TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

APTRANSCO

STANDARD SCHEDULE OF RATES

FOR EHT TRANSMISSION LINES AND SUBSTATIONS OF 220kV & 132kV

FOR THE YEAR 2013 -14

(With effect from the date of issue of T.O.O. Ms.No.162, dated. 26.08.2013.)

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

APTRANSCO – Standard Schedule of Rates for 220kV & 132kV Transmission lines and Substations works for the year 2013-14 – Communicated – Regarding.

T.O.O. No. CE (Construction-2)/ Ms.No.162 **dt. 26.08.2013**

Read the following:-

Ref:- 1). T.O.O.CE (Civil). Ms.No.148, dt.21.10.2009
2).T.O.O.Ms.(CE-Construction-2) MS. No.150, dated.09.08.2012
3).T.O.O.Ms.(CE-Construction-2) MS. No.311, dated.16.01.2013

ORDER

The Standard Schedule of Rates for 220kV & 132kV Transmission lines and Substations for the year 2013-14 approved by Transmission Corporation of Andhra Pradesh Limited in respect of item of works and materials pertaining to EHV Transmission lines and Substations are communicated herewith for adoption in preparation of estimates.

For all Civil item of works of EHV Transmission lines & substations, the rates that are approved in the common SSR 2013-14 for all engineering departments of Govt of A.P and the provisions made in the T.O.O.No.148, dated.21.10.2009 of APTRANSCO shall be adopted as already approved and communicated vide ref 1st cited.

The Standard Scheduled of Rates for 2013-14 will come into force from date issue of T.O.O.

Encl: As above.
(BY ORDER AND IN THE NAME OF TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED)

Sd/- S. SUBRAHMANYAM
DIRECTOR (PROJECTS)

To

The Chief Engineer/ Construction -2/VS/Hyderabad.
The Chief Engineer/ Construction -1/VS/Hyderabad.
The Chief Engineer/ LIS/VS/Hyderabad.
The Chief Engineer/ Construction/400kV /VS/Hyderabad.
The Chief Engineer/ Transmission /VS/Hyderabad.
The Chief Engineer /Civil/VS/Hyderabad.

The Chief Engineer/Telecom/Vidyut Soudha/Hyderabad
The Chief Engineer /Zone/Metro/Hyderabad.
The Chief Engineer/Zone/Rural/Hyderabad.
The Chief Engineer/Zone/Kadapa.
The Chief Engineer/Zone/Vijayawada.
The Chief Engineer/Zone/Vishakapatnam.
The Chief Engineer/Zone/Warangal.

The Superintending Engineer/TLC/Metro/Hyderabad.
The Superintending Engineer/TLC/Rural/Hyderabad.
The Superintending Engineer/TLC/Warangal.
The Superintending Engineer/TLC/Vijayawada.
The Superintending Engineer/TLC/Visakhapatnam.
The Superintending Engineer/TLC/Karimnagar`
The Superintending Engineer/TLC/Kadapa.
The Superintending Engineer/TLC/LIS/Kurnool.

The Superintending Engineer/TL&SS/ Metro Circle / Hyderabad
The Superintending Engineer/TL&SS/ Hyderabad Circle / Hyderabad.
The Superintending Engineer/TL&SS/ Mahaboob Nagar.
The Superintending Engineer/TL&SS/ Nalgonda
The Superintending Engineer/O&M/400 KV L&SS/ Mamidipally
The Superintending Engineer/O&M/400 KV L&SS/ Vemagiri.
The Superintending Engineer/O&M/400 KV L&SS/ Kalpaka.
The Superintending Engineer/TL&SS/ Warangal
The Superintending Engineer/TL&SS/ Karimnagar
The Superintending Engineer/TL&SS/ Nizamabad
The Superintending Engineer/TL&SS/ Vijayawada
The Superintending Engineer/TL&SS/ Nellore
The Superintending Engineer/TL&SS/ Rajahmundry
The Superintending Engineer/TL&SS/ Vizag
The Superintending Engineer/TL&SS/ Kadapa
The Superintending Engineer/TL&SS/ Kurnool

The Superintending Engineer/Telecom/Vidyut Soudha/Hyderabad.
The Superintending Engineer/Telecom/Metro/Hyderabad.
The Superintending Engineer/Telecom/Rural/Hyderabad.
The Superintending Engineer/Telecom/Warangal.
The Superintending Engineer/Telecom/Kadapa.
The Superintending Engineer/Telecom/Vijayawada.
The Superintending Engineer/Telecom/Vishakapatnam.

(Contd….3)

The Superintending Engineer/Civil /TLC/Hyderabad
The Superintending Engineer/Civil/TLC/Warangal
The Superintending Engineer/Civil/TLC/Vijayawada.
The Superintending Engineer /Civil/TLC/Kadapa.
The Superintending Engineer /Civil/TLC/Visakhapatnam

The Executive Engineer/TLC/RMS/Hyderabad.
The Executive Engineer/TLC/Mahaboob Nagar.
The Executive Engineer/TLC/Nalgonda.
The Executive Engineer/TLC/Erragadda.
The Executive Engineer/TLC/Sanga Reddy.
The Divisional Engineer/ MRT / EHT / TLC / Hyderabad
The Executive Engineer/TLC/Warangal.
The Executive Engineer/TLC/Karimnagar.
The Executive Engineer/TLC/Nizamabad.
The Executive Engineer/TLC/Vijayawada.
The Executive Engineer/TLC/Gunadala.
The Executive Engineer/TLC/Guntur.
The Executive Engineer/TLC/Nellore.
The Executive Engineer /TLC/Ongole.
The Executive Engineer/TLC/Thirupathi.
The Executive Engineer/TLC/Rajahmundry.
The Executive Engineer/TLC/Vizag.
The Executive Engineer/TLC/Kurnool
The Executive Engineer/TLC/LIS/Division-I/Kurnool.
The Executive Engineer/TLC/LIS/Division-2/Kurnool.
The Executive Engineer/TLC/Kadapa.

The Executive Engineer/Div-I/400kV L&SS/Mint Compound/Hyderabad.
The Executive Engineer/Div-2/400kV L&SS/Mint Compound/Hyderabad.
The Executive Engineer/Div-3/400kV L&SS/Mint Compound/Hyderabad.
The Executive Engineer/Div-4/400kV L&SS/Warangal.

The Executive Engineer/Div-I/400kV L&SS/Vijayawada.
The Executive Engineer/Div-I/400kV L&SS/Guntur.
The Executive Engineer/Div-I/400kV L&SS/Krishnapatnam.
The Executive Engineer/Div-I/400kV L&SS/Rajahmundry.

The Divisional Engineer/O&M 400kV TL&SS / Dichpally.
The Divisional Engineer/O&M 400kV TL&SS / Nizamabad.
The Divisional Engineer/O&M 400kV TL&SS / Gajwel.
The Divisional Engineer/O&M 400kV TL&SS / Vemagiri.
The Divisional Engineer/O&M 400kV TL&SS / Rajahmundry.
The Divisional Engineer/O&M 400kV TL&SS / Chittoor.
The Divisional Engineer/O&M 400kV TL&SS /Manubolu (Nellore district).
The Divisional Engineer/O&M 400kV TL&SS /Veltur (Mahaboobnagar district).
The Divisional Engineer/O&M 400kV TL&SS /Kalpaka (Visakhapatnam district).

(Contd....4)

The Divisional Engineer /TLC/TRE/Kadapa
The Divisional Engineer/TL&SS / Chandrayangutta
The Divisional Engineer/TL&SS / Moulali
The Divisional Engineer/TL&SS / Erragadda
The Divisional Engineer/ MRT / Metro Circle / Hyderabad
The Divisional Engineer/ MRT / Hyderabad Circle / Hyderabad
The Divisional Engineer/TL&SS / Mahaboobnagar
The Divisional Engineer/TL&SS / Yeddumailaram
The Divisional Engineer/TL&SS / Miryalaguda
The Divisional Engineer/TL&SS / Nagarjunasagar
The Divisional Engineer/ O&M / 400 KV / Mamidipally
The Divisional Engineer/ TL&SS / Warangal
The Divisional Engineer/ TL&SS / MRT / Warangal
The Divisional Engineer/ TL&SS / Budidampadu
The Divisional Engineer/ TL&SS / Karimnagar
The Divisional Engineer/ TL&SS / Ramagundam
The Divisional Engineer/ MRT / Nizamabad
The Divisional Engineer/ TL&SS / Nirmal
The Divisional Engineer/ TL&SS / Dichpally
The Divisional Engineer/ MRT / TLC / Warangal
The Divisional Engineer/ MRT / EHT / TLC / Vijayawada
The Divisional Engineer/ MRT / EHT / TLC / Nellore
The Divisional Engineer/ TL&SS / Vijayawada
The Divisional Engineer/ TL&SS / Guntur
The Divisional Engineer/ MRT / TL&SS / Vijayawada
The Divisional Engineer/ MRT / TL&SS / Nellore
The Divisional Engineer/ TL&SS / Nellore
The Divisional Engineer/ TL&SS / Ongole
The Divisional Engineer/ TL&SS / Bommur
The Divisional Engineer/ TL&SS / Nidadavole
The Divisional Engineer/ HVDC / TL&SS Circle / Rajahmundry
The Divisional Engineer/ MRT / EHT / Rajahmundry
The Divisional Engineer/ TL&SS / Gazuwaka
The Divisional Engineer/ TL&SS / Garividi
The Divisional Engineer/ MRT / TL&SS / Vizag
The Divisional Engineer/ TL&SS / Kadapa
The Divisional Engineer/ TL&SS / Yerraguntla
The Divisional Engineer/ TL&SS / Tirupathi
The Divisional Engineer/ EHT / MRT / Kadapa
The Divisional Engineer/ MRT / TL&SS / Kurnool
The Divisional Engineer/ MRT / TL&SS / Ananthapur
The Divisional Engineer/ Windfarms / Ananthapur
The Divisional Engineer/ TL&SS / Kurnool
The Divisional Engineer/ TL&SS / Ananthapur
The Divisional Engineer/ O&M / 400 KV / Kurnool
The Divisional Engineer/ O&M / 400 KV Lines / Srisailam

(Contd...5)

The Executive Engineer/Civil/TLC/Mint Compound/Hyderabad.
The Executive Engineer/Civil/TLC/Rajahmundry.
The Executive Engineer/Civil/TLC/Kadapa.
The Divisional Engineer/Quality Control/ Vidyut Soudha / Hyderabad

Superintending Engineer/Construction /PM-I /VS/Hyd.
Superintending Engineer/Construction /PM-II/VS/Hyd.
Superintending Engineer/PM-I/400 KV /VS/Hyderabad.
Superintending Engineer/PM-II/400 KV /VS/Hyderabad.
Superintending Engineer/LIS /VS/Hyderabad.
Superintending Engineer/O&M/Lines/VS/Hyderabad.
Superintending Engineer/O&M/Substations/VS/Hyderabad.

Divisional Engineer-1/Construction-1/VS/Hyderabad.
Divisional Engineer-2/Construction-1/VS/Hyderabad.
Divisional Engineer-3/Construction-1/VS/Hyderabad.
Divisional Engineer-4/Construction-1/VS/Hyderabad.
Divisional Engineer-1/Construction-2/VS/Hyderabad.
Divisional Engineer-2/Construction-2/VS/Hyderabad.
Divisional Engineer-3/Construction-2/VS/Hyderabad.
Divisional Engineer-1/LIS/VS/Hyderabad.
Divisional Engineer-2/LIS/VS/Hyderabad.
Divisional Engineer/Design/Construction-1/VS/Hyderabad.

Divisional Engineer-1/PM-1/400kV Construction/VS/Hyderabad.
Divisional Engineer-2/PM-1/400kV Construction/VS/Hyderabad.
Divisional Engineer-1/PM-2/400kV Construction/VS/Hyderabad.
Divisional Engineer-2/PM-2/400kV Construction/VS/Hyderabad.
Eme-1/Transmission/VS/Hyderabad.
Eme-2/Transmission/VS/Hyderabad.
Eme-3/Transmission/VS/Hyderabad.
DE/O&M Lines/Transmission/VS/Hyderabad.

PS to Chairperson Managing Director/APTransco/VS/Hyd.
PS to Joint Managing Director/ HRD, Comml. IPC, & IT/APTransco/VS/Hyderabad.
PS to Joint Managing Director/ V&S/ APTransco/VS/Hyderabad.
PS to Director /Projects/ APTransco/VS/Hyderabad.
ADE/Tech to Director /Grid,Transmission& Management/ APTransco/VS/Hyderabad.
PS to Director /Finance & Revenue/ APTransco/VS/Hyderabad.
The FA & CCA (A,E &R)/APTransco/VS/Hyderabad.
ADE/Tech to Chief Engineer/Construction-2/APTransco/VS/Hyderabad

// FORWARDED BY ORDER //

DIVISIONAL ENGINEER – 3 /PM-II
O/o.Chief Engineer (Construction-2)
Vidyut Soudha, Hyderabad.

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PREAMBLE

1. The Rates for the item of works (Line & Substations) involved under special conditions in the existing SSR 2013-14 are as follows:

(I) TRANSMISSION LINE WORKS:

Sl. No.	Description of work	% Over the basic labour rates
1.	River Crossing with JC type towers	100% extra
2.	2nd Circuit Stringing with 1st Circuit lives.	75% extra
3.	Works under shutdown: This is applicable under the following conditions only. i. Pre-programmed for interruption of line. ii.Pre-arranged replacement / rectification of line materials.	50% extra
4.	Dismantling works	75% of Normal Rate.
5.	Emergency Works such as break down works. This will not be applicable for pre-arranged shutdown works.	100% extra
6.	Stringing of railway crossings	100% extra
7.	National and State High way crossings	25% extra
8.	Tree cutting & Jungle Clearance in Tr. Line works as the works are in scattered areas.	100% extra
9.	DC Works under shutdown	100% extra

SUBSTATIONS AND OTHER WORKS:

Sl. No.	Description of work	% Over the Basic labour rates
1.	Works under shutdown: This is applicable under the following conditions only. i. Pre-programmed for interruption of equipment. ii. Pre-Programmed replacement of bus in Substation. iii. Pre-arranged replacement / rectification of equipment.	50% extra

Sl. No.	Description of work	% Over the Basic labour rates
2.	Dismantling works	75% of Normal Rate.
3.	Emergency Works such as break down works. This will not be applicable for pre-arranged shutdown works.	100% extra
4.	Idle trip (No load) rate of the low-bedded trailer for movement of Power Transformers.	50% of basic labour rate of loaded trip. Shortest distance from / to the place of availability of low bedded trailer shall be considered.

Note:- However if more than one special condition such as emergency, shutdown, 2nd circuit stringing with First circuit live and breakdown etc are applicable for a particular work item / situation, only one condition with maximum extra rate out of applicable special conditions can be allowed. Applying more than one special condition for any item is to be dispensed.

2 For EHT Transmission line works, Keeping scattered in nature, some extra provisions are provide and are as follows

a. 5% extra provision on the basic rates of APTRANSCO towards scattered area mobilization efforts in general areas

Or

b. 10% extra provision on the basic rates of APTRANSCO towards scattered area mobilization efforts in difficult areas. The concerned SE/TLC has to certify that entire line passes through difficult terrain / areas duly furnishing the justification.

Note:- If 10% extra toward mobilization efforts in difficult areas is applicable for a work, then the 5% extra towards mobilization effort in general areas is not applicable.

c Transmission line erection works, Uniform area allowance minimum of 25% on basic labour charges for the entire state as recommended by Board of Chief Engineers will be allowed against weighted average of area allowance mentioned in Schedule of rates except in Greater Municipal corporation limits. If the entire line is with in the Greater Municipal Corporation limits, area allowance shall be considered as mentioned in Common SSR 2013-14. *This uniform area allowance is applicable only for the Transmission line erection works.* However area allowance shall be considered as adopted from Common SSR 2013-14, for the works other than transmission line works.

3(a) 10% extra to the rate of earth flat (material) is allowed towards wastage, cleats and overlap etc., while preparing the estimate as the billing for this item is on Running Meters basis and after laying of earth mat.

3(b) For stringing of conductor for small modification works, if the length of the line is less than 0.5 KM, 0.5KM is considered and if the length of the line is greater than 0.5 KM and less than 1 KM, 1KM is considered, in the preparation of estimate.

3(c) For survey of small length of lines, if the length of line is less than 1KM, then 1KM is considered for survey of small length of lines in the preparation of estimate.

3(d) The rates for tree cutting and jungle clearance may be followed as per Common SSR of Govt of Andhra Pradesh.

4. AREA ALLOWANCES:

A) CORPORATIONS & MUNICIPALITIES:

a) (i) 25% extra over the rates on labour component of works is allowed in all Municipal Corporation Limits of Andhra Pradesh except Greater Hyderabad, Greater Visakhapatnam and Vijayawada municipal Corporations (up to a belt of 12 Kms. from Municipal Corporation limits) and other corporations as notified by the Government from time to time.

(ii) 40% extra over the rates on labour component of works for Greater Hyderabad, Greater Visakhapatnam and Vijayawada Municipal Corporation (up to a belt of 12 Kms. from Municipal Corporation limits).

b) Allow 20% extra over basic rates on labour component of works in all District Headquarters and the remaining Municipal limits (up to a belt of 12 Kms. from Municipal limits).

c) For works at Tirumala Hills in Chittoor District, 40% extra over the basic rates of labour component is allowed.

d) For works at Horsely hills in Chittoor District, 30% extra over the basic rates of labour component is allowed.

e) 20% extra over the basic rates of labour component for Tirupathi Municipal Corporation is allowed.

B) JAIL COMPOUNDS:

15% extra is allowed over basic labour rates for the work in the Jail compounds. Only equivalent number of Man Mazdoor shall be provided in the Jail premises and no women Mazdoor are allowed inside.

C) INDUSTRIAL AREA:

20% over basic rates on labour component works allowed for works situated within 10 Kms belt of Industrial area of, Jeedimetla, Lingampally, Ibrahimpatnam,Tandur in Ranga Reddy District, Ibrahimpatnam, Vuyyuru, Jaggaiahpeta in Krishna District, Macherla, Gurajala, Challapalli in Guntur District Garividi in Vijayanagaram District, Kothur in Mahabubnagar District, Patancheru, Ramachandrapur in Medak District, Bibinagar in Nalgonda District, Ramagundam and Godavarikhani in Karimnagar District, Renigunta in Chittoor District and Yerraguntla & Mangampet in Kadapa District, Manchiryal, Mandamarri, Bellampalli in Adilabad District, Sarpaka, Kothagudem, Paloncha, Manguguru, Singareni Collieries in Khammam District, Kamalapur, Bhoopalpally of Warangal District, Wadepally of Nalgonda District, Nagapally (Centenary Colony, Begumpet "X" roads),Takkelapally of Karimnagar District, Hindupur, Tadipatri, Anantapur, Guntakal, Rayalcheruvu, Yadiki of Anantapur District and Adoni, Dhone, Cement Nagar, Nandyal, Kurnool, Yemmiganur & Bethamcherla of Kurnool District ,Anakapally of Vishakhapatnam District.

D) AGENCY / TRIBAL AREAS:

a) 25% extra is allowed for the works located with in the interior Agency / Tribal limits, i.e. for the works located with in & upto16 KMs from any all weather route inside Agency / Tribal.

b) 40% extra is allowed for the works located with in the interior Agency / Tribal limits, i.e. for the works located beyond 16 KMs from any all weather routes inside Agency / Tribal. The extra percentage under Agency / Tribal areas allowance may be allowed on the labour component and on the labour charges in the rates for conveyance of materials.

E) GHAT ROADS:

For Ghat Roads steeper than 1 in 20, the length of the road may be taken as 1.5 times the existing length of the road for the purpose of leads only for conveyance of materials based on the certificate for the Ghat Road given by the Superintending Engineer concerned. Under compelling circumstances, the concerned Chief Engineer can adopt the equivalent length of road as 2 ½ times of actual length.

Note: If more than one area allowance (such as those) for (1) Municipalities (2) Agency / Tribal areas (3) Industrial areas are applicable for a particular situation, only the maximum out of the allowable percentages is to be allowed.

5. 14% on basic labour rates towards for contractor's overheads and profit including labour importation is applicable only for Turnkey projects (New substations, Lines, 33kV features & Bay extension works) of more than 1 Crore and not applicable to O&M works and other than turnkey works.

Contractor's over heads and profit including Labour importation 14% is allowed on basic labour rates.

The overhead charges include the following:

- Site accommodation, setting up plant, access road, water supply, electricity and general site arrangements.
- Office furniture, equipment and communications.
- Expenditure on:
- Corporate office of contractor.
- Site supervision.
- Documentation and "as built' drawings.
- Mobilization / de-mobilization of resources.
- Labour camps with minimum amenities and transportation to work sites.
- Light vehicles for site supervision including administrative and managerial requirements.
- Laboratory equipment and quality control including field and laboratory testing.
- Minor T&P and survey instruments and setting outworks, including verification of line, dimensions, trial pits and bore holes, where require.
- Watch and ward.
- Traffic management during construction
- Expenditure on safe guarding environment.
- Sundries
- Financing Expenditure.
- Sales / Turn over tax.
- Work Insurance / compensation.
- AutoCAD Tower /Structure drawings of required sets.
- AutoCAD shop drawings of Towers /Structures of required sets.
- AutoCAD Substation layout.
- Testing and commissioning of the equipment.

6. **(i)** The area allowances, COP's and Mobilization charges are not applicable on Fabrication charges and Galvanization Charges.

(ii) The area allowance shall be applicable for O&M and RMI works also on par with construction works.

(iii) The mobilization charges shall be applicable for O&M & RMI works of lines also on par with construction works.

The area allowances are applicable for electrical works (labour), where the value of work is more than Rs.20.00 lakhs (electrical & civil). But this (APTRANSCO SSR) is not applicable for only Civil works.

7. (a) **TREE CUTTING AND CLEARING OF JUNGLE**

Please refer Common SSR of Board of Chief Engineers for the year 2013-14.

7 (b) **THE (LEAD) CONVEYANCE CHARGES FOR TRANSPORTATION OF EQUIPMENT / MATERIALS.**

Please refer Common SSR of Board of Chief Engineers for the year 2013-14.

8. " **Erection of Power Transformers and Oil filteration Works**

The rates communicated by CE/Transmission vide letter No.CTO-121/F.PTRs erection works/D.No.104/08, Dt.05.07.2008 and subsequent Amendment No.I, dt. 15.07.2009 and Amendment No.II, dt. 21-04-11 on rate contract basis for erection, dismantling, transportation and oil filteration of power transformers through private agency are valid up to 03.07.2014.

Area Allowances, Special provisions and any other allowances are not applicable on the rates of rate contract.

The rates mentioned under the rate contract include all taxes & duties, allowances and all extra provisions including Transport etc. excluding service tax.

In the case of the works of Handling, Erection and Filteration of power Transformers will be carried out by the department, in such cases, area allowances, special provisions other than shutdown charges, taxes and duties are not applicable.

Note:

(i) Shutdown charges are applicable only for the works carried out during shutdown period. The same has to be certified by the concerned Superintending Engineer.

(ii) Whenever double boom crane is utilized for PTR works of 80 MVA & above capacity, 50% extra over the existing crane charges are applicable. However, the same has to be certified by concerned Superintending Engineer.

9. **Civil Engineering Works in Transmission lines & Substations :**

For Civil items works of Transmission Lines and Substations the common SSR 2013-14 for engineering departments shall be followed in Toto. Some provisions made in T.O.O.CE (Civil) Ms No.148, dated.21.10.2009 are also applicable for civil works. But the APTRANSCO SSR 2013-14 is not applicable for Civil Works.

10. In respect of Cement and Steel rods the procedure indicated in Common SSR for all Engineering Departments shall be adopted for updating of estimates at the time of finalization of tenders.

11. All statutory levies such as VAT (Works Contract Tax), Service Tax., Cess for labour welfare if any, are based on the prevailing notified rate, shall have to be added in the estimate

12. The S.S.R will come into force with immediate effect until further orders.

Sd/- S. SUBRAHMANYAM
DIRECTOR (PROJECTS)

// FORWARDED BY ORDER //

DIVISIONAL ENGINEER – 3 /PM-II
O/o.Chief Engineer (Construction-2)
Vidyut Soudha, Hyderabad.

APTRANSCO SSR 2013-14

ANNEXURE - I

ERECTION OF 220kV & 132 kV TRANSMISSION LINES

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
CL1	1	Check Survey, peg marking the tower positions on ground, conforming to the approved Profile and tower schedules using GPS, Total stations, Digital theodolites etc.	kM	3555.00
CL2	2	Conducting reconnoitery and preliminary survey along bee line with three alternative routes and furnishing report for selecting the best proposal for approval, including cost & conveyance of all materials, hire charges of equipment, tools and plant, preparation of drawings and reports, labour charges, complete for finished item of work as per the directions of Engineer-in-charge at site. ***Theodolite / With GPS equipment (As per Clause 4.9 of survey) /With total station equipment).***	RKM	3229.00
	3	Conducting detailed survey by taking the levels along the route to a corridor of 15 mtrs. width on either side of alignment, at every 20 mtrs. interval and wherever there is a steep increase/decrease in ground profile duly indicating the chainage between angle points, river crossings, railway crossing and major highway crossings and plotting the profiles and preparation of vicinity maps to the standard scales. The survey includes clearing of bushes, branches of tree, crops and shrubs wherever encountered for detailed survey for viewing, for fixing anchor towers and also taking levels etc. required for conducting detailed surveys.		
		This work can be done with Theodolite or with GPS equipment (As per clause no.4.9 of survey) or with total station equipment. This work involves the following items.		
CL3	i)	Tower schedules as per tower spotting requirements plotted on reproducible tracing of profile original with one extra copy shall be given . *Towers Schedules should be submitted with GPS Co-ordinates. Identification of wind zones, collection of Hydraulic data of rivers / drains from competent authority.*	RKM	11087.00
CL4	ii)	Taking earth resistivity at an interval of 1 Km by electrical resisitivity method (4 point method) **or by ERM method.**	Loc	807.00

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
	iii)	Preparing of PTCC questionnaire, topo sheets extracts with marking of the proposed line. Soil resistivity report, tower sketch, station single line diagram etc. (30 copies/sets)		
CL5	3 iii) a	up to 25KM	Job	4305.00
CL6	3 iii) b	Above 25KM	Job	7892.00
CL7	3 v)	Enumeration and numbering of trees, & marking on tree with white letters on yellow paint measuring girth and height of the trees and plotting in the profile. The trees enumerated shall be shown in profile on either side of centre line clearly, ***up to required corridor*** **for 132kV Line -27 Metres & 220kV Line -35 Meters)** indicating name of tree, girth & height. Separate tree schedule should be submitted along with the profile for arriving tree compensation amount.	Each	16.30
CL8	3 (vi)	Preparation of ground profiles for Railway crossing, River crossing and EHV power line crossing separately wherever required.	Each crossing	2403.00
		The above rates shall include cost and conveyance of all materials hire charges of equipment tools & plant, preparation of profile drawing, painting of trees, labour charges, preparation of report etc., complete for finished item of work as per instructions of Engineer-in-charge.		
CL9	4	Excavation of trial pits of standard dimensions of 1 mtr X 1 mtr. width upto 3 mtrs. depth at 1 KM interval or wherever there is abnormal change in topography and taking observation of soil strata for classification of foundation and position of existing ground water table/depth of water in the existing open wells if any and back filling the trial pits after vetting by Departmental officials.	Each	1330.00
	5	Setting of stubs with stub-setting template : Erection of stubs, stub template, fixing of jacks for supporting template, allignment and levelling for exact location of stubs of stubsetting template, dismantling of template after completion of initial curing of C.C., movement of template from one location to other location (A minimum lead of 1 KM is adopted).		
CL10	(a)	132 KV P, R & S-Type Towers	Loc.	6346.00
CL11	(b)	220 KV A, B, C & D-Type Towers	Loc.	9247.00
CL12	(c)	132 KV Multi circuit Towers	Loc.	7932.00
CL13	(d)	220 KV Multi circuit Towers	Loc.	11558.00
CL14	(e)	132kV Narrow based Multi Circuit Towers.	Single pit	7294.00

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Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
CL15	(f)	220kV Narrow based Multi Circuit Towers.	Single pit	10642.00
CL16	(g)	Pole/structure for termination of 220/132kV cables	Loc.	7139.00
CL17	(h)	220 /132 kV Narrow based tower	Loc.	10402.50
CL18	6(a)	Erection of tower structures, including all types of extensions except JC type towers (stub template erection and dismantling are not to be included) (including 3 mtr., 6 mtr. , 9 mtr., & 12 mtr. extensions)	MT	4201.00
CL19	6(b)	Erection of all types of narrow based towers / multi circuit tower structures **/ narrow based multi circuit towers structures**, including all types of extensions except JC type towers (stub template erection and dismantling are not to be included) (including 3 mtr., 6 mtr. , 9 mtr., & 12 mtr. extensions)	MT	5885.00
CL20	6(c)	Erection of all types of 'JC' Type tower structures, including all types of extensions (stub template erection and dismantling are not to be included) (including '0' based, Extended and Truncated)	MT	7565.00
CL22	6(d)	Erection of pole/structure for 220/132 kV cable termination	MT	5043.00
	7	STRINGING OF POWER CONDUCTOR: Hoisting of tension insulators and Suspension insulators, paving out the conductor, rough sagging,Jointing, tensioning, clipping and fixing of preformed Armour rods and vibration dampers. measuring ground clearances wherever necessary.**Which excludes the works involved in the crossing of LT, 11kV & 33kV power lines viz dismantling and restringing of conductor**		
CL23	(i)	3 Nos. Zebra conductors	RKM	35826.00
CL24	(ii)	6 Nos. Zebra conductors	RKM	53736.00
CL25	(iii)	2 Nos. Panther conductors	RKM	19103.00
CL26	(iv)	3 Nos. Panther conductors	RKM	28657.00
CL27	(v)	6 Nos. Panther conductors	RKM	45377.00
CL28	(vi)	2 Nos. Moose conductors	RKM	30251.00
CL29	(vii)	3 Nos. Moose conductors	RKM	45377.00
CL30	(viii)	6 Nos. Moose conductors	RKM	71645.00
CL31	(ix)	3 Nos. Bear conductors	RKM	35826.00
CL32	(x)	6 Nos. Bear conductors	RKM	53736.00
CL33	(xi)	3 Nos. Dog conductors	RKM	21492.00
CL34	(xii)	6 Nos. Dog conductors	RKM	34032.00
CL37	(xiii)	Twin Moose Conductor for Single circuit stringing (three phases) with TSE Machine .	RKM	Please refer 400kV SSR
CL38	(xiv)	Twin Moose Conductor for Double circuit stringing (three phases) with TSE Machine .	RKM	Please refer 400kV SSR

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
CL39	8	Stringing of Earthwire: FIxing hardware, paving out earth wire, jointing, tensioning, stringing and clamping of 7/3.15 mm high tensile galvanised steel wire.	RKM	5734.00
CL40	9	Earthing of towers including cost of Excavation, Back-filling, including cost of 25 mm dia 2.5 mm thick, class 'C' G.I. pipe of 3.00 Mtrs length with 50X6 mm G.I. Flat 4.05 Mtrs long, ***BH Coke***, Salt etc., and measuring tower footing resistance.	Nos.	3646.00
CL41	10	***Slant Earthing of towers*** including cost of Excavation, Back-filling, including cost of 25 mm dia 2.5 mm thick, class 'C' G.I. pipe of 3.00 Mtrs length, with 50x6mm G.I. Flat of 4.05 Meters, ***BH Coke***, Salt etc., and measuring tower footing resistance.	Nos.	3646.00
CL42	11	Earthing of towers including cost of Excavation, Back-filling, including cost of 25 mm dia 2.5 mm thick, class 'C' G.I. pipe of 3.00 Mtrs length,***BH Coke***, Salt etc., and measuring tower footing resistance. (Without GI Flat) for counter poise earthing.	Nos.	2968.00
CL43	12	Counterpoise earthing including clamping devices and terminal lugs, but excluding cost of steel wire.	Rmts	32.30
CL44	13	Half round welding of G.I.bolts and nuts of towers in the section between ground level & upto bottom X-arm level including all bolts connecting the bracings at the bottom X-arm level and painting the welded portion with one coat of zinc rich paint.	Each	15.20
CL45	14	Half round welding of G.I.bolts and nuts of towers in the section between ground level & upto bottom X-arm level including all bolts connecting the bracings at the bottom X-arm level and painting the welded portion with one coat of zinc rich paint- **For JC type towers**	Each	22.80
CL46	15	Laying of 33 kV 400 sq.mm XLPE cable	Rmts	244.0
CL47	16	Termination of 400 sq.mm XLPE cable	Each	4432.0
CL48	17	Dismantling & re stringing of 33 kV conductor (all types of conductors) for crossing of 33 kV line during stringing of EHT lines.	Per conductor	2316.0
CL49	18	Dismantling & re stringing of 11 kV conductor (all types of conductors) for crossing of 11 kV line during stringing of EHT lines	Per conductor	1267.0
CL50	19	Dismantling & re stringing of LT conductor/cables for crossing of LT line (all types) during stringing of EHT lines	Per conductor	798.0

Sd/- S. SUBRAHMANYAM
DIRECTOR (PROJECTS)

// FORWARDED BY ORDER //

DIVISIONAL ENGINEER – 3 /PM-II
O/o.Chief Engineer (Construction-2)
Vidyut Soudha, Hyderabad.

ANNEXURE - II

ERECTION OF 220kV, 132 kV & 33kV SUBSTATIONS

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
CS1	1	Hoisting of Insulators and hardware, stretching the conductor and stringing of ***220 kV bus*** comprising of three phases with ***Quadraple Moose*** conductor to a tension of **900kgs for single moose conductor**.(***The maximum length or up to a length of bus section of*** **40m**)	**Bus Section**	19100.00
CS2	2	Hoisting of Insulators and hardware, stretching the conductor and stringing of ***220 kV bus*** comprising of three phases with ***single Zebra/Moose*** conductor to a tension of **900kgs**.(The maximum length or up to a length of bus section of **40m**)	**Bus Section**	4776.00
CS3	3	Hoisting of Insulators and hardware, stretching the conductor and stringing of ***220 kV bus*** comprising of three phases with ***Twin Zebra/Moose*** conductor to a tension of **1800kgs**, including fixing of spacer clamps(The maximum length or up to a length of bus section of **40m**).	**Bus Section**	9554.00
CS4	4	Hoisting of Insulators and hardware, stretching the conductor and stringing of ***132 kV bus*** comprising of three phases with ***Single Zebra/Moose*** conductor to a tension of **900kgs**.(The maximum length or up to a length of bus section of **45m**).	**Bus Section**	4776.00
CS5	5	Hoisting of Insulators and hardware, stretching the conductor and stringing of ***132 kV bus*** comprising of three phases with ***Twin Zebra/Moose*** conductor to a tension of **1800kgs** including fixing of spacer clamps.(The maximum length or up to a length of bus section of **45m**).	**Bus Section**	9554.00
CS6	6	Hoisting of Insulators and hardware, stretching the conductor and stringing of **33 kV bus** comprising of three phases with ***Single Zebra/Moose*** conductor to a tension of **450kgs**.(The maximum length or up to a length of bus section of **20m**).	**Bus Section**	3583.00
CS7	7	Hoisting of Insulators and hardware, stretching the conductor and stringing of ***33 kV bus*** comprising of three phases with ***Twin Zebra/Moose*** conductor to a tension of **900kgs** including fixing of spacer clamps.(The maximum length or up to a length of bus section of **20m**).	**Bus Section**	5973.00
CS8	8	Hoisting of Insulators and hardware, stretching the conductor and stringing of ***132 kV bus*** comprising of ***two phases*** with ***Single Zebra/Moose*** conductor to a tension of **900kgs**.(The maximum length or up to a length of bus section of **45m**).	**Bus Section**	3183.00

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
CS9	9	Fixing of spacers for Twin Moose conductor	Each	94.50
CS10	10	Fixing of spacers for Quadruple Moose Conductor	Each	130.50
CS11	11	Fixing of Hardware,stretching the ground wire and stringing of earth wire to a tension of 450kgs from pinacle to pinacle.	Each	713.80
CS12	12	Fixing of Hardware,stretching the ground wire and stringing of earth wire to a tension of 450kgs from pinacle to ground.	RM	49.00
CS13	13	Connection of equipment to bus and or another equipment with ***single zebra/Moose/Panther*** conductor including measuring, cutting,clamping and hoisting of suspension insulator assembly to support the conductor wherever necessary.	Each	250.00
CS14	14	Connection of equipment to bus and or another equipment with ***Twin zebra/Moose/Panther*** conductor including measuring, cutting,clamping and hoisting of suspension insulator assembly to support the conductor wherever necessary.	Each	388.00
CS15	15	Connection of equipment to bus and or another equipment with **Quad** ***zebra/Moose/Panther*** conductor including measuring, cutting,clamping and hoisting of suspension insulator assembly to support the conductor wherever necessary.	Each	776.00
	16	Laying of earth mat including excavation of trenches, welding, connecting to equipment and connecting lightning shield to earth mat and earthing of fence posts, drilling and connecting earth rods including connecting cast iron pipes as per Drg. No.SET(P)/149/82 with the following sizes of MS Flats /GI Flats.**(for 220kV & 132kV) including fabrication.**		
CS16	16 a	100x16mm MS Flat / GI Flat.	RM	73.90
CS17	16 b	50x 8mm MS Flat / GI Flat.	RM	58.20
CS18	16 c	75x 8mm MS Flat / GI Flat.	RM	66.00
CS19	16 d	For laying of earth flat in hard rock in substation / bays extension, an additonal amount to the basic labour rate of SSR will be allowed as there is no provision in the rate of laying of earth flat for remvoal of hard rocks.	RM	50.00
CS20	17	Excavation of earth pit, putting cast iron pipe with flange on one end (as per ISS7181/86) of nominal dia 125mm and 2.75 meters long in side the pit including supply and fixing RCC collars 0.75 meter dia (OD), 50mm thick and 0.60meters long in side the pit, backfill the pit in the 25mm size granules of BHcoke for full depth of the pit with alternate layers of BH coke and salt of 300mm thick around the earth pipe of 150mm on all the sides of the pipe including cost and conveyance of BH coke, salt, clamps, C.I.Pipes and RCC collars, labour charges for all operational	Each	10648.00
CS21	18	Laying of control cables of all sizes (from 2 core. 2.5 / 4.0sqmm to 12 core, 2.5/4.0sqmm , both copper and alluminium in cable trenches including cost of suitable metalic cable glands with rubber lining. **Note:** This includes running of cables in control room where cables are run on cable racks in cable duct.	RM	8.00

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
	19	Laying of power cables.		
CS22	19 a	upto 50 sqmm	RM	10.90
CS23	19 b	above 50 sqmm	RM	15.10
	20	Cable terminations to the switchgear, Marshalling boxes / Panel terminal blocks/control & relay panels, LTAC panel including providng suitable ferrules and lugs as per specification (including cost of ferrules and lugs) **(for 220kV & 132kV)**.		
CS24	20 i	2.5 sqmm Copper with copper lugs each core at both ends.	Nos.	25.40
CS25	20 ii	4.0 sqmm Aluminium with Aluminium lugs each core at both ends.	Nos.	27.00
CS26	20 iii	Up to 50 sqmm Power Cable with lugs each core at both ends.	Nos.	58.50
CS27	20 iv	Above 50 sqmm Power Cable with lugs each core at both ends.	Nos.	107.60
CS28	21	Instalation of lighting fixtures on switch yard structures including cabling and connections, labour charges etc., including 40mm dia G.I bent pipe of 0.75m length with suitable clamps for fixing to structures in complete shape (excluding cost of lighting fixtures)	Each	956.00
	22	Erection of the following equipment with Crane / Derrick at site including handling the material / equipment carefully at site including labour charges for all incidental and operational items of work. (excluding cost of transport charges from Dept. stores to the site).		
CS29	22.1	220 kV Circuit breakers with support structure & marshalling boxes including grouting of foundation bolts and wiring of cables from Ploe to Pole including terminations.	Each	16718.00
CS30	22.2	132 kV Circuit breakers with support structure & marshalling boxes including Ploe to Pole cable wiring and terminations.	Each	11944.00
CS31	22.3	33 kV Circuit breakers including Ploe to Pole cable wiring and terminations.	Each	4813.00
CS32	22.4	2-pole 220 kV Circuit Breaker with support structure & marshalling boxes incl. grouting of foundation bolts & wiring of cables & terminations.	Each	14210.00
CS33	22.5	2-pole 132 kV Circuit Breaker with support structure & marshalling boxes incl. grouting of foundation bolts & wiring of cables & terminations.	Each	10152.00
CS34	22.6	220 kV Current Tranformers.	Each	4062.00
CS35	22.7	132 kV Current Tranformers.	Each	2627.10
CS36	22.8	33 kV Current Tranformers.	Each	811.40
CS37	22.9	220 kV Potential Transfomers.	Each	4062.00
CS38	22.10	132 kV Potential transformers.	Each	2627.10
CS39	22.11	33 kV Potential transformers.	Each	811.40
CS40	22.12	220 kV Lightning Arrestors.	Each	2627.10
CS41	22.13	132 kV Lightning Arrestors.	Each	1240.00
CS42	22.14	33 kV Lightning Arrestors.	Each	485.00
CS43	22.15	220 kV Capacitve Voltage Transformers.	Each	3822.00
CS44	22.16	132 kV Capacitve Voltage Transformers.	Each	2627.10

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
CS45	22.17	220 kV Isolators with earth swtich including solid core insulators erection, alignment in full shape for smooth operation by Electrical and manually.	Each	6449.00
CS46	22.18	132 kV Isolators with earth swtich including solid core insulators erection, alignment in full shape for smooth operation by manually.	Each	4776.00
CS47	22.19	220 kV Isolators without earth swtich including solid core insulators erection, alignment in full shape for smooth operation by Electrical and manually.	Each	5973.00
CS48	22.20	132 kV Isolators without earth swtich including solid core insulators erection, alignment in full shape for smooth operation by manually.	Each	4297.00
CS49	22.21	2-pole, 220 kV Isolators without earth swtich including solid core insulators erection, alignment in full shape for smooth operation by Electrical and manually.	Each	5077.00
CS50	22.22	2-pole, 132 kV Isolators without earth swtich including solid core insulators erection, alignment in full shape for smooth operation by Electrical and manually.	Each	3652.00
CS51	22.23	33 kV Isolators including solid core insulators erection, alignment in full shape for smooth operation.	Each	1552.00
CS52	22.24	220 kV Bus Post Type Insulators.	Each	338.40
CS53	22.25	132 kV Bus Post Type Insulators.	Each	254.70
CS54	22.26	33 kV Solid Core Insulators	Each	171.00
CS55	23	33 kV /400 V Station Transformer including all necessary connections on HV & LV side including cost of lugs (But excluding cost of transformer and HG fuse set)	Each	5395.00
CS56	24	Erection of Control / Relay panels, LTAC panels, announciation, **PTDB** panels etc.,in the control room duly mounting them on channels and grouting them with foundation bolts excluding cost of channels & foundation bolts **(for 220kV & 132kV), including** man power support to MRT wing for commissioning.	Each	2122.00
CS57	25	Erection of 220 V, 200 Ah/ 80 Ah Lead Acid battery in complete shape fit for charging.	Set	8315.00
CS58	26	Erection of 220 V, 200 Ah/ 80 Ah maintenance free battery in complete shape fit for charging .	Set	2688.00
CS59	27	Erection of 220 V, 200 Ah / 80Ah battery charger.	Set	2763.00
CS60	28	Erection of Capacitor Bank including series reactor of 7.5 MVAR Capacity	Each	4283.00
CS61	29	Erection of Marshalling kiosk	Each	713.80
CS62	30	Erection of Marshalling boxes	Each	346.80
CS63	31	Erection of Lighting pillar box in switchyard on foundation laid (Excluding pillar box). **(for 220kV & 132kV)**	Each	955.40

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
CS64	32	Fabrication of Main and Auxiliary structures, stub setting templates, foundation bolts, 'U' bolts etc,.using raw steel such as M.S.Angles, Plates, Channels, R.S.Joists, M.S.rounds, excluding cost of Mild Steel and transport charges to site.	MT	7815.20
CS65	33	Galvanization of Main and Auxiliary structures, stub setting templates, foundation bolts, 'U' bolts etc,.using raw steel such as M.S.Angles, Plates, Channels, R.S.Joists, M.S.rounds, excluding cost of zinc and transport charges to substation site.(Cost of zinc should be followed as per IEEMA rates.).The average quantity of Zinc required for all angles of tower parts is 60 Kgs.	MT	4576.20
	34	Setting of stubs with stub setting template for sub-station structure:Erection of stub template, fixing of jacks for supporting the template, alignment and leveling of exact location of stubs of stubsetting template, dismantling of template after completion of initial curing of CC		
CS66	34.1	220kV Towers	Set	3084.00
CS67	34.2	132kV Towers	Set	2214.00
CS68	34.3	33kV Towers & CPL's	Set	553.00
CS69	34.4	220kV Isolator	Set	2313.00
CS70	34.5	132kV Isolator	Set	1660.00
CS71	34.6	220 kV Breaker	Set	2000.00
CS72	34.7	132 kV Breaker	Set	1500.00
CS73	34.8	33 kV Breaker	Set	1000.00
CS74	35	Erection of the main and auxiliary structures etc., using bolts and nuts.	MT	2389.00
CS75	36	Fixing of 90lb rail poles over the transformer plinths.	RM	475.20
CS76	37	Fixing of 105lb rail poles over the transformer plinths.	RM	556.10
CS77	38	Erection of 33kV HG Fuse set	Each	577.00
CS78	39	Erection of 33kV PT Distribution Box	Each	347.00
CS79	40	Laying and Terminations of 11kV, XLPE 1000 Sqmm Cable	RM	121.00
CS80	41	Erection of 11kV VCB outdoor type Kisok (within built Breaker, CTs, PTs, Surge Arrestors & Relays).	Each	2467.00
		Marking as per approved layout with the help of surveyor		
CS81	42	220 kV sub-station	Each	30000
CS82	43	132 kV sub-station	Each	20000
CS83	44	Bay / Bays in one sub-station	Each	10000

Note:

i. Bore earthing in estimations as per field conditions will be considered on case to case basis as supplemental items.

ii. 25% excess over CS64 is allowed for JC tower fabrication charges.

Sd/- S. SUBRAHMANYAM
DIRECTOR (PROJECTS)

// FORWARDED BY ORDER //

DIVISIONAL ENGINEER – 3 /PM-II
O/o.Chief Engineer (Construction-2)
Vidyut Soudha, Hyderabad.

ANNEXURE - III

I Loading / Unloading of materials from departmental / Private vehicles in to the stores yard and stacking and vice-versa

Sl. No.	Item No.	Description of Item	Unit	SS Rate for 2013-14	
				Loading	Un Loading
ST1	I	Cement	MT	85.80	100.00
	2	All other materials			
ST2	(i)	Steel	MT	194.80	194.80
ST3	(ii)	Tower parts	MT	194.80	194.80
ST4	(iii)	RS Joists and rail poles and MS Sheets pf various sizes.	MT	194.80	194.80
	3	Cable / Conductor drums (for loading / un loading)			
ST5	a	Panther ACSR	Each Drum	214.30	214.30
ST6	b	Zebra ACSR	Each Drum	300.00	300.00
ST7	c	Moose ACSR	Each Drum	300.00	300.00
ST8	d	Moose ACSR (Huge Drums of 1.75KM and above)	Each Drum	441.00	441.00
ST9	e	Earth wire	Each Drum	128.50	128.50
ST10	f	Control cables up to 6 Core	Each Drum	128.50	128.50
ST11	g	Control cables above 6 Core	Each Drum	171.40	171.40
ST12	h	3 1/2 Core LTAC cable drum (up to 500 meters).	Each Drum	171.40	171.40
ST13	i	3 1/2 Core LTAC cable drum (above 500 meters).	Each Drum	214.30	214.30
	4	Other materials received in cases.			
ST14	(i)	Case weighing not more than 100kgs.	Each case	113.00	113.00
ST15	(ii)	Case weighing from101kgs to 500kgs.	Each case	213.00	213.00
ST16	(iii)	Case containg fragile items and weighing more than 501kgs and up to 1MT	Each case	426.10	340.30
ST17	(iv)	for LTAC panel	Each	284.40	284.40
ST18	v(a)	70KN Normal disc insulator	Each	1.10	1.10
ST19	v(b)	120KN Normal disc insulator	Each	1.40	1.40
ST20	v(c)	160KN Normal disc insulator	Each	1.70	1.70
ST21	vi(a)	70KN Anti-fog disc insulator	Each	1.40	1.40
ST22	vi(b)	120KN Anti-fog disc insulator	Each	1.70	1.70
ST23	vi(c)	160KN Anti-fog disc insulator	Each	2.20	2.20
	(vii)	Loading / Un loading and stacking charges for 70KN /120KN SRC insulators.			
ST24	(a)	132kV	Each string	2.20	2.20
ST25	(b)	220kV	Each string	2.80	2.80
ST26	(viii)	Loading / Un loading and stacking charges for 120KN /160KN SRC insulators for 400kV .	Each string	3.30	3.30
	5	Cases containing Control & Relay Panels			
ST27	(a)	33kV	Each	284.40	284.40
ST28	(b)	132kV and 220kV	Each	354.50	354.50
	6	Cases containing CTs, PTs, CVTs			
ST29	(i)	11kV to 33kV Rating	Each case	85.80	85.80
ST30	(ii)	Above 33kV and up to 132kV	Each case	428.50	428.50
ST31	(iii)	220kV Rating	Each case	639.00	639.00

	7	Cases containing LAs			
ST32	(i)	33kV	Each case	18.00	18.00
ST33	(ii)	132kV	Each case	213.00	213.00
ST34	(iii)	220kV	Each case	284.40	284.40
	8	Loading / Un-Loading of			
ST35	1	33kV Breaker	Each set	852.10	852.10
ST36	2	132kV CB	Each set	1702.80	1702.80
ST37	3	220kV SF6 CB	Each set	2127.50	2127.50
ST38	4	Station Transformer (100KVA)	Each set	326.90	326.90
ST39	5	Station Transformer (250KVA)	Each set	391.60	391.60
ST40	6	220V 80AH Battery ***(Conventional)*** *(Lead Acid)*	Set	709.20	709.20
ST41	7	220V 80AH Battery (VRLA) (Maintenance Free)	Set	497.40	497.40
ST42	8	220V 200AH Battery ***(Conventional)*** *(Lead Acid)*	Set	779.30	779.30
ST43	9	220V 400AH Battery	Set	1135.20	1135.20
ST44	10	220V Battery Charger with DC distribution Board	Set	426.10	426.10
ST45	11	DCDB for battery Charger.	Each	141.60	141.60
ST46	12	132kV Hardware single	Set	10.00	10.00
ST47	13	132 KV Hardware double	Set	10.40	10.40
ST48	14	220 kV Hardware single	Set	14.10	14.10
ST49	15	220 KV Hardware double	Set	15.00	15.00
ST50	16	220 KV Isolators, without insulators including machanism box	Set	426.10	426.10
ST51	17	220kV Solid core insulators	Each	57.10	57.10
ST52	18	132 KV Isolators (without soild core insulators)	Each	319.50	319.50
ST53	19	132kV Solid core insulators	Each	35.10	35.10
ST54	20	33 KV Isolators (without soild core insulators)	Each	141.60	141.60
ST55	21	33kV Solid core insulators	Each	4.00	4.00
ST56	22	Vibration dampers, mid span compression joints, repair sleeves, clamps & connectors etc	100 Nos	141.60	141.60
	23	Capacitor Banks			
ST57	a	5 MVAR	Set	1135.20	1135.20
ST58	b	Neutral C.T.	Each	77.90	77.90
ST59	24	Scrap items like MS Scrap, GI Scrap, Ferrous Scrap etc,.	Per MT	213.00	213.00
ST60	25	Scrap items like Conductor scrap, Earth wire Scrap, etc,.	Per MT	284.40	284.40
ST61	26	Bolts & Nuts weighing 50 Kgs bags including springs washers, flat washers.	Each bag	6.50	6.50
ST62	27	3 1/2 Core LTAC Cable bits (loose) by measuring and load / unload (up to 500 Meters, limited to Rs.142 per Bit (Maximum)	Mts	0.70	0.60
ST63	28	Cable bits (loose) up to 6 Core by measuring and load / un load.(up to 500 Meters, limited to Rs.106 per Bit (Maximum)	Mts	0.60	0.60
ST64	29	Cable bits (loose) above 6 Core by measuring and load / un load.(up to 500 Meters, limited to Rs.142 per Bit (Maximum)	Mts	0.90	0.90

ST65	30	Copper Scrap	Per MT	170.10	170.10
ST66	31	Battery Scrap	Per MT	177.90	177.90
ST67	32	Capacitor units Scrap	Each	7.70	7.70
ST68	33	33kV Breaker Limb	Each	143.60	143.60
ST69	34	132kV Breaker Limb	Each	354.50	354.50
ST70	35	220kV Breaker Limb	Each	510.40	510.40
ST71	36	Tyres scrap of all sizes	Each	17.00	8.60
ST72	37	Empty oi drums	Barrel	6.00	6.00
ST73	38	Full oil drums	Barrel	35.50	35.50
ST74	39	220V, 200AH Battery (VRLA) (Maintenance free)	Set	545.70	545.70
ST75	40	220kV Bushing	Each	220.50	220.50
ST76	41	132kV Bushing	Each	110.20	110.20
ST77	42	33kV Bushing	Each	27.60	22.00

Note: - If loading / Un loading is done with Crane, 1/3 rd Charges are to be paid towards labour charges and remaining amount is towards crane hire charges.
Example: Loading charges of 100 kVA Station Transformer is Rs. 326.90/- and in case is loaded by using a crane then labour charges would be Rs.109.00 & crane hire charges would be Rs.217.90.

II. Loading and Un loading and counting at Stores for check measuring and Stock Verificaiton Purpose

Sl. No.	Item No.	Description of Item	Unit	SSR Rate for 2013-14
ST78	43	Tower parts counting on part wise and restocking at stores yard (for stock verification purpose)	Per MT	71.40
ST79	44	Labour charges for weighing and restocking of GI Tower Parts or Bolts & Nuts, Washers (for stock verification purpose)	Per MT	284.40
ST80	45	Labour charges for loading and unloading of ACSR, AAA Conductor & Earth wire bits for weighiment (for stock verification purpose).	Per MT	284.40
ST81	46	Counting and Restocking of Hardware (Iron parts, Al jumper cones, Al Tensition cones, PA rods, Arcing horns, Al grippers etc) (for stock verification purpose)	Each set	4.30
ST82	47	Counting and Restocking of 220kV & 132kV Line accessories like Dampers, MSC Joints, Repair sleeves, PA rods, D- Shackles Links, Earthing sets, Hangers, Counter Poise Earthing Clamps etc (for stock verification purpose)	Each set	1.40
ST83	48	Counting and restocking of insulators of various capacities (for stock verification purpose)	Each	1.40
ST84	49	Loading of Assorted tower parts from different places by observing part wise and loading in to lorry at stores	Per MT	213.00
ST85	50	For Opening and Repacking of Packing of Panels for check measuring purpose	Each	42.80
	51	For Opening and Repacking of Packing of Breakers for check measuring purpose		
ST86	(a)	220 kV	Each	141.60
ST87	(b)	132 kV	Each	100.00
ST88	(c)	33 kV	Each	42.80
ST89	52	For Opening and Repacking of Packing of Fragile Materials, and Small Packages like wooden, Cartoon Boxes etc., for check measuring purposes.	Each	21.30

III Crane Hire charges:(for departmental works at the premises)

Sl. No.	Item No.	Description of Item	Unit	SSR Rate for 2013-14
	53	For 2 to 8 Tonne Capacity crane		
ST90		i.For Ist hour	Hour	2082.50
ST91		ii.For every hour or part thereof after Ist hour	Hour	945.90
	54	For 8 to 20 Tonne Capacity crane		
ST92		i.For Ist hour	Hour	3247.80
ST93		ii.For every hour or part thereof after Ist hour	Hour	1082.60
	55	For above 20 Tonne Capacity crane		
ST94		i.For Ist hour	Hour	5008.40
ST95		ii.For every hour or part thereof after Ist hour	Hour	1760.60

IV Sparing of Departmental vehicle to the contractor:

Sl. No.	Item No.	Description of Item	Unit	SSR Rate for 2013-14
ST96	56	Sparing of Departmental vehicle(Lorry) to the contractor is under emergency only. When departmental lorry is engaged to the Contractor on a particular day an amount per day or part there of should be recovered for a total KM run up to 100KM on that day plus for every additional KM rate, which ever is higher. The run to be worked out taking initial reading at starting point and closing reading after returing the same starting point duly completing the transport work.	Per day	2729.60
			Plus additional KM	22.70

Note:

1 When the departmental lorry is used for transport of fragile and costly equipment, they have to be insured by the contractor in first place before transport and the same will be claimed in the respective work bill.

2 If the crane is given on hire to other than APTRANSCO works, the rate is a minimum of Rs22702/- (Rs.945.90-per hr X 24Hrs) + (Fuel cost & lubricants) per day or part thereoff and the time is to be reckoned from the time of leaving department premises till reaching back.

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DIVISIONAL ENGINEER – 3 /PM-II
O/o.Chief Engineer (Construction-2)
Vidyut Soudha, Hyderabad.

ANNEXURE -IV

TRANSPORT OF EQUIPMENTS / MATERIALS

Sl.No.	Item No.	Description of Item	Per Load
		The following are the minimum materials / equipment, for each load. One Load = 9.0 MT	
	1	**CTs, PTs, & CVTs:**	
T.1	1.a	220 kV	2 Nos.
T.2	1.b	132 kV	3 Nos.
T.3	1.c	33 kV	12 Nos.
		NOTE: For transport of 220kV CTs, PTs &CVTs extra provison of Rs.180/- may be added for each load towards labour for clearing the obstructions like electrically and telephone lines as the equipment are very tall.	
	2	**SF6 Circuit Breakers:**	
T.4	2.a	220 kV	1/2 sets
T.5	2.b	132 kV	2/3 sets
T.6	2.c	33 kV	2 Nos.
	3	**Isolators with or without Earth switch including post type insulators:**	
T.7	3.a	220 kV	1 set.
T.8	3.b	132 kV	2 Sets
T.9	3.c	33 kV	8 Nos.
	4	**Lighting Arrestors:**	
T.10	4.a	220 kV	6 Nos.
T.11	4.b	132 kV	6 Nos.
T.12	4.c	33 kV	24 Nos.
	5	**Control & Relay panels:**	6 Nos.
	6	**ACSR Conductor and Earth wire drums:**	
T.13	6.a	ACSR moose	3Nos.
T.14	6.b	ACSR Zebra	4Nos.
T.15	6.c	ACSR Panther	6Nos.
T.16	6.d	Earth wire of 2 km per each drum	8Nos.
T.17	6.e	Earth wire of 3 km per each drum	6 Nos.
T.18	6.f	CABLE DRUMS	10Nos.
	7	**Disc Insulators**	
T.19	7.a	70 KN	1000 Nos.
T.20	7.b	120KN	800 Nos.
	8	**Silicon Rubber Insulators**	
T.21	8.a	70 KN	275 Nos.
T.22	8.b	120KN	228 Nos.
	9	**Wave Traps**	
T.23	9.a	220kV	6 Nos.
T.24	9.b	132kV	16 Nos.

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O/o.Chief Engineer (Construction-2)
Vidyut Soudha, Hyderabad.

ANNEXURE - V

RATES FOR HANDLING & ERECTION OF POWER TRANSFORMERS

Sl. No.	Item no.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
	A)	**HANDLING AS JOB WORK BY DEPARTMENT**		
	1	**Loading/Unloading of T&P such as wooden sleepers, winch jacks, packing pieces etc., required for handling the power transformers.**		
PT1	a	Up to 31.5 MVA transformers, one load of wooden sleepers and another load of T&P such as chain pulley block and rail poles etc (Maximum two loads)	Load	937.00
PT2	b	For above 31.5 MVA and up to 100 MVA transformers, two loads of wooden sleepers and another load of T&P such as chain pulley block, winch and rail poles etc (Maximum three loads)	Load	937.00
PT3	c	For the above 100 MVA and up to 160 MVA transformers, three loads of wooden sleepers and another load of T&P such as winch machine and rail poles etc (Maximum Four loads)	Load	937.00
	2	**Loading/Unloading of fragile material such as**		
PT4	a)	LV bushing / Neutral bushing for 132 kV transformer	Each	125.00
PT5	b)	132kV Bushings	Box	504.00
PT6	c)	220kV Bushings	Box	627.00
		NOTE : If crane used ,Crane charges can be claimed as per actuals and labour charges will be reduced to 40%		
PT7	3	Loading/Unloading of accessories of transformer including raidator, pipe line, FCC & RTCC panels, conservator tank, turrets LA set frames and oil barrels 'A' frame and header etc., (For 50MVA and above 50 MVA PTRs without oil barrels)	Load	1550.00
	4	**Dragging of power transformer main tank duly arranging wooden sleeper platform providing packing pieces, jacking up the transformer, insertion of wooden sleeper, rail poles arrangement of pullies, steel ropes positioning of winch and anchoring of winch.**		
	a	Transformers upto 16 MVA capacity		
PT8		Up to 10 Mtrs.	LS	2467.00
PT9		Over and above 10 Mtrs.	RM	246.00
	b	Transformers above 16MVA and upto 31.5 MVA capacity		
PT10		Up to 10 Mtrs.	LS	4506.00
PT11		Over and above 10 Mtrs.	RM	451.00
	c	Transformers above 31.5MVA and upto 50 MVA capacity		
PT12		Up to 10 Mtrs.	LS	5259.00
PT13		Over and above 10 Mtrs.	RM	526.00
	d	Transformers above 50MVA and upto 100 MVA capacity		
PT14		Up to 10 Mtrs.	LS	6499.00
PT15		Over and above 10 Mtrs.	RM	649.00
	e	Transformers above 100MVA and upto 160 MVA capacity		
PT16		Up to 10 Mtrs.	LS	8361.00

Sl. No.	Item no.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
PT17		Over and above 10 Mtrs.	RM	837.00
	5	**Turning the transformer through 90 degrees including making arrangements as above.**		
PT18	a	Transformers upto 16 MVA capacity	Each	2209.00
PT19	b	Transformers above 16MVA and upto 31.5 MVA capacity	Each	2770.00
PT20	c	Transformers above 31.5MVA and upto 50 MVA capacity	Each	3445.00
PT21	d	Transformers above 50MVA and upto 100 MVA capacity	Each	3942.00
PT22	e	Transformers above 100MVA and upto 160 MVA capacity	Each	4927.00
	6	**Turning the transformer through 180 degrees including making arrangements as above.**		
PT23	a	Transformers upto 16 MVA capacity	Each	3829.00
PT24	b	Transformers above 16MVA and upto 31.5 MVA capacity	Each	4604.00
PT25	c	Transformers above 31.5MVA and upto 50 MVA capacity	Each	5425.00
PT26	d	Transformers above 50MVA and upto 100 MVA capacity	Each	6028.00
PT27	e	Transformers above 100MVA and upto 160 MVA capacity	Each	7233.00
PT28	7(a)	Anchoring of transformer including excavation of trench of 4 x 1x0. 5 mtrs for anchoring and burying 2 Nos. sleepers in it and removing the same after work is completed.	1 Job	937.00
PT29	7(b)	Movement of 10 MT winch for anchoring.	1 Job	848.00
	8	**Lifting/Lowering the transformer main tank to the required height of one sleeper using jacks and wooden sleepers packing pieces for loading onto /from the truck.**		
PT30	a	Transformers upto 16 MVA capacity	Each	2680.00
PT31	b	Transformers above 16MVA and upto 31.5 MVA capacity	Each	4131.00
PT32	c	Transformers above 31.5MVA and upto 50 MVA capacity	Each	5143.00
PT33	d	Transformers above 50MVA and upto 100 MVA capacity	Each	6856.00
PT34	e	Transformers above 100MVA and upto 160 MVA capacity	Each	8772.00
	9	**Pulling the transformer from platform to the truck for loading/ from truck to the platform for unloading**		
PT35	a	Transformers upto 16 MVA capacity	Each	2254.00
PT36	b	Transformers above 16MVA and upto 31.5 MVA capacity	Each	3942.00
PT37	c	Transformers above 31.5MVA and upto 50 MVA capacity	Each	4381.00
PT38	d	Transformers above 50MVA and upto 100 MVA capacity	Each	5478.00
PT39	e	Transformers above 100MVA and upto 160 MVA capacity	Each	7404.00
	10	**Fixing of transformer wheels to main tank including alignment of transformer etc.,**		
PT40	a	Transformers upto 16 MVA capacity	Job	1042.00
PT41	b	Transformers above 16MVA and upto 31.5 MVA capacity	Job	1230.00
PT42	c	Transformers above 31.5MVA and upto 50 MVA capacity	Job	1791.00
PT43	d	Transformers above 50MVA and upto 100 MVA capacity	Job	2321.00
PT44	e	Transformers above 100MVA and upto 160 MVA capacity	Job	3439.00

Sl. No.	Item no.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
PT45	11	Arranging gas cutter equipment at site including operator and helper to remove anchoring of transformer main tank on truck for loading and unloading (including cost of gas)	Job	1708.00
	12	**Removal of steel rope and turn buckles of transformer main tank on truck.**		
PT46	(a)	Up to 100MVA Capacity	Job	470.00
PT47	(b)	above 100MVA and up to 160MVA Capacity	Job	703.00
	13	Tieing the transformer main tank on to the truck with steel rope and turn buckles		
PT48	(a)	Up to 100MVA Capacity	Job	604.00
PT49	(b)	above 100MVA and up to 160MVA Capacity	Job	904.00
	14	Assisting for lifting of overhead live lines, while transporting of transformers by truck.		
PT50	(a)	Up to 100MVA Capacity	Job	1323.00
PT51	(b)	above 100MVA and up to 160MVA Capacity	Job	2645.00
	B)	**ERECTION OF POWER TRANSFORMERS AS JOB WORK BY DEPARTMENT**		
	1	Opening of crates and keep ready for erection of accessories of transformers		
PT52	a	Transformers upto 16 MVA capacity	Job	1473.00
PT53	b	Transformers above 16MVA and upto 31.5 MVA capacity	Job	1841.00
PT54	c	Transformers above 31.5MVA and upto 50 MVA capacity	Job	2464.00
PT55	d	Transformers above 50MVA and upto 100 MVA capacity	Job	2957.00
PT56	e	Transformers above 100MVA and upto 160 MVA capacity	Job	3942.00
	2	Shifting, loading dragging of accessories of transformers like radiator, conservator tank, pipe line, fans, headers, DM box, FCC, oil barrels etc., from place of storage to work spot and vice versa of transformers.(For 50MVA and above 50 MVA PTRs without oil barrels)		
PT57	a	Transformers upto 31.5 MVA capacity	Job	2209.00
PT58	b	Transformers above 31.5MVA and upto 100 MVA capacity	Job	2947.00
PT59	c	Transformers above 100MVA and upto 160 MVA capacity	Job	4048.00
PT60	d	Transportation of oil barrels from unloading place to the filter	Job	2203.00
	3	Erection of Radiators to the transformers including headers		
PT61	a	Transformers upto 16 MVA capacity	Job	1639.00
PT62	b	Transformers above 16MVA and upto 31.5 MVA capacity	Job	2626.00
PT63	c	Transformers above 31.5MVA and upto 50 MVA capacity	Job	3264.00
PT64	d	Transformers above 50MVA and upto 100 MVA capacity	Job	4001.00
PT65	e	Transformers above 100MVA and upto 160 MVA capacity	Job	5454.00
	4	Erection of main conservator tank.		
PT66	a	Transformers upto 16 MVA capacity	Each	1478.00
PT67	b	Transformers above 16MVA and upto 31.5 MVA capacity	Each	1644.00

Sl. No.	Item no.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
PT68	c	Transformers above 31.5MVA and upto 50 MVA capacity	Each	2411.00
PT69	d	Transformers above 50MVA and upto 100 MVA capacity	Each	3755.00
PT70	e	Transformers above 100MVA and upto 160 MVA capacity	Each	4834.00
PT71	f	Pronal bag testing and commissioning	Each	1626.00
PT72	g	Hiring of compressor	Each	1139.00
PT73	h	Dry Nitrogen Cylinder (In case, Dry Nitrogen Cylinder is used for commissioning of Air cell instead of Air compressor), excluding transportation cost.	Each	1785.00
	5	Erection of transformer bushing		
PT74	a	33 kV Neutral and teritary bushings	Each	322.00
PT75	b(I)	132 kV bushings up to 100MVA.	Each	600.00
PT76	b(ii)	132 kV bushings for above 100MVA and up to 160MVA	Each	751.00
PT77	c(I)	220 kV bushings up to 100MVA	Each	901.00
PT78	c(ii)	220 kV bushings for above 100MVA and up to 160MVA	Each	1117.00
PT79	d(I)	220kV 3 Nos. erection of turrets up to 100MVA	Job	1290.00
PT80	d(ii)	220kV 3 Nos. erection of turrets for above 100MVA and up to 160MVA	Job	1692.00
PT81	e(I)	132kV 3 Nos. erection of turrets up to 100MVA	Job	605.00
PT82	e(ii)	132kV 3 Nos. erection of turrets for above 100MVA and up to 160MVA	Job	887.00
PT83	6	Erection of air blowers (cooling fans) including frames and control cubical etc., (for each transformer)	Job	2437.00
PT84	7	Erection of LA frames (HV & LV side)	Each	765.00
PT85	8(a)	I).Erection of driving mechanism box, bevel gear of OLTC for below 100MVA..	Each	765.00
PT86		ii).Erection of driving mechanism box, bevel gear of OLTC 100MVA and above 100MVA.	Each	1530.00
PT87	8(b)	ii).Erection of OLTC conservator tank with stand for up to 100MVA.	Each	988.00
PT88		ii).Erection of OLTC conservator tank with stand for above 100MVA and upto 160MVA.	Each	1478.00
	9	Erection of pipe line.		
PT89	a	Transformers upto 31.5 MVA capacity	Each	517.00
PT90	b	Transformers above 31.5MVA and upto 50 MVA capacity	Each	773.00
PT91	c	Transformers above 50MVA and upto 100 MVA capacity	Each	1310.00
PT92	d	Transformers above 100MVA and upto 160 MVA capacity	Each	1638.00
PT93	10	I).Erection of Thermometer, pressure Relief valve and vent pipe etc.,	Each	517.00
PT94		ii)Erection of Thermometer, pressure Relief valve and vent pipe etc.,100MVA and above PTRs.	Each	773.00
	11	Erection of detachable OLTC including connecting internal jumper with OLTC tank.		
PT95	a	Transformers upto 31.5 MVA capacity	Each	2541.00

Sl. No.	Item no.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
PT96	b	Transformers above 31.5MVA and upto 100 MVA capacity	Each	3829.00
PT97	c	Transformers above 100MVA and upto 160 MVA capacity	Each	4269.00
PT98	12	I).Erection of separate, cooler bay including 'A' frame header pipes and bends of transformers up to 100 PTRs MVA capacity.	Bay	5478.00
PT99		ii).Erection of separate, cooler bay including 'A' frame header pipes and bends of transformers above 100 MVA and up to 160MVA PTRs capacity.	Bay	6028.00
	13(I)	Removal of old worn out gaskets and replacement with new gaskets including cutting, pasting of gasket with all accessories including cost of adhesives. Excl. top cover		
PT100	a	Transformers upto 16 MVA capacity	Job	2119.00
PT101	b	Transformers 31.5MVA and 50 MVA capacity	Job	3293.00
PT102	c	Transformers 100 MVA and upto 160 MVA capacity	Job	4237.00
	13(II)	Removal of old worn out gaskets and replacement with new gaskets including cutting, pasting of gasket with all accessories including cost of adhesives. for top cover. The following rates are exclusive of crane hire charges which are payable at actuals.		
PT103	a	Transformers upto 16 MVA capacity	Job	1061.00
PT104	b	Transformers 31.5MVA and 50 MVA capacity	Job	1295.00
PT105	c	Transformers 100 MVA and upto 160 MVA capacity	Job	1529.00
PT106	14	Erection of supporting insulators and earth flat for HV & LV Neutrals / Tertiary.	Job	517.00
	C	**OIL FILTERATION OF TRANSFORMERS AS JOB WORK BY DEPARTMENT**		
PT107	1	Loading / Unloading of 2KL Oil filter.	Job	1809.00
PT108	2	Laying of L.T.Cable from AC Supply point to filter connecting Pipes etc, from filter to transformer and back to filter and Vice-versa.	Job	874.00
PT109	3	Loading / unloading of full transformer oil barrels.	Barrel	41.00
PT110	4	Loading / unloading of oil drums.	Barrel	8.00
	5	Oil topping for transformer through oil filter:		
	5.1	Transformer already filled with oil		
PT111	a	Transformers upto 31.5 MVA capacity	Each	695.00
PT112	b	Transformers above 31.5MVA and upto 50 MVA capacity when the transformer is received with transformer oil	Each	1530.00
PT113	5.2	Transformers above 50MVA upto 160 MVA capacity When the transformer is received empty with Nitrozen	Barrel	22.00
	6	Assisting labour for filtering of oil for a period of 5 days during filteration of oil		
PT114	a	For a period of 5 days for Transformers upto 31.5 MVA capacity	Each	3303.00

Sl. No.	Item no.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
PT115	b	For a period of 5 days for Transformers above 31.5 MVA and upto 100 MVA capacity	Each	4625.00
PT116	c	For a period of 5 days for Transformers above 100 MVA and upto 160 MVA capacity	Each	6608.00
PT117	a	Over and above 5 days for Transformers upto 31.5 MVA capacity	per day	660.60
PT118	b	Over and above 5 days forTransformers above 31.5 MVA and upto 100 MVA capacity	per day	925.00
PT119	c	Over and above 5 days forTransformers above 100 MVA and upto 160 MVA capacity	per day	1321.60
PT120	7(I)	Dismantling of control cables of power transformer for arranging, pulling of transformer maintank out of plinth for failed transformer or improvement of transformercapacity.	Job	611.00
PT121	(ii)	Laying of control cables for the transformers which are received with non completion of wiring on the transformer and complete wiring of the transformer on the tank.F.C.C,D.M box etc., (for old repaired transformers).	Job	1626.00
PT122	8	Shifting of filter machine in switch yard from existing place to near transformer or to the convenient place manually (where movement of tractor trailer is not possible).	RM	76.00
	9	Labour charges for arrangement for vaccum filling for the power transformer for prescribed time duration for 50MVA and above PTRs which are received at site with nitrogen gas filled.		
PT123	(a)	Below 100MVA PTRs	Job	2437.00
PT124	(b)	Above 100MVA PTRs.	Job	4877.00
PT125	10	Loading / Unloading of 5 KL Storage tanker.	Job	807.00
	11	Hire charges for a private tractor for transport of 6 KL of oil filter.		
PT126		Up to 50 KM	LS	3827.00
PT127		Beyond 50 KM	per KM	74.00
	12	Providing of oil tanker on daily hire charges		
PT128	a	10 KL capacity	Per day	1200.00
PT129	b	20 KL capacity	Per day	2200.00
	13	Transportation of 10 KL & 20 KL oil tanker (including return trip charges), (a) or (b) only applicable		
PT130		Minimum amount upto 50 KM	LS	6000.00
PT131		More than 50 KM	KM	30.00
	14	Unloading of oil tanker at site and loading the same after completion of the job		
PT132		10 KL capacity	Job	4750.00
	15(i)	Complete wiring up of the transformer indicating systems cooler control fans and motor driving mechanism of OLTC panel providing suitable ferrules and lugs.		
PT133	a)	16/31.5 MVA Transformer	LS	14327.00
PT134	b)	50 MVA Transformer	LS	18627.00
PT135	c)	100 MVA Transformer	LS	20659.00

Sl. No.	Item no.	Description of Item	Unit	SS Rate for 2013-14 (Rs.)
PT136	d)	160 MVA Transformer	LS	20659.00
	15(ii)	Complete wiring up of the transformer indicating systems cooler control fans and motor driving mechanism of OLTC panel providing suitable ferrules and lugs excluding OLTC panel		
PT137	a)	16/31.5 MVA Transformer	LS	7164.00
PT138	b)	50 MVA Transformer	LS	9313.00
PT139	c)	100 MVA Transformer	LS	10329.00
PT140	d)	160 MVA Transformer	LS	10329.00
PT141	16	Draining of oil from main tank of the transformer into empty oil drums and stacking them neatly as directed by the APTRANSCO Engineer at site.	KL	349.00
PT142	17	Unloading of 20 KL oil storage taken at site and loading the same after comletion of the job	Job	5189.00
	D)	Insurance for fragile material during transportation, erection, dismantling may be paid as per actuals from department side for department works.		

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O/o.Chief Engineer (Construction-2)
Vidyut Soudha, Hyderabad.

ANNEXURE - VI

Rates for O&M works of EHT Lines

Sl. No.	ITEM NO.	Description of work	Unit	SSR 2013-14
OM1	1	(a).Providing of Vibration dampers (for 220 KV & 132 KV lines) (Excluding Material & Transportation cost)	Each	106
OM2		(b). Providing of spacer damper for 400 KV twin Moose lines (Excluding Material & Transportation cost)	Each	146
	2	Painting of towers with two coats of aluminum paint using Aluminum paint 1st grade containing 306 Kg of Aluminum paste for 18 liters of thinner 1st coat is to be applied before erection of towers and 2nd coat after stringing and half round welding including cost of paint, cost of brushes, labour charges etc., complete.		
OM3	(a	First coat of 1st Grade Aluminum Paint duly scratching and cleaning of towers including labour charges, cost of paint, brushes etc.	MT	3401
OM4	(b	Labour charges for painting including scratching and cleaning of towers of 1st coat of Alluminum with out cost of paint & brushes.	MT	953
OM5	(c	(*) Second coat of 1st Grade Aluminium Paint duly scratching and cleaning of towers including labour charges, cost of pint, brushes, etc.	MT	1990
OM6	(d	(*) Labour charges for painting including scratching and cleaning of towers of 2nd coat of Aluminum with out cost of paint & brushes.	MT	540
		(*) : The requirement of 2nd coat is to be justified by the concerned Divisional Engineer/Executive Engineer before execution of the work.		
	3	Painting of towers with single coat of red oxide paint of 1st Grade, including scratching and cleaning of towers.		
OM7	(a	One coat of 1st Grade Red Oxide Paint including labour charges for scratching and cleaning of towers including cost of paint, brushes etc.	MT	2130
OM8	(b	Labour charges for painting of towers including scratching and cleaning of towers without cost of paint & brushes.	MT	1181
OM9	4	Providing of Arcing Horns for 132 KV line on both tower side and line side i.e. two per string (Excluding Material & Transportation cost)(with lefty & Pullies)	per string	853
OM10	5	Providing of Arcing Horns for 132 KV line (Excluding Material & Transportation cost)(without lefty & Pullies)	Each	106
OM11	6	Providing of Arcing Horns for 220 KV line on both tower side and line side i.e. two per string (Excluding Material & Transportation cost)(with lefty & Pullies)	per string	968
OM12	7	Providing of Arcing Horns for 220 KV line (Excluding Material & Transportation cost)(without lefty & Pullies)	Each	106
OM13	8	Providing of Missing angles/ Replacement of rusted angles on the existing towers departmentally (including transporaton charges & Excluding cost of tower parts, bolts & nuts)	Per each	95
OM14	9	Replacement of insulators at Suspension tower of 132 KV line (Excluding Material & Transportation cost)	Per string	1074
OM15	10	Replacement of insulators at Tension tower of 132 KV line (Excluding Material & Transportation cost)	Per string	1817

OM16	11	Replacement of insulators at Suspension tower of 220 KV line (Excluding Material & Transportation cost)	Per string	1181
OM17	12	Replacement of insulators at Tension tower of 220 KV line (Excluding Material & Transportation cost)	Per string	2089
OM18	13	Replacement of 132 KV line single suspension insulator string with double suspension insulator strings (Excluding Material & Transportation cost)	Per string	1610
OM19	14	Replacement of 132 KV line single tension insulator string with double tension insulator strings (Excluding Material & Transportation cost)	Per string	2725
OM20	15	Replacement of 220 KV line single suspension insulator string with double suspension insulator strings (Excluding Material & Transportation cost)	Per string	1710
OM21	16	Replacement of 220 KV line single tension insulator string with double tension insulator strings (Excluding Material & Transportation cost)	Per string	3133
OM22	17	Painting the welded portion of GI bolts and nuts of towers In the section ground level and up to X-arm level including all bolts connecting the bracings at the bottom x-arm level with one coat of zinc rich paint including cost of paing.	Each	4.00
OM23	18	Fixing of earth bonds for existing transmission line towers	Each	106.00
	19	Re-Stringing of power conductor on the existing lines (for correction of sag) including fixing of tension insulators / suspension insulators, Hardware and accessories, rough sagging, jointing, tensioning, clipping and fixing of performed armour rods and ibration dampers, measuring ground clearances wherever necessary. Which includes the works involved in the crossing of LT, 11 KV & 33 KV power lines viz dismantling and restringing of conductor.		
OM24	a	3. Nos. Zebra conductors	RKM	26869
OM25	b	6. Nos. Zebra conductors	RKM	40302
OM26	c	2. Nos. Panther conductors	RKM	14327
OM27	d	3. Nos. Panther conductors	RKM	21493
OM28	e	6. Nos. Panther conductors	RKM	34033
OM29	f	2. Nos. Moose conductors	RKM	22688
OM30	g	3. Nos. Moose conductors	RKM	34033
OM31	h	6. Nos. Moose conductors	RKM	53734
OM32	i	3. Nos. Bear conductors	RKM	26869
OM33	j	6. Nos. Bear conductors	RKM	40302
OM34	k	3. Nos. Dog conductors	RKM	16119
OM35	l	6. Nos. Dog conductors	RKM	25524
	21	***Loading / Unloading charges :***		
	(a	For above half drum and up to one drum full drum rate	Basic rate of Full Drum	
	(b	For below half drum and for a Piece	Basic rate of Half Drum	

Sd/- S. SUBRAHMANYAM
DIRECTOR (PROJECTS)

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DIVISIONAL ENGINEER – 3 /PM-II
O/o.Chief Engineer (Construction-2)
Vidyut Soudha, Hyderabad.

ANNEXURE- VI
ERRECTION OF TELECOM EQUIPMENT IN SUB STATIONS & LINES

Sl.No.	Description	Unit	SS Rates for 2013-14 (Rs.)
1	Erection of PLCC panel in 220KV/132KV SS	Each	5294
2	Erection of LMU	Each	884
3	Erection of Wave Trap		
i	Fixing of wavetrap on pedastal mounting insulator stack in 400KV	Each	4948
ii	Fixing o f the wave trap on pedastal mounting insulator stack in 200KV	Each	4010
iii	Fixing of the wave trap on Suspension mounting including jumpering in 132KV	Each	2390
4	Erection of PLCC 48V DC/50A, 35A charger in 220KV/132KV	Each	2444
5	Erection of PLCC 48V DC/100A charger in 400 KV SS	Each	7111
6	Erection of 48V/200AH & 250AH battery sets in 132 & 220 KV SS	Each	5545
7	Erection of 48V/400AH battery set in 400 KV SS	Each	7368
8	Erection of OLTE & MUX (Optical line terminal equipment) equivalent to PLCC pannel	Each	5294
9	Erection of FDP(Fibre Distribution Panel in 400KV/220KV/132KV SS (12F)	Each	7515
10	Erection of FDP(Fibre Distribution Panel in 400KV/220KV/132KV SS (24F)	Each	12541
11	Erection of FDP(Fibre Distribution Panel in 400KV/220KV/132KV SS (48F)	Each	22599
12	Erection of 16/16 EPAX equipment in 400KV/220KV/ 132KV SS	Each	2187
13	Erection of RTU panel in 400KV/220KV/132KV SS	Each	13452
14	Erection of protection coupler equipment in 400KV/220KV/132KV SS	Each	2187
15	Laying of optical fibre approach cable in switch yards of 400KV, 220KV & 132KV (Including hardware)	KM	24393
16	Laying of HDPE pipe O.D. 40mm in trenches in 400KV, 220KV & 132 KV SS (Including accessories)	KM	Deleted
17	Laying of HDPE Pipe in trenches in 400KV, 220KV, 132KVSS .	KM	9280
18	Laying of 12F/24 F OPGW cable on 220KV and 400 KV lines (including Splicing and fixing of hardware accessories)	Km	54650
19	Stringing of ADSS type optical fibre cable (12F/24F capacity) on 132KV, 220KV line sections in plane areas/ forest areas/ hill areas separately, inclusive of splicing and fixing of hardware accessories		
i	For plane area	KM	25723
ii	for agency or tribal area (25% extra on Plane area)	KM	32154
iii	for Hill areas(40% extra on Plane area)	KM	36012
iv	for interior area(40% extra on Plane area)	KM	36012
v	for municipal coorporation areas (upto 12 Kms frrom municipality)(25% extra on Plane area)	KM	32154
vi	for municipalites (upto 12 Kms from municipality)(20% extra on Plane area)	KM	30868
20	Fixing of tension clamp set of OFC on 132KV & 220KV towers	per set	1763
21	Fixing of suspension clamp set of OFC on 132KV, 220KV towers	per set	1452
22	Fixing of tension clamp set of OPGW on 400KV lines	per set	2133
23	Fixing suspension clamp set of OPGW on 400KV lines	per set	1822
24	Fixing of splice box on 132KV & 220KV towers	Each	2653
25	Fixing of splice box on 400KV towers	Each	3316
26	Fixing of vibration dampers on 132KV & 220KV towers	Per set	825
27	Fixing of vibration dampers on 400KV towers	Per set	1052
28	Splicing charges for OFC fibres laid on 132KV, 220KV, 400KV lines in plane Areas/Forest/ Hill Areas/ Municipal limits, separately for each case		
i	For plane area	Each fibre splice	419
ii	for agency or tribal area	Each fibre splice	524
iii	for Hill areas	Each fibre splice	586
iv	for interior area	Each fibre splice	586
v	for municipal corporation areas (upto 12 Kms from municipalities)	Each fibre splice	524
vi	for municipalities (upto 12 Kms from municipalities)	Each fibre splice	503
29	Splicing charges for OFC fibres laid in Offices at Hyderabad and Rangareddy Districts	Each fibre splice	220
30	Erection of RCC manhole for underground OFC works including supply & installation	KM	Deleted

Sl.No.	Description	Unit	SS Rates for 2013-14 (Rs.)
31	Erection of RCC Joint Chambers.	No	3480
32	Blowing(laying)unarmoured UG OFC 24F/48F (DWSM)in the existing HDPE duct in case of underground works	KM	19599
33	Fixing of ADSS type OFC to the tower members with ties, clamps etc.		
i	for 220kv/132 kv	Each	1446
ii	for 400kv	Each	1808
34	Laying of aerial type OFC (12F) on 33KV/11KV HT/LT poles	KM	8522
35	Laying of 6 pair telephone cable in the trenches in 132KV, 220KV & 400KV	KM	6449
36	Laying of Cat 5E/6 Cables in Offices.	KM	3307
37	Laying of Cat 5E/6 Cables with Conduit pipes along with accessories in Offices.	KM	9922
38	Fixing of 6U × 19 inch Rack in Offices for ERP works	Each	276
39	Laying of single pair telephone cable in the trenches in 132KV, 220KV & 400KV	KM	5953
40	Laying of 25sq mm battery cable in control room in 132kv, 220KV & 400KV	KM	14056
41	Laying of Co-axial cable from switch yard gantry tower to communication room in the existing trench	KM	13494
42	Laying of 6 pair telephone cable on overhead poles LT & HT	KM	4961
43	Laying of single pair telephone cable on overhead poles LT & HT	KM	4961
44	Laying of RF cables in 132KV, 220KV & 400 KV SS	KM	13494
45	Digging of 1 X 1 X 1 (Cu.mt) ducts for laying of telephone cable in 132KV, 220KV, 400KV SS	Cu.mt	514
46	Excavation, refilling & closing of ducts of 1 X 1 X 1 (Cu.mt) in 132 KV, 220KV and 400 KV SS premises	Cu.mt	1027
47	Erection of earth pit as per standards in 132KV, 220KV SS for communication purpose	Each	10648
48	Erection of earth pit as per standards in 400 KV SS	Each	10648
49	Erection of VSAT equipment in 132KV, 220KV, 400 KV SS	Each	5043
50	Dismantling of VSAT equipment of 132KV, 220KV, 400 KV SS	Each	2521
51	Loading/unloading charges for PLCC equipment in 132KV SS, 220KV/400KV in to vehicle		
i	for single channel PLCC pannel	Each	514
ii	for Twin channel PLCC pannel	Each	514
52	Loading/unloading charges for 48V/35A, 50A, chargers	Each	514
53	Loading/unloading charges for 48V/100A chargers	Each	771
54	Loading/unloading charges for OLTE/MUX equipment	Each	771
55	Loading/unloading charges for RTU panels	Each	771
56	Loading/unloading charges for EPAXs	Each	257
57	Loading/unloading charges for battery sets 48V/150 AH, 250 AH, 400 AH		
i	for 150 AH	Each	514
ii	for 250 AH	Each	514
iii	for 400AH	Each	771
58	Loading/unloading charges for LMUs	Each	257
59	Loading/unloading charges for Wavetrap		
i	132KV wave trap	Each	257
ii	220KV Wave Trap & 400 KV	Each	514
60	Dismantling of exisiting PLCC chargers (35A, 50A, 100A)		
i	35/50A	Each	1222
ii	100A	Each	3555
61	Dismantling of existing 48V/165AH, 200AH, 250AH battery sets	Each	2773
62	Dismantling of existing 48V/400 AH battery sets	Each	3684
63	Dismantling of existing RTU, OLTE/MUX equipment		
I	RTU	Each	6726
ii	OLTE/MUX	Each	2647

Sl.No.	Description	Unit	SS Rates for 2013-14 (Rs.)
64	Dismantling of EPAXs	Each	1094
65	Dismantling of wave traps on 132 KV/220KV SS/400 KV SS separately		
i	50% of Erection of 2000A/1 m H Wave Trap(400 kv)	Each	2474
ii	50 % of Erection of 1250A/0.5 mH Wave Trap(220 kv)	Each	2005
iii	50% of Erection of 630A/0.2mH Wave Trap (132 KV)	Each	1195
66	Dismantling of 12F/24F ADSS cable from 132KV, 220KV SS lines	Each	12862
67	Dismantling of 12F/24F OPGW cable from 132KV, 220KV SS,400KVSS lines	Each	27325
68	Dismantling and bringing down of splice boxes on 132KV, 220KV towers	Each	1326
69	Dismantling and bringing down of splice boxes on 400KV towers	Each	1658
70	Hiring charges of 5 KVA Diesel Generator per day for attending OFC break down works	Each	783
71	Hiring charges of 230V AC inverter (2KVA) with battery backup for attending OFC break down works	Each	783
72	Hiring charges of 8X8X10(C.u.ft) closed tent shutter for attending splicing works for attending OFC break down works	Each	551
73	Dismantling of VHF 30 ft masts with Gay wires etc.	Each	1614
74	Dismantling of 10 ft/20 ft trylon masts	Each	1303
75	Dismantling of 80ft/100 ft VHF/UHF towers	Each	Deleted
	UGOF cabling works rates		
	UGFO Cabling		
76	Survey & documentation		
	Survey of route, providing as built drawing, documentation for unarmoured underground optical fibre cable	Km	3268
77	Excavation &Backfilling		
	All types of soil, road, footpath, including PCC, sand, warning brick/stone, semi-circular RCC split cover etc. for underground fibre optic cable.	Km	130616
78	Warning Tape (including supply and installation).	Km	19598
79	Laying of PLB HDPE pipe O.D. 40mm (including accessories)	Km.	deleted
	Laying of PLB HDPE pipe O.D. 40mm	Km	9280
80	Installation of HDPE pipe by **Trenchless digging**		
(a)	0-10 mtrs	mtr	522
(b)	> 10 and up to 30 mtrs	mtr	588
(c)	More than 30 mtrs	mtr	653
81	Laying of GI pipe 100mm (Nominal bore), Including accessories.	mtr	166
82	Laying of RCC hume pipe (NP3), 100mm Diameter (Inside), Including accessories.	mtr	249
83	Laying of Unamoured Underground Optical Fibre Cable - 24 Fibers DWSM	Km	19599
84	Installation of Joint box in underground (Including splicing & testing) - 24 Fibers	No.	4086
85	RCC Manholes (supply & installation)		
86	For Joint locations.	No.	deleted
(b)	For providing Service loops at crossings.	No.	deleted
87	Erection of RCC Joint Chambers	No.	3480
88	Brick walled Manhole(supply & installation)		
(a)	For Joint locations.	No.	deleted
(b)	For providing Service loops at crossings.	No.	deleted
89	Installation of PLB HDPE pipe on wall in building premises including routing of OFC through it	mtr	330
90	Reinstatement of excavated area/damages (in road. pavement, footpath etc.)	Sq.mtrs	165
91	Main Distribution frame (100 pairs)	Nos.	1634

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