

सेंट्रल ट्रांसमिशन यूटिलिटी 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.: C/CTU/AI/00/9th CCTP

28th November 2022

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:

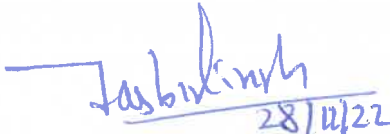
Sl.	Name of scheme	Implementing Agency
Western Region		
1.	Implementation of 1 no. 220kV line bay at Bhuj PS for providing Connectivity to M/s NTPC Renewable Energy Ltd. (300MW)	Power Grid Corporation of India Ltd.
2.	Transmission System for providing connectivity to M/s VEH Jayin Renewables Pvt. Ltd. at Rajgarh (PG) S/s	Power Grid Corporation of India Ltd.
3.	Western Region Expansion Scheme XXXI (WRES-XXXI): Part C	Power Grid Corporation of India Ltd.
4.	Western Region Expansion Scheme XXXIII (WRES-XXXIII): Part D	Power Grid Corporation of India Ltd.
Northern Region		
5.	Implementation of 2 nos. of 220 kV line bays at 400/220 kV Panchkula (Barwala) (PG) S/s for interconnection with 220 kV Dera Bassi S/s.	Power Grid Corporation of India Ltd.
6.	Replacement of 1x315 MVA 400/220kV ICT (ICT-1) at 400/220 kV Ludhiana (PG) S/s with 1x500 MVA 400/220kV ICT	Power Grid Corporation of India Ltd.
7.	Replacement of 1x250 MVA, 400/220 kV ICT at 765/400/220 kV Moga (PG) S/s with 1x500 MVA 400/220kV ICT along with associated works at 220kV level.	Power Grid Corporation of India Ltd.
8.	Augmentation of Transformation Capacity by 1x500 MVA, 400/220kV ICT (3rd) at 400/220 kV Patran (GIS) S/s	Patran Transmission Company Ltd. (PTCL) (a subsidiary of India Grid Trust)
9.	Implementation of 1 no. of 220 kV line bay at 400/220kV Bikaner-II PS for interconnection of solar project (M/s NHPC Ltd.):	POWERGRID Bikaner Transmission System Ltd. {a subsidiary of Power Grid Corporation of India Ltd. [erstwhile known as Bikaner-II Bhiwadi Transco Ltd.]

Eastern Region		
10.	Eastern Region Expansion Scheme-XXX (ERES-XXX)	Power Grid Corporation of India Ltd.
11.	Eastern Region Expansion Scheme-XXXIII (ERES-XXXIII)	Power Grid Corporation of India Ltd.
North Eastern Region		
12.	North Eastern Region Expansion Scheme-XVIII (NERES-XVIII)	Power Grid Corporation of India Ltd.
13.	North Eastern Region Expansion Scheme-XX (NERES-XX)	Power Grid Corporation of India Ltd.
Southern Region		
14.	Implementation of 1 no. 400kV line bay at Kurnool New S/s for providing Connectivity to M/s Greenko AP01 IREP Pvt. Ltd. (2 nd 400kV line bay for M/s Greenko)	Power Grid Corporation of India Ltd.

The detailed scope of works for the above transmission schemes, as approved by CTU is given at **Annexure-I**.

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

This issues with the approval of Competent Authority.


 (Jasbir Singh)
 Chief General Manager

Encl: as stated.

To:

1. The Chairman & Managing Director Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon- 122 001	2. Shri Lokendra Singh Ranawat Head (Regulatory) Patran Transmission Company Ltd., (PTCL) (a subsidiary of India Grid Trust) Unit No. 101, First Floor, Windsor, Village KoleKalyan, off CST Road, Vidyanagari Marg, Kalina, Santacruz (East), Mumbai – 400 098
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Copy to:

1. Shri Ishan Sharan Chief Engineer & Member Secretary (NCT) Central Electricity Authority Sewa Bhawan, R. K. Puram, New Delhi-110 066.	2. Shri Goutam Ghosh Director (Trans) Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110 001
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Western Region**1. Implementation of 1 no. 220kV line bay at Bhuj PS for providing Connectivity to M/s NTPC Renewable Energy Ltd. (300MW)**

Sl.	Scope of the Transmission Scheme	Capacity /km	Implementation Timeframe.
1	1 no. 220kV line bay at Bhuj PS associated with M/s NTPC Renewable Energy Ltd. (300MW)	220kV line bay: 1 no.	15 months from the date of issue of OM by CTUIL (refer Note a).
Total Estimated Cost:			INR 5.84 Crore

Note:

- a. Best efforts shall be carried out to implement the transmission scheme within 12 months from the issue of OM by CTUIL.

2. Transmission System for providing connectivity to M/s VEH Jayin Renewables Pvt. Ltd. at Rajgarh (PG) S/s

Sl.	Scope of the Transmission Scheme	Capacity /km	Implementation Timeframe.
1.	220kV bus extension (GIS) of Rajgarh 400/220 kV (PG) S/s along with 220kV Bus Coupler bay for extended bus.	<ul style="list-style-type: none"> • Bus Extension along with 220kV Bus coupler bay- 1 no. using GIS • Space provision in 220kV GIS Hall for accommodating 5 nos. 220kV future bays 	21 months from the issue of OM by CTUIL.
2.	220kV bus sectionaliser bay (GIS) between existing & extended 220 kV bus of Rajgarh S/s.	• 220kV Bus Sectionaliser – 1 set (GIS)	
3.	220kV GIS line bay at Rajgarh 400/220 kV (PG) S/s (on extended bus) for RE interconnection.	• 220kV line bay: 1 no. (GIS) along with 220kV Bus Duct for Bus Extension (AIS to GIS building)	
Total Estimated Cost:			INR 29.33 Crore

3. Western Region Expansion Scheme XXXI (WRES-XXXI): Part C

Sl.	Scope of the Transmission Scheme	Capacity /km	Implementation Timeframe.
1.	Augmentation of transformation capacity at Pune (GIS) 765/400	• 765/400 kV, 1500 MVA ICT – 1 no.	21 months from the issue of OM by CTUIL (refer note-a)

Sl.	Scope of the Transmission Scheme	Capacity /km	Implementation Timeframe.
	kV substation by 1x1500 MVA ICT (3rd)	<ul style="list-style-type: none"> • 400 kV ICT bay (GIS) – 1 no. • 765/400kV, 1500MVA ICT in existing bay with GIS bus duct along with associated GIS to AIS termination, Erection hardware are required. 	
Total Estimated Cost:			INR 86.01 Crore

Note:

- Best efforts shall be carried out to implement the transmission scheme within 18 months from the issue of OM by CTUIL.
- 1 no. 765kV ICT bay is available (up to wall of GIS building)

4. Western Region Expansion Scheme XXXIII (WRES-XXXIII): Part D

Sl.	Scope of the Transmission Scheme	Capacity /km	Implementation Timeframe.
1.	Installation of 1x500 MVA, 400/220 kV ICT (4 th) along with associated ICT bays at Satna(PG)	<ul style="list-style-type: none"> • 400/220 kV, 500 MVA ICT – 1 no. • 400 kV ICT bay – 1 no. • 220 kV ICT bay – 1 no. (includes 220kV Cable interconnection for 220kV side of ICT) 	18 months from the issue of OM by CTUIL
2.	2 No. of 220kV line bays at Satna for LILO of Satna 220kV - Maihar 220kV line at Satna (PG) S/s	220kV line bay – 2 nos.	
Total Estimated Cost:			INR 77.52 Crore

Northern Region

5. Implementation of 2 nos. of 220 kV line bays at 400/220 kV Panchkula (Barwala) (PG) S/s for interconnection with 220 kV Dera Bassi S/s

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1	Implementation of 2 nos. of 220 kV line bays at 400/220 kV Panchkula (Barwala) (PG) S/s for interconnection with 220 kV Dera Bassi S/s	220 kV line bays – 2 nos.	31.05.24
Total Estimated Cost:			INR 11.68 Crore

6. Replacement of 1x315 MVA 400/220kV ICT (ICT-1) at 400/220 kV Ludhiana (PG) S/s with 1x500 MVA 400/220kV ICT

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1	Replacement of 1x315 MVA 400/220kV ICT (ICT-1) at 400/220 kV Ludhiana (PG) S/s with 1x500 MVA 400/220kV ICT * *along with 66kV cable for shifting auxiliary supply to SVC from ICT-1 to ICT-2	500 MVA 400/220 kV ICT- 1no.	18 months from the issue of OM by CTUIL (refer note-a)
Total Estimated Cost:			INR 26.98 Crore

Note:

- a. TSP may expedite the implementation of the above transmission scheme to the extent possible, as per the request of PSTCL vide letter dated 06.09.22 for implementation schedule of May'23 (reconfirmed to 31.05.23 vide mail dated 01.11.22)

7. Replacement of 1x250 MVA, 400/220 kV ICT at 765/400/220 kV Moga (PG) S/s with 1x500 MVA 400/220kV ICT along with associated works at 220kV level

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1.	Replacement of 1x250 MVA, 400/220 kV ICT at 765/400/220 kV Moga (PG) S/s with 1x500 MVA 400/220kV ICT along with associated works at 220 kV level	500 MVA 400/220 kV ICT- 1no. (with associated works at 220 kV level)	18 months from the issue of OM by CTUIL (refer note a)
Total Estimated Cost:			INR 27.03Crore

Note:

- a. TSP may expedite the implementation of the above transmission scheme to the extent possible, as per the request of PSTCL vide letter dated 06.09.22 for implementation schedule of May'23 (reconfirmed to 31.05.23 vide mail dated 01.11.22)

8. Augmentation of Transformation Capacity by 1x500 MVA, 400/220kV ICT (3rd) at 400/220 kV Patran (GIS) S/s

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1.	Augmentation of Transformation Capacity by 1x500 MVA, 400/220kV ICT (3rd) at 400/220 kV Patran (GIS) S/s along with GIS duct (at 400kV and 220kV) in new diameter of ICT – Tie– Line.	<ul style="list-style-type: none"> • 500 MVA 400/220 kV ICT- 1no. • 400 kV ICT bay (GIS) – 1 no. • 400kV bay (GIS) for diameter completion for 	21 months from the issue of OM by CTUIL.

		future line (duct up to outside GIS Hall) – 1 no. • 220 kV ICT bay (GIS) – 1 no.	
Total Estimated Cost:			INR 65.19 Crore

Note:

- a. Best efforts shall be carried out to implement the transmission scheme by 31.05.2024 as per the request of PSTCL letter vide dated 06.09.22 and mail dated 01.11.2022

9. Implementation of 1 no. of 220 kV line bay at 400/220kV Bikaner-II PS for interconnection of solar project (M/s NHPC Ltd.)

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1.	1 no. of 220 kV line bay at 400/220 kV Bikaner-II PS for interconnection of RE project (NHPC Ltd.)	<ul style="list-style-type: none"> 220 kV line bay – 1 no. (refer note a) 	15 months from the issue of OM by CTUIL
2.	Implementation of 220kV Bus sectionalizer along with bus coupler and transfer bus coupler at 400/220kV Bikaner-II PS	<ul style="list-style-type: none"> 220kV Bus Sectionalizer Bay– 1 Set 220kV Bus Coupler Bay–1 No. 220kV Transfer Bus Coupler Bay–1No. Bus works for future Bays (4 Nos. of Line Bays & 3 Nos. of ICT Bays) 	
Total Estimated Cost:			INR 29.21 Crore

Note:

- a. At 220 kV Bikaner-II, future line bays in Section-C are proposed to be allocated to RE developers with bays in developer's scope (no. 230-231) and ISTS scope (no. 226-227). Accordingly, 220 kV bus works may also be suitably taken up under the above scope.

Eastern Region

10. Eastern Region Expansion Scheme-XXX (ERES-XXX)

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
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1.	Installation of existing spare 132/66kV, 1x50MVA ICT (already stationed at Gangtok) as 3 rd ICT at Gangtok (POWERGRID) S/s along with conversion of existing 132kV TBC bay as 132kV ICT bay for 3 rd ICT and construction of new 66kV ICT bay in Hybrid/Outdoor GIS with suitable modification in the gantry structure of 66kV side.	<ul style="list-style-type: none"> • 132/66kV, 50MVA spare ICT as 3rd ICT – 1 no. • Conversion of 132kV TBC bay to ICT bay – 1 no. • New 66kV ICT bay (in Hybrid/Outdoor GIS) – 1 no. 	21 months from the issue of OM by CTUIL (<i>best efforts may be made for early commissioning to the extent possible</i>)
2.	Construction of new 132kV TBC bay in Hybrid/Outdoor GIS.	<ul style="list-style-type: none"> • New 132kV TBC bay (in Hybrid/Outdoor GIS) – 1 no. 	
Total Estimated Cost:			INR 11.64 Crore

11. Eastern Region Expansion Scheme-XXXIII (ERES-XXXIII)

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1.	Reconductoring of Rangpo – Gangtok 132kV D/c line with single HTLS conductor of 800A (at nominal voltage level).	Ckt-1: 28km Ckt-2: 26km	24 months from the issue of OM by CTUIL.
2.	Upgradation of CTs at Gangtok end in both circuits of Rangpo – Gangtok 132kV D/c line from 600A to rating commensurate with rating of HTLS conductor (800A)	-	
Total Estimated Cost:			INR 23.08 Crore

North Eastern Region

12. North Eastern Region Expansion Scheme-XVIII (NERES-XVIII)

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1.	Reconductoring of Melriat (GIS) (POWERGRID) – Zuangtui (Mizoram) 132kV ACSR Panther S/c line with Single HTLS conductor of 900A (at nominal voltage level) <i>Note: The existing line bay and dead tower at Melriat (POWERGRID) end of Melriat (POWERGRID) – Zuangtui (Mizoram) 132kV HTLS S/c line may be kept as spare bay after shifting of the line to newly constructed bay.</i>	10.13km	Apr 2025

2.	One (1) new 132kV line bay at Melriat (GIS) (POWERGRID) S/s (of rating commensurate with rating of HTLS viz. 900A) for shifting of Melriat (GIS) (POWERGRID) – Zuangtui (Mizoram) 132kV HTLS line from existing bay and termination of the HTLS line in the new bay (0.5km including approx. 5 nos. towers)	<ul style="list-style-type: none"> • 132kV GIS line bay – 1 no. • New 132kV S/c HTLS line section – 0.5km (including approx. 5 nos. towers) 	
3.	Replacement of existing CT of 600/1A at Zuangtui (Mizoram) end in Melriat (GIS) (POWERGRID) – Zuangtui (Mizoram) 132kV S/c line with rating commensurate with ampacity (900A) of HTLS conductor.	-	
4.	Reconductoring of Aizawl (POWERGRID) – Luangmual (Mizoram) 132kV ACSR Panther S/c line with Single HTLS conductor of 800A (at nominal voltage level)	0.8km	
5.	Replacement of existing CT of 600/1A at Luangmual (Mizoram) end in Aizawl (POWERGRID) – Luangmual (Mizoram) 132kV S/c line with rating commensurate with ampacity (800A) of HTLS conductor.	-	
6.	Installation of OPGW in Aizawl (POWERGRID) – Luangmual (Mizoram) 132kV S/c line	0.8km	
Total Estimated Cost:			INR 11.49 Crore

13. North Eastern Region Expansion Scheme-XX (NERES-XX)

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1.	Reconductoring of existing Single ACSR Panther Kopili (NEEPCO) – Khandong (NEEPCO) 132kV S/c line-1 (10.9km) of POWERGRID with Single HTLS conductor of ampacity of 800A (at nominal voltage level) along with replacement of existing wave trap at Kopili end and CT at Khandong end with rating commensurate with ampacity (800A) of HTLS conductor	10.9km	24 months from the issue of OM by CTUIL.
2.	Reconductoring of existing Single ACSR Panther Khandong (NEEPCO) – Khliehriat (POWERGRID) 132kV S/c line-1 (42.48km) of POWERGRID with Single HTLS conductor of ampacity of 800A (at nominal voltage level) along with replacement of existing CTs at both ends with rating commensurate with ampacity (800A) of HTLS conductor.	42.48km	

3.	Reconductoring of existing Single AAAC Panther Khandong (NEEPCO) – Khliehriat (POWERGRID) 132kV S/c line-2 (40.93km) of POWERGRID with Single HTLS conductor of ampacity of 800A (at nominal voltage level) along with replacement of existing CTs at both ends & wave trap at Khandong end with rating commensurate with ampacity (800A) of HTLS conductor, and strengthening of requisite tower members (approx. 0.348 MT).	40.93km	
4.	Reconductoring of existing Single ACSR Panther Khliehriat (POWERGRID) – Khliehriat (MePTCL) 132kV S/c POWERGRID line-1 (7.8km) of POWERGRID with Single HTLS conductor of ampacity of 800A (at nominal voltage level) along with replacement of existing CTs at both ends with rating commensurate with ampacity (800A) of HTLS conductor, and strengthening of requisite tower members (approx. 0.121 MT).	7.8km	
5.	Reconductoring of existing Single AAAC Panther Khliehriat (POWERGRID) – Badarpur (POWERGRID) 132kV S/c line (76.64km) with Single HTLS conductor of ampacity of 900A (at nominal voltage level) along with replacement of existing CTs at both ends with rating commensurate with ampacity (900A) of HTLS conductor.	76.64km	
6.	Replacement of existing bus coupler bay CT at Khandong HEP (NEEPCO) switchyard from 600A to 800A		
Total Estimated Cost:			INR 77.04 Crore

Southern Region

14. Implementation of 1 no. 400kV line bay at Kurnool New S/s for providing Connectivity to M/s Greenko AP01 IREP Pvt. Ltd. (2nd 400kV line bay for M/s Greenko)

Sl. No.	Scope of the Transmission Scheme	Capacity/km	Implementation timeframe
1	Implementation of 1 no. 400kV line bay at Kurnool New S/s for providing Connectivity to M/s Greenko AP01 IREP Pvt. Ltd. (2 nd 400kV line bay for M/s Greenko)	• 400kV line bay – 1 No (Bay No. 412, SLD enclosed).	15 months from the issue of OM by CTUIL (refer note a.)
Total Estimated Cost:			INR 8.55 Crore

Note:

- a. Best efforts shall be carried out to implement the transmission scheme by 15.12.2023 as per the request of M/s Greenko AP01 IERP Pvt. Ltd. in its application / grant for enhancement of Connectivity.

