

**सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड**  
**CENTRAL TRANSMISSION UTILITY OF INDIA LIMITED**  
(Wholly Owned Subsidiary of Power Grid Corporation of India Limited)  
(A Government of India Enterprise)

Ref.: C/CTU/AI/00/1<sup>st</sup> CCTP

16<sup>th</sup> November 2021

**OFFICE MEMORANDUM**

**Sub: Inter State Transmission Schemes (costing up to Rs.100 Cr.) to be taken up for implementation under Regulated Tariff Mechanism (RTM).**

The undersigned is directed to inform that CTU has approved implementation of the following ISTS costing less than or equal to Rs.100 Cr. in line with MoP office order dated 28.10.2021 under the Regulated Tariff Mechanism (RTM) mode by the implementing agencies as indicated in the table below:

Sl.	Name of scheme	Implementing Agency
<b>Northern Region</b>		
1.	Implementation of 220 kV bays for RE generators and 400/220kV ICTs at Bikaner-II PS	Bikaner-II Bhiwadi Transco Ltd. (a subsidiary of Power Grid Corporation of India Ltd.) [now known as POWERGRID Bikaner Transmission System Ltd.]
2.	Augmentation of transformation capacity at 400/220 kV Ludhiana (PG) Substation	Power Grid Corporation of India Ltd.
3.	Augmentation of Transformation capacity at 400/220 kV Kurukshetra (PG) & Patiala (PG) Substations	Power Grid Corporation of India Ltd.
<b>Southern Region</b>		
4.	Requirement of 765 kV spare (1-Ph) Reactors unit at 765kV Warangal New (Part-A)	Warora Kurnool Transmission Ltd. (a subsidiary of Adani Transmission Ltd.)
5.	Requirement of 765 kV spare (1-Ph) Reactors unit at 765kV Chilkaluripeta (Part-B)	POWERGRID Southern Interconnector Transmission System Ltd. (a subsidiary of Power Grid Corporation of India Ltd.)
6.	Scheme to bypass NGR to use Switchable Line Reactor as Bus Reactor at 765kV Chilkaluripeta	POWERGRID Southern Interconnector Transmission System Ltd. (a subsidiary of Power Grid Corporation of India Ltd.)
7.	1 no. 400 kV bay at 765/400 kV Kurnool (New) Substation	Power Grid Corporation of India Ltd.
<b>Eastern Region</b>		
8.	Eastern Region Expansion Scheme-XXVI (ERES-XXVI)	Power Grid Corporation of India Ltd.
<b>North Eastern Region</b>		
9.	Additional scope under NERSS-XIII scheme	Power Grid Corporation of India Ltd.

Western Region		
10.	Transmission Network Expansion in Gujarat to increase its ATC from ISTS (Part-A)	Power Grid Corporation of India Ltd.

Detailed scope of works for the above schemes, as approved by CTU are given at **Annexure-I**.

Respective agencies shall enter into concession agreement with CTU for implementation of the above-mentioned schemes through Regulated Tariff Mechanism (RTM).

This issues with the approval of Competent Authority.



**(Partha Sarathi Das)**  
**Sr. General Manager**

**Encl: as stated.**

**To:**

<p>1. <b>Director (Projects)</b> Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon- 122 001</p>	<p>2. <b>CEO</b> M/s POWERGRID Southern Interconnector Transmission Ltd. (PSITL) (a subsidiary of Power Grid Corporation of India Ltd.) B-9, Qutub Institutional Area, Katwaria Sarai, New Delhi – 110016</p>
<p>3. <b>Shri Ajit Ranjan N R Das</b> Project Incharge M/s Bikaner-II Bhiwadi Transco Ltd. (BBTL) (a subsidiary of Power Grid Corporation of India Ltd.) [POWERGRID Bikaner Transmission System Limited] C/o ED (TBCB) Power Grid Corporation of India Ltd. Saudamini, Plot No. 2, Sector-29, Gurgaon- 122 001</p>	<p>4. <b>Shri Ankesh Kumar</b> M/s Warora Kurnool Transmission Ltd. (WKTL) (a subsidiary of Adani Transmission Ltd.) Adani Corporate House, Shantigram, S.G. Highway, Ahmedabad -382421</p>

**Copy to:**

<p>1. <b>Sh. Ishan Sharan</b> Chief Engineer &amp; Member Secretary (NCT) Central Electricity Authority Sewa Bhawan, R.K.Puram, New Delhi-110 066.</p>	<p>2. <b>Sh. Goutam Ghosh</b> Director (Trans) Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110 001</p>
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**Northern Region:****1. Implementation of 220 kV bays for RE generators and 400/220kV ICTs at Bikaner-II PS**

S. No.	Scope of the Transmission Scheme	Capacity	Implementation timeframe
1.	2x500MVA, 400/220 kV ICT at Bikaner-II PS	400/220 kV, 500 MVA ICT –2 nos.  400 kV ICT bays – 2 nos. 220 kV ICT bays – 2 nos.	ICT-I: Mar' 2023 ICT-II: Apr' 2023
2.	4 nos. 220 kV line bays	220 kV line bays - 4 nos.	1 no. of bay: Mar' 2023 1 no. of bay: Apr' 2023 2 no. of bays: Dec' 2023
<b>Total Estimated Cost:</b>		<b>70 Cr.</b>	

**2. Augmentation of transformation capacity at 400/220 kV Ludhiana (PG) Substation:**

S. No.	Scope of the Transmission Scheme	Capacity	Implementation timeframe
1	Replacement of 1x315 MVA, 400/220 kV ICT by 1x500 MVA, 400/220kV ICT at Ludhiana (PG) S/s	400/220 kV, 500 MVA ICT – 1 no.	15 months from issue of OM by CTU
<b>Total Estimated Cost</b>		<b>14 Cr.</b>	

**3. Augmentation of Transformation capacity at 400/220 kV Kurukshetra (PG) & Patiala (PG) Substations:**

S. No.	Scope of the Transmission Scheme	Capacity	Implementation timeframe
1	1x 500 MVA, 400/220 kV ICT at Kurukshetra (PG) S/s	400/220kV 500 MVA ICT:1 no 400 kV ICT bay – 1 no. 220 kV ICT bay – 1 no.	15 months from issue of OM by CTU
2	1x 500 MVA, 400/220 kV ICT at Patiala (PG) S/s	400/220kV 500 MVA ICT:1 no 400 kV ICT bay – 1 no. 220 kV ICT bay – 1 no.	May'23
<b>Total Estimated Cost</b>		<b>54 Cr.</b>	

## **Southern Region**

### **4. Requirement of 765 kV spare (1-Ph) Reactors units at 765kV Warangal New (Part-A):**

<b>SI. No</b>	<b>Scope of the Transmission Scheme</b>	<b>Capacity</b>	<b>Implementation timeframe</b>
Part-A	One spare unit (1-Ph) of 80 MVAR reactor at 765 kV Warangal New along with necessary arrangement to take spare reactor units into service as per the operational requirement.	80 MVAR (1-Ph)	15 months from issue of OM by CTU
	<b>Estimated Cost (Rs Crores)</b>	<b>5.5 Cr.</b>	

### **5. Requirement of 765 kV spare (1-Ph) Reactors units at 765kV Chilkaluripeta (Part-B):**

<b>SI. No</b>	<b>Scope of the Transmission Scheme</b>	<b>Capacity</b>	<b>Implementation timeframe</b>
Part-B	One spare unit (1-Ph) of 80 MVAR reactor at 765 kV Chilkaluripeta along with necessary arrangement to take spare reactor units into service as per the operational requirement.	80 MVAR (1-Ph)	15 months from issue of OM by CTU
	<b>Estimated Cost (Rs Crores)</b>	<b>5.5 Cr.</b>	

### **6. Scheme to bypass NGR to use Switchable Line Reactor as Bus Reactor at 765kV Chilkaluripeta**

<b>SI. No</b>	<b>Scope of the Transmission Scheme</b>	<b>Capacity</b>	<b>Implementation timeframe</b>
1	NGR bypass arrangement to use switchable line reactors (240 MVAR each) as bus reactors installed on each circuit of Vemagiri – Chilkaluripeta 765 kV D/c line at Chilkaluripeta 765 kV S/s	NGR bypass arrangement	6 months from issue of OM by CTU
2	NGR bypass arrangement to use switchable line reactors (240 MVAR each) as bus reactors installed on each circuit of Chilkaluripeta – Cuddapah	NGR bypass arrangement	6 months from issue of OM by CTU

	765 kV D/c line at Chikaluripeta 765 kV S/s..		
	<b>Total Estimated Cost (Rs Lakhs)</b>	<b>32 Lakhs (approx.)</b>	

**7. 1 no. 400 kV bay at 765/400 kV Kurnool (New) Substation**

SI. No	Scope of the Transmission Scheme	Capacity /km	Implementation timeframe
1	1 no. of 400 kV bay at 765/400 kV Kurnool (New)	400kV line bay-1 no	Oct'22
	<b>Total Estimated Cost (Rs Crores)</b>	<b>9 Cr.</b>	

**Eastern Region**

**8. Eastern Region Expansion Scheme-XXVI (ERES-XXVI):**

Sl. No.	Scope of the Transmission Scheme	Capacity /km	Implementation timeframe
1.	Installation of 500 MVA, 400/220kV ICT (3 <sup>rd</sup> ) at Ranchi (PG)	400/220 kV, 500 MVA ICT- 1 no. 400 kV ICT bays- 1 nos. 220 kV ICT bays- 1 nos.	15 months from issue of OM by CTU
	<b>Total Estimated Cost (Rs. Crore)</b>	<b>27 Cr.</b>	

**North Eastern Region**

**9. Additional scope under NERSS-XIII scheme**

Sl. No.	Scope of the Transmission Scheme	Capacity /km	Implementation timeframe
1.	CT of 132kV Imphal (POWERGRID) – Imphal (Manipur) bay-2 to be upgraded to 1200 A at Imphal (POWERGRID) S/s	NIL	In matching timeframe to SCOD of NERSS-XIII, i.e. Sep'2022
	<b>Total Estimated Cost (Rs. Lakhs)</b>	<b>10 lakhs (approx.)</b>	

## Western Region

### 10. Transmission Network Expansion in Gujarat to increase its ATC from ISTS (Part-A)

<b>Sl. No.</b>	<b>Scope of the Transmission Scheme</b>	<b>Capacity /km</b>	<b>Implementation timeframe</b>
1.	Augmentation of transformation capacity at Vadodara 765/400/220kV S/s by 1x1500MVA, 765/400kV ICT (3rd) along with associated 765kV ICT bay*	765/4000 kV, 1500 MVA ICT- 1 no. 765 kV ICT bays- 1 nos.	Apr'22
	<b>Total Estimated Cost (Rs. Crore)</b>	<b>70 Cr. (approx.)</b>	

*\*Out of the 2 nos. 400kV line bays already constructed by POWERGRID for DGEN – Vadodara line, 1no. line bay to be utilized for 765/400kV ICT (3<sup>rd</sup>) at Vadodara*