



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 & Appraisal Division-II

सेवा में /To

As per list of Addresses

विषय: ट्रांसमिशन पर राष्ट्रीय समिति (एनसीटी) की सत्रहवीं बैठक की कार्यसूची - के सम्बन्ध में ।

Subject: Agenda for the 17th Meeting of National Committee on Transmission (NCT) – regarding.

महोदया (Madam) / महोदय (Sir),

The 17th meeting of the "National Committee on Transmission" (NCT) is scheduled as given below:

Date: 31.01.2024

Time: 02:00 PM

Venue: Chintan, 2nd Floor, CEA, Sewa Bhawan, R.K. Puram Sector-1, New Delhi

The agenda for the meeting is enclosed herewith. Kindly make it convenient to attend the meeting.

भवदीय/Yours faithfully,

(राकेश गोयल / Rakesh Goyal)

मुख्य अभियन्ता एवं सदस्य सचिव, एन.सी.टी.

/Chief Engineer & Member Secretary (NCT)

प्रतिलिपि / Copy to:

Joint Secretary (Trans), Ministry of Power, New Delhi

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List of Addresses:

1.	Chairperson, Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	2.	Member (Power System), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3.	Member (Economic & Commercial), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	4.	Director (Trans), Ministry of Power Shram Shakti Bhawan, New Delhi-110001.
5.	Sh. Lalit Bohra, Joint Secretary, Room no 602, Atal Akshay Urja Bhawan Opposite CGO Complex gate no 2,Lodhi Road, New Delhi – 110003	6.	Chief Operating Officer, CTUIL, Saudamini, Plot No. 2, Sector-29, Gurgaon – 122 001.
7.	Sh. Rajnath Ram, Adviser (Energy), NITI Aayog, Parliament Street, New Delhi – 110 001.	8.	CMD, Grid Controller of India, B-9, Qutub, Institutional Area, Katwaria Sarai, New Delhi – 110010
9.	Sh. Ravinder Gupta Ex. Chief Engineer CEA		

Special Invitee

Chief Engineer (PSETD), CEA

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Agenda for the 17th meeting of National Committee on Transmission

1 Confirmation of the minutes of the 16th meeting of National Committee on Transmission.

1.1 The minutes of the 16th meeting of NCT held on 30.11.2023 were issued vide CEA letter no CEA-PS-12-13/3/2019-PSPA-II dated 26.12.2023.

1.2 Members may confirm the minutes.

2 Status of the transmission schemes noted/approved/recommended to MoP in the 16th meeting of NCT:

2.1 The status of the transmission schemes noted/approved/recommended in the 16th meeting of NCT is tabulated below:

2.1.1 Status of new transmission schemes approved/recommended:

Sr. No	Name of the Transmission Scheme	Noted/Recommended/Approved	Mode of Implementation	MoP approval	BPC
1.	Augmentation of transformation capacity at 765/400 kV Indore S/s in Madhya Pradesh	Approved	RTM	Not applicable	Not applicable
2.	Augmentation of 1x1500 MVA (3rd), 765/400 kV transformation capacity at Kurnool New S/s.	Approved	RTM	Not applicable	Not applicable
3.	Reconductoring of Raichur – Veltor (Mahabubnagar) 400 kV S/c line with HTLS conductor	Approved	RTM	Not applicable	Not applicable
4.	Augmentation of transformation capacity at Bhuj-II PS (GIS)	Approved	TBCB	Not applicable	PFCCCL
5.	Eastern Region Generation Scheme-I (ERGS-I)	Approved	TBCB	Not applicable	PFCCCL
6.	Network Expansion Scheme in Navinal (Mundra) area of Gujarat for drawal of power in the area	Recommended	TBCB	Awaited	PFCCCL

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Sr. No	Name of the Transmission Scheme	Noted/ Recommended/ Approved	Mode of Implementation	MoP approval	BPC
7.	Eastern Region Expansion Scheme XXXIX (ERESXXXIX)	Recommended	TBCB	Awaited	RECPDCL
8.	Supply and Installation of OPGW on existing line 765/400kV Pune (PG) (GIS) – 400kV Parli (PG) line which is to be LILoed at Kallam Substation under TBCB project namely “Transmission system for evacuation of power from RE projects in Osmanabad area (1 GW) in Maharashtra”	Approved	RTM	Not applicable	Not applicable
9.	OPGW installation on Itarsi-Dhule Transmission Line	Approved	RTM	Not applicable	Not applicable
10.	Additional FOTE at Loktak and Bongaigaon AGC locations in NER region	Approved	RTM	Not applicable	Not applicable

2.1.2 Status of transmission schemes where modifications was suggested:

S. No	Scheme where modifications was suggested	MoP Approval
1.	Transmission System for Evacuation of power from potential renewable energy zone in Khavda area of Gujarat under Phase-IV (7 GW): Part B	Awaited
2.	Additional 1x500 MVA 400/220 kV (9th) ICT, for injection from any additional RE project (other than 4000 MW injection under SECI bids upto Tranche IV) at Bhuj PS	Awaited
3.	Spare Reactor (1-ph, 1x80 MVAR) unit at 765/400 kV Beawar S/s under Rajasthan REZ Ph-IV (Part-2: 5.5 GW) (Jaisalmer/ Barmer Complex): Part D scheme	Awaited
4.	Change in Scope of Transmission system for evacuation of power from Rajasthan REZ Ph-IV (Part-1: Bikaner Complex)- Part-A package	Awaited

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3 Modifications in the earlier approved/notified transmission schemes:

3.1 Network Expansion Scheme in Navinal (Mundra) area of Gujarat for drawal of power in the area

3.1.1 In the 16th meeting of NCT, the transmission scheme “Network Expansion Scheme in Navinal (Mundra) area of Gujarat for drawal of power in the area” was recommended to MoP for implementation under TBCB route with BPC being PFCCL.

3.1.2 CTU vide mail dated 11th January, 2024 proposed the following changes in the future provision (space for) in original scope of the scheme:

Original Text	Revised text proposed
<p>Future provision (space for):</p> <ul style="list-style-type: none"> • 765/400 kV ICT along with bays- 2Nos. • 765 kV line bays along with switchable line reactors – 4 Nos. • 765 kV Bus Reactor along with bay: 2 Nos. • 765 kV Sectionalizer: 1 -set • 400 kV line bays along with switchable line reactors– 6 Nos.<i>(in addition to 4 nos. bays for MUL– Navinal (Mundra) (GIS) 400 kV 2xD/ c line mentioned under Note)</i> • 400/220 kV ICT along with bays - 6Nos. • 400 kV Bus Reactor along with bays: 3 Nos. • 400 kV Sectionalization bay: 1- set • 220 kV line bays: 10 Nos. • 220 kV Sectionalization bay: 1 set • 220 kV BC and TBC: 2 Nos. • STATCOM (± 300 MVAR) alongwith MSC (2x125 MVAR) & MSR (1x125 MVAR) and associated bays- 2 Nos. 	<p>Future provision (space for):</p> <ul style="list-style-type: none"> • 765/400 kV ICT along with bays-5 Nos. • 765 kV line bays along with switchable line reactors – 6 Nos. • 765 kV Bus Reactor along with bay: 2 Nos. • 765 kV Sectionalizer: 1 -set • 400 kV line bays along with switchable line reactors– 10Nos. <i>(in addition to 4 nos. bays for MUL – Navinal (Mundra) (GIS) 400 kV 2xD/ c line mentioned under Note)</i> • 400/220 kV ICT along with bays-6 Nos. • 400 kV Bus Reactor along with bays: 3 Nos. • 400 kV Sectionalization bay: 1-set • 220 kV line bays: 10 Nos. • 220 kV Sectionalization bay: 1set • 220 kV BC and TBC: 2 Nos. • STATCOM (± 300 MVAR) alongwith MSC (2x125 MVAR) & MSR (1x125 MVAR) and associated bays- 2 Nos.

3.1.3 Members may deliberate.

3.2 Transmission Scheme for integration of Tumkur-II REZ in Karnataka

3.2.1 In the 15th meeting of NCT, the transmission scheme “Transmission Scheme for integration of Tumkur-II REZ in Karnataka” was recommended for implementation through TBCB mode at an estimated cost of Rs. 792.77 Cr. with the approximate line length from Tumkur-II – Tumkur (Pavagada) 400 kV (Quad ACSR moose) D/c line as 100 km. The line length had been arrived at considering the location of potential zone as per SECI.

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3.2.2 RECPDCL had been appointed as the survey agency to carry out the survey works for “Transmission Scheme for integration of Tumkur-II REZ in Karnataka” in the 15th meeting of NCT. Ministry of Power had directed RECPDCL to carry out survey before notification of the Transmission scheme

3.2.3 Subsequently, connectivity applications had been received by CTUIL from RE Generation Developers close to the existing Tumkur (Pavagada) sub-station. KREDL/ KSPDCL has also informed that they are setting up solar park close to the existing Tumkur (Pavagada) sub-station. Accordingly, RECPDCL had carried out the survey works keeping in view the location of proposed solar parks and intimated that the line length from Tumkur-II PS – Tumkur (Pavagada) 400 kV D/c line is about 38 km. The revised cost of the transmission scheme as furnished by CTUIL is Rs.501 Crs.

3.2.4 Details of the scheme is summarized as below:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
	Establishment of 400/220 kV 4x500 MVA Pooling Station near Tumkur, Karnataka Future provisions: Space for <ul style="list-style-type: none"> • 400/220 kV, 500 MVA, ICTs – 7 Nos. • 400 kV ICT bays – 7 Nos. • 220 kV ICT bays – 7 Nos. • 400 kV line bays – 6 Nos. (with provision for SLR) • 220 kV line bays – 14 Nos. • 220 kV Sectionalizer: 3 sets • 220 kV Bus Coupler (BC) Bay – 3 Nos. • 220 kV Transfer Bus Coupler (TBC) Bay – 3 Nos. 	<ul style="list-style-type: none"> • 400/220 kV, 500 MVA, ICTs – 4 Nos. • 400 kV ICT bays – 4 Nos. • 220 kV ICT bays – 4 Nos. • 400 kV line bays – 2 Nos. (at Tumkur-II PS for termination of Tumkur-II – Tumkur(Pavagada) line)) • 220 kV line bays – 4 Nos. • 220 kV Bus Coupler (BC) Bay – 1 No. • 220 kV Transfer Bus Coupler (TBC) Bay – 1 No.
	Tumkur-II – Tumkur(Pavagada) 400 kV (Quad ACSR moose) D/c line	Route length ~38 km <ul style="list-style-type: none"> • 400 kV line bays – 2 Nos. (at Tumkur (Pavagada))
	2x125 MVA _r , 420 kV bus reactors at Tumkur-II PS	<ul style="list-style-type: none"> • 420 kV, 125 MVA_r bus reactors – 2 Nos. • 420 kV, 125 MVA_r bus reactor bays – 2 Nos.

Note:

- (i) POWERGRID shall provide space for 2 nos. of 400 kV line bays at Tumkur (Pavagada) Pooling station for termination of Tumkur-II – Tumkur (Pavagada) 400 kV (Quad ACSR Moose) D/c line.
- (ii) The line length mentioned above is approximate as the exact length shall be obtained after detailed survey.

3.2.5 Members may deliberate

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3.3 Transmission system for evacuation of power from Shongtong Karcham HEP (450 MW) and Tidong HEP (150 MW)

- 3.3.1 A comprehensive transmission scheme (400 kV Jhangi-Wangtoo-Panchkula D/c Corridor) for evacuation of power from two Hydro Electric Projects (HEPs) viz Tidong HEP (150 MW) of Tidong Power Generation Private Limited (STATKRAFT) and Shongtong Karcham HEP (450 MW) of HPPCL in Himachal Pradesh was approved by MoP based on the recommendation by NCT (11th) for implementation through TBCB route. Scheme has been notified vide Gazette notification dated 13.04.2023 with RECPDCL as the BPC. CTUIL was the survey agency for the transmission scheme.
- 3.3.2 In the 14th NCT meeting held on 09.06.23, CTUIL informed that based on the preliminary survey report for 400 kV Wangtoo - Panchkula D/c line, conductor in certain portion of the transmission line may need to be of different configuration (due to very high altitude encountered in certain sections) in order to avoid Corona inception gradient. During walkover survey, it emerged that line length of 400 kV Wangtoo -Panchkula D/c line is reduced to 175 km from 210 km in earlier approved proposal. In view of this, CTUIL was requested to confirm change in conductor configuration, if any, along with revised cost of the scheme based on the survey report.
- 3.3.3 The scheme was again deliberated in the 15th NCT meeting held on 25.08.2023 and after detailed deliberations, the scheme was deferred and it was agreed that a meeting would be convened under Member (Power Systems), CEA, to decide the conductor specification and estimated revised cost of the scheme.
- 3.3.4 Subsequently, a meeting under the chairmanship of Member (Power Systems), CEA, was held on 03.11.2023 to discuss the issue of finalizing the suitable conductor for Wangtoo-Panchkula 400 kV D/c line. In the meeting, Quad AL59 conductor was recommended for the complete line length of Wangtoo-Panchkula 400 kV D/c transmission line. Further, to give options to bidders and for continuing with the practice being followed at present in the RfP document of TBCB projects, CTUIL may decide to also give options of Quad ACSR/Quad AL59/Quad AAAC conductor for the subject line. Therefore, considering the earlier approved transmission scheme w.r.t original time frame of STKHEP i.e. July'26 and change in conductor configuration (Quad) & line length as 175 km instead of 210 km (considered in the initial estimate for 400 kV Wangtoo-Panchkula line).
- 3.3.5 The scheme was again deliberated in the 16th NCT meeting held on 30.11.23, wherein it was suggested that CTU will review the conductor configuration of 400 kV Wangtoo – Panchkula D/c line w.r.t. walkover survey and provide information regarding line length where an alternative to Twin HTLS (as per altitude encountered in the route of the line) shall be required along with its revised cost estimate, if any, instead of considering Quad configuration over entire stretch of the above line.

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3.3.6 After detailed study by CTU-Engg, it emerged that the Twin HTLS bundle configuration shall be used for the segment up to the first 2000 meters above Mean Sea Level (MSL) starting from the Panchkula end (approx. 90 km). Beyond that point, where the altitude of the line may vary up to 2700 meters (maximum altitude as per survey report) and above (85 kms), the Quad bundle configuration shall be implemented, even though some sections may lie below 2000 meters, to ensure uniformity in the bundle configuration of the transmission line.

Considering above conductor configuration for part sections (Quad /Twin HTLS) as well as factors for Wind zone/snow bound/hill terrain etc. for relevant parts, the cost estimate for the scheme was revised to about Rs. 2367 Cr. (as per March'23 price level).

There is a variation of +3.5% in the modified scheme, which is as under:

Sl. No.	Scope	Estimated cost (Rs Cr.)
1	With Original Transmission scheme including 400 kV Wangtoo -Panchkula (210 km) D/c line (Twin HTLS)	2286 (March, 22 price level)
2	With revised Transmission scheme including 400 kV Wangtoo -Panchkula (175 km) D/c line [Quad Bundle-85 km, Twin HTLS (Min. dia 31.77 mm) -90 km]	2367 (March, 23 price level)
	% variation in cost	+3.54%

3.3.7 Accordingly, the detailed scope of work along with changes from earlier transmission scheme (approved in 11th NCT meeting) is as under:

S.No.	Scope of the Transmission Scheme (As Agreed in 11 th NCT meeting)	Revised Scope of the Transmission Scheme
A. Phase-I with Tidong HEP [Schedule: 01st July 2026]		
1.	Establishment of 2x315 MVA (7x105 MVA 1-ph units including a spare unit) 400/220 kV GIS Pooling Station at Jhangi <ul style="list-style-type: none"> • 400/220 kV ICTs- 2x315 MVA (7x105 MVA 1-ph units including a spare unit) • 400 kV ICT bays- 2 Nos. • 220 kV ICT bays- 2 Nos. • 400kV line bays (GIS) -2 Nos. (for Jhangi PS – Wangtoo D/c line) • 420 kV Bus reactor -1 No. (4x 41.66 MVA 1-ph units including one spare unit) • 420 kV Reactor bay-1 No. 	No Change

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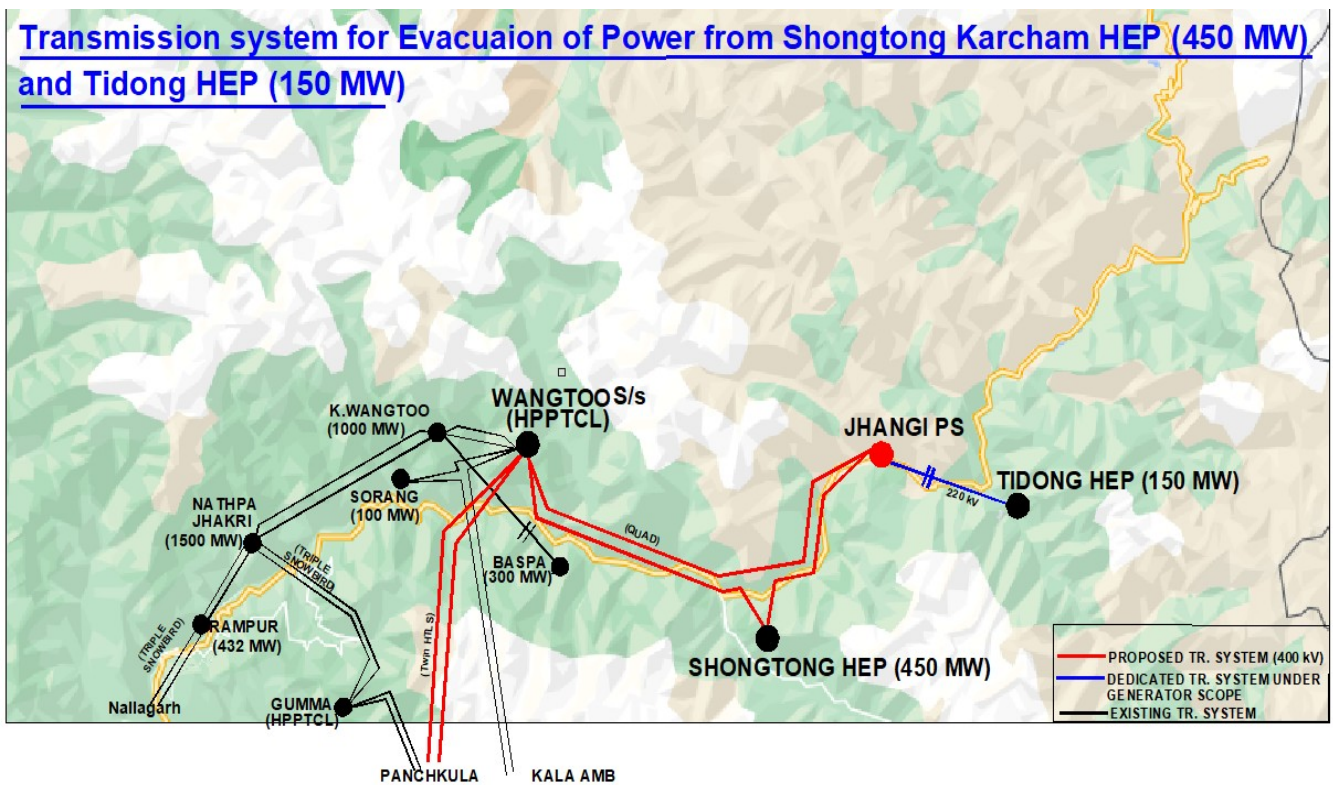
	<p>Future space provision for:</p> <ul style="list-style-type: none"> • 5 nos. of 400 kV line bays • 6 nos. of 220 kV line bays for future projects (space for 2 bays to be utilized for connectivity to Tidong generation) • 2 nos. of 400/220 kV Transformer • 1 no. 420 kV Bus Reactor along with bay • 220 kV Sectionalization bay: 1 set • Bus Coupler: 1 No. 	
2.	400 kV Jhangi PS – Wangtoo (Quad) D/c line (Line capacity shall be 2500 MVA per circuit at Nominal voltage) <ul style="list-style-type: none"> • Route Length-54 km 	No Change
3.	400 kV bays at Wangtoo for termination of 400 kV Jhangi PS – Wangtoo D/c line <ul style="list-style-type: none"> • 400 kV bays – 2 Nos. (GIS) 	No Change
B. Phase-II with Shongtong HEP [Schedule: 31st July, 2026]		
1.	LILLO of one circuit of Jhangi PS - Wangtoo (HPPTCL) 400 kV D/c (Quad) line ^s at generation switchyard of Shongtong HEP <ul style="list-style-type: none"> • LILLO Route length- 1 km (2 ckm) 	No Change
2.	<p>Wangtoo (HPPTCL) - Panchkula (PG) 400 kV D/c (Twin HTLS*) line along with 80 MVar switchable line reactor at Panchkula end on each circuit</p> <ul style="list-style-type: none"> • Route length-210 km 	<p>2a) Panchkula- Point PW** 400 kV D/c line (Twin HTLS, Min. Diameter 31.77 mm) along with 80 MVar switchable line reactor at Panchkula end on each circuit – 90 km</p> <p>2b) Point PW** - Wangtoo (HPPTCL) 400 kV D/c line (Quad AL 59/Quad ACSR Moose/Quad AAAC) - 85 km</p> <ul style="list-style-type: none"> • Total Route length-175 km <p>** Point PW : First point of 2000 m altitude of Panchkula-Wangtoo line from Panchkula end (as per</p>

		<i>survey report)</i>
3	400 kV bays at Wangtoo S/s (2 Nos.) and Panchkula S/s (2 Nos.) for termination of 400 kV Wangtoo (HPPTCL) - Panchkula (PG) D/c line <ul style="list-style-type: none"> 400 kV line bays- 4 nos. (2 Nos. GIS bays at Wangtoo and 2 Nos. AIS bays at Panchkula) 	No Change
	Estimated Cost of the Scheme: <ul style="list-style-type: none"> Rs. 2,286 Cr 	Estimated Cost of the Scheme: <ul style="list-style-type: none"> Rs. 2,367 Cr

\$ Line capacity shall be 2500 MVA per circuit at nominal voltage

* with minimum capacity of 2100 MVA on each circuit at nominal voltage

3.3.8 Schematic Diagram of the Transmission scheme is given below:



3.3.9 Members may deliberate.

3.4 **Timeline for 1500 MVA, 765/400 kV ICT Augmentation at Jhatikara S/s**

Augmentation of 1x1500 MVA, 765/400kV ICT (3rd) at Jhatikara Substation (Bamnoli/Dwarka Section) was planned as part of “Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III”.

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The ICT was recommended to be implemented under RTM route in 5th NCT meeting held on 25.08.2021 & 02.09.2021. Subsequently, MoP vide OM dated 01.12.2021 allocated above ICT to POWERGRID in matching timeframe of Rajasthan SEZ Ph-III Part-D Scheme which consists of the following major elements:

- Sikar-II – Khetri 765 kV D/c line
- Sikar-II – Narela 765 kV D/c line
- Jhatikara – Dwarka 400 kV D/c line (Quad) – **(Now Part-D Ph-II)**

Due to the high complexity involved in resolution of RoW for the Jhatikara – Dwarka 400 kV transmission line and prior approval required for above line route from various authorities in Delhi, the Jhatikara – Dwarka 400 kV D/c line was delinked from Rajasthan SEZ Ph-III Part-D Scheme in 15th NCT meeting held on 25.08.2023. It was also recommended that the line shall be implemented under RTM route. Based on above, MoP vide OM dated 06.11.2023 allocated the scheme comprising of Jhatikara – Dwarka 400 kV D/c line to POWERGRID through RTM route under Rajasthan SEZ Ph-III Part-D Phase-II scheme with tentative implementation timeframe as 18 months.

Other elements of Part-D scheme comprising of Sikar-II – Khetri 765 kV D/c line and Sikar-II – Narela 765 kV D/c line are under bidding by RECPDCL as part of Rajasthan SEZ Ph-III Part-D Phase-I scheme with implementation timeframe as 18 months from SPV transfer (SPV Transfer is expected in January, 2024).

Requirement of 1500 MVA ICT (3rd) at Jhatikara (PG) S/s is arising with Jhatikara – Dwarka 400 kV D/c line. Accordingly, it is proposed that “Augmentation of 1x1500 MVA, 765/400 kV ICT (3rd) at Jhatikara Substation (Bamnoli/Dwarka Section)” may be implemented in matching timeframe of Rajasthan SEZ Ph-III Part-D Phase-II i.e. Jhatikara – Dwarka 400 kV D/c line (Quad).

Members may deliberate.

3.5 **Timeline for implementation of 400 kV D/C (Quad) Jhatikara - Dwarka line along with associated bays under the scheme “Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part D Phase-II”**

Implementation of 400 kV D/C (Quad) Jhatikara-Dwarka line along with 2 Nos. 400 kV bays at Jhatikara and Dwarka end under the scheme “Transmission system for evacuation of power from REZ in Rajasthan (20 GW) under Phase-III Part D Phase-II” was allocated to POWERGRID in RTM mode vide MoP OM No.- 15/3/2018-Trans-Part (5) dated 06.11.23 with completion schedule of 18 months from OM.

Subsequently, Powergrid vide letter dated 29.12.2023 has submitted the following:

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- a) As per the walkover survey of above line, it has been gathered that construction of mentioned line with quad conductor configuration is very difficult/not possible in Dwarka (Delhi area) in view of severe RoW constraints.
- b) Part of LILO of one circuit of 400 kV Jhatikara-Bamanuali at Dwarka (Delhi) was also constructed by POWERGRID on monopole with twin HTLS conductor and recently, UPPTCL also implemented their line under TBCB in Delhi/Noida on monopole.
- c) Based on prior experience of POWERGRID, it is to submit that during execution of transmission line in Delhi area, approval of various statutory bodies would be required which would take time.

In view of the above, Powergrid has requested to increase the time frame provided for implementation of the transmission scheme from 18 months to 24 months and has also requested to change the conductor configuration from Quad to twin HTLS conductor (on monopole).

Regarding the above proposal of Powergrid, CTUIL vide email dated 08.01.2024 has furnished following observations:

- a) The proposed Twin HTLS conductor shall have equivalent ampacity (2100 MVA per ckt) with respect to the Quad bundle configuration. Therefore, from a power flow requirement perspective, it is technically acceptable.
- b) According to the walkover survey report/POWERGRID letter, POWERGRID expressed various Right-of-Way (RoW) concerns due to the passing of the line through highly urbanized areas. To facilitate the ease of implementation, twin HTLS bundle configuration can be accepted for the Jhatikara – Dwarka 400 kV transmission line.
- c) As per clause 84 (Chapter V) of the CEA Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022, it is mentioned that for transmission lines in areas where a Right-of-Way constraint is encountered, appropriate technology options may be used.
- d) Various Rajasthan Ph-III transmission scheme packages (TBCB) are already awarded. Only Ph-III Part-D Ph-I (TBCB) & II (RTM) are delayed. This would impact power transfer from RE generation projects.

Members may deliberate.

3.6 **Change in Scope of the transmission scheme “Transmission Scheme for North Eastern Region Expansion Scheme-XVI (NERES-XVI)”**

CEA vide gazette notification dated 24.01.2023 has notified “Transmission Scheme for North Eastern Region Expansion Scheme-XVI (NERES-XVI)” and appointed RECPDCL as Bid Process Coordinator (BPC) of the scheme. The transmission scheme broadly includes:

- i. Establishment of new Gogamukh 400/220/132 kV substation

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- ii. Gogamukh (ISTS) – Gerukamukh (Arunachal Pradesh) 132 kV D/c (Zebra) line
- iii. Extension works at Gerukamukh (Arunachal Pradesh) 132 kV S/s, 2 no. of 132 kV line bays for termination of Gogamukh (ISTS) – Gerukamukh (Arunachal Pradesh) 132 kV D/c line

As per the Gazette notification, Department of Power, Arunachal Pradesh, has to provide space at Gerukamukh S/s for establishment of 2 no. 132 kV line bays for termination of Gogamukh (ISTS) – Gerukamukh 132 kV D/c line.

Subsequently, during survey works by RECPDCL, Department of Power, Government of Arunachal Pradesh had informed RECPDCL that space for 1 no. of bay is available at existing Gerukamukh S/s for termination of Gogamukh (ISTS) - Gerukamukh (Arunachal Pradesh) 132 kV D/c line and for 2nd line bay, TSP has to acquire land outside the existing Gerukamukh S/s.

In this regard, a meeting was held on 18.12.2023 (minutes attached herewith), wherein it was agreed that Department of Power, Arunachal Pradesh, would acquire the additional land and furnish the additional cost that shall be payable by the TSP.

Further, it was decided that as the acquisition of land may take time, Department of Power, Govt. of Arunachal Pradesh, may allow the use of space (which has been reserved by them for future bays) in the existing sub-station for construction of two numbers of 132 kV line bays under the present scheme. The land which the Government of Arunachal Pradesh is purchasing for the present scope of work for which they would be charging the TSP, would be subsequently used for the construction of bays by Arunachal Pradesh.

Based on the above, [Department of Power, Govt. of Arunachal Pradesh, vide their letter dated 22.12.2023](#) has conveyed the tentative cost estimates amounting to Rs. 39.36 Lakhs pertaining to additional land acquisition and dismantling and erection of already installed structures with the associated civil works.

With this, there would be change of scope of the transmission scheme with additional cost implications of Rs. 39.36 lakhs. If agreed, RECPDCL may incorporate the additional cost of Rs. 39.36 Lakhs in the bidding document and intimate the same to the prospective bidders.

Members may deliberate.

3.7 **Change in Scope of transmission scheme "Eastern Region Expansion Scheme-XXXIV (ERES-XXXIV)"**

The transmission scheme "Eastern Region Expansion Scheme-XXXIV (ERES-XXXIV)" was agreed in the 12th meeting of NCT held on 24.03.2023. The scheme inter-alia includes establishment of Paradeep 765/400 kV, 2x1500 MVA GIS substation along with Paradeep (ISTS) – Paradeep GIS (OPTCL) 400 kV D/c line. In the scope of works of the scheme, it has been mentioned that:

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OPTCL shall provide space at under implementation Paradeep (OPTCL) 400/220 kV GIS S/s (expected by December 2024) for implementation of 2 Nos. of 400 kV GIS line bays for termination of Paradeep–Paradeep (OPTCL) 400 kV D/c (Quad) line. 2 Nos. full diameter i.e. 4 Nos. GIS bays shall be established.

Subsequently, a meeting was held amongst CEA, CTUIL, BPC and OPTCL on 08.01.2023 under the chairmanship of Member (PS), wherein it was agreed that one existing bay at Paradeep GIS (OPTCL) would be utilized for termination of one circuit of Paradeep (ISTS) – Paradeep (OPTCL) 400 kV D/c line and for the second circuit, one full dia will be implemented under ISTS at 400 kV Paradeep GIS (OPTCL). Further, remaining bay of the dia (to be implemented under ISTS) will be utilized by OPTCL for future requirement in lieu of the existing bay (of OPTCL) being utilized under ISTS.

With this, there would be change in the scope of the scheme with establishment of 1 no. of full diameter i.e. 2 nos. of GIS bays instead of 2 nos. of full diameter i.e. 4 nos. of GIS bays at Paradeep (OPTCL).

Members may deliberate.

4 New Transmission Schemes:

4.1 **Augmentation of transformation capacity by 2x500 MVA (7th & 8th), 400/220 kV ICTs at Tumkur (Pavagada) 400/220 kV Pooling Station in Karnataka**

- 4.1.1 Presently, Tumkur (Pavagada) PS is under operation with 5x500 MVA, 400/220 kV ICTs. Further, additional 1x500 MVA, 400/220 kV ICT (6th) is under implementation and is expected by Dec'23. connectivity of about 3150 MW has been granted / agreed for grant. For evacuation of power with 'N-1' reliability criteria, it is proposed to augment the ICTs at Tumkur (Pavagada) PS by 2x500 MVA, 400/220 kV ICTs (7th & 8th ICT).
- 4.1.2 The estimated cost of the scheme is INR 116 Cr. Accordingly, the same is not required to be sent to SRPC for deliberation.
- 4.1.3 Detailed scope of the scheme is given below:

S. No.	Items	Details
1.	Name of Scheme	Augmentation of transformation capacity by 2x500 MVA (7 th & 8 th), 400/220 kV ICTs at Tumkur (Pavagada) 400/220 kV Pooling Station
2.	Scope of the scheme	Augmentation by 2x500 MVA, 400/220 kV transformation capacity at Tumkur (Pavagada) PS i. 500 MVA, 400/220 kV ICTs – 2 Nos. ii. 400 kV ICT bay – 2 Nos. iii. 220 kV ICT bay – 2 Nos. iv. 220 kV cable (2000 m approx.) along with

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S. No.	Items	Details
		associated termination kits
3.	Depiction of the scheme on Transmission Grid Map	
4.	Upstream/downstream system associated with the scheme	NA
5.	Objective / Justification	<p>1. Presently, Tumkur (Pavagada) PS is under operation with 5x500 MVA, 400/220kV ICTs. Further, additional 1x500 MVA, 400/220kV ICT (6th) is under implementation and is expected by Dec'23. Connectivity of 2550 MW has been granted at Tumkur (Pavagada) PS. Further, M/s Iacon Renewable Power Ltd. was granted connectivity for 500 MW with availability of 1x500 MVA (7th), 400/220 kV ICT at Tumkur (Pavagada) in the 21st CMETS-SR meeting held on 08.08.2023. With this total Connectivity granted at Tumkur (Pavagada) PS will be 3050 MW. Subsequently, in 22nd CMETS-SR held on 25.08.2023, it was agreed to grant additional connectivity for 100 MW to SECI at Tumkur (Pavagada). The total connectivity granted at Tumkur (Pavagada) PS will be 3150 MW with 7x500 MVA, 400/220 kV ICT(s).</p> <p>2. Further, the Manual on Transmission Planning Criteria, 2023 have come into effect from 01.04.2023 wherein it was specified that N-1 reliability criteria may be considered for ICTs at the ISTS / STU pooling stations for renewable energy based generation of more than 1000 MW after considering the capacity factor of renewable generating stations. With 7x500 MVA, 400/220kV ICTs at Tumkur (Pavagada) PS, the transformation capacity is 3500 MVA, however, connectivity of about 3150 MW has been granted / agreed for grant. Accordingly, for meeting the N-1 reliability criteria, 1x500 MVA, 400/220 kV ICT (8th) at Tumkur (Pavagada) PS is also required.</p> <p>3. Accordingly, augmentation of transformation capacity by 2x500 MVA (7th & 8th), 400/220 kV ICTs at Tumkur (Pavagada) PS was discussed and agreed in the 23rd CMETS-SR held on 29.09.2023</p>
6.	Estimated Cost	INR 116 Crore
7.	Impact on the total Annual	A. ATC (considering Levelized Tariff @15% of

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S. No.	Items	Details
	Transmission charges (ATC) in % along with the existing ATC	estimated cost): INR 17.4 Crore B. Present ATC: INR 44338.33 Crore* C. A/B (%): Less than 0.03924 %
8.	Need of phasing, if any	Not Applicable
9.	Implementation timeframe	18 months from date of allocation to implementing agency / SPV Transfer (as the case may be). Tentative time-frame: Aug'25 (Considering 2-3 months for necessary approvals & subsequent award of the project)
10.	Inclusion of any wildlife/protected area along the transmission line route	None envisaged
11.	Deliberations with RPC along with their comments	The estimated cost of the scheme is less than INR 500 Cr. Accordingly, the same is not required to be sent to SRPC for deliberation in line with MoP office order no. 15/3/2018-Trans-Pt(5) dated 28-10-2021 regarding reconstitution of NCT.
12.	System Study for the evolution of the proposal	The augmentation of 1x500 MVA, 400/220kV ICT (7 th) at Tumkur (Pavagada) PS has been agreed for grant of connectivity to RE generation projects. The augmentation of addl. 1x500 MVA, 400/220kV ICT (8 th) at Tumkur (Pavagada) PS has been agreed for meeting N-1 criteria as per CEA's revised Planning Criteria.

4.1.4 Accordingly, the detailed scope of the scheme is given below:

Sl.	Scope of the Transmission Scheme	Capacity /km
I.	Augmentation by 2x500 MVA, 400/220 kV transformation capacity at Tumkur (Pavagada) PS	<ul style="list-style-type: none"> • 500 MVA, 400/220 kV ICTs – 2 Nos. • 400 kV ICT bay – 2 Nos. • 220 kV ICT bay – 2 Nos. • 220 kV cable (2000 m approx.) along with associated termination kits

4.1.5 Members may deliberate.

4.2 Augmentation of transformation capacity at Jam Khambhaliya PS (JKTL)

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4.2.1 The proposed system shall enable evacuation of RE power from various generation projects in Jam Khambhaliya area who have applied for connectivity under GNA at Jam Khambhaliya PS at 220 kV level.

4.2.2 The estimated cost of the scheme is about INR 110 Cr. Accordingly, concurrence of WRPC is not required.

4.2.3 Detailed scope of the scheme is given below:

S. No.	Items	Details		
1.	Name of Scheme	Augmentation of transformation capacity at Jam Khambhaliya PS (JKTL)		
2.	Scope of the scheme	Sl.	Scope of the Transmission Scheme	Capacity /km
		1.	Creation of New 220 kV Bus Section at Jam Khambhaliya PS Space to be kept for 1 no. 220 kV line bay in the same GIS Hall for RE Interconnection being implemented by the RE developer (in addition to 2 nos. bays at Sl. 3)	220 kV Bus sectionaliser bay - 1 Set (<i>to be kept normally CLOSED and may be opened based on system requirement</i>) 220 kV BC – 1 No.
		2.	Augmentation of transformation capacity at Jam Khambhaliya PS (GIS) by 2x500MVA, 400/220 kV ICT (5th & 6th) terminated on New 220 kV bus section	500 MVA, 400/220 kV ICTs: 2 Nos. 400 kV ICT bays: NIL* 220 kV ICT bays: 2 Nos.
		3.	Implementation of 220kV GIS line bays at Jam Khambhaliya PS for RE Projects on New 220kV bus section	220 kV line bay – 2 No. (GIS) (1 for ACME Sun Power Pvt Ltd and 1 for Juniper Green Energy Pvt Ltd.)
<i>*Note: Termination of the 2x500MVA ICTs under present scope is proposed in the '2' seperate dia's</i>				

S. No.	Items	Details		
		<i>Sl.</i>	<i>Scope of the Transmission Scheme</i>	<i>Capacity /km</i>
		<p>which are being developed by POWERGRID for RIL for termination of 400 kV Jam Khambaliya - Jamnagar D/c line. In this respect, POWERGRID vide e-mail dated 08.12.2023 has informed the following:</p> <ul style="list-style-type: none"> • 2 complete 400 kV diameters (Line-Tie-ICT) along with 400 kV D/C Line upto Jamnagar is being constructed and owned by POWERGRID for providing connectivity to Bulk Consumer i.e. RIL. Transmission charges for the said asset are not included in PoC pool and will be recovered based on bilateral agreement between POWERGRID and RIL. • 400 kV side GIS Duct length required for interconnection of ICT-5 & 6 at 400kV Jam Khambaliya PS is approx. 350m. (Actual length shall be finalized based upon final layout). 		
3.	Depiction of the scheme on Transmission Grid Map	<p style="text-align: center;">Augmentation of transformation capacity at Jam Khambaliya PS (JKTL)</p>		
4.	Upstream/downstream system associated with the scheme	<p>2 nos. 220 kV bays at Jam Khambaliya PS (Sec-2) allotted to:</p> <ul style="list-style-type: none"> • ACME Sun Power Private Limited (ACME SPPL) (400MW): Appl. No. 2200000263 • Juniper Green Energy Private Limited (JGEPL) (100MW): Appl. No. 2200000253 <p>Further, 1 no. 220 kV bay is being implemented by M/s Mounting Renewable Power Limited (MRPL) (250MW):</p>		

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S. No.	Items	Details
		Application No. 2200000246 at JK PS, for which space has to be kept on 220kV section-2 under present scope. M/s MRPL have informed that they shall implement their 220kV bay by Dec-24 <i>(subject to availability of 220kV GIS Bus section-2)</i> . Cumulative injection from above developers at 220 kV bus section-2 shall be: 750 MW, out of which 650 MW (ACME & MRPL) is linked with 2x500 MVA, 400/220 kV ICT (5th & 6th).
5.	Objective Justification	The proposed system shall enable evacuation of RE power from various generation projects in Jam Khambhaliya area who have applied for connectivity under GNA at Jam Khambhaliya PS at 220 kV level.
6.	Estimated Cost	INR 110 Crore
7.	Impact on the total Annual Transmission charges (ATC) in % along with the existing ATC	A. ATC (considering levelized tariff @15% of estimated cost): about ₹16.5Cr. B. Present ATC: ₹44582.2 Cr.* C. A/B: about 0.03701%
8.	Need of phasing, if any	Not Applicable
9.	Implementation timeframe	For scope at Sl. 1 & 2: 21 months from date of allocation to implementing agency For 2 Nos. 220 kV bays in respect of scope at Sl. No. 3: <ul style="list-style-type: none"> • 1 no. bay for M/s ACME Sun Power Private Limited (ACME SPPL) (400MW): 30.03.2026 <i>(subject to minimum schedule of 21 months from date of allocation to implementing agency)</i> • Juniper Green Energy Private Limited (JGEPL) (100MW): 30.06.2027 <i>(subject to minimum schedule of 21 months from date of allocation to implementing agency)</i> <p>The scheme shall be taken up for implementation upon receipt of Conn-BGs, as applicable under GNA Regulations, 2022 from:</p> <ul style="list-style-type: none"> • ACME Sun Power Private Limited (ACME SPPL) (400MW): Application No. 2200000263 <i>(In-principle connectivity granted on 17.11.2023) (for scope at Sl. 1, 2 & 3)</i> • Juniper Green Energy Private Limited (JGEPL) (100MW):

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S. No.	Items	Details
		Appl. No. 2200000253 (<i>In-principle connectivity granted on 17.11.2023</i>) (for scope at Sl. 1 & 3) <ul style="list-style-type: none"> Mounting Renewable Power Limited (MRPL) (250MW): Appl. No. 2200000246 (<i>In-principle connectivity granted on 17.11.2023</i>) (for scope at Sl. 1 & 2)
10.	Inclusion of any wildlife/protected area along the transmission line route	Not Applicable
11.	Deliberations with RPC along with their comments	The estimated cost of the scheme is less than INR 500 Cr. Accordingly, the same is not required to be sent to WRPC for deliberation in line with MoP office order no. 15/3/2018-Trans-Pt(5) dated 28-10-2021 regarding reconstitution of NCT.
12.	System Study for the evolution of the proposal	The scheme was agreed in the 22 nd Consultation Meetings for Evolving Transmission Schemes in Western Region held (1st sitting) on 23.10.2023.

4.2.4 Detailed scope of the scheme is given below:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Creation of New 220 kV Bus Section at Jam Khambhaliya PS <ul style="list-style-type: none"> Space to be kept for 1 no. 220 kV line bay in the same GIS Hall for RE interconnection being implemented by the RE developer (in addition to 2 nos. bays at Sl. 3) 	220 kV Bus sectionaliser bay - 1 Set (<i>to be kept normally CLOSED and may be opened based on system requirement</i>) 220 kV BC – 1 No.
2.	Augmentation of transformation capacity at Jam Khambhaliya PS (GIS) by 2x500 MVA, 400/220 kV ICT (5th & 6th) terminated on New 220 kV bus section	1x500 MVA, 400/220 kV ICTs- 2 Nos. 400 kV ICT bays - NIL* 220 kV ICT bays - 2 Nos.
3.	Implementation of 220 kV GIS line bays at Jam Khambhaliya PS for RE Projects on New 220 kV bus section	220 kV line bay – 2 No. (GIS) (1 for ACME Sun Power Pvt Ltd and 1 for Juniper Green Energy Pvt Ltd.)

**Note: Termination of the 2x500 MVA ICTs under present scope is proposed in the '2' seperate dia's which are being developed by POWERGRID for RIL for termination of 400*

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kV Jam Khambaliya - Jamnagar D/c line. In this respect, POWERGRID vide e-mail dated 08.12.2023 has informed the following:

- *2 complete 400 kV diameters (Line-Tie-ICT) along with 400kV D/C Line upto Jamnagar is being constructed and owned by POWERGRID for providing connectivity to Bulk Consumer i.e. RIL. Transmission charges for the said asset are not included in PoC pool and will be recovered based on bilateral agreement between POWERGRID and RIL.*
- *400kV side GIS Duct length required for interconnection of ICT-5 & 6 at 400kV Jam Khambaliya PS is approx. 350m. (Actual length shall be finalized based upon final layout).*

4.2.5 Members may deliberate.

4.3 Augmentation of transformation capacity at 765/400 kV Lakadia S/s (WRSS XXI(A) Transco Ltd) in Gujarat – Part B scheme

4.3.1 The proposed system shall enable evacuation of RE power from various generation projects in Lakadia area who have applied for connectivity under GNA at Lakadia S/s at 220 kV level. The 2x500 MVA ICTs proposed at Lakadia form part of ATS of RE projects for 550 MW [AMNSIL: 350 MW & RS(S8) PL: 200 MW].

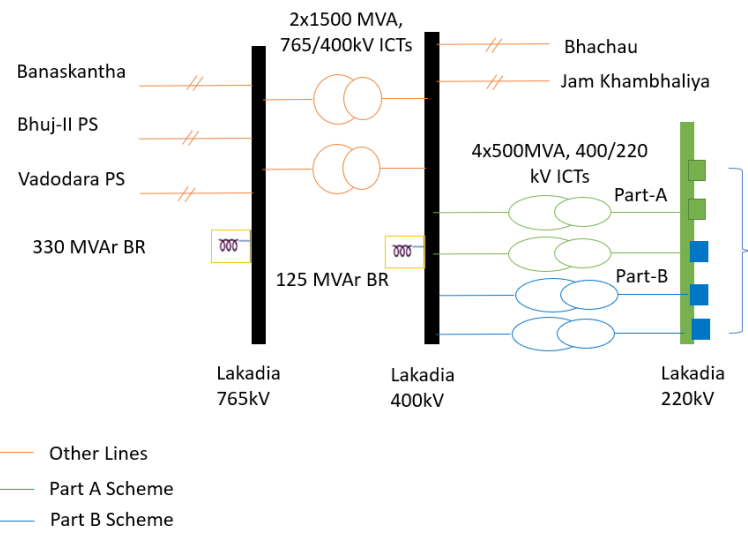
4.3.2 The estimated cost of the scheme is less than INR 500 Cr and accordingly, same was not sent to WRPC for deliberations.

4.3.3 Details of the proposed scheme is given below:

S. No.	Items	Details
1.	Name of Scheme	Augmentation of transformation capacity at 765/400 kV Lakadia S/s (WRSS XXI(A) Transco Ltd) in Gujarat – Part B

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S. No.	Items	Details		
2.	Scope of the scheme	<i>Sl.</i>	<i>Scope of the Transmission Scheme</i>	<i>Capacity /km</i>
		1.	Installation of 2x500 MVA, 400/220 kV ICTs (3 rd & 4 th) at Lakadia PS along with associated ICT bays	400/220 kV, 1x500 MVA ICT – 2 Nos. 400 kV ICT bay – 2 No. 220 kV ICT bay – 2 No.
		2.	Implementation of 220 kV line bay at Lakadia PS for TEQ Green Power XVII Private Limited (TGPXVIIPL: 300 MW)	220 kV line bay – 1 No.
		3.	Implementation of 220 kV line bay at Lakadia PS for Arcelor Mittal Nippon Steel India Limited (AMNSIL: 350 MW)	220 kV line bay – 1 No.
		4.	Implementation of 220 kV line bay at Lakadia PS for Renew Solar (Shakti Eight) Private Limited (RS(S8)PL: 200 MW)	220 kV line bay – 1 no.
3.	Depiction of the scheme on Transmission Grid Map			

S. No.	Items	Details
		<p style="text-align: center;">Augmentation of transformation capacity at 765/400kV Lakadia S/s (WRSS XXI(A) Transco Ltd.) in Gujarat – Parts A & B</p>  <p style="text-align: center;"> — Other Lines — Part A Scheme — Part B Scheme </p>
4.	Upstream/downstream system associated with the scheme	<p>3 Nos. 220 kV bays at Lakadia S/s allotted to:</p> <ul style="list-style-type: none"> • TEQ Green Power XVII Private Limited (TGPXVIIPL: 300MW): Appl. No. 2200000311 • Arcelor Mittal Nippon Steel India Limited (AMNSIL: 350MW): Appl. No. 2200000324 • Renew Solar (Shakti Eight) Private Limited (RS(S8)PL: 200MW): Appl.No. 2200000341 <p>With this, cumulative capacity granted in-principle connectivity at Lakadia S/s is 1400MW (550+300+350+200MW).</p>
5.	Objective Justification	<p>The proposed system shall enable evacuation of RE power from various generation projects in Lakadia area who have applied for connectivity under GNA at Lakadia S/s at 220 kV level. The 2x500 MVA ICTs proposed at Lakadia form part of ATS of RE projects for 550 MW (AMNSIL: 350 MW & RS(S8)PL: 200 MW).</p>
6.	Estimated Cost	INR 135 Crore
7.	Impact on the total Annual Transmission charges (ATC) in % along with the existing ATC	<p>D. ATC (considering levelized tariff @15% of estimated cost): about ₹20.25Cr.</p> <p>E. Present ATC: ₹44582.2 Cr.*</p> <p>F. A/B: about 0.04542%</p>
8.	Need of phasing, if	Not Applicable

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S. No.	Items	Details		
	any			
9.	Implementation timeframe	Sl.	Scope of the Transmission Scheme	Time-frame
		1.	Installation of 2x500 MVA, 400/220 kV ICTs at Lakadia PS along with associated ICT bays	18 months from date of allocation to implementing agency
		2.	Implementation of 220 kV line bay at Lakadia PS for TEQ Green Power XVII Private Limited (TGPXVIIPL: 300MW)	31.12.2026 (as per start date requested by applicant)
		3.	Implementation of 220 kV line bay at Lakadia PS for Arcelor Mittal Nippon Steel India Limited (AMNSIL: 350 MW)	18 months from date of allocation to implementing agency
		4.	Implementation of 220kV line bay at Lakadia PS for Renew Solar (Shakti Eight) Private Limited (RS(S8) PL: 200 MW)	30.09.2026 (as per start date requested by applicant)
		<p>The scheme shall be taken up for implementation upon receipt of Conn-BGs, as applicable under GNA Regulations, 2022 from:</p> <ul style="list-style-type: none"> • TEQ Green Power XVII Private Limited (TGPXVIIPL: 300MW): Appl. No. 2200000311 (<i>In-principle connectivity granted on 29.12.2023</i>) • Arcelor Mittal Nippon Steel India Limited (AMNSIL: 350MW): Appl. No. 2200000324 (<i>In-principle connectivity granted on 29.12.2023</i>) • Renew Solar (Shakti Eight) Private Limited (RS(S8)PL: 200MW): Appl.No. 2200000341 (<i>In-principle connectivity granted on 29.12.2023</i>) 		
10.	Inclusion of any	Not Applicable		

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S. No.	Items	Details
	wildlife/protected area along the transmission line route	
11.	Deliberations with RPC along with their comments	The estimated cost of the scheme is less than INR 500 Cr. Accordingly, the same is not required to be sent to WRPC for deliberation in line with MoP office order no. 15/3/2018-Trans-Pt(5) dated 28-10-2021 regarding reconstitution of NCT.
12.	System Study for the evolution of the proposal	The scheme was agreed in the 23 rd Consultation Meeting for Evolving Transmission Schemes in Western Region held on 29.11.2023.

* Total YTC allowed for Aug'23 as per Notification of Transmission Charges payable by DICs for Billing Month of October, 2023 dated 25.09.2023 posted on NLDC website.

4.3.4 Detailed scope of the scheme is given below:

Sl. No.	Scope of the Transmission Scheme	Capacity /km
1.	Installation of 2x500 MVA, 400/220 kV ICTs (3 rd & 4 th) at Lakadia PS along with associated ICT bays	1x500 MVA, 400/220 kV ICT – 2 Nos. 400 kV ICT bay – 2 Nos. 220 kV ICT bay – 2 Nos.
2.	Implementation of 220 kV line bay at Lakadia PS for TEQ Green Power XVII Private Limited (TGPXVIIPL: 300 MW)	• 220 kV line bay – 1 No.
3.	Implementation of 220 kV line bay at Lakadia PS for Arcelor Mittal Nippon Steel India Limited (AMNSIL: 350 MW)	• 220 kV line bay – 1 No.
4.	Implementation of 220 kV line bay at Lakadia PS for Renew Solar (Shakti Eight) Private Limited (RS(S8) PL: 200 MW)	• 220 kV line bay – 1 No.

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4.3.5 Members may deliberate.

4.4 400 kV line bays & ICT Augmentation at 765/400/220 kV Mandsaur S/s in MP

4.4.1 The Mandsaur PS is being set-up with 3x1500 MVA, 765/400 kV ICTs to enable evacuation of power from 2 GW Wind Potential. The S/s has been approved in the 14th NCT meeting held on 09.06.2023 and the same is under bidding with implementation time-frame of 24 months from SPV Transfer. The GNA application of Greenko shall result in cumulative injection of 3,512 MW (including 2,000 MW WEZ) at 400 kV level of Mandsaur PS and hence, an additional 1x1500 MVA, 765/400 kV ICT (4th) is required.

4.4.2 The PSPs of M/s Greenko are tying up power from RE sources and the RE power stored during high RE generation periods shall be dispatched in conjunction with the 2 GW WEZ at Mandsaur PS. Thus, the 4th ICT would be catering to WEZ potential and would also facilitate evacuation of power from PSP in a reliable manner. Hence, the 1x1500 MVA, 765/400 kV ICT (4th) at Mandsaur PS shall serve both RE projects as well as the subject PSPs (Energy storage).

4.4.3 Detailed scope of the scheme is given below:

S. No.	Items	Details		
1.	Name of Scheme	400 kV line bays & ICT Augmentation at 765/400/220 kV Mandsaur S/s in MP		
2.	Scope of the scheme	<i>Sl. No.</i>	<i>Scope of the Transmission Scheme</i>	<i>Capacity /km</i>
		1.	Augmentation of transformation capacity at Mandsaur PS by 1x1500 MVA, 765/400 kV ICT (4th) along with associated bays	765/400 kV ICT – 1 No. (4 th) 765 kV ICT bay – 1 No. 400 kV ICT bay – 1 No.
		2.	400kV line bays at 765/400/220 kV Mandsaur S/s for Interconnection of PSP of Greenko MP01 IREP Private Limited	400 kV line bay – 2 No.
3.	Depiction of the scheme on Transmission Grid Map			

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S. No	Items	Details
4.	Upstream/downstream system associated with the scheme	<p>PSPs of Greenko MP01 IREP Private Limited has requested start date of connectivity under GNA as follows:</p> <ul style="list-style-type: none"> • 504 MW: 14.11.2025 • 504 MW: 15.01.2026 • 504 MW: 16.03.2026
5.	Objective Justification	<p>The Mandsaur PS is being set-up with 3x1500 MVA, 765/400kV ICTs to enable evacuation of power from 2 GW Wind Potential identified under 181.5 GW REZ potential. The S/s has been approved in the 14th NCT meeting held on 09.06.2023 & the same is under bidding with implementation time-frame of 24 months from SPV Transfer. The present application shall result in cumulative injection of 3, 512MW (incl. 2000 MW WEZ) at 400 kV level of Mandsaur PS and hence, an additional 1x1500 MVA, 765/400 kV ICT (4th) is required.</p> <p>The PSPs of M/s Greenko are tying up power from RE sources and the RE power stored during high RE periods shall be dispatched in conjunction with the 2 GW WEZ at Mandsaur PS. Thus, the 4th ICT would be catering to WEZ potential and would also facilitate evacuation of RE power stored in PSP in a reliable manner. Hence, the 1x1500 MVA, 765/400 kV ICT (4th) at Mandsaur PS shall serve both RE projects as well as the subject PSPs (Energy storage).</p>
6.	Estimated Cost	INR 143 Crore
7.	Impact on the total Annual Transmission charges (ATC) in % along with the existing ATC	<p>D. ATC (considering levelized tariff @15% of estimated cost): about ₹21.45 Cr.</p> <p>E. Present ATC: ₹44582.2 Cr.*</p> <p>F. A/B: about 0.0481%</p>
8.	Need of phasing, if any	Not Applicable
9.	Implementation timeframe	24 months from date of allocation to implementing agency
10.	Inclusion of any wildlife/protected area along the transmission line	Not Applicable

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S. No	Items	Details
	route	
11.	Deliberations with RPC along with their comments	The estimated cost of the scheme is less than INR 500 Cr. Accordingly, the same is not required to be sent to WRPC for their deliberation in line with MoP office order no. 15/3/2018-Trans-Pt(5) dated 28-10-2021 regarding reconstitution of NCT.
12.	System Study for the evolution of the proposal	The scheme was agreed in the 21 st CMETS-WR (2 nd sitting) meeting held on 29.08.2023. Refer Justification section for more details.

* Total YTC allowed for June 2023, as per notification of transmission charges payable by DICs for billing month of Aug 2023 dated 31-08-2023 published on NLDC website (available @ https://posoco.in/download/amendment-to-notification_transmission-charges-for-dics_billing-month_august_2023/?wpdmdl=53317)

4.4.4 Detailed scope of the scheme is given below:

<i>Sl.</i>	<i>Scope of the Transmission Scheme</i>	<i>Capacity /km</i>
1.	Augmentation of transformation capacity at Mandsaur PS by 1x1500 MVA, 765/400 kV ICT (4th) along with associated bays	765/400 kV ICT – 1 No. (4 th) 765 kV ICT bay – 1No. 400 kV ICT bay – 1 No.
2.	400 kV line bays at 765/400/220 kV Mandsaur S/s for Interconnection of PSP of Greenko MP01 IREP Private Limited	400 kV line bay – 2 Nos.

4.4.5 Members may deliberate.

5 Evaluation of functioning of National Grid.

POSOCO may make the requisite presentation apprising NCT of the performance of national Grid.

6 Any other issues, with permission of chair
