

## TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

**Sub:** Revised Administrative approval for erection of 220/132 kV substations at Gunrock, Imlibun (GIS) & Hayatnagar and 132 kV GIS Substations at Moosarambagh, Miralam Filter bed, Patigadda, Balkampet and Osmania University along with connected Under Ground XLPE Cables – Under Modernization and Strengthening of Hyderabad Metropolitan area – Revised administrative approval - Accorded.

**Ref:** 1) T.O.O Ms.No.308 dt. 07.2.2007  
2) T.O.O Ms.No.149 dt. 28.7.2010

**T.O.O (CE-Construction) Ms. No.379**

**Dated: 17.01.2012**

The Twin cities of Hyderabad and Secunderabad witnessed manifold Socio-Economic growth in the recent years and it is likely to grow at a much faster pace especially with the coming up of IT parks, Biotechnology parks etc. While the twin cities are witnessing unprecedented growth, particularly in the services and IT sectors, the need to supply quality power in the city was strongly felt. The transmission and distribution system in the twin cities has been witnessing overloading due to insufficient network affecting the quality of power supply. The network development of transmission and distribution system of the twin cities could not keep pace with the city's growth due to technical and commercial reasons such as difficulties in obtaining sufficient site for erection of substations and right of way problems for taking overhead lines etc.

In order to cope up with the load growth in the twin cities and to provide quality power supply, a scheme for erection of 3 Nos. 220 kV Substations, 5Nos. 132 kV GIS Substations along with connected lines & bay extensions for an amount of Rs.1410. Crores is formulated by revising the T.O.O No.149 dt. 28-7-2010 to suit the present network conditions and to develop the transmission network in Hyderabad Metropolitan areas as detailed below:

***220kV Substations along with connecting UG XLPE Cables at:***

Gunrock (Conventional)  
Hayatnagar (Conventional)  
Imlibun (GIS)

***132kV GIS Substations along with connecting UG XLPE Cables at:***

Osmania University(Fever Hospital)  
Pattigadda  
Balkampet  
Moosarambagh  
Miralam filter bed ( PTO)

Since all the proposed substations are located in highly populated areas of the twin cities where availability of sufficient land and take off for overhead transmission lines is extremely difficult due to the right of way problems and lack of necessary clearances, it is proposed to construct SF6 Gas Insulated Switchgear (GIS) substations with 220kV or 132kV under ground XLPE cables.

Due to present system requirement certain changes are made to the existing routes of phase-I&phase-II.As such certain single circuit routes are converted to double circuits &certain routes are deleted.

After careful consideration, APTRANSCO accords approval for the above scheme at a revised cost of Rs. 1410 Crores with revised scope of work as per the break up indicated below:

**ABSTRACT OF THE ESTIMATE (Rs. 1410 Crores)**

Sl. No.	Name of the Substation/line	Voltage level (kV)	MVA/CKM	Cost in Rs. crores
<b>PHASE-I</b>				
1	Gunrock Substation(Conventional)	220/132	2 X 160 MVA	25.05
2	Imliban Substation(GIS)	220/132	2 X 160 MVA	62.31
3	Fever Hospital GIS Substation	132/33	2 X 80 MVA	27.29
4	Balkampet GIS Substation	132/33	2 X 80 MVA	27.31
5	220KVMalkaram SS to 220kV Gunrock SS U/G DC XLPE cable	220	34	321.58
6	220kV Chandrayanagutta SS to 220kV Imliban SS U/G DC XLPE cable	220	22	216.64
7	220/132 kV Osmania University to 132/33 kV Chilkalguda GIS SS,	132	5	30.86
8	Erragadda to Balkampet U/G SC line	132	5	31.83
9	Balkampet to Pattigadda U/G SC line	132	8	53.18
10	Pattigadda to Hussain sagar U/G SC line	132	6	42.22
11	Bay extension at Malkaram SS	220	2 Nos.	2.34
12	Bay extension at Chandrayanagutta SS	220	2 Nos.	2.34
13	Bay extension at Hussain Sagar Substation(GIS)	132	1 No.	10.87
14	Additional Bay extension at Fever hospital Substation(GIS)	132	1 No.	10.87
15	Communication facility			5
	<b>Sub- Total</b>			<b>869.69</b>

Sl. No.	Name of the Substation/line	Voltage level (kV)	MVA/CKM	Cost in Rs. crores
<b>PHASE-II</b>				
1	Hayathnagar Substation (Conventional)	220/33	2 X 50 MVA	15.82
2	Pattigadda GIS Substation	132/33	2 X 80 MVA	30.19
3	Additional GIS Bay extension at Pattigadda GIS SS	132	1 No.	10.87
4	PTO (Miralam Filter Bed) GIS Substation	132/33	2 X 80 MVA	29.08

5	Moosarambagh Substation	132/33	2 X 80 MVA	30.19
6	DC XLPE UG cable from Marripally (common point) Near Nagole to proposed 220/132/33KV Hayatnagar SS	220	19	184.06
7	Erection of 220KV Multi Circuit for line about 14Km from 220KV Ghanapur to Marripally (common point) near Nagole.	220KV	14KM	18.78
8	Bay extension at Ghanapur SS	220	2 Nos.	2.34
9	Pattigadda to Gunrock U/G DC line	132	14	77.08
10	Imlibun to PTO U/G DC line	132	6	36.51
11	LILO of 132 KV GHNPR-CHG line to Moosarambagh by U/G DC line	132	1	9.64
12	Narayanaguda to Fever Hospital UG SC Cable	132	3	22.08
13	Fever Hospital to Osmania University UG DC Cable.	132	10 CKM	55.87
14	Bay Extensions at Gunrock SS	132	2 No.	1.06
15	GIS Bay extension at Chilkalguda GIS SS	132	1 No.	10.87
16	Communication facility			5
			<b>Sub- Total</b>	<b>539.44</b>
	<b>Total Project Cost</b>			<b>1409.13</b>

**Or Say Rs.1410Crores**

The earlier Administrative approval accorded vide T.O.O Ms.149 dt.28-07-2010 for Rs.1392.00 Crores stands cancelled, due to the above Modifications, Additions /Deletions,

Due to 132/33 kV Osmania University shifted to Fever Hospital, the scope of 132 kV Fever Hospital with connected cable issued vide TOO No. 283, dt. 15.03.2008 for erection of 132/33 kV Fever Hospital GIS, 132 kV Narayanaguda GIS SS and 220 kV Bachupalli SS with connected cables will be deleted from the approved TOO No. 283, dt. 15.03.2008 and the revised administrative approval for 132 kV Narayanaguda GIS SS and 220 kV Bachupalli SS along with connected cables will be issued accordingly.

The scheme will be executed with financial assistance extended by M/s. JICA/PFC, other funding agencies and with A.P. Transco funding in case of full loan is not sanctioned.

The Chief Engineer/Construction is hereby authorized to take up the work. This authorization is issued with the concurrence of Director (Finance & Revenue) vide U.O.No. 4998 Dated. 29.12.2011

“In exercise of the powers conferred by G.O. Ms. No. 115 dated 07.10.2003 of Government of Andhra Pradesh, APTRANSCO or their authorized representatives shall have the powers that the Telegraphic Authority possesses under the provision of the Indian Telegraph Act 1885 (13 of 1885)

for placing of any wires, poles, towers etc., for Transmission of electricity or for the purpose of telephonic or telegraphic communication facility necessary for the proper coordination of the works of APTRANSCO.

**BY ORDER AND IN THE NAME OF TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED**

**Sd/-  
Director/Transmission**

To  
The Chief Engineer/Construction-1/Vidyut Soudha/Hyderabad.

**Copy to:**

The Chairman & Managing Director/APCPDCL.  
The Chief Engineer/Power Systems  
The Chief Engineer/Rural Electrification & Operation  
The Chief Engineer/Planning, RAC & Reforms  
The Chief Engineer/ Telecom/V.S./Hyd.  
The Chief Engineer/Metro Zone/Hyderabad.  
FA & CCA (CF)/Vidyut Soudha/Hyderabad  
FA & CCA (A&E)/Vidyut Soudha/Hyderabad  
The Superintending Engineer/TLC/Metro/Hyderabad  
The Superintending Engineer/PM-1//VS/Hyd,  
Personal Secretary to the Chairman & Managing Director  
Personal Secretary to the Additional Joint Managing Director/ Distribution  
Personal Secretary to the Joint Managing Director/Vigilance & Security  
Personal Secretary to the Director/Finance & Revenue  
DE (T) to Director/Projects  
DE (T) to Director/Transmission  
DE(T) to Director/ Grid Operation,  
D2/D3 SE/PM-1CE/Construction  
T.O.O Section.

**// FORWARDED BY ORDER //**

**ASSISTANT DIVISIONAL ENGINEER**