

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.: CTUIL/OM/06

15<sup>th</sup> November 2022

**Director (Projects)**  
Power Grid Corporation of India Ltd.,  
Saudamini, Plot No. 2, Sector-29,  
Gurgaon- 122 001

**Sub: Implementation of ISTS Transmission Schemes approved by NCT in its 9<sup>th</sup> meeting held on 28.09.2022 under Regulated Tariff Mechanism (RTM)**

NCT vide letter dated 15.11.2022 has awarded the following ISTS Transmission Schemes to CTUIL for their implementation under RTM mode by POWERGRID as indicated in the table below:

Sl. No.	Transmission Scheme	Implementing Agency
1.	Augmentation of ISTS for interconnection of HVPNL transmission schemes	POWERGRID
2.	Scheme to relieve high loading of WR-NR Inter Regional Corridor (400 kV Bhinmal-Zerda line)	POWERGRID
3.	Eastern Region Expansion Scheme-XXIX (ERES-XXIX)	POWERGRID
4.	Transmission system for evacuation of power from Rajasthan REZ Ph- IV (Part-1) (Bikaner Complex)- Part-E	POWERGRID
5.	Supply and Installation of OPGW on existing main lines which are to be LILOed under various transmission schemes	POWERGRID

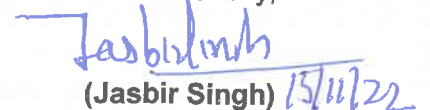
Further, the modified scope of works for Western Region Expansion Scheme-XXV (WRESXXV) scheme on account of space constraints at Raigarh (Kotra) S/s has also been approved by 9<sup>th</sup> NCT with revised implementation time-frame, which was already awarded for implementation under RTM mode by POWERGRID as per 8<sup>th</sup> NCT meeting held on 25.03.2022.

Copy of NCT letter in this regard is enclosed at **Annexure-I**. The detailed scope of work along with implementation time frame for transmission schemes is as per the letter enclosed.

POWERGRID shall enter into a concession agreement with CTUIL for implementation of aforementioned Transmission Schemes. However, pending finalization of Concession Agreement, it is requested to initiate necessary activities for implementation of the aforementioned Transmission Schemes.

This is for your kind information and necessary action, please.

Yours faithfully,

  
(Jasbir Singh) 15/11/22

**Chief General Manager**

**Encl: as stated.**

I/24500/2022



भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केंद्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली योजना एवं मूल्यांकन प्रभाग-II

Power System Planning &amp; Appraisal Division-II

सेवा में / To

Chief Operating Officer, CTUIL

Saudamini, Plot No. 2,

Sector-29, Gurgaon – 122 001.

**विषय/Subject: Implementation of ISTS Transmission Schemes (costing greater than Rs.100 crore and upto Rs. 500 crore) approved by NCT in its 9<sup>th</sup> meeting held on 28.09.2022- regarding**

महोदय/ Sir,

The undersigned is directed to inform that NCT has approved implementation of the following ISTS Transmission Scheme (costing greater than Rs. 100 crore and upto Rs. 500 crore) in its 9<sup>th</sup> meeting held on 28.09.2022, in line with MoP office order dated 28.10.2021, to be implemented through Regulated Tariff Mechanism (RTM) route by agency as indicated below:

S.No	Transmission Scheme	Implementing Agency
1.	Augmentation of ISTS for interconnection of HVPNL transmission schemes	POWERGRID
2.	Scheme to relieve high loading of WR-NR Inter Regional Corridor (400 kV Bhinmal-Zerda line)	POWERGRID
3.	Eastern Region Expansion Scheme-XXIX (ERES-XXIX)	POWERGRID
4.	Augmentation of transformation capacity at Kallam PS by 2x500 MVA, 400/220 kV ICTs (3rd & 4th) along with 220kV bays for RE interconnection	Consortium of IndiGrid 1 Ltd. (Lead Member) and IndiGrid 2 Ltd.
5.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-1) (Bikaner	POWERGRID

सेवा भवन, आर. के. पुरम-I, नई दिल्ली-110066 टेलीफोन : 011-26732305 ईमेल: cea-pspa2@gov.in वेबसाइट: www.cea.nic.in

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S.No	Transmission Scheme	Implementing Agency
.		
	Complex)-Part-E	
6.	Supply and Installation of OPGW on existing main lines which are to be LILoed under various transmission schemes.	POWERGRID

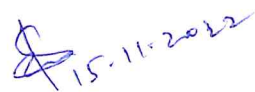
Detailed scope of works for the above scheme is enclosed at Annexure-I.

In addition to the above, NCT also approved modification in the scope under Western Region Expansion Scheme-XXV (WRES-XXV) awarded through RTM by 8<sup>th</sup> NCT. Details enclosed at Annexure-II.

The schemes are awarded to CTUIL for its implementation under RTM mode. CTUIL is requested to take necessary action for entering into a concession agreement with the respective agency for implementation of the above schemes.

भवदीय / Yours faithfully,

संलग्न / Encl. - उपरोक्त / as above

 15-11-2022

**(ईशान शरण/Ishan Sharan)**

मुख्य अभियन्ता /Chief Engineer & Member Secretary (NCT)

Copy to:

Joint Secretary (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi-110001

Annexure-I**Detailed scope of works of schemes agreed in 9<sup>th</sup> meeting of NCT:**

S.No	Name of scheme	Detailed scope	Estimated Cost (Rs. Crs)
1.	Augmentation of ISTS for interconnection of HVPNL transmission schemes	<p>i) Augmentation by 1x500 MVA, 400/220 kV ICT (3 rd ) at 400/220 kV Bahadurgarh (PG) S/s -<b>July, 24</b></p> <ul style="list-style-type: none"> <li>• 400/220 kV, 500 MVA ICT – 1 no.</li> <li>• 400 kV ICT bay – 1 no.</li> <li>• 220 kV ICT bay – 1 no.</li> </ul> <p>ii) 2 nos of 220 kV line bays at 400/220 kV Bahadurgarh (PG) S/s (for 220 kV Kharkhoda pocket B- Bahadurgarh (PG) D/c line) – <b>July, 24</b></p> <ul style="list-style-type: none"> <li>• 220 kV line bays – 2 nos.</li> </ul> <p>iii) 2 nos of 220 kV line bays at 400/220 kV Bahadurgarh (PG) S/s (for 220 kV METL – Bahadurgarh (PG) D/c line) – <b>March, 24</b></p> <ul style="list-style-type: none"> <li>• 220 kV line bays – 2 nos.</li> </ul> <p>iv) Augmentation by 1x500 MVA, 400/220 kV ICT (3 rd ) at 400/220 kV Jind (PG) S/s – <b>February, 24</b></p> <ul style="list-style-type: none"> <li>• 400/220 kV, 500 MVA ICT – 1 no.</li> <li>• 400 kV ICT bay – 1 no.</li> <li>• 220 kV ICT bay – 1 no.</li> </ul> <p>v) 2 nos of 220 kV line bays at 400/220 kV Sonapat (PG) S/s (for 220 kV D/c line from Kharkhoda pocket A) - <b>July, 24</b></p> <ul style="list-style-type: none"> <li>• 220 kV line bays – 2 nos.</li> </ul>	117.05
2.	Scheme to relieve high loading of WR-NR Inter Regional Corridor (400 kV Bhinmal-Zerda line)	<p>i) Bypassing of 400 kV Kankroli - Bhinmal-Zerda line at Bhinmal to form 400 kV Kankroli – Zerda (direct) line # - 12 months from date of issue of this letter</p> <p>ii) Reconductoring of 400 kV Jodhpur (Surpura) (RVPN) – Kankroli S/c (twin moose) line with twin HTLS conductor*- 18 months** from date of issue of this letter</p> <p>iii) OPGW installation on 400 kV Jodhpur (Surpura)(RVPN) – Kankroli S/c (twin moose) line -188 km</p> <p># with necessary arrangement for bypassing Kankroli- Zerda line at Bhinmal with suitable</p>	288.9

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		switching equipment inside the Bhinmal substation  *with minimum capacity of 1940MVA/ckt at nominal voltage; Upgradation of existing 400kV bay equipment's each at Jodhpur (Surpura) (RVPN) and Kankroli S/s(3150 A)  **Best effort to be made for reconductoring in 15 months from date of issue of this letter	
3.	Eastern Region Expansion Scheme-XXIX (ERES-XXIX)	i) Reconductoring of Jharsuguda/Sundargarh (PG) – Rourkela (PG) 400kV 2xD/c Twin Moose line with Twin HTLS conductor (with ampacity of equivalent to single HTLS as 1228 A at nominal voltage).  ii) Bay upgradation at Rourkela (PG) end for 3150 A rating – 04 nos. diameters in one and half breaker scheme (except 09 nos. existing circuit breakers which are of minimum 3150 A rating).  Implementation timeframe 36 months from date of issue of this letter. Note: No upgradation in line bays is envisaged at Jharsuguda/Sundargarh (POWERGRID) S/s as the existing line bays are rated for 3150A.	422.23
4.	Augmentation of transformation capacity at Kallam PS by 2x500 MVA, 400/220 kV ICTs (3rd & 4th) along with 220kV bays for RE interconnection	i) Augmentation of Kallam Pooling Station by 2x500 MVA, <ul style="list-style-type: none"> <li>• 500 MVA, 400/220kV ICT: 2 nos.</li> <li>• 400 kV ICT bays: 2 nos.</li> <li>• 400/220 kV ICTs 220 kV ICT bays: 2 nos.</li> </ul> ii) 3 nos. 220 kV line bays for RE interconnection <ul style="list-style-type: none"> <li>• 220 kV line bays: 3 nos.</li> </ul> iii) 1x125 MVAr bus reactor (2 nd ) at Kallam PS <ul style="list-style-type: none"> <li>• 125 MVAr, 420 kV Bus reactor – 1 no.</li> <li>• Bus reactor bay: 1 no.</li> </ul> with implementation timeframe of 18 months from date of issue of this letter	156.89
5.	Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-1) (Bikaner Complex)-	i) Augmentation by 765/400 kV, 1x1500 MVA ICT (4 <sup>th</sup> ) at Bikaner (PG) <ul style="list-style-type: none"> <li>• 765/400 kV, 1500 MVA ICT – 1 no.</li> <li>• 765 kV ICT bay – 1 nos.</li> <li>• 400 kV ICT bay - 1 nos.</li> </ul> with implementation timeframe of 18 months from date of issue of this letter  ii) Augmentation by 400/220 kV, 1x500 MVA	368

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	Part-E	<p>ICT (3 rd ) at Kotputli (PG)</p> <ul style="list-style-type: none"> <li>• 400/220 kV, 500 MVA ICT – 1 nos.</li> <li>• 400 kV ICT bay – 1 nos.</li> <li>• 220 kV ICT bay - 1 nos.</li> </ul> <p>with implementation timeframe of 18 months from date of issue of this letter {matching with Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-1) (Bikaner Complex)-Part-B }</p> <p>iii) Augmentation by 400/220 kV, 5x500 MVA ICT at Bikaner-II PS</p> <ul style="list-style-type: none"> <li>• 400/220 kV, 500 MVA ICT – 5 nos.</li> <li>• 400 kV ICT bays – 5 nos.</li> <li>• 220 kV ICT bays - 5 nos.</li> </ul> <p>Augmentation with 400/220 kV, 5x500 MVA ICT at Bikaner-II PS –to be taken up for evacuation requirement beyond 2000 MW at 220 kV level of Bikaner-II PS, with implementation timeframe matching with schedule of RE generation or 18 months from date of allocation, whichever is later.</p>	
6.	Supply and Installation of OPGW on existing main lines which are to be LILOed under various transmission schemes.	<p>Installation of OPGW alongwith necessary accessories and FOTE are mentioned as under-</p> <p>Western Region</p> <ul style="list-style-type: none"> <li>• 400kV Bachau (PG) – EPGL line (221 km) [to be LILOed at Lakadia]</li> <li>• 400kV Satna – Bina (1 st ) D/c line (276 km) [to be LILOed at Chatarpur]</li> <li>• 400kV Kakrapar - Vapi D/c line (116 km) [to be LILOed at Vapi-II]</li> </ul> <p>Northern Region</p> <ul style="list-style-type: none"> <li>• 765kV S/c Jaipur (Phagi) (RVPNL) – Gwalior line (312 km) (Ckt-1 is proposed) (to be LILOed at Dausa)</li> <li>• 400kV D/c Agra – Jaipur (South) (PG) line (254 km) (to be LILOed at Dausa).</li> </ul> <p>Matching with the timeframe of the respective LILOs.</p>	59.5

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Annexure-II**Modification in the scope of works of Transmission Scheme awarded through RTM by 8<sup>th</sup> NCT.**

1. The modified scope of works for Western Region Expansion Scheme-XXV (WRES-XXV) scheme on account of space constraints at Raigarh (Kotra) S/s:

**Raigarh (Kotra) Section-A**

Original Scope	Revised Scope
765/400kV ICT: 1x1500MVA	765/400 kV ICT (Sec-A: 3rd ): 1x1500 MVA
765kV ICT bay: 1 no.	765 kV bay: 1 no. for change in termination of Champa-I line from existing bay to new bay & Equipment of Existing Main bay of Champa-I line shall be shifted to New ICT Bay (ICT 3rd bay) for utilization.
400kV ICT bay: 1 no.	400 kV ICT bay: 1 no.

**Raigarh(Kotra) Section-B**

Original Scope	Revised Scope
765/400kV ICT: 2x1500MVA	765/400kV ICTs (Sec-B: 3rd & 4th ): 2x1500MVA
765kV ICT bay: 2 no.	Sec-B: 3rd ICT <ul style="list-style-type: none"> <li>• 765kV ICT bay (AIS): 1 no.</li> </ul> Sec-B: 4th ICT <ul style="list-style-type: none"> <li>• 765kV ICT bay (GIS): 1 no. consisting of 2 breakers [with Double bus double breaker scheme and the ICT (4 th ) (physically located in the space available near section-A) to be connected with the above bay through GIB Duct]</li> </ul>
400kV ICT bay: 2 no.	Sec-B: 3rd ICT <ul style="list-style-type: none"> <li>• 400kV ICT bay (AIS): 1 no. (ICT shall be terminated into above bay using partly 400Kv GIB duct and balance by BPI arrangement)</li> </ul> Sec-B: 4th ICT <ul style="list-style-type: none"> <li>• 400kV ICT bay (GIS): 1 no. consisting of 2 breakers [with Double bus double breaker scheme and the ICT (4th ) (physically located in the space available near section-A) to be connected with the above bay through GIB Duct]</li> </ul>

2. The revised cost of Western Region Expansion Scheme-XXV (WRES-XXV) scheme is Rs. 381 Crs. Implementation timeframe of the scheme would be 12 months on best effort basis from date of issue of this letter

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