



सेंट्रल ट्रान्समिशन यूलिटी ऑफ इंडिया लिमिटेड

(पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड के स्वामित्व में)

(भारत सरकार का उद्यम)

CENTRAL TRANSMISSION UTILITY OF INDIA LTD.

(A wholly owned subsidiary of Power Grid Corporation of India Limited)

(A Government of India Enterprise)

Ref. No.: C/CTU/AI/00/15th CCTP/POWERGRID

26th October 2023

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 the implementation of the following ISTS costing less than or equal to Rs.100 Cr. in line with the 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. No.	Name of Transmission Scheme	Implementing Agency
Eastern Region		
1.	Eastern Region Expansion Scheme-XXXVIII (ERES-XXXVIII)	Power Grid Corporation of India Ltd.
2.	Eastern Region Expansion Scheme-41 (ERES-41)	Power Grid Corporation of India Ltd.
Western Region		
3.	Augmentation of Transformation Capacity at 400/220 kV Bhachau substation in Gujarat by 400/220 kV, 1x500 MVA ICT (3rd)	Power Grid Corporation of India Ltd.
4.	Augmentation of Transformation Capacity at 400/220 kV Magarwada GIS substation in DD & DNH by 400/220 kV, 1x500 MVA ICT (3rd)	Power Grid Corporation of India Ltd.
5.	Replacement of 63 MVA Bus reactor with 125MVA Bus reactor at 400kV level of Jabalpur S/s of POWERGRID	Power Grid Corporation of India Ltd.
Northern Region		
6.	Augmentation of Transformation Capacity at 400/220 kV Fatehgarh-III PS(Section-1) by 400/220 kV, 1x500 MVA ICT (5th)	POWERGRID Ramgarh Transmission Ltd. (a subsidiary of Power Grid Corporation of India Ltd.)
7.	Implementation of Bus Sectionalizer at 400kV level of 400/220kV Bikaner-II PS	POWERGRID Bikaner Transmission System Ltd. (a subsidiary of Power Grid Corporation of India Ltd.)
Southern Region		
8.	Augmentation of Transformation Capacity at 400/220 kV Hassan Substation in Karnataka by 400/220 kV, 1x500 MVA ICT (3rd)	Power Grid Corporation of India Ltd.

The detailed scope of works for the above transmission schemes is given at **Annexure-I**.

The above transmission schemes are awarded to the Implementing Agency for its implementation under RTM mode. The implementing agency shall enter into a concession

agreement with CTU for the implementation of the above-mentioned transmission schemes through the Regulated Tariff Mechanism (RTM).

This issues with the approval of Competent Authority.

Ashok Pal.
(Ashok Pal)
Dy. Chief Operating Officer

Encl: as stated.

To:

<p>1. The Chairman & Managing Director Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon- 122 001</p>
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Copy to:

<p>1. Shri Ishan Sharan Chief Engineer & Member Secretary (NCT) Central Electricity Authority Sewa Bhawan, R. K. Puram, New Delhi-110 066.</p>

<p>2. Shri Om Kant Shukla Director (Trans) Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110 001</p>
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Eastern Region

1. Eastern Region Expansion Scheme-XXXVIII (ERES-XXXVIII)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line to bays 431 and 434 in diameters 431-432-433 and 434-435-436 at Ranchi (POWERGRID) end: about 1.27km new line section (<i>refer note a</i>).	400kV D/c (Quad) line – 1.27 km	24 months from the issuance of OM by CTUIL
2.	Dismantling of 1355m section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC at Ranchi end from tower location 433 to 438 and scraping of the same (<i>refer note b</i>).	-	
3.	Shifting of 420kV, 125MVA bus reactor installed in bay no. 431 to bay no. 413 [vacated after shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV ckt-2] at Ranchi (POWERGRID) end.	-	
4.	Shifting of equipment of bay no. 416 [released upon shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV ckt-3] to bay no. 434 for completion/establishment of bay no. 434 at Ranchi (POWERGRID) end.	-	
5.	Installation of 420kV, 1x80MVA switchable line reactor, one each in both circuits of Raghunathpur (DVC) – Ranchi-New (POWERGRID) 400kV D/c (Quad) line [formed after bypassing of Ranchi (POWERGRID) – Raghunathpur (DVC) and Ranchi (POWERGRID) – Ranchi-New (POWERGRID) ckt-3 & 4 of 400kV D/c (Quad) lines from Ranchi-New through tie circuit breaker in diameters 431-432-433 and 434-435-436] at Ranchi-New (POWERGRID) end along 400ohm NGR (including NGR bypass scheme).	420kV, 1x80MVA switchable line reactor with 500ohm NGR (including NGR bypass scheme) – 2 no.	
Total Estimated Cost:			₹ 41.74 Crore

Note:

- a) The ISTS licensee shall coordinate with DVC for shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line to bays 431 & 434. Further, ISTS licensee shall also take care of completion of communication link upon line shifting.
- b) The scrap value of the tower members, ACSR conductor, auxiliaries etc. of dismantled assets shall be deducted by the ISTS licensee as per prevailing scrap value to arrive at the final cost of the project. As the scrap value of dismantled assets (about 1355m of line) is already being

adjusted against the project cost of this new scheme, tariff of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC shall remain unaffected.

- c) During the implementation period of the above scheme, ERS can be used for temporary bypassing of Ranchi (POWERGRID) – Raghunathpur (DVC) and Ranchi (POWERGRID) – Ranchi-New (POWERGRID) ckt-3 & 4 lines outside Ranchi S/s so as to facilitate shifting of bus reactor and bay equipment, if required.
- d) Upon implementation of this scheme, the Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line may be bypassed from Ranchi S/s with Ranchi – Ranchi (New) 400kV D/c line (ckt-3 & ckt-4) through tie circuit breakers (432 & 435) as per system requirement and based on instructions from Grid-India.

2. Eastern Region Expansion Scheme-41 (ERES-41)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Installation of 400/220kV, 1x500MVA ICT (3 rd) along with associated bays at Rajarhat GIS (POWERGRID) 400kV S/s	<ul style="list-style-type: none"> • 400/220kV, 1x500MVA ICT– 1 no. • 400kV GIS ICT Bay– 1 no. + 1 no. additional bay for diameter completion (<i>refer note a</i>) • 220kV GIS ICT Bay– 1 no. • 400kV GIS duct (1-phase) – 650m • 220kV GIS duct (1-phase) – 300m 	21 months from the date of issuance of OM by CTUIL
Total Estimated Cost:			₹ 86 Crore

Note:

- a) In view of GIS substation, complete diameter with three Circuit Breakers (one and half switching scheme) needs to be implemented at 400kV level for installation of 3rd ICT in one 400kV bay. Utilisation of other 400kV bay of the diameter shall be identified in future.

Western Region

3. Augmentation of Transformation Capacity at 400/220 kV Bhachau substation in Gujarat by 400/220 kV, 1x500 MVA ICT (3rd)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Augmentation of Transformation capacity at 400/220kV Bhachau S/s in Gujarat by 400/220kV 1x500MVA ICT (3 rd)	<ul style="list-style-type: none"> • 400/220kV, 1x500MVA ICT–1 No. • 400kV ICT bay – 1 No. • 220kV ICT bay – 1 No. 	18 months from date of issuance of OM by CTUIL
Total Estimated Cost:			₹ 49 Crore

4. Augmentation of Transformation Capacity at 400/220 kV Magarwada GIS substation in DD & DNH by 400/220 kV, 1x500 MVA ICT (3rd)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Augmentation of Transformation capacity at 400/220kV Magarwarda GIS S/s by 400/220kV 1x500MVA ICT (3 rd)	<ul style="list-style-type: none"> • 400/220kV, 1x500MVA ICT – 1 No. • 400kV GIS ICT Bay– 1 No. • 220kV GIS ICT Bay – 1 No. • 400kV GIS duct (1ph) – 350m. (approx.) • 220kV GIS duct (1ph) – 150m. (approx.) 	21 months from date of issuance of OM by CTUIL
Total Estimated Cost:			₹ 64 Crore

5. Replacement of 63 MVar Bus reactor with 125MVar Bus reactor at 400kV level of Jabalpur S/s of POWERGRID

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Replacement of 420kV, 63 MVar Bus reactor with 420kV, 125MVar bus reactor at Jabalpur (PG) S/s along with associated civil works	<ul style="list-style-type: none"> • 420kV, 125MVar bus reactor – 1 No. 	27 months from date of issuance of OM by CTUIL
Total Estimated Cost:			₹ 17 Crore

Northern Region

6. Augmentation of Transformation Capacity at 400/220 kV Fatehgarh-III PS(Section-1) by 400/220 kV, 1x500 MVA ICT (5th)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Augmentation with 400/220kV, 1x500MVA Transformer at Fatehgarh-III PS (5th ICT at Section-1) along with associated transformer bays* *1 no. of 400kV (AIS) (including associated tie bay) and 1 no. of 220kV (AIS) transformer bay	<ul style="list-style-type: none"> • 500 MVA 400/220 kV ICT – 1no. • 400 kV ICT bay (including associated tie bay) – 1 no. • 220 kV ICT bay – 1 no. 	18 months from the date of issuance of OM by CTUIL
Total Estimated Cost:			₹ 58.18 Crore

7. Implementation of Bus Sectionalizer at 400kV level of 400/220kV Bikaner-II PS

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	<ul style="list-style-type: none">One set of bus sectionalizer at 400kV level of 400/220kV Bikaner-II PSOne no. of 400kV tie bay (associated with 400/220kV ICT-4)	<ul style="list-style-type: none">400 kV Bus sectionalizer– 1 no.400kV tie bay–1 no.	Matching with implementation of 400/220kV ICTs (4 th to 7 th) i.e., Dec'24
Total Estimated Cost:			₹ 28 Crore

Southern Region

8. Augmentation of Transformation Capacity at 400/220 kV Hassan Substation in Karnataka by 400/220 kV, 1x500 MVA ICT (3rd)

Sl. No.	Scope of the Transmission Scheme	Item Description	Implementation Timeframe.
1.	Augmentation of Transformation Capacity at 400/220 kV Hassan Substation in Karnataka by 400/220 kV, 1x500 MVA ICT (3 rd)	<ul style="list-style-type: none">500 MVA 400/220 kV ICT–1no.400 kV ICT bay (in existing dia) – 1 no.220 kV ICT bay – 1 no.	18 months from the date of issuance of OM by CTUIL
Total Estimated Cost:			₹ 49 Crore