



TRANSMISSION CORPORATION OF TELANGANA LIMITED

TSTRANSCO - Yadadri Thermal Power Evacuation Scheme (5 x 800MW) - Erection of 400/220/132kV Choutuppal Sub-station, 400/220kV Damaracherla Sub-station and connected network - Administrative Approval – Accorded.

T.O.O. (CE-400kV) Ms.No.451

Dt.10.10.2019

Read the following: -

PROCEEDINGS:

1. TSGENCO has envisaged construction of Yadadri Thermal Power Plant at Damaracherla with an installed capacity of 4000MW (5x800). Accordingly, TSTRANSCO have formulated the Power Evacuation Scheme and CEA accorded approval for subject Scheme during the 39th meeting of Standing Committee on Power System Planning of Southern Region.
2. Subsequently, downstream connectivity to 400/220/132kV Choutuppal SS was revised and the revised connectivity was technically found feasible as per System studies.
3. CEA during the 1st meeting of Southern Region Standing Committee on Transmission suggested to implement 1 No. 125MVAR Bus Reactor at 400/220/132kV Choutuppal SS.
4. Further it was envisaged for construction of 400/200kV Substation at Damaracherla in order to facilitate startup power to Yadadri TPP at 400kV level duly taking supply from 220kV Miryalaguda SS and also to meet the future load growth in industrial, domestic and agricultural sectors at Nalgonda, Suryapet and Khammam districts.
5. Technical Committee have proposed certain revisions in the subject scheme based on the present system network, to provide startup power to Yadadri TPP at 400kV level, to reduce the transmission losses, to improve system voltage, to optimize the scheme cost and also to provide alternate supply to the 400kV Choutuppal SS, 220kV Miryalaguda and Huzurnagar substations and are technically found feasible during studies.

6. Accordingly, Yadadri Thermal Power Evacuation Scheme(5x800MW) is formulated and the Scheme contemplates the following Lines and Sub-stations:

- i) Erection of 400/220kV Damaracherla SS with 3x500MVA PTRs.
- ii) Erection of 400/220/132kV Choutuppal SS with 2x500MVA+2x100MVA PTRs+1x125MVAR Bus Reactor.
- iii) 400kV QMDC Line from Yadadri TPP switchyard to proposed 400/220/132kV Choutuppal Sub-Station -110 kMs
- iv) 400kV QMDC Line from Yadadri TPP switchyard to 400/220kV Dindi Sub-Station -120 kMs
- v) 400kV QMDC Line from Yadadri TPP switchyard to proposed 400/220kV Damaracherla Sub-Station - 8 kMs
- vi) 400kV QMDC Line from Yadadri TPP switchyard to 400/220kV Jangaon Sub-Station-150 kMs
- vii) Double circuit LILO of existing 400kV Khammam-Mamidipally TMDC Line to proposed 400/220/132kV Choutuppal Sub-Station -2x15 kMs
- viii) 220kV TMDC Line from proposed 400/220kV Damaracherla SS to 220kV Miryalaguda Sub-Station -25 kMs.
- ix) 220kV Single Moose DC line from proposed 400/220kV Damaracherla SS to 220kV Huzurnagar Sub-Station – 45kMs
- x) Double circuit LILO of existing 220kV Narketpally-Malkaram DC line to proposed 400/220/132kV Choutuppal SS on multi circuit towers-15 kMs.
- xi) Double circuit LILO of 132kV Ramannapet-Choutuppal DC line to proposed 400/220/132kV Choutuppal SS on multi circuit towers-10 kMs
- xii) 132kV DC line from proposed 400/220/132kV Choutuppal SS to upcoming 132kV Dandumalkapur SS - 25 kMs.
- xiii) 400kV Quad Bay extensions at 400kV Jangoan SS (2 Nos.) and 400kV Dindi SS (2 Nos.) - 4Nos.
- xiv) 220kV Bay Extensions at 220kV Miryalaguda SS (2Nos) & 220kV Huzurnagar SS (2 Nos)-4 Nos.
- xv) 132kV Bay Extension at 132kV Dandumalkapur SS - 2 Nos.

7. After careful examination, TSTRANSCO accords Administrative approval for “Yadadri Thermal Power Evacuation Scheme(5x800MW)- Construction of 400/220/132kV Substation at Choutuppal, 400/220kV Substation at Damaracherla and connected network”, at an estimated cost of Rs.2144.65Crores and Interest During Construction of Rs.209.70Crores. The total cost of the scheme including IDC is Rs.2354.35Crores as per the Annexure enclosed.
8. Chief Engineer/400kV/Vidyut Soudha and Chief Engineer/Construction/Vidyut Soudha are here by authorized to take up the 400kV and 220/132kV works respectively and shall provide the necessary budget as per the scope.
9. The scheme will be executed with capital funds of TSTRANSCO/ Loan sanctioned by REC/PFC/any other Financial Agencies.
10. This order is issued as per the minutes of 34th Board Meeting held on 26.09.2019 at Vidyut Soudha.

(BY ORDER AND IN THE NAME OF TRANSMISSION CORPORATION OF
TELANGANA LIMITED)

Encl: Annexure

D.PRABHAKAR RAO
CHAIRMAN AND MANAGING DIRECTOR

To:

1. Chief Engineer/ 400kV/TSTRANSCO/ Vidyut Soudha, Hyderabad.
2. Chief Engineer/Construction/TSTRANSCO/ Vidyut Soudha, Hyderabad.

Copy to:

- 1) Executive Director/LIS/TSTRANSCO/VS/Hyd.
- 2) Executive Director (Finance)/ TSTRANSCO/ Vidyut Soudha/Hyderabad.
- 3) Chief Engineer/ Power Systems/TSTRANSCO/ Vidyut Soudha/Hyderabad.
- 4) Chief Engineer/ 400kV/Construction/TSTRANSCO/Warangal.
- 5) Chief Engineer/Transmission/TSTRANSCO/Vidyut Soudha/Hyderabad.
- 6) Chief Engineer/ SLDC/TSTRANSCO/ Vidyut Soudha/Hyderabad.
- 7) Chief Engineer/ Telecom/TSTRANSCO/ Vidyut Soudha/Hyderabad.
- 8) Chief Engineer/ Civil/TSTRANSCO/ Vidyut Soudha/Hyderabad.
- 9) Chief Engineer/Comml.& RAC/TSTRANSCO/VS/Hyd.
- 10) Chief General Manager/HRD/TSTRANSCO/Vidyut Soudha/Hyderabad.
- 11) Chief Engineer/Metro Zone/ TSTRANSCO/ Hyderabad.
- 12) Chief Engineer/Rural Zone/ TSTRANSCO/ Hyderabad.

- 13) Chief Engineer/ Karimnagar Zone /TSTRANSCO/ Karimnagar.
- 14) Chief Engineer/Warangal Zone/ TSTRANSCO/ Hyderabad.
- 15) SE(T) to CMD/TSTRANSCO/VidyutSoudha/ Hyderabad.
- 16) Superintending Engineer/Power Systems/TSTRANSCO/Vidyut Soudha/Hyd.
- 17) Superintending Engineer/400kV/Const./Metro/TSTRANSCO/Hyderabad.
- 18) Superintending Engineer/400kV/Const./Rural/TSTRANSCO/Hyderabad.
- 19) Superintending Engineer/400kV/Const./TSTRANSCO/Warangal.
- 20) DE(T) to Director (Projects)/TSTRANSCO/ VS/ Hyd.
- 21) DE(T) to Director (Transmission)/TSTRANSCO/ Vidyut Soudha/ Hyd.
- 22) ADE(T) to Director (Lift Irrigation)/ TSTRANSCO/ VS/ Hyderabad.
- 23) AE(T) to Director (Grid Operation)/ TSTRANSCO/VS/ Hyderabad.
- 24) P.S. to JMD (Finance, Comml., & HRD) /TSTRANSCO/VS/Hyd.
- 25) Company Secretary/TSTRANSCO/ Vidyut Soudha/Hyderabad.
- 26) Estate Officer/TSTRANSCO/ Vidyut Soudha/Hyderabad.
- 27) Central Record Section – 2 copies.

ANNEXURE-I				
Sl. No.	Description of Line/ Substation	Length/ No. of bays		Amount in Lakhs
A:400kV Transmission System:				
1	400/220/132kV Sub Station at Choutuppal	2x500MVA +2x100MVA +1x125MVAR		17,840.62
2	400 kV Lines :			
i	400kV QMDC line from Yadadri TPP (Damaracherla) Switchyard to Proposed 400/220/132 kV Choutuppal SS	110	KM	34,210.00
ii	LILO of both circuits of existing 400kV Mamidipally-Khammam TMDC Line to Proposed 400/220/132kV Choutuppal SS	30 (2x15)	KM	6,300.00
iii	400kV QMDC line from Yadadri TPP Switchyard to 400/220 kV Dindi SS	120	KM	37,320.00
3	400kV Bay Extensions :			
i	Quad Bay Extensions at 400/220kV Dindi SS	2	Nos.	1,585.66
	Total of A:			97,256.28
C : Communication Equipment:				
i	400kV Works	LS		1919.11
	Total of C:			1919.11
	Total (A+B+C) :			99,175.39
D)	Special T & P @ 1% :			991.75
E)	Contingencies (3%) :			2,975.26
G)	Estt. and other charges @ 10.75% :			10,661.35
	Grand Total :			113,803.76
	or Say (Rs. in Crores) ::			1,138.04
	Interest During Construction (Rs. in Crores) :			114.05
	Total (including IDC) -(Rs. in Crores) :			1,252.09

Sd/-
CHIEF ENGINEER / 400kV

ANNEXURE-II				
Sl. No.	Description of Line/ Substation	Length/ No. of bays		Amont in Lakhs
A:400kV Transmission System:				
1	400/220kV Sub Station at Damaracherla	3x500MVA		14,093.16
2	400 kV Lines :			
i	400kV QMDC Line from Yadadri TPP Switchyard to proposed 400/220 kV Damaracherla SS	8	KM	2,488.00
ii	400kV QMDC line from Yadadri TPP Switchyard to 400/220 kV Jangoan SS	150	KM	46,650.00
3	400kV Bay Extensions :			
i	Quad Bay Extensions at 400kV Jangoan SS	2	Nos.	1,585.66
	Total of A:			64,816.83
B:220kV & 132kV Transmission System:				
1	220 kV Lines:			
i	220kV TMDC Line from proposed 400/220kV Damaracherla SS to 220kV Miryalaguda SS	25	KM	5,450.00
ii	220kV SMDC Line from proposed 400/220kV Damaracherla SS to 220kV Huzurnagar SS	45	KM	6,210.00
iii	LILO of both circuits of 220kV Malkaram-Narketpally DC line to proposed 400/220/132kV Choutuppal SS on Multi circuit towers	15	KM	4,410.00
2	220kV Bay Extensions:			
i	Bay Extensions at Huzurnagar and Miryalaguda SS	4	Nos.	724.00
3	132kV Lines			
i	LILO of both circuits of 132kV Ramannapet-Choutuppal Line to proposed 400/220/132kV Choutuppal SS on Multicircuit Towers	10	KM	1,730.00
ii	132kV DC line from 400/220/132kV Choutuppal SS to proposed 132kV Dandumalkapur SS	25	KM	2,450.00
4	132kV Bay Extensions			
i	Bay Extensions at 132kV SS Dandumalkapur	2	Nos.	212.00
	Total of B:			21,186.00

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C : Communication Equipment:				
i	400kV Works	LS		673.30
ii	220kV and 132kV Works	LS		1045.78
	Total of C:			1719.08
	Total (A+B+C) :			87,721.91
D)	Special T & P @ 1% :			877.22
E)	Contingencies (3%) :			2,631.66
G)	Estt. and other charges @ 10.75% :			9,430.10
	Grand Total :			100,660.89
	or Say (Rs. in Crores) ::			1,006.61
	Interest During Construction (Rs. in Crores) :			95.65
	Total (including IDC) - (Rs. in Crores) :			1,102.26

Sd/-
CHIEF ENGINEER / 400kV