

सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड

(पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड के स्वामित्व में)

(भारत सरकार का उदयम)

CENTRAL TRANSMISSION UTILITY OF INDIA LTD.

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

(A Government of India Enterprise)

संदर्भ/Ref: CTU/E/00/11th/CMETS-ER

दिनांक/Date: 14-10-2022

वितरण सूची के अनुसार/ As per Distribution List

विषय/ Subject: पूर्वी क्षेत्र में पारेषण योजनाओं के विकास के लिए 11^{वीं} परामर्श बैठक के कार्यवृत्त (सीएमईटीएस-ईआर) / Minutes of 11th Consultation Meeting for Evolving Transmission Schemes in Eastern Region (CMETS-ER)

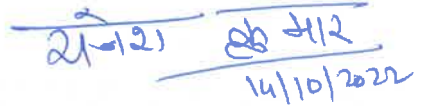
महोदय/महोदया/ Sir/ Ma'am,

पूर्वी क्षेत्र में पारेषण योजनाओं के विकास के लिए 11^{वीं} परामर्श बैठक 28 सितंबर, 2022 को वीडियो कॉन्फ्रेंस के माध्यम से आयोजित की गई थी। इस संबंध में बैठक के कार्यवृत्त संलग्न है। यही CTUIL की वेबसाइट (www.ctuil.in >> [ISTS Planning and Coordination](#) >> [Consultation Meeting for ISTS >> Eastern Region](#)) पर भी उपलब्ध है।

The 11th Consultation Meeting for Evolving Transmission Schemes in Eastern Region (CMETS-ER) was held on 28th September, 2022 through video conferencing. In this regard, please find enclosed minutes of the meeting. The same is available on CTUIL website (www.ctuil.in >> [ISTS Planning and Coordination](#) >> [Consultation Meeting for ISTS >> Eastern Region](#))

धन्यवाद/ Thanking you,

भवदीय / Yours faithfully,


(राजेश कुमार) / (Rajesh Kumar)
महाप्रबंधक/ General Manager

A. वितरण सूची / Distribution List:

1.	Chief Engineer (PSP&A-II) Central Electricity Authority Sewa Bhawan, R.K.Puram New Delhi-110066	2.	Member Secretary Eastern Regional Power Committee 14, Golf Club Road, Tollygunge Kolkata-700033
3.	Director (SO) Power System Operation Corporation Ltd. (POSOCO) 9 th Floor, IFCI Towers, 61, Nehru Place, New Delhi-110016	4.	Executive Director Eastern Regional Load Despatch Centre 14, Golf Club Road, Jubilee Park, Golf Gardens, Tollygunge, Kolkata, West Bengal - 700095
5.	CMD Damodar Valley Corporation DVC Towers, VIP Road Kolkata-700054	6.	CMD Odisha Power Transmission Corporation Ltd. (OPTCL) Bhoinagar Post Office, Jan path Bhubaneswar-751022
7.	CMD Bihar State Power Transmission Company Ltd. (BSPTCL) Vidyut Bhavan, 4 th floor, Bailey Road Patna-800021	8.	CMD Jharkhand Urja Sancharan Nigam Limited (JUSNL) Engineering Building, HEC, Dhurwa Ranchi -834004
9.	Principal Chief Engineer cum Secretary Power Department Government of Sikkim Gangtok, Sikkim	10.	Managing Director West Bengal State Electricity Transmission Company Ltd. (WBSETCL) Vidyut Bhavan, 8 th Floor, A-Block Salt Lake City, Kolkata-700091
11.	Director (Projects) Power Grid Corporation of India Ltd. "Saudamini", Plot No. 2, Sec-29, Gurugram Haryana-122001	12.	Managing Director Haldia Energy Limited (HEL) 2A, Lord Sinha Road, First Floor, Kolkata, West Bengal - 700 071, Email: rabi.chowdhury@rpsg.in ; kakali@rpsg.in ;
13.	Chairman CESC Limited CESC House, Chowringhee Square Kolkata – 700001 Email: kakali@rpsg.in ; rabi.chowdhury@rpsg.in		

B. आवेदन करता /Applicant:

1.	Shri Milind Nigudkar Sr. General Manager Sembcorp Energy India Ltd. 5th Floor, Tower C, Building No.8 DLF Cyber City, Gurugram-122002, Haryana Email: milind.nigudkar@sembcorp.com jasvir.malik@sembcorp.com
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Minutes of 11th Consultation Meeting for Evolving Transmission Schemes in Eastern Region (CMETS-ER)

CGM (CTUIL) welcomed the participants to the meeting. He informed that the interim Rolling Plan of ISTS for 2027-28 would be published by CTU on 30th Sep 2022 which has been prepared based on inputs provided by stakeholders to assess the transmission system requirement for 2027-28 timeframe. In this regard, it was requested that all the stakeholders may also analyse the power system violations in the intra-state system mentioned in the report and come up with suitable proposals to mitigate these constraints.

List of the participants is enclosed at **Annexure-I**. Agenda wise deliberations and decisions are given below:

1. Confirmation of minutes of the previous meeting

CTU informed that minutes of the 10th CMETS-ER held on 30-08-2022 were issued vide letter dated 08-09-2022. As no comments have been received, the minutes were considered to be confirmed as circulated.

A. Application related matters in Eastern Region (ER)

2. LTA applications with injection in SR and drawl in ER

2.1 CTU informed that a LTA application has been received from M/s Sembcorp Energy India Limited (SEIL) (erstwhile NCC Power Projects Private Limited) with injection at Nellore pooling station, Andhra Pradesh, SR and drawl at Baharampur switching station (POWERGRID) for onward transfer to Bangladesh in the month of August 2022. The details in this regard is given below:

Sl. No.	Applic-ation ID	Name of Applicant	Submi-ssion Date	Quantum of LTA	Start Date of LTA	End Date of LTA	Generation/ Injection Point	Drawl Point
1.	0450200012	Sembcorp Energy India Limited	29-08-2022	200 (firm)	01-01-2023	31-05-2033	Nellore PS AP, SR	NVVN-Bangladesh through 400kV Baharampur (POWERGRID) switching station, West Bengal

2.2 CTU informed that M/s Sembcorp Energy India Limited (SEIL) was granted 740MW LTA vide intimation dated 04-06-2012 on target region (SR). Subsequently, 250MW LTA out of 740MW was firmed up to ER/Bangladesh vide intimation dated 09-12-2019 (for onward transfer to Bangladesh). Now, M/s SEIL has submitted LTA application for 200MW towards change in target region from Southern Region to Eastern Region for transfer of 200MW from their generation project to Baharampur switching station in West Bengal (ER), India for onward transfer to Bangladesh from 01-01-2023 to 31-05-2033.

2.3 CTU mentioned that presently, 800MW LTA is operational from various generators in India to Baharampur S/s for onward transfer to Bangladesh, comprising of 250MW to NVVN Ltd. (from various NTPC plants), 300MW to

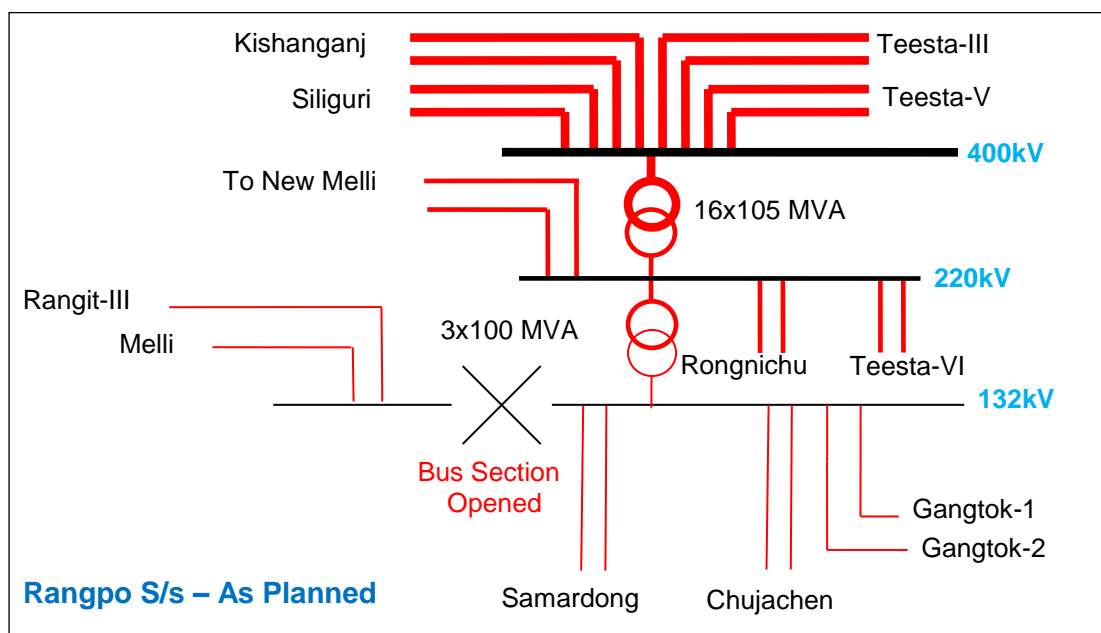
NVVN Ltd. (from DVC), 250MW to M/s SEIL. The Baharampur (India) – Bheramara (Bangladesh) interconnection comprises of 2x400kV D/c line along with 2x500MW HVDC back-to-back at Bheramara end. Thus, power transfer capacity for additional 200MW exists in the Baharampur – Bheramara interconnection.

- 2.4 It was informed that the start date of above mentioned LTA is from 01-01-2023. Accordingly, studies have been carried out on All India load flow file for Dec 2022 timeframe for subject LTA requirement of 200MW from M/s SEIL in SR to Baharampur (POWERGRID) switching station in ER for onward transfer to Bangladesh. From the system studies, it is observed that line loadings are generally in order with the existing/under implementation transmission system for the said LTA.
- 2.5 After detailed deliberations, it was agreed to grant the LTA to M/s Sembcorp Energy India Limited for transfer of 200MW (firming up of additional 200MW in already grant LTA of 740MW on target basis) power from their generation project to Baharampur switching station in West Bengal (ER) for onward transfer to Bangladesh w.e.f. 01-01-2023 to 31-05-2033.

B. ISTS expansion schemes in Eastern Region

3. Split bus arrangement at Rangpo 132kV Bus

- 1.1 CTU informed that Rangpo 400/220/132kV substation was commissioned in 2016 as part of transmission system implemented for phase-1 generation projects in Sikkim. In this scheme, split bus arrangement at 132kV bus of Rangpo S/s was planned wherein the Melli and Rangit-III 132kV feeders were planned to be on one side of the split bus section and all other 132kV feeders to be on other side. This Arrangement was planned due to anticipated overloading in the Rangit-III & Melli 132kV feeders during high hydro generation scenario.



- 1.2 CTU mentioned that as per inputs from POWERGRID, the bus split arrangement at Rangpo S/s at 132kV level has been implemented differently. Rangpo 132kV bus is having double bus (single CB) switching scheme. It is understood that presently the substation is being operated with two single buses at 132kV level (by keeping the bus couplers open and bus sectionalisers closed) with Rangit-III and Melli feeders in first bus and remaining feeders on the second bus.
- 1.3 POWERGRID confirmed the above rearrangement mentioned by CTU. POWERGRID mentioned that presently, during the outage of Rangpo - Melli 132kV S/c line, Melli substation would be fed from Siliguri as an alternate source. Therefore, no constraint is observed in power supply to the area as per the present operating condition/arrangement.
- 1.4 ERLDC stated that there are no operational constraints as per the present arrangement at 132kV level at Rangpo S/s. ERLDC also informed that for implementation of the planned bus split rearrangement at 132kV Rangpo S/s, a long shutdown may be required, which may neither be feasible nor desirable at present as entire power requirement of capital city of Gangtok is met from Rangpo S/s. Upon implementation of the Rangpo – Samardong 220kV D/c line (initially operated at 132kV) under Sikkim Comprehensive Scheme, some of the existing loads at Rangpo may be shifted to Samardong S/s. Subsequently, implementation of the planned 132kV bus split rearrangement at Rangpo S/s may be taken up as per system requirement. ERLDC emphasized that reliability of the transmission system in Sikkim would be better after implementation of the planned system by CTU. ERPC also confirmed the same.
- 1.5 On enquiry of status of commissioning of transmission system under Sikkim Comprehensive Scheme, Sikkim stated that the work is delayed due to RoW, forest clearance, difficult terrain, high altitude etc. However, best efforts are being made to complete the system at the earliest (within next 6 months).
- 1.6 After detailed deliberation, it was agreed that present arrangement may continue at 132kV bus at Rangpo S/s till completion of Rangpo – Samardong 220kV D/c line (initially operated at 132kV) and associated systems under Sikkim Comprehensive Scheme. Upon completion of the Comprehensive Scheme, system requirement would be reviewed and implementation of the planned 132kV split bus arrangement at Rangpo S/s would be taken up accordingly.

4. Revised connectivity for Laxmikantpur 400/132kV S/s and split bus arrangement at Laxmikantpur S/s

- 4.1. CTU informed that in the 10th CMETS-ER held on 30-08-2022, following was deliberated:
 - (a) WBSETCL to share the demand data for various scenarios as requested by HEL.
 - (b) HEL to carry out requisite studies and to provide their decision on the LILO of Haldia – Subhasgram 400kV D/c line at 400/132kV New Laxmikantpur

substation, prior to the next CMETS-ER meeting, so that the scheme can be finalized at the earliest.

- 4.2. HEL stated that they have received only Summer Peak (MVA & MW) and Winter Peak (MW) data from WBSETCL which is not sufficient for technical study regarding establishment of New Laxmikantpur S/s with the LILO of Haldia – Subhasgram 400kV D/c line. HEL requested WBSETCL for additional data viz. Summer off peak (MVA & MW), Winter peak (MW) and Winter off peak (MVA & MW).
- 4.3. WBSETCL stated that they have already shared all the available and requisite data to HEL and additional data, if any, will be provided after discussion with HEL.
- 4.4. It was suggested that HEL and WBSETCL may coordinate and finalise regarding implementation of New Laxmikantpur S/s through LILO of Haldia – Subhasgram 400kV D/c line, as the same is required to improve the power supply to capital city of Kolkata.
- 4.5. After detailed deliberation, it was agreed that WBSETCL and HEL would jointly finalise requirement of the additional data and carry out necessary system studies. WBSETCL mentioned that if the matter is not resolved by the next CMETS-ER they would come up with alternate proposal for establishment of New Laxmikantpur S/s.

5. Modification in Eastern Region Expansion Scheme-XXXI (ERES-XXXI)

- 5.1. CTU informed that in the 8th CMETS-ER held on 30-06-2022, Eastern Region Expansion Scheme-XXXI (ERES-XXXI) with implementation timeframe of 18 months from the date of allocation was agreed to be taken up in ISTS with following scope of works:
 - (a) Installation of new 420kV, 1x63MVAR line reactor at Maithon-A end of Maithon-A – Kahalgaon-B ckt-1 400kV line along with new 700ohm NGR (with NGR bypass arrangement for operation of line reactor as a bus reactor)

Note: The existing 50MVAR line reactor along with NGR in this line at Maithon-A end may be decommissioned prior to commissioning of above new 63MVAR line reactor and NGR.
 - (b) Installation of new 420kV, 1x125MVAR bus reactor along with associated bay at Jamshedpur (POWERGRID) S/s
- 5.2. CTU informed that after further studies and considering past operational experiences, size of the NGR has been reviewed and it has been observed that NGR of lower rating such as 500ohms would also be technically suitable along with the planned 63MVAR line reactor.
- 5.3. In view of the above, following revised scope of work was agreed under ERES-XXXI scheme keeping the implementation timeframe of 18 months from the date of allocation:

- (a) Installation of new 420kV, 1x63MVAR line reactor at Maithon-A end of Maithon-A – Kahalgaon-B ckt-1 400kV line along with new **500ohm NGR** (with NGR bypass arrangement for operation of line reactor as a bus reactor)

***Note:** The existing 50MVAR line reactor along with NGR in this line at Maithon-A end may be decommissioned prior to commissioning of above new 63MVAR line reactor and NGR.*

- (b) Installation of new 420kV, 1x125MVAR bus reactor along with associated bay at Jamshedpur (POWERGRID) S/s

6. Status of downstream 220kV or 132kV network by STUs from the various commissioned and under-construction ISTS substations in ER

- 6.1. CTU informed that numbers of ISTS sub-stations have been commissioned and some are under construction for which the downstream system is being implemented by the STUs. Based on the information provided by the states, updated information on planned/under-construction downstream system is given at **Annexure-II**.
- 6.2. CTU informed that OPTCL and WBSETCL have already provided the update prior to the meeting and the same shall be incorporated in the minutes. Other STUs were once again requested to provide the update prior to meeting itself so as to save time. All STUs agreed for the same.

7. Status of 400kV substations being implemented by STUs in ER under intra-state schemes to be connected through ISTS

- 7.1. CTU informed that various 400kV substations have been approved in the intra-state strengthening schemes in ER having interconnection with ISTS grid involving LILO of ISTS lines or direct connection to ISTS substations. Status of intra-state substations and associated lines as updated by STUs in the meeting is given at **Annexure-III**.
- 7.2. CTU informed that OPTCL and WBSETCL have already provided the update prior to the meeting and the same shall be incorporated in the minutes. Other STUs were once again requested to provide the update prior to meeting itself so as to save time. All STUs agreed for the same.

8. Status of space allocated at various ISTS substations to STUs for implementation of line bays under intra state system) for their intra state lines

- 8.1. CTU informed that space at various ISTS substations have been allocated to STUs for creation of line bays for termination of their new intra-state lines. List of such ISTS substations as per available information is given at **Annexure-IV**. Status of the bays allocated at ISTS S/s as updated by STUs in the meeting is given at **Annexure-IV**.

Annexure-I**List of participants of 11th Consultation Meeting for Evolving Transmission Schemes in Eastern Region (CMETS-ER)**

Sl. No.	Name	Designation	Organization	Email id
1.	Sh. Jasbir Singh	CGM	CTU	jasbir@powergrid.in
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3.	Sh. Rajesh Kumar	GM	CTU	rajeshkumar@powergrid.in
4.	Sh. Manish Ranjan Keshari	Manager	CTU	manish.keshari@powergrid.in
5.	Sh. Shyam Sunder Goyal	Manager	CTU	shyam.goyal@powergrid.in
6.	Sh. Anupam Kumar	Manager	CTU	i.anupamk@powergrid.in
7.	Sh. Kaushal Suman	Manager	CTU	k.suman@powergrid.in
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9.	Sh. Amit Kumar	Engineer	CTU	emailamit0014@gmail.com
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12.	Sh. Partha Ghosh	CM	POWERGRID	Partha.ghosh@powergrid.in
13.	Sh. Shyamal konar	GM	ERLDC	Konar-s@posoco.in
14.	Sh. Bilash Achari	DGM	ERLDC	Bilash_achari@posoco.in
15.	Sh. Saibal Ghosh	Manager	ERLDC	saibal@posoco.in
16.	Sh. Saurav Kr Sahay	Chief Manager	ERLDC	saurav.sahay@posoco.in
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18.	Ms. Shabari Pramanick	Manager	ERLDC	shabari.pramanick@posoco.in
19.	Sh. Akash Modi	Manager	ERLDC	akmodi@posoco.in
20.	Sh. Amaresh Mallick	CGM	ERLDC	amareshmallick@posoco.in
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22.	Sh. Ranjan Das	Addl. CE	WBSETCL	cpd.wbsetcl@gmail.com
23.	Sh. Sandip pal	CE(SYSTEM)	DVC	sandip.pal@dvc.gov.in
24.	Sh. Jayanta Dutta	Chief Engineer	DVC	jayanta.dutta@dvc.gov.in
25.	Sh. A. K. Banerjee	DGM	OPTCL	ele.akbanerjee@optcl.co.in
26.	Sh. H R Pandey	Director (Projects)	BSPTCL	dir.proj.bsptcl@gmail.com
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28.	Sh. D K Jha	CE(P&E)	BSPTCL	ceplanningengg@gmail.com
29.	Sh. Praveen Kumar	EEE(STU)	BSPTCL	stubsptcl2019@gmail.com
30.	Sh. Kumar Prasant	CE STU	BSPTCL	stubsptcl2019@gmail.com
31.	Sh. Ajit Kumar Bhagat	Sr Manager	JUSNL	cetjusnl@gmail.com
32.	Sh. Sunil rai	CE, EHV	Sikkim	trans.sikkimgov@gmail.com
33.	Sh. Sudipta Mukherjee	ED (Gen)	HEL	sudipta.mukherjee@rpsg.in
34.	Sh. Chiranjiv Bhomi	GM	HEL	
35.	Sh. Sandip Pal	VP (SO)	CESC Limited	sandip.pal@rpsg.in
36.	Sh. Jasbir Mallick		Sembcorp Energy India Ltd	

Annexure-II

Status of Downstream Transmission Network in ER

Sl. No.	ISTS S/s	State	Voltage ratio, Trans. Cap	Downstream Voltage level (kV)	Unutilised bays	Status of ISTS bay	STU lines for unutilised bays	Status of Lines	
								Date of Award	Completion schedule
1.	Chaibasa	Jharkhand	400/220kV, 2x315MVA	220	2	Existing bay	Chaibasa (POWERGRID) – Jadugoda (JUSNL) 220kV D/c		Will be taken up in future. No firm plan as of now.
2.	Daltonganj	Jharkhand	400/220/132kV, 2x315MVA+ 2x160MVA	132	2	Existing bay	Daltonganj (POWERGRID) – Chatarpur 132kV D/c	22-10-2019	Expected by 31-01-2023.
3.	Dhanbad	Jharkhand	400/220kV	220	4	Existing bay	LILO of 1 st circuit of 220kV Dumka – Govindpur D/c line at Dhanbad (23km)	Bid evaluation is in progress. Price bid opened. Additional funds are required, proposal sent to state govt. for approval	Expected by Dec 2023.
							LILO of 2 nd circuit of 220kV Dumka – Govindpur D/c line at Dhanbad		
4.	Keonjhar	Odisha	400/220kV, 2x315MVA	220	2	Existing bay	Keonjhar (POWERGRID) – Turumunga (OPTCL) 220kV D/c		Expected by Mar 2023.
5.	Subashgram	West Bengal	400/220kV, 3x315MVA	220	2	Existing bay	Subashgram (POWERGRID) – Baraipur 220kV D/c line		220kV Baraipur substation charged. 132kV downstream delayed due to RoW. Expected by Oct 2022.
6.	Rajarhat	West Bengal	400/220kV, 2x500MVA	220	2	Existing bay	Rajarhat (POWERGRID) – New Town AA2C 220kV D/c		Cable laying has completed. cable termination work is going

Sl. No.	ISTS S/s	State	Voltage ratio, Trans. Cap	Downstream Voltage level (kV)	Unutilised bays	Status of ISTS bay	STU lines for unutilised bays	Status of Lines	
								Date of Award	Completion schedule
									on which is expected by Sep 2022. Line would be charge upon completion of same. Substation is expected by Dec 2022.
7.	Sitamarhi (New)	Bihar	400/220/132kV, 2x500MVA + 2x200MVA	132	2	Existing bay	LILO of Benipatti - Pupri 132kV S/c at Sitamarhi (New)		Expected by Mar 2023
8.	Saharsa (New)	Bihar	400/220/132kV, 2x500MVA + 2x200MVA	132	2-ISTS (addln.4 by state)	Existing bay	Saharsa (New) - Saharsa 132kV D/c line formed by LILO of Saharsa - Banmankhi and Saharsa - Uda Kishanganj 132kV S/c line		04 nos. of bays are under construction by BSPTCL at Saharsa (New). Two bays are expected in Nov 2022, and balance two in Dec 2022.
9.	Banka	Bihar	400/220/132kV, 2x500MVA + 2x200 & 1x315MVA	220	2	Under Bidding	Banka (POWERGRID) – Goradih (Sabour New) 220kV D/c line	Award expected in December 2022	18 months from date of award

Annexure-III

Status of 400kV & 220kV substations being implemented by STUs in ER under intra-state schemes to be connected to ISTS

Sl. No.	Substation/Location	Transformation Capacity/ Element	Date of Award	Completion Schedule
A Bihar (to be implemented by BSPTCL/BGCL)				
I	Bakhtiyarpur GIS	400/220/132kV, 2x500MVA + 2x160MVA	26.11.2019	Progressively from Jan'22 to Feb'22.
a)	LILO of both circuits of Barh – Patna (PG) 400kV D/c (Quad) line-1 at Bakhtiyarpur 400 kV 2xD/C	400kV 2xD/c	26.11.2019	Line ready to be charged matching with Bakhtiyarpur S/s.
ii	Chappra (New)	400/220/132kV, 2x500MVA + 2x200MVA	Cabinet approval under process	24 months from date of award
a)	LILO of 400 kV Barh (NTPC) - Motihari (DMTCL) D/C (Quad) transmission line at Chappra	400kV 2xD/c	Cabinet approval under process	24 months from date of award.
B Odisha (to be implemented by OPTCL)				
I	Digapahandi	400/220kV, 2x500MVA	Tendering activity to be taken up shortly along with Pandiabili-Digapahandi 400kV D/c line	2025-26
a)	Digapahandi – Therubali – Jeypore 400kV D/c line	400kV D/c	To be taken after tending of Digapahandi S/s	2025-26
II	Therubali	400kV switching station along with 420kV, 1x125MVAr bus reactor	Survey completed. Land schedule is under preparation	2026-27
III	Bhadrak	400/220kV, 2x500MVA	Tendering is in hold	2025-26
a)	LILO of Baripada – Duburi and Baripada – Pandiabili 400kV line sections at Bhadrak	400kV D/c	Tendering in progress	2025-26
IV	Paradeep*	400/220kV, 2x500MVA		24 months

Sl. No.	Substation/Location	Transformation Capacity/ Element	Date of Award	Completion Schedule
a)	Paradeep – Duburi 400kV D/c line	400kV D/c	Line package awarded May'22 and substation package send to government for approval	24 months
V	Paradeep*	765/400kV, 2x1500MVA	Survey completed. Land schedule is under preparation	2026-27
a)	Angul (POWERGRID) – Paradeep (OPTCL) 765kV D/c line	765kV D/c	Survey completed. Land schedule is under preparation	2026-27
VI	Begunia	765/400kV, 2x1500MVA	Kept in abeyance	Kept in abeyance
a)	Angul – Begunia 765kV D/c line	765kV D/c	Kept in abeyance	Kept in abeyance
b)	LILO of Pandiabil – Digapahandi 400kV D/c line at Begunia	400kV D/c	Kept in abeyance	Kept in abeyance
C	Jharkhand (to be implemented by JUSNL)			
I	Chandil (New)	400/220kV, 2x500MVA	Bid price very high. It will send to Jharkhand cabinet for approval	24 months
a)	PVUNL – Chandil 400kV D/c (Quad) line	400kV D/c (Quad)		
b)	Chandil – Chaibasa (POWERGRID) 400kV D/c (Quad) line	400kV D/c (Quad)		
c)	Chandil – Dhanbad 400kV D/c (Quad) line	400kV D/c (Quad)		
II	Koderma	400/220/132/33kV, 2x500MVA + 2x200MVA + 2x80MVA		
a)	PVUNL – Koderma 400kV D/c (Quad) line	400kV D/c (Quad)		
III	Latehar			
a)	Patratu – Latehar 400kV D/c line	400kV D/c	Forest Stage-I clearance is awaited.	Feb 2023
b)	Latehar – Chandwa (POWERGRID) 400kV D/c line	400kV D/c	All clearances have been obtained. Works for	Dec 2022

Sl. No.	Substation/Location	Transformation Capacity/ Element	Date of Award	Completion Schedule
			20km is pending due to theft of line.	
IV	Jasidih	400/220kV, 2x500MVA	-	No firm plan now. To be taken up in future.
a)	Koderma (JUSNL) – Jasidih 400kV D/c (Quad) line	400kV D/c (Quad)	-	
b)	Jasidih – Dumka 400kV D/c (Quad) line	400kV D/c (Quad)	-	
V	Mander	400/220kV, 2x500MVA	-	
a)	LILO of Patratu – Ranchi (New) 400kV D/c line at Mander	400kV 2xD/c	-	
VI	Dumka (New)	400/220kV, 2x500MVA	-	
a)	Dumka (New) – Dhanbad (ISTS) 400kV D/c (Quad) line	400kV D/c (Quad)	-	
D	West Bengal (to be implemented by WBSETCL)			
I	Laxmikantpur GIS[#]	400/132kV, 2x315MVA	Land identified. In process of acquisition. Expected by Dec 2024	
a)	LILO of Haldia – Subhasgram 400kV D/c line at Laxmikantpur	400kV D/c	-	Expected by Dec 2024
II	Falakata	220/132kV, 2x160MVA	Initial civil works have been started	Mar 2024
a)	LILO of Birpara – Alipurduar 220kV D/c line at Falakata substation	220kV 2xD/c		Mar 2024

** As per inputs from OPTCL: Paradeep 765/400kV S/s shall be established at a different location from the already under-construction Paradeep 400/220kV S/s, accordingly, 400kV 2xD/c line shall be established between two substations.*

The 400kV infeed to Laxmikantpur 400/132kV S/s is under discussion in the item no 3. Based on the deliberations, the lines would be updated, if required.

Annexure-IV

Space allocated at various ISTS substations to STUs for implementation of line bays under intra state system for their intra state lines

Sl. No.	Substation/ Location	Space for	Date of award of line and bays	Completion Schedule	Agreed in CMETS-ER
1.	Angul (POWERGRID)	2 nos. 765kV lines bays for termination of Angul (POWERGRID) – Paradeep 765kV D/c line (including suitable switchable line reactors)		Survey is going on. Expected by 2025-26	1 st
2.	Rourkela (POWERGRID)	2 No. 220kV lines bays for termination of Rourkela (POWERGRID) – Tarkera 220kV D/c (HTLS) line		Would be taken up after reconductoring of 1 st D/c line.	1 st & 7 th
3.	Keonjhar (POWERGRID)	2 No. 220kV lines bays for termination of Keonjhar (POWERGRID) – Tikarpada 220kV D/c line	NIT yet to be taken up	Expected by 2024-25	1 st
4.	Maithon (POWERGRID)	2 No. 220kV lines bays for implementation of Maithon (POWERGRID) – Asansol 220kV D/c line	expected to be floated by Dec, 2022	Expected by 2024-25.	7 th