

# TRANSMISSION CORPORATION OF TELANGANA LIMITED

## A B S T R A C T

Extension of Power Supply to meet the Additional Load requirement of **3425 MW** at various Pumping Stations of LINK-I, LINK-II and LINK-IV under Kaleshwaram Lift Irrigation Project required for **lifting of additional 1 TMC of water from Godavari Basin** – Bulk Load Works – Administrative Approval – Accorded.

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T.O.O. (CE-LIS) Ms.No. 848

Dt. 18 -09-2020.

Read the following:-

- Ref: 1. Lr.No. ENC/KP/LMD/KNR/151/H, Dt:12.04.2019  
 2. Lr.No.ENC/KPH/DCE/DEE-2/AEE-4/P-Conv. System/2019/3154, Dt:27.10.19  
 3. Lr.No. ADV/LIS/Kaleshwaram/Power Calculations/D.No.23/2020, Dt:28/01/2020

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## PROCEEDINGS:

1. Chief Engineer/Kaleshwaram Project/I&CAD and Advisor to the Govt. of Telangana for Lift Irrigation Projects vide letters cited under ref(1) to (3) have requested for extending the power supply to the additional load power requirement for the additional pumps to be installed at Medigadda, Annaram and Sundilla Pump Houses under Link- I , at Reach- I (Velgatoor ) & Reach-II ( Pegadapally) in Link- II and at Reach I ( Mid Manair Reservoir to Ananthagiri Reservoir), **Reach-2**(Ananthgiri to DC-2 at Chinnagundavalli village) and **Reach-3**(Chinnagundavalli village to Sri Komaravelli MallannaSagar) in Link- IV for lifting additional **1 TMC** of water from Godavari Basin (inaddtion to the existing 2 TMC) under Kaleshwaram Lift Irrigation Project.
2. The power requirement details at Link- I, Link- II and Link- IV under Kaleshwaram Lift Irrigation Scheme for additional Loads at each pumping station as furnished by I&CAD department are as follows.

### I. Link-I:

I.

S.No.	Pump Location	Additional No. of Pumps/ Motors & Power Requirement
1	Medigadda Lift System	6 Nos x 40 MW = 240 MW
2	Annaram Lift System	4 Nos x 40 MW = 160 MW
3	Sundilla Lift System	5 Nos x 40 MW = 200 MW
	<b>TOTAL (in MW)</b>	<b>600 MW</b>

### II. Link-II

S.No.	Pump Location	Additional No. of Pumps/Motors & Power Requirement
1	Reach-I ( Velgatoor)	5 Nos x 135 MW = 675 MW
2	Reach-II ( Pegadapally)	4 Nos x 135 MW = 540 MW
	<b>TOTAL (in MW)</b>	<b>1215 MW</b>

### III. Link-IV

Sl.No	Pump Location	Additional No. of Pumps/Motors & Power Requirement
1	<b>Reach -1:</b> Parallel Conveyor system for lifting water from Mid Manair Reservoir to Ananthagiri reservoir: <b>Veljipur</b>	4x125 MW = 500 MW
2	<b>Reach-2:</b> Parallel Conveyour system for Ananthgiri to DC-2 at Chinnagundavalli village: <b>Chinagundavalli</b>	6x125 MW =750 MW
3	<b>Reach-3</b> (Chinnagundavalli village to Sri Komaravelli MallannaSagar): <b>Tukkapur New</b>	4x90MW =360 MW
	<b>TOTAL (in MW)</b>	<b>1610 MW</b>

3. After careful consideration, TSTRANSCO has approved the Scheme at a cost of **Rs. 2292.88 Crores** (Rupees Two Thousand Two Hundred Ninety Two Crores and Eighty Eight lakhs only) including 10% overhead charges for the works of extension of H.T supply to Pumping Stations at Medigadda, Annaram and Sundilla Pump Houses under Link- I , at Reach- I ( Velgatoor ) & II ( Pegadapally) in Link- II and at Reach I (Mid Manair Reservoir

to Ananthagiri Reservoir), **Reach-2**(Ananthgiri to DC-2 at Chinnagundavalli village) and **Reach-3**(Chinnagundavalli village to Sri Komaravelli MallannaSagar) in Link- IV under Kaleshwaram Lift Irrigation Project for a Total C.M.D of **3605.27 MVA** at 400kV and 220kV level as **Bulk Load Works** as detailed below. Considering the above, the estimated cost of the scheme is as detailed below:

		Rs. in Crores
a)	Scheme cost for works -	1932.355 Crores
b)	Development Charges - @ Rs.1000/- per KVA for <b>3605.27 MVA</b>	( + ) 360.527 Crores
<b>Total</b>		<b>2292.882 Crores</b>
** Security Deposit Charges to be paid to TS NPDCL at the rate of Rs.1000/- per KVA for a load of <b>3605.27MVA</b>		360.527 Crores
Service connection charges Rs 30,000 per Connection		0.0240 Crores
<b>Total</b>		<b>Rs. 360.551Crores</b>

\*\*The above charges of **Rs.360.551Crores** which includes connection charges @ Rs30,000 per connection are required to be paid to TS NPDCL by I&CAD, Govt. of Telangana, at the time of release of service connection

4. The Salient features of the Scheme are as follows:

Sl.No.	Description	Amount (Rs. in Lakhs)
<b>LINK - I PACKAGE</b>		
I(a)	Erection of 400/220 KV Annaram Substation with 3 Nos 500 MVA Transformers and 1 No. 125 MVAR Reactor Bay	17007.00
(b)	400 kV QMDC line from SCCL(Jaipur) to proposed 400/220 kV Annaram Substation : Length - 20 KM	6720.00
(c)	220 kV TMDC line from Medigadda to proposed 400/220 kV Annaram Substation : Length 50 KM	9000.00
(d)	2 No. 400kV Feeder Bay Extensions at 400 kV Switchyard at SCCL(Jaipur)	1869.00
(e)	2No.s 220 kV Bay Extensions at Medigadda 220/11 kV Substation	683.00
<b>Sub-total Link- I:</b>		<b>35279.00</b>

<b>LINK - II PACKAGE</b>		
II(a)	Erection of 400 KV Switching Station at Vadkapur ( Kachapur)	15230.00
(b)	LILO of 400kV QMDC Line from STPP Jaipur- Gajwel 400/220/132kV SS to Vadkapur ( Kachapur) SS: Length 2x 5 KM	3360.00
( c)	LILO of 400kV QMDC Line from Telangana STPP NTPC (2x800MW)- 400/220/132kV Narsapur SS to Vadkapur ( Kachapur) SS: Length 2 x 5 KM	3360.00
(d)	400kV QMDC Line from 400kV Vadkapur (Kachapur ) Switching station to 400/220kV Ramadugu SS : Length 18 KM	6048.00
<b>SUB-TOTAL(II):</b>		<b>27998.00</b>
III (a)	Erection of 400/11KV Pegadapally ( Namapur) Substation Terminal and Metering Arrangement with 4 Nos 400kV QM Feeder Bays with 6 No.s Transformer Bays and 1No. 125 MVAR Reactor Bay	8849.00
(b)	400kV QMDC Line from 400kV Vadkapur Switching station to 400/11kV Pegadapally( Namapur) SS- : Length 32 KM	10752.00
(c)	400kV QMDC Line from 400kV Velgatoor Switchyard to 400/11kV Pegadapally ( Namapur) SS- : Length 29 KM	9744.00
<b>SUB-TOTAL(III)</b>		<b>29345.00</b>
IV(a)	Erection of 400/11KV VELAGATOOR Substation Terminal and Metering Arrangement with 4 NOS 400kV QM Feeder Bays with 7 No.s Transformer Bays and 1No. 125 MVAR Reactor Bay	9949.00
( b)	400kV QMDC Line from 400kV Vadkapur Switching station to 400/11kV Velgatoor SS- : Length 35 KM	11760.00
(c)	LILO of 400kVNTPC-Dichpally TMSC to proposed 400/11kV Velgatoor SS with One Circuit of 15Km with TMSC Line .	2595.00
(d)	400kVNTPC-Dichpally TMSC to proposed 400/11kV Velgatoor SS -45Km length - Reconductoring with HTLS Conductor from Ramagundem end.	7470.00
<b>SUB-TOTAL(IV)</b>		<b>31774.00</b>
<b>Total Link- II</b>		<b>89117.00</b>

<b>LINK - IV PACKAGE</b>		
V(a)	Erection of 400/11KV Veljipur Substation Terminal and Metering Arrangement with 2 NOS 400kV QM Feeder Bays with 6 No.s Transformer Bays and 1No. 125 MVAR Reactor Bay	3676.00
(b)	400kV QMDC Line from 400/11 kV Tippapur Substation to 400/11kV Veljipur Switchyard : Length 5 KM	1680.00
(c)	2 Nos 400 kV Bay extensions at 400/11 kV Tippapur Substation	1869.00
<b>SUB-TOTAL(V)</b>		<b>7225.00</b>
VI(a)	Erection of 400/11KV Chinnagundavalli Substation Terminal and Metering Arrangement with 2 NOS 400kV QM Feeder Bays with 7 No.s Transformer Bays and 1No. 125 MVAR Reactor Bay	3676.00
( b )	400kV QMDC Line from 400/13.8/11 kV Chandlapur Substation to 400/11kV Chinnagundavalli Switchyard : Length 5 KM	1680.00
( c )	4 Nos 400 kV Bay extensions at 400/13.8/11 kV existing Chandlapur Substation	3287.00
<b>SUB-TOTAL(VI)</b>		<b>8643.00</b>
VII(a)	400kV QMDC Line from 765/400kV Nizamabad Substation to (PGCIL) to existing 400/13.8/11kV Chandlapur Substation.- 120Km	<b>40320.00</b>
(b)	2 nos 400 kV GIS Bay Extensions at Nizambad 765/400 kV existing Substation ( PGCIL)	<b>6086.00</b>
<b>Sub-total(VII):</b>		<b>46406.00</b>
VIII(a)	Erection of 400/11KV New Tukkapur Substation Terminal and Metering Arrangement with 2 Nos 400kV QM Feeder Bays with 6 No.s Transformer Bays and 1No. 125 MVAR Reactor Bay	4597.00
(b)	400kV TMDC Line from 400/11 kV Tukkapur Substation to 400/11kV New Tukkapur Switchyard: Length 0.5KM	99.50
( c )	2 Nos 400 kV Bay extensions at 400/11 kV Tukkapur Substation	1869.00
<b>SUB-TOTAL</b>		<b>6565.50</b>
<b>Total Link- IV</b>		<b>68839.50</b>
<b>GRAND TOTAL</b>		<b>1,93,235.5</b>

5. “In exercise of the powers conferred under section 164 of the Electricity Act,2003 Central Act No.36 of 2003, the Government of Telangana vide (G.O.Ms.No.115, dt.7.10.2003) conferred upon the Transmission Corporation of Telangana Limited, the Transmission Supply Licensee in the State of Telangana and Northern Power Distribution Company of Telangana Limited and Southern Power Distribution Company of Telangana Limited the distribution and retail supply licensee or their authorized representatives to have the powers for placing of the electric supply lines or telegraphic communications necessary for the proper co-ordination of works that a telegraphic authority possessed under the provision of the Indian Telegraph Act,1885 (Central Act 13 of 1885).
6. The sanction accorded in Para No.3&4 above is subject to instructions issued by the TSTRANSCO on release of services and tariff as may be in force from time to time.
7. The works are under the scope of Chief Engineer/LIS/TSTRANSCO/VS/Hyderabad.
8. An amount of **Rs. 2292.882 Crores** shall be collected as Service line charges and Developmental charges, from Engineer – in – Chief /I&CAD/Kaleshwaram Project/Hyderabad and Engineer – in – Chief /I&CAD/Kaleshwaram Project/Karimnagar for carrying out the works by TSTRANSCO.
9. The Technical Sanction will be accorded by the Chief Engineer/Lift Irrigation Schemes/ Vidyut Soudha/Hyderabad
10. The order is issued with the concurrence of Joint Managing Director (Finance, Comml. & HRD )/ TSTRANSCO vide Regd.No.3172, dated 25.08.2020.

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

Sd/-  
D. PRABHAKAR RAO  
CHAIRMAN AND MANAGING DIRECTOR  
TSTRANSCO

Encl: Annexure -I

To

The Chief Engineer (LIS) / Vidyut Soudha / Hyderabad.

Copy to:

1. The Executive Director (Finance)/ TSTRANSCO/VS/Hyderabad
2. The Chief Engineer/400 KV/VS/Hyderabad.
3. The Chief Engineer / Transmission /TSTRANSCO / VS / Hyderabad.

4. The Chief Engineer / Construction /TSTRANSCO / VS / Hyderabad
5. The Chief Engineer / Power Systems/ TSTRANSCO / VS / Hyderabad
6. The Chief Engineer / SLDC/ TSTRANSCO / VS/Hyderabad.
7. The Chief Engineer/ Comml. & RAC / TSTRANSCO / VS / Hyderabad.
8. The Chief Engineer/ Telecom / TSTRANSCO / VS / Hyderabad.
9. The Chief Engineer/ Civil / TSTRANSCO / VS / Hyderabad.
10. The Chief Engineer / IT & QC/ TSTRANSCO / VS/Hyderabad.
11. The Chief Engineer / P&MM/ TSTRANSCO / VS/Hyderabad.
12. The Chief Engineer / Zone/ TSTRANSCO / Karimnagar.
13. The Chief Engineer/Zone/Hyderabad -Rural/Hyderabad
14. The FA & CCA ( Accounts ) / TSTRANSCO / VS / Hyderabad.
15. CGM/Commercial/TSNPDCL/Warangal
16. The SE(T) to CMD / TSTRANSCO / VS / Hyderabad.
17. The P.S. to the JMD(Finance, Comml. & HRD)/ TSTRANSCO / VS / Hyderabad.
18. The ADE(T) to Director (LIS)/ TSTRANSCO / VS / Hyderabad.
19. The DE (T) to Director ( Projects)
20. The P.S. to the Director( Grid Operation) / TSTRANSCO / VS / Hyderabad.
21. The DE(T) to Director (Transmission) / TSTRANSCO / VS / Hyderabad.
22. The Superintending Engineer /400kV/Construction/TSTRANSCO/Karimnagar
23. The Superintending Engineer/LIS/TSTRANSCO/Karimnagar, Hyderabad Rural
24. The Superintending Engineer/OMC/TSTRANSCO/Karimnagar, Hyderabad, Sangareddy
25. The Executive Engineer/LIS/TSTRANSCO/Karimnagar, Hyderabad
26. The Resident Audit Officer / TSTRANSCO / VS / Hyderabad.