(7.14Kg./Mtr)	AB Switch Mounting Channel 75X40X4.8 mm GI Channel (2800 mm long) (7.14Kg./Mtr)	11kV AB Switch, 400A. 3pole, 50Hz, Horizontal Type	Description of Item	Cost Estimate for Installation of DSS AB Switch,400Amp
								5	FΔ		Kg		-										Kg	Kg	Kg	Kg	Kg	Set	Unit	
								,	- -		50												1.53	1.75	6.59	4.46	39.98	1	Quantity	1
cess @ 1% 이 Sub-Iotal Sub-Grand Total	CECC @ 1% of C.L Total	GST @ 18% of Sub-Total	Sub-total	Supervision charges)@ 6%	Other Over Head (Including	Sub-Total	Total Civil Part	±,	1 575 00		78.75			ELE Total	Erection Other @ 10%.	Erection	Transportation @ 7.5%	Tools & Plants @ 2%	Contigency @ 3%	Sub Total	Stock, Storage & Insurance i.e 3%	Total Cost of materials	97.50	97.50	97.50	97.50	97.50	15,405.00	Unit Rate(In Rs.)	
37.641.27	10 210	5,693.64	31,631.32		ı	31,631.32	5,512.50		1575 00		3937.50		20,110.02	10 011 20	2,132.15		1,599.11	426.43	639.64	21,321.48	621.01	20,700.47	149.18	170.24	642.53	435.09	3,898.44	15,405.00	Amount(In Rs.)	

SI No	Description of Item	Unit	Unit Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
				Inspection Fee	
				Drawing Approval	
				Grand Total	37,641.27

										ITC of	Civil 8												4 GI Nut	3 40mm earthi	2 25x6 r	1 Lightn	SI No	Cost Esti Arrester	
								A REAL PROPERTY OF THE REAL PR		ITC of Earthing pipe with E/C	Civil & Services												GI Nut, Bolt & Washer of different sizes	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	25x6 mm Gl flat	Lightning Arrester (11kV,10kA) (Station Class,Class 2)	Description of Item	Cost Estimate for Installation of 11kV Lightning Arrester	
										EA													Kg	No	Kg	No	Unit		
										1.00													1.00	1.00	4.00	3.00	Quantity	1	
CESS @ 1% of Sub-Total Sub-Total D Inconction Fee	CESS @ 1% of Sub-Total	CESS @ 1% of Sub-Total		GST @ 18% of Sub-Total	Sub-Total B)@ 6%	Other Over Head (Including Supervision charges	Sub-Total C	Total Civil Part	2,415.00		Sub Total B	Erection PSC Pole @ 20%	Erection Other @ 10%.	Pole/Joist Poles @ 5%	Erection Transformer/Breaker/WPB/H	Transportation @ 7.5%	Tools & Plants @ 2%	Contigency @ 3%	Sub Total A	Stock, Storage & Insurance i.e 3%	Total Cost of materials	101.40	1,365.00	97.50	4,615.00	Unit Rate(In Rs.)		
		26,449.23	222.26	4,000.72	22,226.24		1	22,226.24	2,415.00	2,415.00		19,811.24		1,617.24			1,212.93	323.45	485.17	16,172.44	471.04	15,701.40	101.40	1,365.00	390.00	13,845.00	Amount(In Rs.)		

	Cost Estimate for Installation of HG Fuse,400Amp		ч		
SI No	Description of Item	Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
	HG Fuse(11KV,400A,3 Pole,50Hz) with PI	Set	F	14,989.00	14,989.00
2	HG Fuse Channel 75X40X4.8 mm GI Channel (2800 mm long) (7.14Kg./Mtr)	Kg	39,98	97.50	3,898.44
e	HG Fuse Side Support Channel 75X40X4.8 mm GI Channel(330 mm long)(7.14Kg,/Mtr)	Kg	6.59	97.50	642.53
4	GI Nut , Bolt & Washer of different sizes	Kg	5	101.40	507.00
				Total Cost of materials	20,036.97
				Stock, Storage & Insurance i.e 3%	601.11
				Sub Total	20,638.07
				Contigency @ 3%	619.14
				Tools & Plants @ 2%	412.76
				Transportation @ 7.5%	1,547.86
				ireaker/ WPB/H Pole/Joist	d
				Erection Other @ 10%.	2,063.81
				Erection PSC Pole @ 20%	
				Sub Total	25,281.64
	Civil & Services				
	Dismantling of Steel Structure, Nuts & Bolt including				
	loading,transportation, unloading & staking of dismantled material at a moner place in TPSOD1 store	Kg	50	78.75	3,937.50
	Dismantling of SINGLE phase DD Fuse/ DO Fuse set arrangement				
	fitted on structure including removal of all Electric/Earth connections etc., loading, transportation, unloading and staking at a	EA	1	840.00	840.00
	proper place in TPSODL Store			Total Civil Part	4,777.50
				Sub-Total	30,059.14
				Other Over Head (Including Supervision charges)@	
				Sub-total	30,059.14
				GST @ 18% of Sub-Total	5,410.65
				CESS @ 1% of Sub-Total	300.59
				Sub-Grand Total	35,770.38
				Inspection Fee	
				Drawing Approval	
				Grand Total	35.770.38

DSS HG Fuse-400Amp

SINO Cost Estimate for Installation of MICES > 00000000000000000000000000000000000	2,65,790.00	Grand Total				
Cost Estimate for Installation Of MCGB SODVA I Quantity Interface Amountity LT Distribution Bow with MCGB for SODVA S/S No 1 1,126,568.00 1,2 L1LWA LICGSD SQ.mm Uncarmoured Cable Nt 6400 8.00 750.00 575.00 3 L1LWA LICGSD Sq.mm Uncarmoured Cable Nt 6400 8.00 750.00 575.00 3 Light Ant LICGSD Sq.mm VLPE Single hole Kg 6.00 97.50 3 3 750.00 3 <		Drawing Approval				
Ocst Estimate for Installation of MCGB-SDOKV Vnit Quantity Unit Rate(in Rs.) Amountity LT Distribution Box with MCGB for SDOKVA S/S No 1 L12652052 No 1 L25568.00 1,2 Gland for L1kV AI LCG30 Sq.mm Un-armoured Cable Mt 64.00 64.00 67.60 57.60		Inspection Fee				
Ocst Extinate for Installation of Item Unit Quantity Unit Rate(In Rs.) Amount(I LT Distribution Box with MCCB for SOOK/A S/S No 1 Lt Rate(In Rs.) Amount(I Gland for LIW Al ICK30 Sq.mm Un-armoved Cable Mt 64.00 C.2.70	2,65,790.00	Sub-Total E				
Cost Estimate for Installation of Item Unit Unit Quantity Unit Rate(In Rs.) Amount(I LT Distribution Box with MCCB for SOXVA S/S No 1 1,26,568.00 1,3 Gland for L1WV AI ICX630 Sq.mm Un-armoured Cable Mt 64.00 622.70 67.60 $1,2$ 67.60 $1,2$ $1,2$ $1,2$	2,233.53	CESS @ 1% of Sub-Total				
Cost Estimate for Installation of NICGE-SORVA Unit Quantity Unit Rate(In Rs.) Amount(I LT Distribution Box with MCCB for SORVA S/S No 1 1.1.26,568.00 1.2 ILT Distribution Box with MCCB for SORVA S/S No 1 1.22,568.00 1.2 ILT VAI LCK330 Sq.mm Un-armoured Cable Mtr 64.00 64.00 622.70 3 ILT VAI LCK330 Sq.mm Un-armoured Cable No 8.00 1.00 67.60 3 Isseming Flat No 6.00 97.50	40,203.53	GST @ 18% of Sub-Total				
Cost Estimate for instaliation of MCGB-SOOKA Unit Quantity Unit Rate(In Rs.) Amount(In Rate(In Rs.)) Amount(In Rate(In Rs.))	2,23,352.94	Sub-Total D				
Cost Estimate for instaliation of MCGB-SOOKA Unit Quantity Unit Rate(In Rs.) Amount(In Rate(In Rs.)) Amount(In Rate(In Rs.))	20	charges)@ 6%				
Cost Estimate for Installation of NCCB-SOOKAUnitQuantityUnit Rate(In Rs.)Amount(ILT Distribution Box with MCCB for SOOKVA S/SNo11.126,566.001,2L1.1V AI 1CK630 Sq.mm Un-armoured CableMtr64.00622.703Gland for 1.1kV AI 1CK630 Sq.mm XLPE Single holeKg6.00750.003Lug AL Crimping 630 Sq.mm XLPE Single holeKg3.001.00750.003Gl Nut. Bot & Waster of different sizesKg3.001.001,365.001,365.00Gl Nut. Bot & Waster of different sizesKg3.001.001,365.001,365.00Gl Nut. Bot & Waster of different sizesNo1.00Total Cost of materials1,3Gl Nut. Bot & Waster of different sizesNo1.00Total Cost of materials1,3Gl Nut. Bot & Waster of different sizesNo1.00Total Cost of materials1,3Gl Nut. Bot & Waster of different sizesNo1.00Total Cost of materials1,3Gl Nut. Bot & Waster of different sizesNo1.00Total Cost of materials1,3Gl Nut. Bot & Bot & Star & Sub Total A1,365.001,31,3Gl Nut. Bot & Bot & Star & Sub Total A1,365.001,31,3Gl Nut. Bot & Bot & Star & Sub Total A1,365.001,31,3Gl Nut. Bot & Star & Sub Total B1,31,41,41,4Gl Nut. Bot & Star & Sub Total B2,415.002,415.002,415.00Gl Nut. Bot & Sub Total CSub Total CSub Tota	•	Other Over Head (Including Supervision				
Cost Estimate for Installation of NCCB-SOOKAUnitQuantityUnit Rate(In Rs.)Amount(LT Distribution Box with MCCB for SOOKVA S/SNo111.26,568.001,21.1kV Al 1CK330 Sq.mm Un-armoured CableMtr64.008.00622.703Gland for 1.1kV Al 1CK330 Sq.mm XLPE Single holeEA8.00750.003Ug AL Crimping 630 Sqmm XLPE Single holeKg3.001.00750.003Gl Mut, Bolt & Washer of different sizesKg3.001.001.365.001.2device with 3 mtr .LongNo1.001.001.365.001.3Interventional bore Gl pipe (medium gauge) earthingNo1.001.001.365.001.3device with 3 mtr .LongNo1.00Total Cost of materials1.31.3Interventional bore Gl pipe (medium gauge) earthingNo1.00Total Cost of materials1.3Interventional bore Gl pipe (medium gauge) earthingNo1.00Total Cost of materials1.3Interventional bore Gl pipe (medium gauge) earthingNo1.00Total Cost of materials1.3Interventional bore Gl pipe (medium gauge) earthingNo1.00Total Cost of materials1.3Interventional bore Gl pipe (medium gauge) earthingNo1.00Total Cost of materials1.3Interventional bore Gl pipe (medium gauge) earthingNoTotal Cost of materials1.3Interventional bore Gl pipe (medium gauge) earthingNoIntervention entry earthing1.3 <td>2,23,352.94</td> <td>Sub-Total C</td> <td></td> <td></td> <td></td> <td></td>	2,23,352.94	Sub-Total C				
Cost Estimate for Installation of MCCB-SORVAUnitQuantityUnit Rate(In Rs.)Amount(ILT Distribution Box with MCCB for SORVA S/SNo11,26,568.001,2L1LV AI 1CX630 Sq.mmMtr64.008.00622.703Gland for 1.1kV AI 1CX630 Sq.mmKg8.008.0057.60057.600Ug AL Crimping 630 Sqmm XLPE Single holeKg3.001.0057.6001.0025x6 mm Gi flatKg3.001.00101.400101.400Quantity Bobs GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.1365.00040mm nominal bore GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.1365.00040mm nominal bore GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.1365.00040mm nominal bore GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.1365.00040mm nominal bore GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.14040mm nominal bore GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.14040mm nominal bore GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.14040mm nominal bore GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.140400m nominal bore GJ pipe (medium gauge) earthingNo1.00Total Cost of materials1.140400m nominal bore GJ pipe (medium gauge) earthingNo1.00Total	2,415.00	Total Civil Part				
Cost Estimate for Installation of MCCB-SOOKVAUnitQuantityUnit Rate(In Rs.)Amount(ILT Distribution Box with MCCB for SOOKVA S/SNo1 1.1 L/26,568.001,21.1KV AI 1CX630 Sq.mm Un-armoured CableMtr64.008.00622.703Lig AL Crimping 630 Sq.mm VLPE Single holeEA8.00750.00325.66 mm Gif farsizesKg3.00750.00340mm nominal bore Gi pipe (medium gauge) earthing device with 3 mtr. LongNo1.001.001.01.401Stock, Storage & Insurance i.e 3% 1.35.141.65.001.31Vith 3 mtr. LongVith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.51Vith 3 mtr. LongVith 3 mtr. LongVith Storage & Insurance i.e 3% 1.51Vith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.52Vith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.53Vith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.54Vith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.55Vith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.56Vith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.57Vith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.58Vith 3 mtr. LongVith Sith Storage & Insurance i.e 3% 1.59Vith Sith Sith Sith Sith Sith Sith Sith S	2,415.00	2,415.00	1.00	EA	ITC of Earthing pipe with E/C	
Cost Estimate for Installation of MCCB-SOOKVA Unit Quantity Unit Rate(In Rs.) Amount(I LT Distribution Box with MCCB for SOOKVA S/S No 1 1.26,568.00 1,26,568.00 1,2 L.1.KV A1 1CX630 Sq.mm Un-armoured Cable Mtr 64.00 8.00 622.70 3 LI.KV A1 1CX630 Sq.mm Un-armoured Cable No 8.00 8.00 622.70 3 Lug AL Crimping 630 Sq.mm XLPE Single hole EA 8.00 97.50 3 25.56 mm GI flat Kg 3.00 97.50 97.50 3 GI Nut , Bolt & Washer of different sizes Kg 3.00 1.00 1,365.00 <td></td> <td></td> <td></td> <td></td> <td>Civil & Services</td> <td></td>					Civil & Services	
Cost Estimate for Installation of MCCB-SOOKVAUnitQuantityUnit Rate(In Rs.)Amount(ILT Distribution Box with MCCB for SOOKVA S/SNo11.14243(568.001.21.14V AI 12X630 Sq.mm Un-armoured CableMtr64.0064.0067.603750.001.14V AI 12X630 Sq.mm Un-armoured CableNo8.008.007750.003750.001.14V AI 12X630 Sq.mm Un-armoured CableKg6.0097.503750.003750.001.14V AI 12X630 Sq.mm Un-armoured CableKg3.007750.003750.001.14V AI 12X630 Sq.mm Un-armoured CableKg3.003003750.001.14V AI 12X630 Sq.mm Un-armoured CableKg3.003750.003750.001.14V AI 12X630 Sq.mm Un-armoured CableKg3.003750.003750.001.14V AI 12X630 Sq.mm XLPE Single holeKg3.00101.403750.0025X6 mm Gl flatSingle holeKg3.00101.4030525X6 mm Gl flatNo1.001.00101.4030540mm nominal bore Gl pipe (medium gauge) earthingNo1.001.355.001.355.0025X6 mm Gl flatSigel CableNo1.001.355.001.355.0025X6 mm Gl flatSigel CableNo1.001.355.001.355.0025X6 mm I and Nort Sigel CableNo1.001.355.001.355.001.355.0025X6 mm I and Sigel CableSigel CableSigel Cable1.355.001.355.001.355.0025X6 mu I and Sigel Cable<	2,20,937.94	Sub Total B				
Cost Estimate for Installation of MCGE-SOUKAUnitQuantityUnit Rate(In Rs.)Amount(ILT Distribution Box with MCCB for SOOKVA S/SNo11.1kV AI 126,568.001,26,568.001,2I.1kV AI 12K630 Sq.mm Un-armoured CableMtr64.0064.00622.703Iug AL Crimping 630 Sqm MLPE Single holeEA8.00750.00325x6 mm Gl flatKg6.0097.5097.503GI Nut, Bolt & Washer of different sizesKg3.00101.403.05.001.365.0040mm nominal bore Gl pipe (medium gauge) earthing device with 3 mtr .longNo1.00Total Cost of materials1.311Stock, Storage & Insurance i.e 3% 1.21.21.221Stock, Storage & Insurance i.e 3% 1.21.2311Trasportation @ 7.5%1.2411Frection Trasformer/Breaker/WPB/H1.851111.2658.001.26111.2658.011.2711.001.001.3711.001.001.3811.001.001.3911.001.001.3911.001.001.3911.001.001.3911.001.001.39111.001.39111.001.39		Erection PSC Pole @ 20%				
Cost Estimate for Installation of MCCB-SOOKVAUnitQuantityQuantity I $Amount[nLT Distribution Box with MCCB for SOOKVA S/SNo111,26,568.001,261.1kV AI 1CK630 Sq.mm Un-armoured CableMtr64.0064.0067.2.7039Gland for 1.1kV AI 1CK630 Sq.mm XLPE Single holeKg8.00750.00067.6057.60025x6 mm Gl flatKg6.00750.0097.5097.50Gl Nut, Bolt & Washer of different sizesKg3.001.00101.4040mm nominal bore Gl pipe (medium gauge) earthingdevice with 3 mtr.LongNo1.001.001.01.4091.001.001.001.365.001.365.001.365.0091.001.001.001.365.001.365.001.365.0091.001.001.001.365.001.365.001.365.0091.001.001.0141.365.001.365.001.365.0091.001.001.001.365.001.365.001.365.001.365.0091.001.001.001.0141.365.001.365.001.365.0091.001.001.001.001.365.001.365.001.365.0091.001.001.001.001.365.001.365.001.365.0091.001.001.001.00$	17,906.63	Erection Other @ 10%.				
Cost Estimate for Installation of MCCB-SOKVA11It Distribution Box with MCCB for SOKVA S/SNo11,26,568.001,261.1kV Al 12X6302 Sq.mm Un-armoured CableMtr64.00622.7039Gland for 1.1kV Al 12X6302 Sq.mm XLPE Single holeKg8.00750.0061Lug AL Crimping 630 Sqmm XLPE Single holeKg3.00750.00625x6 mm Gl flatKg3.00101.40101.4040mm nominal bore Gl pipe (medium gauge) earthingNo1.00Total Cost of materials1,365.00advice with 3 mtr .LongNo1.00Stock, Storage & Insurance i.e 3% 1,80advice with 3 mtr .LongITotal Cost of materials1,80advice with 3 mtr .LongITotal Cost of materials1,80advice with 3 mtr .LongIITotal S Plants @ 2% 13advice with 3 mtr .LongIIIcontige ng 2% 13advice with 3 mtr .LongIIcontige 3% 1,365.001,365.00advice with 3 mtr .LongIIcontige 3% 1,365.001,365.00advice with 3 mtr .LongIcontige 3% 1,365.001,365.001,365.00advice with 3 mtr .LongIcontige 3% 1,365.001,365.00 <td< td=""><td></td><td>Pole/Joist Poles @ 5%</td><td></td><td></td><td></td><td></td></td<>		Pole/Joist Poles @ 5%				
Cost Estimate for Installation of MCCB-SOOKVA1Quantity1Amount(InLT Distribution Box with MCCB for SOOKVA S/SNo1 1.1 $1.26,568.00$ 1.26 1.1kV Al 1CX630 Sq.mm Un-armoured CableNo8.0064.00 622.70 39 Gland for $1.1kV$ Al 1CX630 Sq.mmNo8.00 620 67.60 67.60 Lug AL Crimping 630 Sqmm XLPE Single holeEA 8.00 750.00 67.60 25x6 mm Gl flatKg 3.00 97.50 610 40mm nominal bore Gl pipe (medium gauge) earthing device with 3 mtr.longNo 1.00 1.00 1.00 9Stock, Storage & Insurance i.e 3% $1.365.00$ $1.365.00$ $1.365.00$ 9No1.00Stock, Storage & Insurance i.e 3% $1.365.00$ $1.365.00$ 9No1.00Sub Total A $1.365.00$ $1.365.00$ 9No1.00Stock, Storage & Insurance i.e 3% $1.365.00$ 9No1.00Sub Total A $1.365.00$ $1.365.00$ 9No1.00Stock, Storage & Insurance i.e 3% $1.365.00$ 9No1.00Sub Total A $1.365.00$ $1.365.00$ 9No1.00Stock, Storage & Insurance i.e 3% $1.365.00$ 9No1.00Sub Total A $1.365.00$ 910Sub Total A $1.365.00$ $1.365.00$ 910Sub Total A $1.365.00$ $1.365.00$ 910Sub Total A $1.365.00$		Erection Transformer/Breaker/WPB/H				
Cost Estimate for Installation of MCCB-SOOKVAUnitQuantityUnit Rate(In Rs.)Amount(InLT Distribution Box with MCCB for SOOKVA S/SNo1 $1.2656.00$ $1.2652.70$ 3.26 1.1kV AI 1CX630 Sq.mm Un-armoured CableMtr 64.00 6.00 622.70 39 Gland for 1.1kV AI 1CX630 Sq.mm XLPE Single holeKg 8.00 8.00 5750.00 6750.00 Lug AL Crimping 630 Sqmm XLPE Single holeKg 3.00 750.00 672.70 25x6 mm GI flatKg 6.00 750.00 672.70 40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .LongNo 1.00 1.00 1.00 $1.365.00$ 1Stock, Storage & Insurance i.e 3% $1.365.00$ $1.365.00$ $1.365.00$ $1.365.00$ 1NoStock, Storage & Insurance i.e 3% 1.80 1NoSub Total A 1.80 500 1NoSub Total A 1.80 1NoSub Total A 38	13,535.42	Transportation @ 7.5%				
Cost Estimate for Installation of MCGE-SO0KVA11 $\mathbf{Amount[InLDescription of ItemUnit\mathbf{Rate[In Rs.)}Unit Rate[In Rs.)Amount[InLLDistribution Box with MCCB for SO0KVA S/SNo111,26,568.001,261.1kV AI 1CX630 Sq.nm Un-armoured CableMtr64.0064.00622.7039Gland for 1.1kV AI 1CX630 Sq.nm MLn-armoured CableNo8.008.0067.60575.00Lug AL Crimping 630 Sqnm XLPE Single holeEA8.0050.00750.0067.6025x6 mm Gi flatKg6.0050.0097.5097.5040mm nominal bore Gi pipe (medium gauge) earthingdevice with 3 mtr.LongNo1.00100101.401,365.0040urd to sub trait 100100100100101.401,365.001,365.0040urd to sub trait 100100100100101.401,365.0040urd to sub trait 10010010010010040urd to sub trait 10010010010040urd to sub trait 10010010010040urd to sub trait 10010010010040urd to sub trait 10010010010040urd to sub trait 100100100100$	3,609.45	Tools & Plants @ 2%				
Cost Estimate for Installation of MCCB-SOOKVA1QuantityQuantity 1 $Amount[InLDescription of ItemUnitQuantityUnit Rate(In Rs.)Amount[InLDescription of ItemNo11,26,568.001,26,568.001,26,568.001.1kV Al 12X630 Sq.mm Un-armoured CableMtr64.0064.00622.7039Gland for 1.1kV Al 12X630 Sq.mm Un-armoured CableNo8.00622.7039Ug AL Crimping 630 Sqmm XLPE Single holeEA8.0050.0067.6025x6 mm Gl flatKg6.0050.0097.50625x6 mm Gl flatKg3.001.0010.4010.4040mm nominal bore Gl pipe (medium gauge) earthingdevice with 3 mtr .longNo1.0010.001,365.001,365.0040mu nominal bore Gl pipe (medium gauge) earthingdevice with 3 mtr .longNo1.0010.1401,365.001,365.009No1.00Stock, Storage & Insurance i.e 3\%550.0050.0050.009No1Stock, Storage & Insurance i.e 3\%50.0050.0050.00$	5,414.17	Contigency @ 3%				
Cost Estimate for Installation of MCCB-SO0KVA11Amount(InDescription of ItemUnitQuantityUnit Rate(In Rs.)Amount(InLT Distribution Box with MCCB for SO0KVA S/SNo1 $1,26,568.00$ $1,26$ 1.1kV Al 1CX630 Sq.mm Un-armoured CableMtr 64.00 622.70 39 Gland for 1.1kV Al 1CX630 Sq.mm XLPE Single holeNo 8.00 622.70 39 Lug AL Crimping 630 Sqmm XLPE Single holeEA 8.00 750.00 67.60 25x6 mm Gl flatKg 3.00 750.00 97.50 40mm nominal bore Gl pipe (medium gauge) earthing device with 3 mtr .LongNo 1.00 1.00 1.00 40 mu nominal bore Gl pipe (medium gauge) earthing device with 3 mtr .LongNo 1.00 1.00 $1.365.00$ $1.365.00$ 500 Stock, Storage & Insurance i.e 3% Stock, Storage & Insurance i.e 3% 500 500 500	1,80,472.27	Sub Total A				
Cost Estimate for Installation of MCGE-SOOKVA1QuantityUnit Rate(In Rs.)Amount(InLDescription of ItemVnitQuantityUnit Rate(In Rs.)Amount(InLItDescription of ItemNo11,26,568.001,261.1kV Al 1CX630 Sq.mm Un-armoured CableMtr64.00622.7039Gland for 1.1kV Al 1CX630 Sq.mmNo8.0067.6067.60Lug AL Crimping 630 Sqmm XLPE Single holeEA8.00750.00625x6 mm Gl flatKg6.0097.5097.50640mm nominal bore Gl pipe (medium gauge) earthing device with 3 mtr .LongNo1.001.001,365.001Vei e with 3 mtr .LongNo1.00Total Cost of materials1,751	5,256.47	Stock, Storage & Insurance i.e 3%				
Cost Estimate for Installation of MCGE-SOOKVA1QuantityUnit Rate(In Rs.)Amount(InLDescription of ItemVnitQuantityUnit Rate(In Rs.)Amount(InLLT Distribution Box with MCCB for SOOKVA S/SNo11,26,568.001,261.1kV Al 1CX630 Sq.mm Un-armoured CableMtr64.00622.7039Gland for 1.1kV Al 1CX630 Sq.mm XLPE Single holeNo8.0050.0067.60Lug AL Crimping 630 Sqmm XLPE Single holeEA8.00750.00625x6 mm Gl flatKg6.0097.5097.50640mm nominal bore Gl pipe (medium gauge) earthing device with 3 mtr .LongNo1.001.001,365.001	1,75,215.80	Total Cost of materials				
Cost Estimate for Installation of MCGB-SOOKVA 1 Quantity Unit Rate(In Rs.) Amount(In I Description of Item Unit Quantity Unit Rate(In Rs.) Amount(In I Distribution Box with MCCB for SOOKVA S/S No 1 1,26,568.00 1,26 I I.1kV Al 1CX630 Sq.mm Un-armoured Cable Mtr 64.00 622.70 39 Gland for 1.1kV Al 1CX630 Sq.mm XLPE Single hole No 8.00 750.00 67.60 525.00 750.00 6 Lug AL Crimping 630 Sqmm XLPE Single hole EA 8.00 750.00 6 6 6 6 6 101.40 <td>1,365.00</td> <td>1,365.00</td> <td>1.00</td> <td>No</td> <td>40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long</td> <td>7</td>	1,365.00	1,365.00	1.00	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	7
Cost Estimate for Installation of MCGB-SOOKVA 1 1 Amount(In Image: Description of Item Unit Quantity Unit Rate(In Rs.) Amount(In Image: Description Box with MCCB for SOOKVA S/S No 1 1,26,568.00 1,26 Image: Image: Description Box with MCCB for SOOKVA S/S No 1 1,26,568.00 1,26 Image: Image: Image: Description Box with MCCB for SOOKVA S/S No 1 1,26,568.00 1,26 Image: Image: Image: Description Box with MCCB for SOOKVA S/S No 1 1,26,568.00 1,26 Image: Image: Image: Image: Description Box with MCCB for SOOKVA S/S No 1 1,26,568.00 1,26 Image: Image: Image: Image: Description Box with MCCB for SOOKVA S/S No 1 1,26,568.00 1,26 Image: I	304.20	101.40	3.00	Kg	GI Nut , Bolt & Washer of different sizes	6
Cost Estimate for Installation of MCCB-SOOKVA 1 1 Amount LT Distribution Box with MCCB for 500KVA S/S No 1 1,26,568.00 1, 1.1kV Al 1CX630 Sq.mm Un-armoured Cable Mtr 64.00 622.70 62.70 6	585.00	97.50	6.00	Kg	25x6 mm Gl flat	5
Cost Estimate for Installation of MCCB-S00kVA 1 1 Amount Description of Item Unit Quantity Unit Rate(In Rs.) Amount LT Distribution Box with MCCB for S00KVA S/S No 1 1,26,568.00 1, 1.1kV Al 1CX630 Sq.mm Un-armoured Cable Mtr 64.00 622.70 622.70 67.60	6,000.00	750.00	8.00	EA	Lug AL Crimping 630 Sqmm XLPE Single hole	4
Cost Estimate for Installation of MCCB-500kVA 1 1 Amount Description of Item Unit Quantity Unit Rate(In Rs.) Amount LT Distribution Box with MCCB for 500KVA S/S No 1 1,26,568.00 1, 1.1kV Al 1CX630 Sq.mm Un-armoured Cable Mtr 64.00 622.70 622.70	540.80	67.60	8.00	No	Gland for 1.1kV AI 1CX630 Sq.mm	3
Cost Estimate for Installation of MCCB-500kVA 1 1 Amoun Description of Item Unit Quantity Unit Rate(In Rs.) Amoun LT Distribution Box with MCCB for 500KVA S/S No 1 1,26,568.00	39,852.80	622.70	64.00	Mtr	1.1kV Al 1CX630 Sq.mm Un-armoured Cable	2
Cost Estimate for Installation of MCCB-500kVA 1 Description of Item Unit Quantity Unit Rate(In Rs.)	1,26,568.00	1,26,568.00	1	No	LT Distribution Box with MCCB for 500KVA S/S	1
	Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No
			F		Cost Estimate for Installation of MCCB-500kVA	

SINo Source Desc 1 CDB IT Distribution Box with MC 2 CDB 1.1kV AI 1CX300 Sq.mm Un 3 CDB Gland for 1.1kV AI 1CX300 Sqmm 4 RC Lug AL Crimping 300 Sqmm 5 CDB Gland for 1.1kV AI 1CX300 Sqmm 7 CDB A0mm nominal bore GI pip 7 CDB with 3 mtr .Long 8 with 3 mtr .Long Introving 8 Introving Services Introving 8 Introving Services Introving 8 Introving Services Introving 8 Introving Services Introving	Description of Item				
		Unit	Quantity	Unit Rate(In Rs.)	Amount(In Rs.)
	LT Distribution Box with MCCB for 250KVA S/S	No	7	62,400.00	62,400.00
	1.1kV Al 1CX300 Sq.mm Un-armoured Cable	Mtr	64.00	496.60	31,782.40
L L L L L L L L L L L L L L L L L L L	Gland for 1.1kV AI 1CX300 Sq.mm	No	8.00	67.60	540.80
	Lug AL Crimping 300 Sqmm XLPE Single hole	EA	8.00	750.00	6,000.00
	l flat	Kg	6.00	97.50	585.00
CDB	t & Washer of different sizes	Kg	2.00	101.40	202.80
Civil & Services	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr 1 one	No	1.00	1,365.00	1,365.00
Civil & Services	9			Total Cost of materials	1,02,876.00
Civil & Services				Stock, Storage & Insurance i.e 3%	3,086.28
Civil & Services				Sub Total A	1,05,962.28
Civil & Services				Contigency @ 3%	3,178.87
Civil & Services ITC of Earthing pi				Tools & Plants @ 2%	2,119.25
Civil & Services TTC of Earthing pi				Transportation @ 7.5%	7,947.17
Civil & Services				Erection Transformer/ Breaker/ WPB/H Pole/Joist Poles @ 5%	
Civil & Services				Frection Other @ 10%.	10.455.63
Civil & Services		I		Erection PSC Pole @ 20%	
Civil & Services				Sub Total B	1,29,663.20
ITC of Earthing pi	rices				
	ITC of Earthing pipe with E/C	EA	1.00	2,415.00	2,415.00
				Total Civil Part	2,415.00
				Sub-Total C	1,32,078.20
				Other Over Head (Including	
				Supervision charges)@ 6%	
				Sub-Total D	1,32,078.20
				GST @ 18% of Sub-Total	23,774.08
				CESS @ 1% of Sub-Total	1,320.78
				Sub-Total E	1,57,173.06
				Inspection Fee	
				Drawing Approval	
				Grand Total	1,57,173.06

Installation of MCCB-250kVA

Installation of MCCB-100kVA

71,458.67	Grand Total				
71,458.67	Sub-Total E				
600.49	CESS @ 1% of Sub-Total				
10,808.88	GST @ 18% of Sub-Total				
60,049.31	Sub-Total D				
1	Other Over Head (Including Supervision charges)@ 6%			1	
60,049.31	Sub-Total C				
2,415.00	Total Civil Part				
2,415.00	2,415.00	1.00	EA	ITC of Earthing pipe with E/C	
				Civil & Services	
57,634.31	Sub Total B				
	Erection PSC Pole @ 20%				
4,575.72	Erection Other @ 10%.				
	Erection Transformer/Breaker/WPB/H Pole/Joist Poles @ 5%				
3,037.24	Iransportation @ 7.5%				
943.26	Tools & Plants @ 2%				
1,414.90	Contigency @ 3%				
47,163.19	Sub Total A				
1,373.69	Stock, Storage & Insurance i.e 3%				
45,789.50	Total Cost of materials				
1,365.00	1,365.00	1.00	No	40mm nominal bore GI pipe (medium gauge) earthing device with 3 mtr .Long	7
202.80	101.40	2.00	Kg	GI Nut, Bolt & Washer of different sizes	6
585.00	97.50	6.00	Kg	25x6 mm GI flat	л
3,000.00	750.00	4.00	EA	Lug AL Crimping 150 Sqmm XLPE Single hole	4
156.00	39.00	4.00	No	Gland for 1.1kV Al 1CX150 Sq.mm	ω
8,736.00	273.00	32.00	Mtr	1.1kV Al 1CX150 Sq.mm Un-armoured Cable	2
31,744.70	31,744.70	1	No	LT Distribution Box with MCCB for 100KVA S/S	1
Amount(In Rs.)	Unit Rate(In Rs.)	Quantity	Unit	Description of Item	SI No
		1		Cost Estimate for Installation of MCCB-100kVA	
					L