सत्यमेव जयते
भारत सरकार
Government of India
विद्युत् मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत् समिति
Eastern Regional Power Committee

सं /NO. ERPC/TCC& ERPC Committee/2025/ 807 दिनांक / DATE: 18.07.2025

सेवा में /To,
संलग्न सूची के अनुसार /As per list enclosed.

विषय : 23.06.2025 (सोमवार) को ताज फिशरमैन कोव, चेन्नई में आयोजित 54वीं टीसीसी बैठक का कार्यवृत्त-संबंध में।
Subject: Minutes of 54th TCC Meeting held on 23.06.2025 (Monday) at TAJ Fisherman Cove, Chennai -regd.

महोदय/ महोदया,
Sir/Madam,

कृपया अपनी जानकारी और आवश्यक कार्रवाई के लिए 23 जून 2025 (सोमवार) को ताज फिशरमैन कोव, चेन्नई में आयोजित 54वीं टीसीसी बैठक का संलग्न कार्यवृत्त देखें। यह ईआरपीसी वेबसाइट (www.erpc.gov.in) पर भी उपलब्ध है।

Please find enclosed Minutes of 54th TCC Meeting held on 23.06.2025 (Monday) at Taj Fisherman Cove, Chennai at 10:30 hrs for your kind information and necessary action. The same is also available at ERPC website (www.erpc.gov.in).

इसे सदस्य सचिव के अनुमोदन से जारी किया जाता है।
This issues with the approval of Chairperson TCC.

भवदीय /Yours faithfully

अनुप दास 18.07.25
(अनुप दास/ (Anup Das)
सहायक सचिव/Assistant Secretary

ERPC Members

1. **Chairperson ERPC & CMD, West Bengal State Electricity Distribution Company Ltd.,** Vidyut Bhavan, 7th Floor, Block-DJ, Sector-II, Bidhannagar, Kolkata-700091.
2. Managing Director, West Bengal State Electricity Transmission Company Ltd., Vidyut Bhavan, 8th Floor, Block- DJ, Sector-II, Bidhannagar, Kolkata-700091.
3. Chairman & Managing Director, West Bengal Power Development Corporation Ltd., Bidyut Unnayan Bhavan, 3/C, Block LA, Sector-III, Bidhannagar, Kolkata-700098.
4. Principal Chief Engineer-cum-Secretary, Energy & Power Department, Govt. of Sikkim, Kazi Road, Gangtok – 737101, Sikkim.
5. Member (GO&D), Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
6. Chairman, GRIDCO Ltd., Janpath, Bhubaneshwar-751022.
7. Chairman-cum-Managing Director, Odisha Power Transmission Corporation Ltd., Janpath, Bhubaneswar- 751022.
8. Chairman-cum-Managing Director, OHPC Ltd., Orissa State Police Housing & Welfare Corporation Bldg. Vanivihar, Janpath, Bhubaneswar- 751022.
9. Managing Director, OPGC Ltd., Zone-A, 7th Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023.
10. Chairman-cum-Managing Director, Jharkhand Urja Vikas Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
11. Chairman-cum-Managing Director, Jharkhand Urja Utpadan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
12. Managing Director, Jharkhand Urja Sancharan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
13. Managing Director, Jharkhand Bijli Vitaran Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi- 834004.
14. Managing Director, Tenughat Vidyut Nigam Ltd., Hinoo, Doranda, Ranchi – 834002
15. Chairman-cum- Managing Director, Bihar State Power Holding Company Ltd., Vidyut Bhavan, Bailey Road, Patna-800001.
16. Managing Director, Bihar State Power Transmission Company Limited, Vidyut Bhavan, Bailey Road, Patna- 800001.
17. Managing Director, North Bihar Power Distribution Company Limited, Vidyut Bhavan, Bailey Road, Patna- 800001.
18. Chairman, Damodar Valley Corporation, DVC Towers, VIP Road, Kolkata -700054.
19. Director (Finance), NTPC Ltd., Core-7, SCOPE Complex, Lodhi Road, New Delhi -110003.
20. Director (Technical), NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad, Haryana-121003.
21. Director (Operations), Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon-122001.
22. Executive Director, ERLDC, GRID-INDIA, 14 Golf Club Road, Tollygunge, Kolkata – 700033.
23. Director(SO), GRID-INDIA, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016
24. COO, CTUIL, Saudamini, 1st Floor, Plot-1, Sector-29, Gurgaon-122001
25. Director (C&O), PTC India Ltd., 2nd floor, NBCC Tower,15 Bhikaji Cama Place, New Delhi-110066.
26. Managing Director (Generation), CESC Ltd., CESC House, 1 Chowringhee Square, Kolkata-700001.
27. Chief Executive Officer, Maithon Power Ltd., Village-Dambhui, P.O. Barbindia, Dist.-Dhanbad, Jharkhand- 828205.
28. V.P (Plant Head), GMR Kamalanga Energy Ltd., AT/PO-Kamalanga, PS-Kantabania, Via-Meramundali, Dist.- Dhenkanal, Odisha-759121.
29. Chief Executive Officer, Jindal India Thermal Power Limited, Plot No-12, Sector-B1, Local Shopping Complex, Vasant Kunj, New Delhi-110070.

30. Managing Director, Sikkim Urja Limited, 2nd Floor, Vijaya Building, 17 Barakhamba Road, New Delhi- 110001.
31. CEO, BRBCL, Nabinagar, Dist- Aurangabad, Bihar-824303.
32. CEO, NTPC Vidyut Vyapar Nigam Ltd., Scope Complex, Core-5, 1st and 2nd Floor, Lodhi Road, New Delhi-110003.
33. Director, JSW (Utkal) Ltd., at-Sahajbahal, P.O-Charpali-Barpali, Via-Bandhabahal, Dist: Jharsuguda, Odisha-768211.
34. COO, East North Interconnection Co. Ltd. (Indi Grid), 101, Windsor, CST Raod, Santacurz East, Mumbai-400098. sanil.namboodiripad@indigrid.com.

TCC Members

1. **Chairperson TCC & Director (R&T), West Bengal State Electricity Distribution Company Ltd.,** Vidyut Bhavan, 7th Floor, Block- DJ, Sector-II, Bidhannagar, Kolkata-700091.
2. Director (Operations), West Bengal State Electricity Transmission Company Ltd., Vidyut Bhavan, 8th Floor, Block-DJ, Sector-II, Bidhannagar, Kolkata-700091.
3. Director (O&M), WBPDCL, Bidyut Unnayan Bhavan, 3C, Block-LA, Sector-III, Bidhannagar, Kolkata- 700098.
4. Principal Chief Engineer-II, Energy & Power Dept., Govt. of Sikkim, Kazi Road, Gangtok-737101.
5. Chief Engineer (GM), CEA, Sewa Bhawan, R.K. Puram, New Delhi-110066.
6. Managing Director, GRIDCO Ltd., Janpath, Bhubaneswar-751022.
7. Director (Operation), Odisha Power Transmission Corporation Ltd., Janpath, Bhubaneswar - 751022.
8. Director (Operation), Orissa Power Generation Corporation Ltd, Zone-A, 7th floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023.
9. Director (Operation), Orissa Hydro Power Corporation Ltd, Orissa State Police Housing & Welfare Corporation Building, Vanivihar Chowk, Janpath, Bhubaneswar-751022.
10. Executive Director (Tech),, Jharkhand Urja Utpadan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
11. Director (Project), Jharkhand Urja Sancharan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi- 834004.
12. Chief Engineer (S&D-JBVNL), Jharkhand Urja Vikas Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
13. Chief Engineer (S&D), Jharkhand Bijli Vitaran Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
14. General Manager, Tenughat TPS, Lalpania, Dist- Bokaro, Jharkhand-829149.
15. Chief Engineer (Commercial), Bihar State Power Holding Company Ltd., Vidyut Bhavan, Bailey Road, Patna-800001.
16. Director (Project), South Bihar Power Distribution Company Limited, Vidyut Bhavan, Bailey Road, Patna-800001.
17. Executive Director (Commercial), Damodar Valley Corporation, DVC Tower, VIP Road, Kolkata-700054.
18. Regional Executive Director (ER-I), NTPC Ltd., ER-I Head Quarter, Near Urja Auditorium, Shastri Nagar, Patna-800023.
19. Regional Executive Director (ER-II), NTPC Ltd., 3rd Floor, OLIC Building, Plot No.N-17/2, Nayapalli, Bhubaneswar-751012.
20. HOD (O&M), NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad-121003, Haryana.
21. Executive Director (ER-I), Power Grid Corporation of India Ltd, Board Colony, Shastri Nagar, Patna- 800023.
22. Executive Director (ER-II), Power Grid Corporation of India Ltd, CF-17, Action Area-I, Newtown, Rajarhat, Near Axis Mall, Kolkata-700091.
23. Executive Director (Odisha Project), Power Grid Corporation of India Ltd, Plot No-4, Unit 41, Niladri Vihar, Chandrasekharpur, Bhubaneswar, Odisha-751021.
24. Executive Director, ERLDC, GRID-INDIA, 14 Golf Club Road, Kolkata –700 033.
25. Head, National Load Dispatch Center, GRID-INDIA, B-9 Qutab Institutional Area, Katwaria Sarai,New Delhi-110016.
26. COO, CTUIL, Saudamini, 1st Floor, Plot-1, Sector-29, Gurgaon-122001.
27. Director (Marketing), PTC India Ltd., NBCC Tower, 15 Bhikaji Cama Place, New Delhi-110066.
28. Vice President (System Operation), CESC Ltd, CESC House, 1 Chowringhee Square, Kolkata-700001.
29. Station Head & General Manager (O&M), Maithon Power Ltd., Village-Dambhui, P.O. Barbindia, Dist.- Dhanbad, Jharkhand-828205.

30. GM (Head-Electrical), GMR Kamalanga Energy Ltd., AT/PO-Kamalanga, PS-Kantabania, Via-Meramundali, Dist.- Dhenkanal, Odisha-759121.
31. Chief Operating Officer, Jindal India Power Limited, Plot No-12, Sector-B1, Local Shopping Complex, Vasant Kunj, New Delhi-110070.
32. Managing Director, Sikkim Urja Limited, 2nd Floor, Vijaya Building, 17 Barakhamba Road, New Delhi- 110001.
33. CEO, BRBCL, Nabinagar, Dist- Aurangabad, Bihar-824303.
34. Chief General Manager, NTPC Vidyut Vyapar Nigam Limited, SCOPE Complex, Core-3, 7th Floor, Lodhi Road, New Delhi-110003
35. Head Regulatory, East North Interconnection Co. Ltd. (Indi Grid), 101, Windsor, CST Raod, Santacurz East, Mumbai-400098. Alokendra.ranawat@indigrid.com
36. Director, JSW (Utkal) Ltd., at-Sahajbahal, P.O-Charpali-Barpali, Via-Bandhabahal, Dist: Jharsuguda, Odisha-768211

Non-Member Participants

1. Managing Director, DANS Energy Pvt Ltd, DLF Cyber City, Phase-II, Gurgaon – 122 002

2. Director, Shiga Energy Pvt. Ltd., 5th Floor, DLF Building No. 8, Tower-C, DLF Cyber City, Phase-II, Gurgaon – 122002

3. Vice President, Greenko Energies Pvt. Ltd. Greenko Hub, 13, Hitech City, Madhapur, Hyderabad-500081. (For Sneha Kinetic PPL and GI Hydro Pvt. Ltd.)

4. CEO, Rongnichu HEP, MBPCL, Sikkim-737102.

5. Managing Director, Adhunik Power & Natural Resources Ltd., Lansdowne Towers, 5th Floor, 2/1A Sarat Bose Road, Kolkata-700020.

6. Senior Vice President, Sikkim Power Transmission Limited, New Delhi-110066

7. CEO, Alipurduar Transmission Limited, 101, Part-III, G.I.D.C Estate, Gandhinagar, Gujarat-382028.

8. Vice President, North Karanpura Trasnmission Ltd., Adani Corporate House, 3rd Floor, South Wing, Shantigram, SG Highway, Near Vasihnodevi Circle, Ahmedabad-382421.

9. CEO, SJVN Thermal Pvt Ltd, 169. Pataliputra Colony, Patna-800013

10. CEO, JSW Ind-Bharath Energy (Utkal) Ltd, Jharsguda, Odisha-768211

11. Managing Director (Generation), Haldia Energy Limited, 2A, Lord Sinha Road, First Floor, Kolkata - 700 071

12. Managing Director, India Power Corp. Ltd., Plot No. X1- 2 & 3, Block-EP, Sector – V, Salt Lake City, Kolkata – 700 091

13. CEO, Cross Boarder Power Transmission Limited, Ambience Mall Complex, Gurgaon, Haryana-122001

14. MD, Tata Steel UISL, Jamshedpur, Jharkhand-831001

15. The Head Power Transmission Darbhanga Motihari Transmission Co. Ltd. Essel Infraproject Ltd., 6th Floor, Plot No.19, Noida-201301, U.P.

16. Project Director-O&M/AM, Odisha Generation Ph-II Transmission Ltd., O&M Head office, Tulip-634, New Minal Residency, J.K.Road, Near Ayodha Bypass, Bhopal-462023, M.P.

17. Head (Asset Management/O&M), Purulia & Kharagpur Transmission Co. Ltd., Tulip-634, New Minal Residency, J.K.Road, Near Ayodhya Bypass, Bhopal-462023, M.P.

GOVERNMENT OF INDIA

MINISTRY OF POWER

Eastern Regional Power Committee

MINUTES

OF

54th TCC MEETING

Date: 23.06.2025

Time: 10:00 Hrs

Chennai

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Eastern Regional Power Committee, Kolkata

MINUTES OF 54th TCC MEETING

Date: 23rd June, 2025(Monday) at 10:00 Hrs **Chennai, Tamilnadu**

- **In Chair: Shri Ajay Kumar Pandey, Director (R&T), WBSEDCL**
- **Host: Powergrid.**

- *Meeting was convened physically at Taj Fisherman Cove, Chennai*
- *List of participants is attached at **Annexure-A.***

***CGM(ER), Powergrid,** welcomed all esteemed members of TCC and other participants to the 54th TCC meeting. He expressed his gratitude to ERPC for giving them the opportunity to host the 54th TCC & ERPC Meeting. He wished all the delegates a pleasant stay and fruitful deliberations in the meeting.*

***Member Secretary, ERPC** warmly welcomed the Chairperson of TCC, all TCC members on dais, special invitees and delegates to the meeting.*

He expressed his concerns regarding the growing challenge of energy security in today's geopolitical context. With several overseas nations currently engaged in war, the import of crude oil has become increasingly difficult and uncertain. In such a scenario, he emphasized the importance of exploring alternative energy sources that are abundantly available within the country.

- *He highlighted Coal Bed Methane (**CBM**) as a cleaner indigenous energy resource, noting that although India has an estimated potential of 2,600 billion cubic meters, only 280 billion cubic meters have been established as gas reserves so far. He stressed the need for accelerated exploration and utilization of this resource.*
- *Further informed the forum about the Nuclear Mission launched by Government of India with the goal of achieving 100 GW of nuclear power capacity by 2047. Presently, India has 8,880 MW of operational nuclear capacity, 6,600 MW under construction, and 8,000 MW in the planning phase.*
- *He introduced the forum with developing advanced nuclear technologies such as Small Modular Reactors (SMRs) and Bharat Small Reactors (BSRs) for safety, flexibility and scalability.*
- *To meet peak demand during non-solar hours, he drew attention to the need for Renovation and Modernization (R&M) of aging thermal power plants. This is essential to manage the expected surge in demand during peak hours.*
- *Additionally, highlighted the important transition from Security Constrained Economic Dispatch **(SCED)** to Security and Emission Constrained Economic Dispatch **(SECED)** marking a significant step forward by—shifting the focus from least-cost dispatch to **least-impact** dispatch, by considering both environmental cost of power generation as well as economic cost.*

***ED (ERLDC),** welcomed all members and expressed gratitude for the excellent arrangements made for the meeting. He highlighted India's ongoing journey to achieve 500 GW of renewable energy (RE) capacity by 2030, with adoption of globally proven technologies.*

*He mentioned recent major grid events of **Blackout in Spain and Portugal** on **25th April 2025 & near-miss event in the UK grid** on **29th May 2025 and s**tated that India is facing similar operational challenges, particularly in the context of RE integration.*

He noted that Eastern Region (ER) faces unique challenges in forecasting due to frequent weather variations and emphasized that precise forecasting and consistent integration of RE are fundamental to reliable grid operation.

***Shri A.K. Pandey**, Director (R&T), WBSEDCL & **Chairperson, TCC**, extended a warm welcome to all members of the TCC and the distinguished delegates attending the meeting. At the outset, he conveyed the TCC forum's sincere appreciation to Powergrid for their commendable efforts in organizing the 54th TCC and ERPC Meetings in Chennai.*

He emphasized that the long-term impact of our actions must align with environmental sustainability for future generations, while also ensuring commercial viability.

1. PART-A

1.1. Confirmation of Minutes of 53rd TCC Meeting held on 10th February 2025 at Gopalpur, Odisha

The minutes of 53rd TCC meeting held on 10.02.2025 at Gopalpur Odisha was circulated vide letter no. ERPC/ TCC & ERPC COMMITTEE/2025/2005 dated 27.02.2025.

Members may confirm the minutes of 53rd TCC meeting.

Deliberation in 53rd TCC meeting

Members confirmed the Minutes of 53nd TCC meeting.

2. PART-B: ITEMS FOR DISCUSSION

2.1 Resource Adequacy Tool launched by CEA

After the issuance of Resource Adequacy Guidelines, CEA has been carrying out the Resource Adequacy (RA) plans for all the Discoms. To begin with, CEA completed the exercise for all Discoms up to 2032, and now all of them have been updated to 2034-35. CEA has also finished the national level exercise up to 2034-35. Since the plan is dynamic and is mandated to be revised every year, it was thought to develop a common tool for all and share it with them free of cost to play with it.

Accordingly, a State of art totally Indigenously developed Resource adequacy model (STELLAR) - vital Resource Adequacy Tool, has been launched by CEA on 11.04.2025. CEA is planning to distribute this software model to all the States/ Discoms free of cost.

The benefits of the tool include:

i. Ensuring adequate resource adequacy (neither less nor more) in the electricity grid. Zero load shedding, No stressed capacity and least cost solutions.
ii. Optimisation of the cost of power system generation expansion and system operation while considering the benefit of demand response.
iii. Optimisation of energy and ancillary services.
iv. Optimisation of size and location of storage.

CEA will update and upgrade this tool based on further suggestions from the users (Discoms/ load despatchers) of this software.

TCC may note.

Deliberation in the 54th TCC meeting:

MS ERPC highlighted the need for resource adequacy plan by the state discoms as per the resource adequacy guidelines issued by the Ministry of Power in June 2023.

He informed that CEA has developed an indigenous tool named STELLAR for resource adequacy planning by the discoms. The tool will be distributed to all the discoms free of cost.

TCC noted.

2.2 Provision for Reliable Power Evacuation from NKSTPP

Presently, only the 400 KV D/C Chandwa line is available for power evacuation from NKSTPP, as the 400 KV NKSTPP–Gaya D/C line is still under construction.

- As per the system study conducted by ERLDC for power evacuation, in the scenario where all three units at NKSTPP are operational, stable operation is possible only up to 1700 MW in the event of a trip or shutdown of one circuit of the 400 kV D/C Chandwa line.
- The second evacuation corridor, i.e., the 400 kV NKSTPP–Gaya D/C line, is under construction and is being expedited by M/s NKTL.

In 227th OCC Meeting,

i) OCC advised NKTL to expedite the construction of 400 KV DC NKSTPP Gaya Transmission lines.

ii) ERLDC was advised to design an SPS for reliable evacuation of power from NKSTPP through existing 400 KV NKSTPP Chandwa line.

iii) NTPC was advised to implement the SPS within a week of the finalization of same.

iv) OCC opined that Forest clearance and Land related issues come within purview of state govt.

A Joint meeting was held with all stakeholders on 27-05-25 and SPS quantum was finalized in this meeting.

In 228th OCC Meeting,

OCC approved the SPS scheme as implemented for reliable power evacuation from NkSTPP.

Since, NKTL was not present, the timeline for completion of 400kV NkSTPP- Gaya lines could not be discussed and OCC referred the matter to TCC.

TCC may discuss.

Deliberation in the 54th TCC meeting:

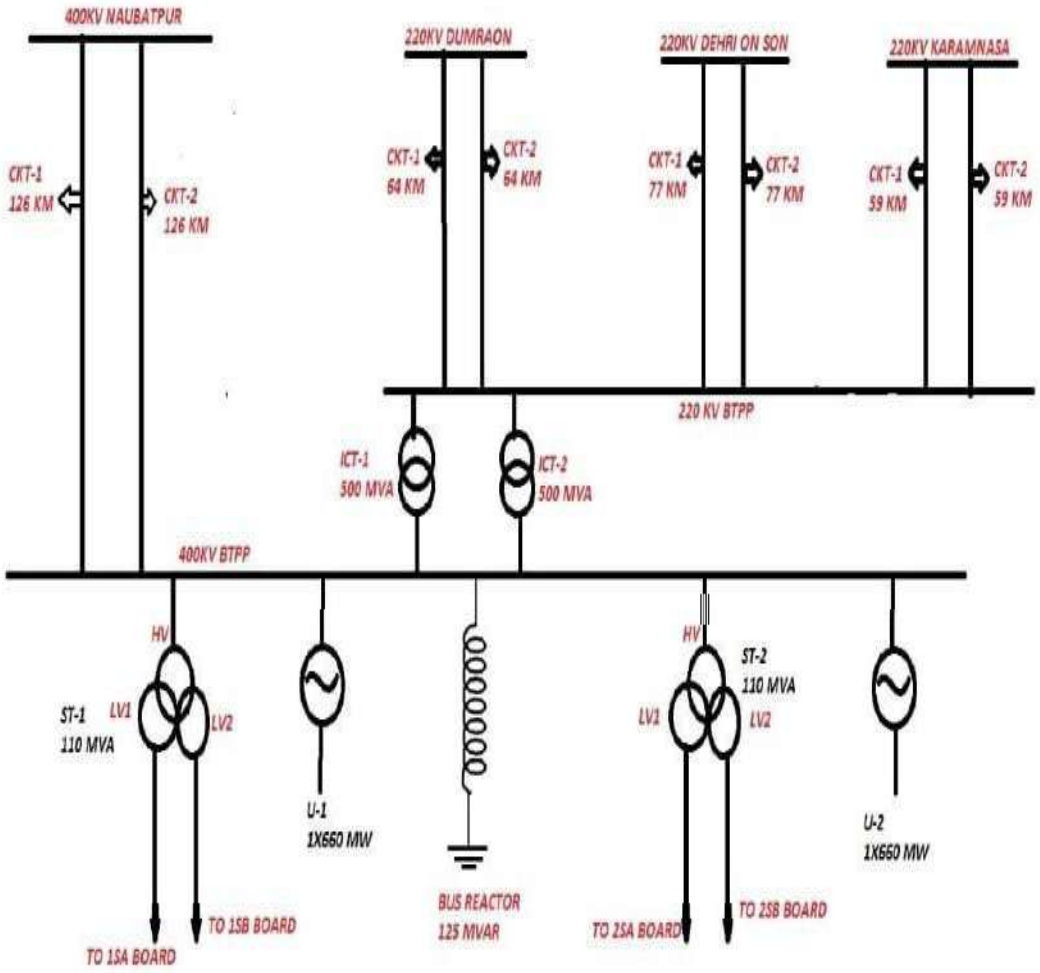
- *NTPC updated that 5 foundations and 20 tower erections are yet to be completed and the work is expected to be completed by Dec, 2025.*
- *TCC opined that in case of delay in bringing the line into operation, such project could attract Commercial implication on NKTL.*
- *Since there was no representative from NKTL, the forum advised ERPC Secretariat to issue a letter to NKTL for regular updation of the status of the transmission line and requested all the concern utilities viz. Jharkhand & Bihar to facilitate for addressing issues regarding RoW & forest clearance.*

TCC referred the issue to ERPC for guidance.

2.3 Buxar Thermal Power plant, SJVN Thermal Pvt. Limited: SJVN

Following Intra-state scheme in Bihar for evacuation of power from Buxar TPS was agreed in the 1st Meeting of Eastern Region Power Committee (Transmission Planning) held on 14.02.2020:

- Buxar TPS-Naubatpur 400 kV D/C (Twin Moose)
- Buxar TPS-Dumraon (New) 220 kV D/C (Twin Moose)
- Buxar TPS-Karmnasa (New) 220 kV D/c (Twin Moose)
- Buxar TPS-Dehri 220 kV D/c (single Zebra)
- 2X500 MVA, 400/220kVICT



In Current Situation, 400 KV Naubatpur bay and 220 KV Dumraon Bay is not ready from BSPTCL end.

STPL was connected at 400 kV Naubatpur as a temporary measure to facilitate the drawl of start-up power. However, the dedicated bay at Naubatpur GIS is still under construction and remains non-operational as of date.

ERPC in 206th OCC meeting held on 31.08.2023 had granted consent to provide start up power to 2x660 MW Buxar Thermal Power Project, Chausa, Buxar as temporary arrangement at 400 KV level Naubatpur GIS to draw up Start-up Power only and not for evacuation purpose. STPL has earlier requested in ERPC forum to allow to evacuate the power through the line.

Unit #1 of BTPP, with a capacity of 660 MW, is scheduled to be synchronized with the grid on 15th July 2025 and Unit#2 is scheduled to synchronized with the Grid on October,25.

In this context, it is imperative for STPL to assess the grid readiness and transmission system strength to ensure the safe evacuation of power from Unit #1 and Unit#2 during initial synchronization and commissioning and further Commercial Operation.

In view of the current transmission system configuration and incomplete bay arrangement, the matter is placed before the TCC forum for deliberation. STPL seeks guidance and clarity from SLDC Bihar and ERLDC on the following points:

1. Whether the power from Unit #1 can be evacuated safely and reliably under an N-1 contingency condition, in the absence of the dedicated Naubatpur bay and the temporary nature of the current connection.
2. Whether power flow between 400 KV and 220 KV will create any network congestion for evacuation of the Power in this current situation.

MoP communicated the approval of allocation of 85% power to State of Bihar, generated from Buxar Thermal Power Station (2x660 MW). Balance 15% of generation capacity from the plant remained earmarked as “unallocated power” and on declaration of commercial operation, will be added in the ER Power pool and allocated to the states as per the provisions of existing guidelines of allocation of unallocated power as approved by the Ministry of Power from time to time.

Accordingly, the states of ER also have to initiate appropriate measures to avail the share of 15% unallocated power of BTPP at their end.

TCC may discuss.

Deliberation in the 54th TCC meeting:

i. Director(Op), BSPTCL informed the forum that a meeting held among SJVN, SLDC Bihar & BSPTCL on 18.06.2025 regarding adequacy of transmission line for evacuation of power from one unit of Buxar TPP fulfilling (n-1) criteria with the existing lines.

He informed that GIS Bay at Naubatpur end will be completed by Aug,2025 whereas Buxar TPS-Dumraon (New) 220 kV D/C (Twin Moose) will be ready by Oct,2025.

ii. SJVN Buxar has updated that unit#1 will be synchronized with Grid by 15.07.2025 and CoD by 15th August 2025.

iii. *It was informed by ERPC Secretariat that a letter has been issued to ER beneficiaries to convey their consent regarding availing the share under unallocated quota. However, no response has been received so far.*

TCC advised ER Beneficiaries to intimate their willingness at the earliest.

TCC referred the matter to ERPC.

2.4 Issues related to Patratu TPS:PVUNL

85% power of PTPS was allocated to Jharkhand. Balance 15% "unallocated power" will be added in the Eastern Regional Power Pool and distributed among the existing beneficiaries of Eastern Regional Power Pool in accordance with the percentage of unallocated power allocated to the states.

PVUNL raised their concern on connectivity and scheduling issue for the first time in 226th OCC. Considering the importance of the issue, ERPC organized a meeting on 2nd June 2025 at Ranchi to sort out the connectivity and scheduling issues.

As per the ATS of Patratu TPS, it will be connected only with the state grid of Jharkhand through the following lines:

i) 400 KV Quad Moose PVUNL - Katia (Patratu)

ii) 400 KV D/C PVUNL – Koderma

iii) 400 KV D/C PVUNL – Chandil

iv) 400 KV D/C Patratu – Ranchi (PG 765/400 KV)

v) 400 KV Twin Moose Katia (Patratu) – Latehar

vi) 400 KV Quad Moose Latehar – Chandwa

Gist of discussion of meeting dated 2nd June'2025:

PVUNL requested that the connectivity should be granted for entire capacity of 2400 MW. MD JUSNL intimated that connectivity agreement for 85 % (2400*0.85=2040 MW) of power of PVUNL is in the process of getting signed by JBVNL and remaining 15 % to be signed by PVUNL as per legal opinion by Advocate General, Jharkhand. Within this quantum of 2040 MW connectivity by JBVNL, there will be no connectivity constraint for evacuation of full power from the first two units of PVUNL.

PVUNL raised concern for connectivity of remaining 15 % capacity. It was decided that the matter will be resolved by JUSNL after taking up with the concerned department and the issues may be resolved before CoD of third unit.

PVUNL expressed that as per CERC (sharing of transmission Charges) regulation 2020, the generator should not be liable for any kind of transmission charges.

PVUNL also stated that STU/SLDC needs to make necessary arrangements for infirm power consumption and MD JUSNL assured for the same.

PVUNL raised concern for various NoCs required as per regulations. MD, JUSNL assured that NoC for obtaining injection GNA for 15 % power will be expeditiously processed by STU. Simultaneously signing of the connectivity agreement between JBVNL & STU shall be expedited at the earliest possible. Further NoC for scheduling of URS Power will be provided as and when required.

On scheduling issue, PVUNL requested for permanent or temporary control area jurisdiction to ERLDC until Jharkhand-SLDC's scheduling and accounting system is operational. SLDC informed that they are in the process of implementation of SAMAST through M/s Accenture but it will take some more time to be implemented. PVUNL requested to explore whether the scheduling could be done by ERLDC for the time being. MS, ERPC clarified that as per existing CERC regulations, RLDC is not entrusted to do scheduling of state embedded generators in accordance with IEGC 2023 regulation 43(5). It is decided that SLDC will approach CERC or may direct PVUNL to approach CERC under regulation 43(10) of IEGC 2023 to grant approval for a change in the control area jurisdiction of PVUNL for the interim period till the scheduling & accounting platform gets ready by SLDC.

PVUNL raised concern that designated ATS Patratu-Chandil and Patratu-Kodarma line will take minimum 2 years to complete. Katia- Latehar- Chandwa line is critical for power evacuation of Unit-2 (planned for FY 25-26) and Unit-3 (planned in FY 26-27).

It was apprised that 400 kV PVUNL-Patratu D/C line is likely to be get ready by June-2025. However, it will take some more time for implementation of transmission line differential protection relay mechanism. Order has been placed for procurement of relays which may take three months' time to be supplied. JUSNL clarified that necessary electrical clearance from state shall be obtained in time. With the undertaking on transmission line differential protection relay there will not be any objection for charging of this line. ERPC shall issue consent for protection setting based on the declaration of JUSNL.

As an alternate power evacuation path for PVUNL, 400 kV PVUNL-Tenughat & Tenughat-Biharsharif (400 kV presently charged at 220 kV) line may be strengthened for reliability of the line by charging Tenughat-Biharsharif portion at its rated capacity of 400 kV level.

PVUNL also placed the following agenda for 53rd CCM:

(i) Connectivity Agreement by JUSNL having Transmission charge payment obligation

- ERPC vide its letter dated 22.05.2025, allocated power from 15% to the beneficiary states of eastern region.
- Beneficiaries of PVUNL are requested to sign

o PPA with PVUNL for this allotment of power from the unallocated pool.

o Transmission Service agreement/Sharing of Transmission Charges with Jharkhand STU for availing the power from the station.

- As per relevant documents like PPA, JVA, the JBVNL will be responsible for evacuation of power from Patratu Station's bus bar. The beneficiaries of the stations will share the charges associated to operation of the station i.e. fixed charge, transmission charges etc.

(ii) For operation of plant:

NOC for injection GNA needed by PVUNL

- No Objection Certificate (NOC) is needed for 15% of PVUNL's capacity to facilitate the grant of GNA with ISTS. (15% power of PVUNL to the beneficiaries other than Jharkhand)
- The NOC may be provided in line with the special meeting by ERPC held on 02.06.2025.

(iii) Start-up power accounting and billing upon the availability of Patratu-Patratu line.

At present PVUNL is using start-up power as a HT consumer of JBVNL. Upon the arrival and stable operation of Patratu-Patratu line, start-up power will be drawn from the designated ATS of PVUNL as per IEGC,2023 and as per relevant CERC regulation.

Deliberation in the 53rd CCM meeting

ERPC clarified that formal share allocation for the UA power of Patratu TPS is not yet issued from their end. Only the concerned authorities were apprised in advance to initiate appropriate measures to avail the share of 15% UA power of PTPS.

PVUNL mentioned that they placed the agenda in CCM to apprise the members of the committee. and informed that they are in the process of sorting out various issues with JUSNL/JBVNL.

West Bengal raised their concern on state transmission charges & losses payable for availing any UA power from the PTPS and requested to resolve the issue before signing of any PPA.

MS requested Jharkhand to consider the feasibility of waiving of the state transmission charges for PTPS.

The issue was referred to TCC for kind consideration and deliberation on various issues faced by Patratu TPS as well as the concern of the utilities viz West Bengal.

A communication has been received from JUSNL vide letter No. GM/SLDC/Ranchi/309/2024 dated 18.06.2025 addressed to PVUNL communicating No Objection of SLDC Jharkhand for:

(i) As an interim arrangement, ERLDC may carry out the scheduling and accounting function of PVUNL till December 2025 and afterwards SLDC, Jharkhand will do the job or till the SAMAST get operative.

(ii) PVUNL may approach Hon'ble CERC to seek the necessary regulatory directions for the same.

TCC may discuss.

Deliberation in the 54th TCC Meeting:

- *JUSNL updated that erection of 2 towers & stringing work for 1.5 KM of 400 KV PVUNL - Katia (Patratu) D/C line are yet to be completed and the line shall be ready without differential protection by 15.07.2025.*
- *JUSNL further updated that the SAMAST project will be completed by Dec-25.*
- *It was informed that PUVNL has approached CERC to get the consent for the scheduling by ERLDC.*
- *CTUIL informed that PVUNL needs to apply for injection GNA for 15 % unallocated power.*
- *JUSNL informed that the transmission charges shall be levied at the prevailing transmission tariff of the state which is presently of the order of 38 paise/unit.*
- *It was intimated by ERPC Secretariat that Sikkim has already conveyed their unwillingness to avail the power.*
- *Odisha informed that they do not intend to avail this power.*
- *Issue of waiver off state transmission charges & losses was requested by beneficiaries.*

TCC Decision:

- *TCC requested other ER beneficiaries to convey their willingness to avail the power within 15 days.*
- *TCC also requested Jharkhand to waive off transmission charges and transmission loss for power allocated to other beneficiaries of PVUNL.*
- *TCC referred to ERPC for further deliberation.*

2.5 Diversion of 315 MVA Spare ICT from Jamshedpur to Subhasgram: Powergrid ER II

In recent past it is observed that due to unprecedented loading and adjoining affects, accelerated ageing is observed in existing 315 MVA ICT-I of Subhasgram SS.
At present there is no 315 MVA spare available at POWERGRID-ER-II and in case of any contingency it will be very difficult to handle the crisis as transportation to Subhasgram is a very big challenge always. POWERGRID has proposed for a fresh 315 MVA spare for ER-II but in earlier references (ERPC meeting), the same was denied and as such at present, to handle the contingency it is planned to bring the available 315 MVA spare of Jamshedpur to Subhasgram SS. The spare will be available at Subhasgram SS and in case of any problem in any existing asset of POWERGRID, the same shall be used.
Considering the criticality of the transportation following points was raised by Powergrid in the 227th OCC for discussion and approval:

- ☐ In principle approval for diversion of existing 315 MVA spare of Jamshedpur to Subhasgram SS.
- ☐ All necessary transportation and storing cost for relocation of spare will be booked in original project cost for further capitalization.

As per 227th OCC deliberation:

- ✓ Powergrid submitted that 315 MVA ICT 1 of Subhasgram s/s needs urgent replacement. As of now there is no fresh spare 315 MVA ICT.
- ✓ Powergrid Proposed for diversion of existing 315 MVA spare ICT at Jamshedpur to Subhasgram.
- ✓ WB SLDC representative intimated that they need to review the proposal of Powergrid and revert in a week time.

OCC Decision

OCC technically agreed with proposal of Powergrid. However, Powergrid was advised to place the proposal in the next CCM along with cost estimate and views of WB SLDC.

In 53rd CCM Meeting,
WBSETCL stressed upon the importance of Subhasgram Substation and in ensuring the healthiness of all ICT's to avoid any grid disturbance and affecting the reliability. Considering, the issues observed in 315MVA ICT-I at Subhasgram SS, WBSETCL opined the need of maintaining healthy spare available at Subhasgram itself, moreover, transportation of any ICT to Subhasgram is very critical and forum agreed for early action such that adequate time for transportation could be arranged by POWERGRID.
WBSETCL also stressed upon the fact that considering the criticality & loading of Subhasgram SS, it is prudent that the spare under discussion for Subhasgram, must be a new/Fresh ICT, like Jamshedpur and not the refurbished one, like Durgapur.
The matter was deliberated regarding the relocation of available Regional spare 400/220KV,315MVA ICT from Jamshedpur to Subhasgram SS.

The criticality of transportation was discussed and as informed by POWERGRID estimated cost for multi-modal transportation of the said ICT shall be around Rs. 4 crore approx.
The required transportation cost shall be capitalized suitably in original Spare ICT package and will be recovered as per prevailing guidelines.
Member Secretary stressed for maintaining stock of spare transformers at state level also following the CEA guidelines.

CCM Forum in principally agreed and recommended for consideration and approval of 54th TCC.

TCC may concur.

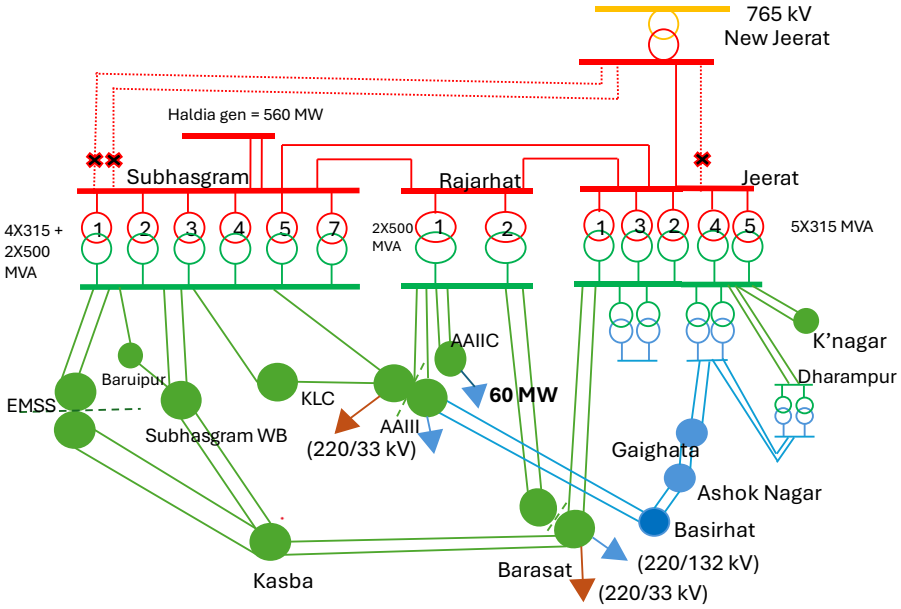
Deliberation in the 54th TCC Meeting:

Director Operation, WBSETCL requested Powergrid to reassess the transportation cost.

TCC agreed for transportation of 315 MVA ICT from Jamshedpur to Subhasgram and advised Powergrid to reassess the transportation cost. TCC referred ERPC for approval.

2.6 Near miss situation around Capital city of West Bengal : ERLDC

Kolkata and surrounding suburban area are being fed from three main Substation Subhasgram(PG), Rajarhat(PG) and Jeerat(WBSETCL) substation. These substations receive power mainly from 765 kV New Jeerat(PG), Farakka (NTPC) and Sagardighi (WBPDCL) other than internal generation of HEL and Budge Budge. During the peak demand period of 2023 there was significant transformation capacity shortage in Subhasgram S/S. Persistent effort of all stakeholders from ERPC forum ensured 500 MVA capacity addition at Subhasgram, 2X315 MVA capacity addition at Jeerat till date. Also commissioning of another 500 MVA ICT at Rajarhat and a spare of 500 MVA ICT at Subhasgram (PG) are under implementation stage and being actively monitored. This has ensured sufficient transformation capacity in steady state around Kolkata region. However, frequent and multiple transmission outages at 400KV and 765 kV corridors around Kolkata have resulted in near miss situations recently. From 28th May to 30th May 2025 outages of 400 kV New Jeerat-Jeerat -1 and New Jeerat-Subhasgram-D/C resulted in system operation without any reliability margin and system was one tripping away from voltage collapse or cascading tripping. Around 2330 MW load and 1300 MW generation could have been impacted with another one 400 kV line tripping.



Repeated outages (Planned and forced) of 765 kV New Ranchi-Medinipur-New Jeerat and 400 kV New Jeerat- Subhasgram and Jeerat posing serious threat for reliability of Kolkata region. During the 28th May to 30th may WB demand was on the lower side, however during

peak demand day extent of possible challenges and possible damage could have been more significantly higher.

Considering the rising demand and the critical nature of loads in key areas such as hospitals, metro railway, airports and the capital city of Kolkata, it is prudent to initiate a discussion on short-term mitigation strategies as well as long-term planning proposals.

Deliberation in 228th OCC meeting:

i. ERLDC highlighted that transformation capacity in Subhasgram (PG), Rajarhat (PG) and Jeerat (WBSETCL) around Kolkata is augmented timely with persistent effort of POWERGRID, WBSETCL, CESC, ERPC & ERLDC. However, recently from 28th to 30th May 2025, due to prolonged & Simultaneous forced outage of 400 kV New Jeerat-Jeerat one circuit and New Jeerat-Subhasgram D/C, a near miss scenario occurred, endangering approximately 2300 MW load and 1300 MW generation around Kolkata area.
ii. ERLDC highlighted that during 28th to 30th May demand was on the lower side. If demand would have been on the higher side, then the situation would have become critical. ERLDC further highlighted that next year being election year such events of prolonged outage in this corridor needs to be avoided.
iii. PMJTL/POWERGRID summitted that they have found certain problems in a batch of CLR insulators which resulted in such prolonged outage of the said lines. They are replacing all 4 strings of insulators in a location where any fault is taking place.
iv. West Bengal supplemented that there were several instances of emergency S/D of one ckt of 765kV Ranchi-Medinipur-New jeerat corridor taken by PMJTL. This poses a serious threat of voltage instability due to outage of entire corridor during high demand period. However, the healthiness of the 400 kV New Jeerat-Jeerat D/C and New Jeerat-Subhasgram D/C corridor is more important from overall reliability of Kolkata region.

OCC Decision:

i) OCC advised PMJTL to perform a thorough checkup of the line and complete replacement of faulty insulator strings of entire stretch of all 400kV connecting lines from New Jeerat (including switchyard) and 765-New_Ranchi-Medinipur-New-Jeerat-D/C corridor. Replacement work should be started immediately after Festive season in the Sep-Oct-2025 and should be completed before Jan 2026. Insulator replacement work of 400 kV lines should be completed on priority basis.
ii) Matter has been referred to TCC/ERPC meeting.

Deliberation in the 54th TCC Meeting:

I. *Powergrid representative informed that frequent failures are being observed in CLR insulators used in the above lines. He stated that similar failure is occurring in various other sites as well and the matter is being investigated by their corporate team.*
II. *He updated that all CLR insulators in the 400KV New Jeerat-Jeerat(WB) D/C lines will be replaced and the work will be completed by Dec-2025. Subsequently, insulator replacement work in 765kV Ranchi-Medinipur-New jeerat corridor will be planned.*
III. *Director(Op), OPTCL suggested that tower footing resistance may be strengthened if frequent insulator failures are occurring due to lightning.*
IV. *Powergrid informed the forum that the cost of replacing CLR insulator will be borne by PMJTL from their own fund.*

TCC Decision:

- *TCC expressed serious concern about frequent outage of 400KV New Jeerat-Jeerat(WB) D/C line as it compromises the reliability of power supply to Kolkata and adjoining areas.*
- *TCC advised Powergrid/PMJTL to judiciously plan the preventive maintenance of these lines including the 765 kV corridor and adopt quality control measures to ensure smooth and reliable operation.*
- *TCC advised Powergrid to identify and replace the defective batch of CLR insulators at all locations.*
- *TCC advised Powergrid to adhere to the timeline for insulator replacement work as proposed above.*

2.7 Finalization regarding fixation of methodology against 500 MVA ICT-7 (Interim) of Subhasgram SS and termination of Baruipur TL-II and Installation of 125 MVAR Bus Reactor:Powergrid ER II

As per special meeting dated 25.08.23, chaired by Secretary Power, GoWB and subsequent 51st ERPC meeting, available spare 500 MVA of ER-II, located at Maithon SS (As cold spare), diverted to Subhasgram SS and further commissioned at Subhasgram ss on 22.06.2024 as ICT-7 (Interim).

Subject 500 MVA ICT is originally envisaged as Regional spare and accordingly capitalized as regional spare in Dec-23. Post diversion of the ICT does not involved any change in commercial activities whatsoever. Further, to accommodate 7th ICT, 125 MVAR Bus Reactor & 220 KV Subhasgram-Baruipur-II line also has to be sacrificed.

6th ICT of Subhasgram, of CESC (500 MVA) is under transportation and soon it will be commissioned.

However, considering continuous load growth of Kolkata and surrounding area, and also, delay in commissioning of proposed 400 KV Laxmikantpur SS of WBSETCL, probably the loading at Subhasgram ICTs will have no relief in near future. Moreover, considering summer of 2026 will be of assembly election period, criticality around Subhasgram will have no respite.

Continuing regional spare with charged condition for a prolonged period is difficult for spare planning of entire region, and further, typical Transportation constraint of Subhasgram SS also added complexity and have no room for any flexibility of movement of spare in case of any urgency arises. Add to it, 220 KV Subhasgram-Subhasgram-D/C, cumulative power flow sometimes touched 900 MW, in 2025 itself, resulting immediate attention for diverting certain load to 220 KV Subhasgram-Baruipur link (To release the excess stress over 220 KV Subhasgram-Subhasgram-D/C).

Considering all such typical aspects, and also requirement of 220 KV Subhasgram-Baruipur-II is also imminent, it is proposed to consider as follows: -

a. Only Spare bay (217) at 220 KV at Subhasgram SS is available beside existing ICT-7 Bay (216). As bay construction work related to 6th ICT is ongoing, it will be prudent to finalize the location of 220 KV Baruipur-II feeder. If it is terminated at bay No-217, it will be very easy to terminate the same (Only Cable termination assembly need to be shifted, but no additional 220 KV HV cable is required). Considering, 220KV Cable already terminated within the switchyard for feasibility of connection, 217 Bay may be

considered. Complete 220KV Bay with Main Bus-I/II/Transfer Bus Extension required to be constructed for termination of Baruipur-II bay. By this activity, 220 KV Subhasgram-Baruipur-D/C link will be reestablished and loading of 220 KV Subhasgram-Subhasgram-D/C, will be reduced accordingly.

b. 400KV, 125MVAR Bus Reactor is available at Subhasgram SS that was opened for commissioning of ICT-7. Considering, the voltage profile during winter lean period it may be prudent to install the 125MVAR Bus Reactor in the available Dia of ICT-6 which is under construction. Future Bay is available in the said Dia of ICT-6 and with new foundation and corresponding CRP, 125 MVAR Bus Reactor-1, could be reinstated at Future Bay (Bay No-419) of Subhasgram SS.

c. Considering, the load profile already detailed above the methodology of consideration of 500MVA ICT-7 (Interim) to be considered as a permanent asset under RTM. Accordingly, the same shall be deleted from spare list and new procurement will be done to replenish the spare.

Based upon finalization commercial implications shall be taken up accordingly as per prevailing regulatory guidelines.

Powergrid may explain. TCC may discuss.

Deliberation in the 54th TCC meeting:

- *Powergrid insisted that the 7th ICT needs to be capitalized at the earliest and the 125 MVAR bus reactor needs to be put in operation. ERLDC also stressed the requirement of Bus reactor at Subhasgram for voltage regulation.*

- *Powergrid also proposed to terminate 220 kV Baruipur-Subhasgram-II at Bay 217.*

- *Direcor(Op), WBSETCL informed that earlier to accommodate the 7th ICT, as temporary measure WBSETCL had to construct a bay at Subhasgram(WBSETCL) S/s to use this 220 kV Baruipur-Subhasgram-II line and hence the bay no 217 is not required by them at present. However, this particular space may be kept for WBSETCL to use the bay in future and cable laying for 6th ICT(for CESC) at Subhasgram should be done to keep this option open for WBSETCL for future use.*

- *TCC agreed to the proposal of capitalization of 7th ICT and putting the 125 MVAR reactor in service. TCC also agreed to maintain the status quo of Bay 217 for future use by WBSETCL.*

TCC referred to ERPC for concurrence

2.8 Requirement of one 315MVA ICT on Loan basis from regional pool of spares: DVC

One no. 400/220/33 KV,315MVA ICT got damaged at Koderma Thermal Power Station, DVC on 02.06.2025. Due to this outage, DVC is facing difficulties in managing power flow of that area.

In this context a special meeting under the chairmanship of MS, ERPC was conducted on 06.06.2025.

During the meeting, DVC informed that of the two nos. of 315 MVA ICTs at Koderma TPS one ICT caught fire and got damaged on the early morning of 02.06.2025. Importance of the Koderma switchyard was apprised as it is connected to both the PowerGrid network at 400 kV level and internal DVC grid at both 220 kV and 132 kV level and that it is supplying power to JVVNL and other industrial consumers. In view of the above, DVC is seeking for one 315 MVA ICT on loan basis urgently.

After detailed deliberation, the following decisions were arrived at during the meeting:

All ER utilities were advised to adhere to CEA guidelines for availability of spares and inventories as well as to ensure N-1 redundancy.

✓ DVC may inspect the 315 MVA spare ICT being made available by PowerGrid at 400 kV Durgapur S/S and upon satisfactory test results, the same may be deployed at Koderma TPS. As informed later, DVC has already carried out inspection of spare 315 MVA ICT. few photographs attached at **Annexure-B.2.14**

Recently an inquiry committee has been formed by ERPC to analyse root causes that led to the burn out of the ICT.

Deliberation in 228th OCC meeting

i. *DVC informed that the spare 315 MVA ICT, previously made available from 400 kV Powergrid Durgapur Substation, has physical design mismatches. Hence, after discussion with Powergrid, spare ICT from Muzaffarpur S/s with matching design and specification has been agreed.*

ii. *Powergrid submitted that the bushings of the proposed spare ICT are not available. DVC agreed to install the bushings and transport the ICT to Koderma after all necessary testing.*

OCC decision:

i. *OCC agreed with the proposal of DVC for use of spare 315MVA 400/132/33kV Transformer from PGCIL Muzaffarpur S/s at Koderma TPS of DVC.*

ii. *OCC advised DVC to carry out necessary testing and healthiness check of the Transformer and arrange for its transportation to Koderma.*

iii. *OCC advised Powergrid to extend all possible co-operation in this regard.*

iv. *OCC referred the issue to TCC/ERPC for post facto approval.*

Deliberation in the 54th TCC Meeting:

TCC agreed with the proposal and advised DVC to expedite transportation of the ICT from Powergrid Muzaffarpur to Koderma after conducting the necessary tests. The issue was referred to ERPC for approval.

2.9 Provision of Hot Spare Line reactor for 765 kV Sundargarh-Raipur#1&2 Lines at Sundargarh Substation: Powergrid Odisha

- 765 kV Sundargarh-Raipur#1&2 along with their respective 240 MVR (3x80MVAR) switchable Line Reactors were commissioned on 29th & 30th March 2019

- The Reactors were supplied under the package :RT01 (under TBCB):- for (I) (a) 6x80MVAR, 765kV Shunt Reactor at Jharsuguda S/S , (b) 6x80MVAR, 765kV Shunt Reactor at Raipur Pooling S/S under Odisha Phase-II (DPR-2) and (II) 2x80MVAR, 400kV Shunt Reactor with 400 ohm NGR at Kishanganj GIS S/S under HEP's in Bhutan under POWERGRID works associated TBCB line under Common Transmission System for Phase-II Generation Projects in Odisha.
- Presently there is no provision for Hot Spare for Switchable Line Reactors of 765 kV Sundargarh-Raipur #1 & 2. However, Hot Spare of Line reactors is available at Raipur end for the same line.
- The existing 80 MVAr Hot Spare of 765 kV Bus Reactors and Line Reactors of all four 765 kV Angul Lines is connected to 765 kV Bus#2 and positioned 400m apart from Raipur LRs. Line Reactors of Raipur Lines are connected to 765 kV Bus#1. Being physically positioned apart, there is no possibility for electrical connectivity of Raipur Line Reactors with the existing Hot Spare Unit to meet any type of exigency condition.
- It is noteworthy to mention that there is repetitive switching of Line Reactors of Raipur Lines for Voltage Regulation and These Line reactors are being taken into service as Bus Reactors based on the System conditions as per the instruction of ERLDC.
- Being an oil filled equipment and exposed to higher switching surges in 765 kV system, requirement of hot spare is very much important for grid reliability. The availability of spare unit shall ensure quick restoration of these reactors in case of any major breakdown issue in any of the unit.
- Therefore, it is felt prudent to provide spare Reactor for these Line Reactors for smooth, reliable and flexible system operation with minimum outage to Line.

- As per the site condition there is availability of space in proximity to B-Ph unit of Raipur#1 Line Reactor.
- Auxiliary Bus and Neutral Bus for Spare rotation is already available at site as part of the above-mentioned Package considering future provision for accommodating spare unit.

- Based on the above, requirement of Hot spare for Line reactors of 765 kV Sundargarh-Raipur #1 & 2 may kindly be considered.

In 228th OCC Meeting, it was observed that the proposed Reactor was not envisaged in the original scope of work during the planning stage. However, the same might be required at present scenario. Accordingly, OCC advised that the matter may be referred to CMETS to establish its present requirement.

TCC may discuss.

Deliberation in the 54th TCC meeting:

Powergrid informed that the bay & line reactors are under RTM and not part of TBCB. OPTCL informed that they are agreeable to the above proposal of Powergrid.

TCC Decision:

TCC agreed with proposal of the Powergrid Odisha for requirement of hot spare for Line Reactor of 765 kV Sundargarh-Raipur #1 & 2. However, consent of CMETS-ER may be obtained.

The issue was referred to ERPC for its concurrence.

2.10 Status of spare Transformer/ICT in Eastern Region: ERPC

As per CEA guidelines for availability of spares and inventories for power transmission system (transmission lines & substation/switchyard) assets, adequate cold spare for ICTs has to be maintained at regional as well as state level. Key guidelines for determining spare as per the guidelines are provided below:

- Regional level spare: For regional power utilities (PGCIL & Transmission licensees), the spare at regional level would be required for these assets. These spares should be increased, optimized and limited to double the quantities mentioned for State Level based on transmission line assets in that region in order to avoid unnecessary storage of inventories.
- State level spare: The spares at 'State level' can be maintained at a centralized location which could be conveniently accessed to meet the emergency requirement of various substations/switchyards spread across the State.
- Requirement of state level: ICT and Shunt Reactor: One number single phase/three-phase unit of each rating, as applicable
- Utility for State level spare: If there are five or more substations/switchyards (of same voltage class) of a utility in a State, the 'State Level' spares shall be maintained by the utility.
- Replenishment of Consumed spare: Replenishment of the consumed mandatory spares shall be made at the earliest but in any case, not later than six months from the date of its consumption depending on the criticality of equipment component/material.

With a significant rise in state demands and regional demand along with the number of ICTs, it would be desirable to have an adequate spare to improve reliability and resilience in case of any exigency. Recently, a substantial delay in restoration of damaged ICTs in eastern region has been observed. Thus, maintaining adequate regional and state level cold spare is important.

TCC may discuss.

Deliberation in the 54th Meeting:

I. *Powergrid ER-II intimated that as per CEA guidelines for maintaining spare, one number of spare is mandated for each element with population less than 20 for a particular utility. If the population of such element is more than 20, utility make decision on maintaining more than one spare.*

II. *Director(Op), OPTCL opined that when n-1 criteria is satisfied for the ICTs for all individual stations of an utility, there is no need of maintaining a separate cold spare.*

III. *Director(Op), WBSETCL opined that ICT being the most valuable item should not be a kept as cold spare instead it must be maintained as hot spare, ready to deploy.*

IV. *CTU representative informed that in the present scenario Transformer manufacturing & delivery timelines are significantly long which poses a challenge in procurement of a new transformer in an event of transformer failure.*

TCC decision:

I. *TCC advised state transmission utilities to maintain spare transformer/ICT as per CEA guidelines. TCC observed that it would be prudent in view of applicability of interstate GST for transportation of ICT.*

II. *TCC opined that while planning augmentation of transformation capacity, transformers which have completed their significant life may be converted to cold spare and new ICT may be installed in place of the old one. In this way the financial burden on maintaining the spare can be minimized.*

2.11 Status of ERS in Eastern Region: ERPC

"Disaster Management Plan for Power Sector" mandated the following in case of the ERS:

" Each transmission licensee shall have an arrangement for the restoration of transmission lines of 400 kV and above and strategic 220 kV lines through the use of Emergency Restoration System in order to minimise the outage time of the transmission lines in case of tower failures."

The status is regularly monitored in monthly OCC meeting. However, all utilities of ER are yet to comply the above guidelines.

TCC may discuss.

Deliberation in the 54th Meeting:

MS, ERPC intimated about MoP communications of 2014 and May 2025 regarding maintenance of ERS tower inventory by transmission utilities on the basis of total ckt km and no of sets of ERS towers.

It was further updated that as per MOP Communication dated 11.05.2025, Powergrid was directed to procure 20 sets of ERS comprising of 300 ERS towers.

Powergrid representative apprised that 2 days training program on ERS was conducted from09.06.2025 to 10.06.2025 at Siliguri for the transmission utilities of Eastern Region.

TCC Decision:

TCC advised all transmission utilities including STUs & private transmission Licensees to maintain ERS inventory in compliance with MoP guidelines.

TCC suggested that each utility needs to conduct workshop at their level for their executives in order to manage the emergency situation.

TCC also advised to maintain healthy ERS and replenish the necessary parts of ERS especially after its utilization, to ensure readiness for any future crisis.

2.12 Provision for Visibility of Regional Power System Operational data at ERPC Secretariate: ERPC

The real-time operational data is available in SLDC/RLDC/NLDC for system operation. Many a times operation data of past period is required for decision making by ERPC Secretariat. Various operation data is also sought by CEA/MoP regularly. Though ERLDC Provides the data as per the request of RPC, however there is no direct visibility/access to the data. An access (only viewing rights) to the operational data such as Demand data of utilities, Generation data of power plants etc. may be provided to ERPC Secretariat.

ERLDC may update.

Deliberation in the 54th Meeting:

ERLDC updated that as per NCIIPC guidelines, an internet-based web-access for real time data was stopped and with the existing aged SCADA, it may not be possible to provide such access. They updated that the new SCADA will be operational by Feb-2026 in which the provision of online access of data is already incorporated.

2.13 Purchase of power from from Heo (240MW), Tato-I (186MW) and Tato-II (700MW) HEPs in Arunachal Pradesh

IRP Division, CEA vide mail sought the willingness of states of Eastern Region to take power from Heo (240MW), Tato-I (186MW) and Tato-II (700MW) HEPs in Arunachal Pradesh and communicate the same directly to IRP Division, CEA.

It is requested that unwillingness, if any, of any State of Eastern Region to take power from the above mentioned projects may be communicated to ERPC/CEA.

Members may note.

Deliberation in the 54th Meeting:

TCC advised all ER discoms to timely submit the requisition to CEA/ERPC for availing power from above hydro projects in Arunachal Pradesh.

2.14 Sharing AMR system application web client access with Utilities- pilot testing / roll out for WBSETCL Utility: POWERGRID ER- II

In the present landscape of AMR system in ER, all SEM data from different utilities reports to the central AMR system at ERLDC. This data transmission happens over secure LAN based channel. The AMR application operates at ERLDC, and the GUI of the application is accessible only for ERLDC users. However, there have been multiple discussions happened on sharing the application access of AMR to the SLDC.

Sharing of AMR system access outside of ERLDC network requires certain network level upgradation for strengthening the security. Upgradation of AMR network to Layer3/Layer4 project was ongoing since Jan-25 and the same has completed now for all the SLDCs. Hence, in the present network setup, the AMR data sharing with other SLDC may be envisaged.

For a pilot testing & rollout, AMR data sharing will be done for WBSETCL Meters. At present, 59 number of Meters (at 20 Sub stations) are connected to AMR system for WB utility. To

provide the GUI access for end users at SLDC-Howrah location, a separate customized AMR application will be developed. This application will be hosted at central server of ERLDC, and the web client access will be provided over the exiting LAN setup and the already installed router at SLDC station. Following are the features which will be provided in the application (only for the Meters belongs to WBSETCL Utility, connected with the existing AMR system).

System Dashboard for SEM communication status.

SEM data view block-wise for Load Survey and Midnight. (Load Survey depends upon LS frequency, 15 min and/or 05mins)

Instant data of SEM

Meter information

Reports

- NPC report (for both 15 min and/or 05 min)
- SEM block-wise data Report

Role based access will be provided for 03 users.

System Audit trail and user log maintenance.

On-boarding/Off-boarding of users.

Application Audit/Assessment

System/Desktop at SLDC location needs to be arranged by the respective utility.

The initial planning has been done for WB utility due to better connectivity and local presence of delivery center. As this will be for the first time, multiple testing and Application Development Life Cycle phases to be designed/implemented for a hassle-free rollout.

The first level of development/roll-out for WB has been planned as a pilot basis mode. An optimized and a minimal effort has been considered for optimal cost adjustment.

Once successful completion and go-live of the project for WB utility happens, the same will be planned for other 04 SLDC users (SIKKIM, Odisha, Bihar and Jharkhand) & DVC and system upgradation will be done accordingly. Additional Servers and licenses to be procured for the next phase of development along with necessary application module implementation. Additional hardware is required to physically isolate the SLDC application and database from the existing setup of the ERLDC to avoid any un-precedent scenarios. These additional hardware/servers will be installed at ERLDC Data Centre but will be isolated from the existing setup through firewall interface. During the development, separate application module will be developed for all different SLDC users. There will be access control mechanisms to give access only to the SEMs which belongs to that particular SLDC. Features and reports mentioned above, will be provided.

For the initial pilot rollout for WB, this will be done in the existing system/servers at ERLDC. However, when the development will start for other 4 SLDC & DVC, application for WB will be migrated to the new Servers/System.

Tentative expenditure will be around Rs. 1,25,66,848 without taxes. (22,59,420 INR will be for additional Hardware/Software and 1,03,07,428 INR will be for new Application development for 05 SLDC and DVC users).

Timeline for this job completion will be total 09 months (First 03 months for WB, next 06 months for other utilities) from the date of order.

This will be onetime cost for the development and roll-out. PGCIL will discuss with M/S TCS for carrying out this job based upon approval.

Deliberation in the 53rd CCM meeting

POWERGRID considered to take up the project after repeated request by some of the SLDCs in various forum of ERPC for viewing AMR data at various SLDC level.

POWERGRID had assured to carry out the same after completion of Network Upgradation (From Layer-2 to Layer-3/4). As the network upgradation works are already completed, now, as per commitment, POWERGRID proposed for the implementation of instant feature at the SLDC level of ER.

The data sharing of existing AMR system will be planned for 05 SLDC (West Bengal, Sikkim, Odisha, Bihar and Jharkhand) and DVC as well. The mechanism and development process will be same as mentioned in the CCM agenda. Forum agreed for pilot implementation at West Bengal SLDC.

Timeline for this job completion will be 09 months total. (First 03 months for WB, next 06 months for other utilities). The total cost of ownership for the job will be Rs. 1,25,66,848/- without taxes. (Rs. 22,59,420/- will be for additional Hardware/Software and Rs. 1,03,07,428/- will be for new Application development for 05 SLDC and DVC users).

As the original system is designed & maintained by M/S. TCS, POWERGRID proposed to carry out the implementation through M/S. TCS on nomination basis and entire job will be implemented on consultancy mode by POWERGRID. Post completion, POWERGRID shall charge prevailing consultancy charges (15%) like other projects, and after execution exact cost implications shall be intimated.

Forum agreed with the proposal as it will enable various SLDC's to view Energy data as presently viewed by ERLDC. Further, on query of West Bengal, POWERGRID clarified that, entire scheme will be implemented on secured LAN only and no public IP will be used as per prevailing IT policy.

CCM Forum in principally agreed with the proposal in view of upgradation of feature and recommended for consideration and approval of 54th TCC.

TCC may discuss.

Deliberation in the 54th TCC meeting:

Powergrid apprised that AMR network of ER has been successfully updated to layer3/layer 4 and project has gone live on 18.06.2025. It was further informed that pilot testing of AMR data sharing for 59 meters in WB control area shall be carried out and subsequently the same shall be done for other state SLDCs as well.

The total cost of the completion of this project is Rs. 1,03,07,428/- the excluding taxes and including HW/SW and application development.

Further proposed that powegrid should charge 15% consultancy charges post completion of the project.

TCC Decision:

i. *TCC appreciated the effort of Powergrid as it will enable state SLDCs to access real time SEM data and manage the drawal deviations effectively.*

ii. *TCC concurred the proposal of Powergrid with the cost implications of Rs. 1,03,07,428 /- without taxes and consultation charges of 15% will be implied after completion.*

iii. *TCC directed the Powergrid to complete the Pilot testing for WB system.*

Matter is referred to ERPC for its concurrence.

2.15 Cost recovery against AMR expenditures in ER from 01.07.2023 to 31.03.2025 for various phases of implementation and associated activities pertaining to Software/Hardware refreshment and upgradation of AMR: Powergrid ER II

POWERGRID is entrusted for implementation and subsequent maintenance/troubleshooting of AMR system in entire Eastern Region. For implementation of various phases of AMR and further H/W software refreshment program and migration from GPRS to LAN as per cyber security guidelines, multiple LOAs placed by POWERGRID. On 19.06.2023, updated AMR system with Software/Hardware refreshment, done completely with all necessary cyber security compliances. Moreover, now all concerned sites are connected with LAN only which is as per cyber security guideline. In Mar-24, AMR Phase5 LOA was awarded to integrated new SEMs with the existing AMR system and automate the Meter data over LAN network.

As POWERGRID has already incurred the expenditures or provisioned for subject heads (LOA placed and liability created), entire amounts required to be recovered for budget balancing.

As per minutes of 50th CCM, 51st TCC & 51st ERPC Meeting, the last approved value of AMR expenditure was Rs. 7,87,31,547/-. The period of this approved cost was considered from Mar-2019 till Jun-2023.

Now for balance expenditure done in between 01.07.2023 to 31.03.2025 are reproduced below for reference, which will be recovered along with associated consultancy fees and applicable GST.

Details of expenditures from 01-Jul-23 till 31-Mar-25 in phased manner are given below:

Project	**LOA#/ SAP PO**	**Total Expenditure (from 01-Jul-23 till 31-Mar-25)**
AMR Phase-4 (AMC Contract)	ER-II/KOL/CS/I-2446/P-2420/1929 Dated: 20-Jul-2020, ER-II/KOL/CS/I-2446/P-2420/AMENDII/4374 Dated: 05-Jul-2021/ER-II/KOL/CS/I-2446/P-2420/AMEND-III/6493 Dated: 07-Jun-2022 **(SAP PO- 5100032889)**	41,09,767.72
AMR Phase-1&2 AMC renewal	ER-II/KOL/CS/I-2724/P-2702/4285 Dated: 02-Jun-2021 (**SAP PO- 5100035446**)	1,85,40,957.68
AMR Phase-3 AMC renewal for 249 SEM	ER2/NT/SAMC/DOM/E00/22/00692/1000000986/I-3645/P-3556/8045 **Dated** 29.12.2022 **(SAP PO- 5200059035)**	67,94,673.64
AMR Phase-5 for 320 SEM	ER2/NT/W-MISC / DOM /E00 /24 /03816 /1000022907/I-4329/P-4156/9801 Dated 14.03.2024 (**SAP PO- 6800012472**)	2,40,24,045.96
TOTAL		5,34,69,445

Consultancy Fees @ 15%	80,20,417
GST on Consultancy Fees @ 18%	14,43,675
Grand Total	**6,29,33,537**

As per above list, total Rs. 6,29,33,537/- (Rs. Six crores twenty-nine lacs thirty-three thousand five hundred thirty-seven only) required to be recovered from ER constituents against expenditure done from 01-Jul-2023 till 31.03.2025.

It is proposed to approve the recovery amount, and recovery may be done from concerned beneficiaries (DIC's) w.r.t RTA billing for the month of March-2025.

During claiming of bill/invoicing to respective constituents, POWERGRID will provide, necessary auditor certificates.

Deliberation in the 53rd CCM meeting

POWERGRID representative explained the details cost incurred under various projects of AMR and equivalent amount already incurred for the same are given in above table. Further during actual billing, necessary auditor certificate will be provided.

Further, add to above, unrecovered AMR related expenditures of amount Rs. 30,76,130/- (Including all), vide 41st TCC Meeting, also to be added to the total cost. As per proposed methodology, in 40th CCM, IPP cost to be recovered against ex-bus generation, however, the same could not be finalized due to shortage of data at that period and now, it is proposed to add the same in the main cost for recovery purpose.

Considering all, total recovery cost comes to Rs. 6,60,09,667/- (including the unrecovered Rs. 30,76,130/-).

Further Forum also agreed to recover the same from concerned beneficiaries (DIC's) w.r.t RTA billing for the month of July-2025.

CCM Forum in principally agreed and recommended for consideration and approval of 54th TCC.

TCC may concur.

Deliberation in 54th TCC Meeting:

- *TCC concurred the total recovery cost of ₹ 6,60,09,667/- (including ₹ 30,76,130/-, in respect of IPPs) against expenditures of various phases of AMR implementation in ER from 1.07.2023 to 31.03.2025.*
- *TCC agreed with the proposal for the recovery of same DIC agreed to recover the same from concerned beneficiaries (DIC's) w.r.t RTA billing for the month of July-2025.*

TCC referred the matter to ERPC for approval.

2.16 Planning of a Disaster Recovery (DR) site for AMR system in Eastern Region: Powergrid ER II

The present AMR system is getting operated from ERLDC central location. The data centre setup along with necessary hardware/software are installed at ERLDC location. The SEM data is very crucial for carrying out the accounting and settlement on weekly basis.

To improve the system redundancy, it is recommended to have a Disaster Recovery (DR) centre for AMR system. The DR site will be installed at Malda-PG station. This location will be a different seismic zone and 300km away from the Data Centre. Data replication between the DC and DR will be happening over the existing LAN/FO setup. If there is any unprecedent issue takes place at DC site of AMR, the web client access of end users will be redirected to

the DR site and the AMR application can be accessed which operates at DR sites. All the data dumping process will be carried out from the DR location until the DC gets live. The DR site will be working as a child node of the Data Centre on normal condition. Required network level security mechanism will be applied to ensure that there is no data communication happened from the DR to DC (it will always be DC to DR). The SOP for DR operation (drills, Audit, Failover Testing, Performance Monitoring etc.) will be decided later with ERLDC and ERPC.

Following activities will be done for the DR site implementation at Malda-PG

- Installation of Firewall and other required Networking Devices
- Installation of Rack Servers and Other required software licenses
- Installation of AMR application for ERLDC
- Installation of AMR application for SLDC users
- Configuration and tuning of the application/database to be in synch with the Data Center System over LAN.
- Impose of network level security and hardening of system
- Testing of AMR application (at DR) accessibility from ERLDC location.
- Monitoring and Maintenance
- Periodic failover drill assessment between DC & DR

Project timeline will be total of 04 years. 06 months implementation, 06 months warranty and 03 years AMC support.

Total cost of ownership will be Rs. 1,65,37,163/- (without GST). Rs. 76,09,991/- for hardware supply, Rs. 29,91,379/- for implementation and warranty Services and 59,35,793 INR for 36 months AMC support. PGCIL will discuss with M/S TCS for carrying out this job based upon approval.

Deliberation in the 53rd CCM meeting

As per present architecture, there is no data backup policy in place for AMR data at ERLDC. However, as per standard guideline (CERT-In), in policy measures (Vide Policy 3.5), Preparation, test and implementation of Business Continuity Plan (BCP) and Disaster Recovery (DR) plan is mandatory.

In line with above, to maintain proper data back up and business continuity, DR site of entire AMR receiving infrastructure was proposed. Also, as per defined policy of keeping DR site in different seismic zone than of DC, POWERGRID proposed to keep the same at POWERGRID/Malda SS.

On enquiry from West Bengal, POWERGRID responded that data backup is not an option in today's IT environment rather it is mandatory for maintaining transparency and keeping ready the system for any eventuality (Like Fire hazard or massive earth quake, etc).

Project timeline will be total of 04 years. 06 months implementation, 06 months warranty and 03 years AMC support.

Total cost of ownership will be: Rs. 1,65,37,163/- (without GST). Rs. 76,09,991/- for hardware supply, Rs. 29,91,379/- for implementation and warranty Services and Rs. 59,35,793/- for 36 months AMC support.

As the original system is designed & maintained by M/S. TCS, POWERGRID proposed to carry out the implementation through M/S. TCS on nomination basis and entire job will be implemented on consultancy mode by POWERGRID. Post completion, POWERGRID shall charge prevailing consultancy charges (15%) over and above to actual project cost, like other projects in ER executed for AMR, and after execution exact cost implications shall be intimated to forum with required auditor certificates.

CCM Forum in principally agreed with the proposal in view of upgradation of feature and recommended for consideration and approval of 54th TCC.

TCC may concur.

***Deliberation in 54th TCC Meeting*:**

TCC agreed with the proposal of establishment of DR center for AMR system at Malda Substation with cost estimate of Rs. 1,65,37,163/- (without GST). Powergrid will charge consultancy charges @15 % over and above o actual cost.

TCC referred the matter to ERPC for approval.

2.17 Supply & Installation of Bus-Bar Protection Panels including Bus Differential Protection in different 220 kV & 400 kV Sub• stations of WBSETCL: WBSETCL

To enhance capacity of existing network with an objective to maintain N-1 contingency and to improve reliability and voltage profile in the State as well as National Grid, one proposal amounting to Rs. 55.41 Crore has been submitted to the PSDF authority. Accordingly, the proposal was also discussed in the meeting of the Techno-Economic Subgroup (TESG) held on 25.08.2023.

OCC is requested to grant consent to the proposal to achieve reliable and economic power transmission system with highest system availability within the state of West Bengal.

In 227th OCC meeting WBSETCL updated that TESG had principally approved their proposal. OCC agreed with the proposal of WBSETCL and referred to ERPC for concurrence.

WBSETCL may update. TCC may discuss.

Deliberation in 54th TCC Meeting:

TCC consented with the proposal of WBSCTCL for Supply & Installation of Bus-Bar Protection Panels including Bus Differential Protection in different 220 kV & 400 kV Sub• stations of WBSETCL.

Matter has been referred to ERPC for concurrence.

2.18 Update on current situation of Tower no. 91 of 400 kV Teesta III –Rangpo-Kishanganj D/C transmission Line affected due to Flash Flood of 2023: SPTL

Sikkim Power Transmission Limited (formerly Teestavalley Power Transmission Ltd.), (SPTL), a JV of Sikkim Urja Limited & POWERGRID (A Govt. of India Enterprise), was entrusted with the responsibility to construct, operate & maintain the 400 kV Teesta-III- Rangpo- Kishanganj D/C Transmission Line. The 400 kV D/C Teesta-III – Rangpo-Kishanganj transmission line of SPTL is an ISTS line evacuating a major portion of power from HEPs in Sikkim Hydro Generating Complex.

The tower no. 91 of the 400 kV Teesta III-Kishanganj D/C line is located in Mingley Village, Namchi District, Sikkim near the Teesta River. The Flash Flood of October 2023 eroded a large portion of the riverbank at several locations along the Teesta River Basin. Due to flash flood, the river course was also shifted at several locations. At Tower -91 due to flash flood huge amount of riverbed material was deposited on the opposite riverbank and the river course was shifted to bank near the tower. The Flash Flood of October 2023 was declared as Disaster by Government of Sikkim.

Accordingly, SPTL had taken up the issue with concerned authorities including District Collectors, Water resource & irrigation, Forest department etc. SPTL has also apprised the issue to the Chief Secretary, Sikkim. Further, SPTL had requested that the matter be deliberated in the 52nd TCC meeting. Accordingly, the matter was taken up in the 52nd TCC meeting dated 05.09.2024. Based on the deliberation, the following decisions were made:-

a. TCC advised SPTL to either relocate the position of tower or construct some embankment around the tower area so that breakdown of Tower no. 91 of 400 kV Teesta-III – Rangpo-Kishanganj D/C transmission line due to erosion of riverbank can be avoided.
b. TCC Chairperson and PCE, Energy and Power Dept. Govt of Sikkim assured to provide all types of administrative support to SPTL in this regard.

As the Teesta river basin is huge and river protection works of such large scale are under the purview of Water resources and River Development Department in Government of Sikkim, SPTL requested the intervention of office of the Chief Secretary, Sikkim in September 2024 and subsequently the protection works for river bank near Tower -91 were included in the Detailed Project Report (DPR) of Central Water Commission (CWC) for River Training Works from Zema at Lachen under Mangan District up to Rangpo under Pakyong District and Melli under Namchi District, Sikkim.

As the permanent protection works at the river bank based on DPR of CWC will take time, SPTL is continuously monitoring the situation at the Tower -91 and also carried out interim protection works in the immediate tower area along the river bank. Meanwhile, SPTL vide letter dated 07.05.2025 requested Secretary-IPP , Power Department , Government of Sikkim (GoS) for removal of excess river bed material deposited on the opposite river bank due to Flash Flood of October 2023 so that the river channel is widened and impact of the river flow on the bank side near tower is reduced so that major protection works can be taken up by SPTL for tower. The Secretary-IPP, Power Department, GoS vide letter dated 09.05.2025 requested PCCF-cum-Secretary, Forest Department, Sikkim to take emergent measures in this regard. Letter attached as Annexure-B2.13.

The State of Sikkim experienced Flash Flood like situation again on 30th-31st May 2025 due to cloudburst and heavy rainfall in Mangan District. The Teesta River was flowing at alarming levels and caused damages to various bridges, roads etc. Landslides were also reported at various parts in Mangan District. Due to very high flow in Teesta River the protection wall constructed by SPTL as an interim measure, got washed away.

Any disruption in the line due to any further damage near the riverbanks will endanger the line and will lead to shutdown of line causing generation loss in the Sikkim complex and also in the National Grid. This will also result in huge financial losses to the State of Sikkim and Nation.

The current status of the Tower -91 is put for information of the forum and SPTL requests the following for further safeguard of the tower:-

1. SPTL requests intervention of TCC and ERPC forum in the matter so that the required measures of removal of flash flood river bed material on the opposite bank (Rangto

Village Side, Gangtok District,Sikkim) are taken by the concerned department in GoS at the earliest so that SPTL can plan to carry out major protection works for tower -91 located at Mingley Village side, Namchi District, Sikkim.

2. As the temporary protection wall got washed away, SPTL intends to carry out major protection wall works along tower area for a length of upto 60m with Gabion Protection Walls of height upto 5-6 m in line with POWERGRID practices. The protection works will also include placing PP Rope Gabions with Geobags placed inside. SPTL will depute the agency and based on the finalization of the scheme the final cost will be arrived as per Design & Engineering recommendation. As the works are necessitated due to force majeure events of flash flood of 2023 and subsequent events thereafter, the works are proposed to be carried out under additional capital expenditure due to force majeure conditions of CERC Tariff Regulations. (Annexure attached 2.13A)

Deliberation in the 54th meeting:

SPTL representative intimated that the temporary protection wall constructed as an interim measure at Tower loc-91 of 400 kV Teesta III-Kishanganj line got washed away during the recent flash flood in May-25. SPTL intimated that they have requested Govt of Sikkim for removal of excess river bed material deposited on the opposite river bank to reduce the impact of the river flow near tower-91 so that major protection works can be taken up.

In the absence of representative of Power Dept, Govt of Sikkim in the meeting, TCC advised SPTL to follow up with Power Dept , Govt of Sikkim.

However TCC opined that Power Dept., Govt of Sikkim may provide administrative support to SPTL.

2.19 Repeated tripping of 132 kV Chuzachen-Rangpo D/c: ERPC

Vide 220th OCC dated 28.10.24, 132 kV Chuzachen-Rangpo D/C tripped more than 10 times since May'24 causing total generation loss occurred at Chuzachen HEP (110 MW).

Committee visited site with following observations:

- Critical tree infringement and bamboo trees between loc. 27-29 along the corridor.
- Severe infringement along with several flashover marks on the conductor and burnt trees along the corridor.
- Less ground clearance b/w loc. 28-29 for Ckt-1 (4.1 meter instead of minimum requirement of 6.1 meter).
- The Committee recommended two new towers to be constructed between loc. 28-29 and 35-36 (one each) and hill cutting along the periphery of tower no. 27 to improve ground clearance.

Considering the severity of less ground clearance and potential of damage to human life, the recommended measures need to be implemented on an immediate basis.

OCC advised Sikkim to expedite in implementation of Committee recommendations i.r.o increasing ground clearance by construction of new tower (between loc. 28-29) and hill cutting (around tower no. 27).

Update on the same needs to submitted to ERPC/ERLDC every week.

The matter has been referred to TCC.

TCC May discuss.

Deliberation in the 54th Meeting:

Representative from Sneha Kinetics informed that tender process for construction of three additional tower has been completed and the award is in progress.

TCC Decision:

TCC advised to expedite the tower construction work with support of Govt of Sikkim.

2.20 Status of DTL for Ind Barath TPP

Due to delay in completion of DTL, presently Ind-Barath TPP is connected to ISTS through an interim arrangement viz. connection of one circuit of OPGC –Sundargarh 400 kV D/c ISTS line at suitable cross over point of IBEUL –Sundargarh (Jharsuguda) 400 kV D/c line so as to form OPGC – Ind-Barath –Sundargarh 400 kV S/c line.

In 228th OCC meeting during discussion of challenges in intra-state network in Odisha system, Odisha representative highlighted the delay in DTL of Ind-Barath TPP and advised for early completion of the line.

JSWEUL may update the present status.

Deliberation in 54th TCC meeting:

JSW informed that the original proposal of 4 towers has been modified to one having 12 towers due to objections from MCL. The revised proposal has been agreed upon by MCL and is forwarded to Ministry of Coal for approval. Once approval will be granted, JSW has assured that the construction of the transmission line will be completed within 3 to 4 months.

TCC Decision:

TCC advised JSW for expediting the construction of the transmission line and has referred the matter to ERPC for information.

2.21 Schedule Generation Below Technical Minimum- Non-Compliance wrt IEGC-2023: NTPC

SCUC & SCED technical minimum support was not extended to some generating stations, the affected generating stations incurred significant financial loss and grid experiences disturbance due to excessive non-scheduled energy on account of this anomaly in the scheduling structure.

Further, the attention is drawn to the specific recent incidents (mentioned in Table no.01), generating stations which were required to cater to the evening peak of Eastern region, incurred heavy DSM loss to maintain Technical Minimum in absence of suitable schedule from beneficiaries and SCUC/SCED support.

It is also likely to mention that some beneficiaries of above-mentioned stations are procuring power from the market during non-solar hours instead of availing their entitled share from these generating stations. (Annexure B.2.21)

Table- 01: Stations receiving SG less than TM

Date	Station	Tech. Min. (MW)	SG<TM during solar hours (MW)	SG<TM during solar hours (MW)	Support
31.05.2025	Kahalgaon_II	777	Block No. (34-60)	Min- 634 Max- 716	SCUC- No SCED- Yes
01.06.2025	Farakka_I&II	823	Block No. (29-70)	Min- 152 Max- 782	SCUC- No SCED- Yes
01.06.2025	Farakka_III	259	Block No. (26-71)	Min- 11 Max- 238	SCUC- No SCED- Yes
01.06.2025	Kanti_II	195	Block No. (22-40)	Min 170 Max- 170	SCUC- No SCED- Yes
15.06.2025	Kanti_II	195	Block No. (43-56)	Min 91 Max- 178	SCUC- No SCED- Yes
16.06.2025	Farakka_I&II	823	Block No. (50-54)	Min- 359 Max- 777	SCUC- No SCED- Yes

Kind intervention of TCC/ERPC is requested to ensure the technical minimum schedules are provided to the generating stations during solar hours.

Applicable Clauses/Regulations:

1. Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023, clause No. 4(b) Section 46
2. Central Electricity Regulatory Commission (Indian Electricity Grid Code) (First Amendment) Regulations, 2024: Clause No. 6(5)10
3. Detailed procedure for moderating schedule up to minimum turndown level for Section 62 generators through SCED, dated- 12.03.2025

NTPC may explain. TCC may discuss.

Deliberation in 54th TCC Meeting:

MS ERPC updated the forum that a committee has been formed by NPC on the issue of technical minimum support to thermal generating stations. Two meetings of the committee have already been held. A guideline to deal with this issue is going to be finalized soon.

TCC noted.

2.22 Participation of State Generators in TRAS market: ERLDC

The grid frequency has been observed to remain persistently above the IEGC band (49.50 to 50.05 Hz) for 4-5 hours during the solar hours on lean demand days. The situation is particularly critical if the occurrence of inclement weather coincides with weekend or extended holidays in various parts of India. Backing down of conventional generation (thermal, gas and hydro) at regional and intrastate level through the de-centralized scheduling mechanism and through the centralized ancillary despatch (SRAS, TRAS) from NLDC to the participating generation fleet has been found to be thoroughly inadequate during these conditions. Few major reasons were identified as follows:

i. High RE integration.
ii. Lack of TRAS down margin due to non-participation of state generators in TRAS Market.
iii. Maintaining generation of state generators well above 55% MTDL.

Due to very less participants in TRAS market and limited reserve available under shortfall category, sufficient TRAS down couldn't be despatched. To address this, the National Load Despatch Centre (NLDC) has issued an advisory with real-time measures to ensure grid security and maintain system frequency within the IEGC band. TRAS down under emergency category one of the key measures, where NLDC would instruct all generators, including IPP, to bring their generation to MTDL (55% of MCR) in last week of May and First week of June 2025.

It was observed that many state generators were operating well above MTDL (55%) but not participating in TRAS market for down reserve. In the India level, it was estimated that at least 9GW TRAS down could be made available, which could have brought down frequency within IEGC Limit. On other hand, generators can generate additional revenue by participating in this market, and few IPPs have already started to bid in TRAS market to harness additional revenue.

This matter was already raised in 226th & 227th OCC meeting by ERLDC and deliberated in detail. Subsequently, 2 separate meetings were held with IPPs & State Gencos on 29.05.25 & 12.06.25 respectively to create awareness about TRAS market participation. MPL & JIPL from ER are already participating in this market and IPPs from other regions are also participating.

All State generators may explore participation in the TRAS market.

TCC may discuss.

Deliberation in 54th TCC meeting:

ED, ERLDC presented cost benefit analysis of participation in TRAS down market during high frequency conditions. The presentation is enclosed at Annexure B2.22.

He emphasized the need of bringing down the generation upto MTL by intrastate generators during high frequency.

It was also supplemented that performances of ER state generators on 1s June 2025 revealed that except DVC, most state generators operated at around 70% of MCR despite advisories to reduce to 55%, reflecting untapped potential for TRAS participation.

ERLDC reiterated the need for state generators/IPPs to utilize the market platform both for supporting grid operations and revenue optimization

TCC Decision:

i) TCC advised all intra State Gencos to approach the respective SERCs for regulatory guidance on this issue.

ii) TCC advised all intra State GENCOs and IPPs to participate in the TRAS Down market.

iii) ERLDC was advised to conduct a meeting with SLDCs for addressing their concerns on scheduling aspects for participation in TRAS down market.

2.23 Bulk Power purchase by industries from Market: Odisha SLDC

With participation of many real time buyers/sellers, the state-based industries transacts anticipating market rate giving maximum gain to them. This result into bulk purchase of power at cheaper rate & industries do not draw even their contract demand, simultaneously state holding company also buys power at cheap rate to reduce portfolio burdens. The SLDC becomes aware at the time, when there is no scope of control over revision of RTM sell/ purchase. This leads to heavy under drawl attracting penalty. Such ambiguity need to get corrected by suitable amendment of revision facility to state entity at 4 to 6 time block.

SLDC Odisha may explain.

Deliberation in 54th TCC Meeting:

ERLDC presented the current scheduling timelines as per the revised IEGC framework, wherein schedule revisions made in odd/even blocks would become effective from the 7th/8th time block, necessitating gate closure 7–8 blocks ahead of actual despatch. The Real Time Market (RTM) opens and clears in the next subsequent two blocks post gate closure. (Annexure B.2.22)

It was highlighted that in Odisha, intra-state entities were currently allowed to revise requisitions 4-time blocks ahead after RTM schedule finalization, leaving no scope for schedule correction and potentially attracting DSM penalties. ERLDC mentioned that the Odisha State Grid Code, last notified in 2015, was overdue for revision.

Members were informed that alignment of intra-state gate closure timelines with IEGC 2023 (from 4th TB to 7th/8th TB) may be considered to avoid discrepancies and improve scheduling coherence.

TCC decision:

TCC emphasized that all ER states need to update their grid codes to be in sync with IEGC 2023.

2.24 Request for Clarification on Continuous Imposition of Ancillary Charges despite High Grid Frequency Conditions: WBSEDCL

In accordance with the latest DSM regulations, the computation of DSM charges is considered incomplete without the inclusion of Ancillary Up operations and the associated Ancillary Charges. Under the Grid Code, Ancillary Up services are permitted to be utilised exclusively during anticipated low-frequency periods, when the demand-supply gap is expected to be narrowed through the injection of additional ancillary power.

However, it has been indicated by the final DSM data published on the Grid India website that Ancillary Charges were imposed in nearly all 96 time-blocks each day including on dates such as 18th May, 22nd May, and 25th May 2025, as well as 1st June 2025 despite the All-India grid frequency having repeatedly exceeded its permissible limits.

A review conducted for the period from 1st January to 25th May 2025 shows that Ancillary Charges were claimed in 13,913 out of 13,920 time-blocks (99.95%), suggesting that Ancillary Up operations were activated almost continuously, even during prolonged high-frequency conditions.

In view of the significant commercial implications of DSM charges for Grid entities, a detailed technical explanation is requested from the NLDC regarding the uninterrupted deployment of

Ancillary Up services, regardless of the prevailing grid frequency. To promote transparency, it is further requested that a comprehensive breakup of the final Ancillary Charges be published on the Grid India website alongside the final DSM charge statements on a regular basis.

WBSEDCL may explain. TCC may discuss.

Deliberation in 54th TCC Meeting:

- *ERLDC acknowledged the issue raised by WBSEDCL and informed that the dates for which WBSEDCL has raised their concern, the grid is under high frequency and the generators were having generation schedule less than the MTL. The AGC signal in such a high frequency scenario is generally triggered to bring down the generation schedule to MTL. However, as the schedule of generators were already below their respective MTL, such AGC signal as mentioned above resulted in up the actual generation and to match it to their MTL. This undesirable effect led to ancillary service up instruction on those days.*
- *ED, ERLDC stated that the matter was discussed by ERLDC with NLDC and it was gathered that on the occasions when scheduleof a generators were below MTL, AGC was generally switched off, However, on these days of high frequency, TRAS emergency down of very high quantum was invoked and hence AGC of all generators were kept in operation to take care of automatic increase in generation in case of any large generation loss during solar hours.*
- *TCC appreciated the analysis made by WBSEDCL.*
- *TCC felt that while switching off of AGC would not be desirable, appropriate change in logic is required.*

TCC advised that NLDC would have to modify the AGC triggering logic suitably for taking care of such anomalies in the coming days.

TCC referred the matter to ERPC.

2.25 Consideration of Partial Outages of Generating Stations in calculation of DSM Accounts: NTPC

Vide CERC Notification No. L-1/260/2021/CERC, Dated: 5th August, 2024, Clause 8 - Charges for Deviation, Sub-Clause (12) states as follows:

Quote

(12) Notwithstanding anything contained in Clauses (1) to (11) of this Regulation, in case of forced outage or partial outage of a seller, the charges for deviation shall be @ the reference charge rate for a maximum duration of eight time blocks or until the revision of its schedule, whichever is earlier.

Unquote

The said notification has been effective from 16.09.2024.

However, in case of partial outage**, "Deviation rate @ reference charge" has not yet been incorporated in the DSM calculation in the published DSM statements. It is requested that the same may please be incorporated.**

The issue was deliberated in 53rd TCC as well.

NTPC stations are submitting the partial outage data to ERLDC on regular basis and further requested to incorporate the same in the DSM.
In 53rd CCM, it was deliberated that the DSM accounts of the generating stations shall be considered and revised w.e.f. 01.04.2025.

Deliberation in 54th TCC Meeting:

MS, ERPC informed that partial outage data will be considered in DSM calculation and will be reflected in the DSM statements of July-25 onwards. For the period of April-25 to June-25, the DSM accounts will be revised accordingly. He stated that if required, a small committee will be formed to discuss and finalize the accounts.

2.26 Regarding Frequent Cyclic Ramp up and Ramp down of schedule (Kanti_II, Kahalgaon): NTPC

It has been observed that frequent cyclic ramp up and ramp down schedule (i.e. Ramp direction change in consecutive blocks) being given to MTPS-II, Kahalgaon-I, Kahalgaon-II on multiple occasions.

It is to mention that such frequent change in ramping direction is not desirable to generating machines barring some occasional emergency requirement. Often/ block to- block cyclic ramping is needlessly stressing the generating unit, as it is very difficult for mechanical systems of the unit to manage change in electrical system of the grid, this is severely increasing the stress on Boiler and Turbine. Moreover, such frequent variations in schedule lead to financial losses for the station on account of DSM.

As per the Revised detailed guidelines for assessment of ramping capability of thermal Interstate generating stations (ISGS) issued by NLDC on 30.12.2020, it has been stated that:
"F – Number of blocks where the Actual Ramp is greater than or equal to 1%/Min F consists of blocks where Actual ramp (in %/min) >= 0.90, or
If the scheduled ramp in the previous block is less than 0.5%/minute, then F includes such blocks were
Actual ramp (in %/min) >= 0.45"
From the above , it is gathered that for 1st eligible ramp (i.e.1% / min) , generator has to achieve only 50% ramp (with 10% tolerance , it is 45%) , but even on achieving 1st eligible ramp , generator has to bear the losses on account of DSM as there is gap between SG & actual generation (~50% of ramp schedule) and this loss shall continue till the ramping schedules ends.
It is mention that Negative DSM occurs in every ramp down/up even after achieving 1% ramp and if frequency is above 50.03Hz and less than 49.97Hz respectively, then there is heavy penalty on account of DSM.

It is suggested for the following:
1. To avoid this situation and in view of difficulty faced technically and commercially, appropriate Schedule by ERLDC / NLDC may be provided.

2. In all the cases of eligible ramping schedules (i.e.1% / min) , DSM calculation shall be done on basis of reference Charge rate (ECR) irrespective of Grid frequency

Or

3 In all cases of eligible ramping schedules (i.e., 1%/min), DSM calculations shall be restricted based on the assessed ramping capability of thermal Inter-State Generating Stations (ISGS), and blocks with a change in direction shall not be considered in the DSM computations.

NTPC may explain. TCC may discuss.

Deliberation in 54th TCC Meeting:

It was informed that the committee which has been formed by NPC as mentioned previously will look into the issue of thermal generating stations comprehensively.

2.27 Computation of Average Monthly Frequency Response Performance Beta (`β') Factor: NTPC

The methodology for computation of Average Monthly Frequency Response Performance, (Terms and Conditions of Tariff) Regulations, 2024 has been prepared by NLDC and same has been approved by CERC on dated 23.10.2024. In line with the Clause No. 4.4 (b) of the CERC Approved NLDC procedure for computation stations, whose tariff is determined by CERC and are falling under the jurisdiction of SLDCs (in accordance with the control area jurisdiction as per Regulation 43 of CERC (IEGC) Regulations, 2023) shall be assessed by concerned SLDC in line with this methodology, for computation of Beta. Bihar being the sole beneficiary of NTPC Barauni, the generating station falls under the jurisdiction of Bihar State Load Despatch Centre (SLDC).

The methodology for calculating the FRO has been discussed with SLDC through various meetings been conducted on the following dates: 26.12.2024, 27.01.2025, 02.04.2025, and 10.04.2025 held at Vidyut Bhavan, Patna. Bihar state is considering the Methodology-I as mentioned in Agenda-7: Methodology for calculation of FRO of intra-sate entities of 48th FOLD meeting date 21.08.2024.

It is observed that, if Bihar state adopts Method-I, the basic motive behind the implementation of the frequency response will be defeated as Beta (`β') value of Barauni Station will seldomly get incentive at par even for the best performance. The method -I demonstrates a much-deviated result with respect to NLDC adopted methodology as there is no other intra state generating station is available in Bihar besides.

Barauni STPS, being a CGS, it is appropriate that Beta (`β') factor for NTPC Barauni TPS should be calculated as per methodology by NLDC to avoid the discrepancy in calculating the FRO and maintaining uniformity. It is gathered that other SLDCs are also adopting the same procedure.

The high-resolution data for Barauni Stage-II has already been submitted to SLDC.

NTPC may explain. TCC may discuss.

Deliberation in the 54th meeting:

Bihar representative informed following:

- *During FOLD meeting, it was mentioned that there are five methods to determine β factor for intra-state generators. It was decided that the respective State SLDC would select the method for calculating the β factor for intrastate generating stations.*

- *BSPTCL updated that in meeting with NTPC Barauni, state discoms & PMC at Patna, no consensus could be reached as NTPC requested to follow method-2 whereas state discoms wants to follow method-1.*
- *It was highlighted that method-1 does not consider input of the average demand of the state control area whereas in method-2, there is an input of average demand of state control area.*
- *FRO quantum as worked out according to the method-1 & method-2 is 320 MW & 25 MW respectively.*
- *Discoms were willing to choose method 1 for the calculation but technically it is not viable for a 500 MW station to maintain FRO of 320 MW.*

TCC Decision:

TCC opined that method-1 is not practically implementable and therefore Bihar needs to review their decision. Further, TCC opined that Bihar SLDC may refer the issue to FOLD meeting.

2.28 Dual reporting (2+2) of ISTS stations to Main RLDC and Backup RLDC : ERLDC

Presently SCADA data channels are reporting in main and backup mode (1+1) with 1 main channel to RLDC and 1 backup channel to Backup RLDC. To increase the redundancy in the system Grid-India requested that both main and backup channels should report to RLDCs as well as back up RLDCs (in dual mode).
CERC has issued Guidelines on "Interface Requirements" under the CERC (Communication System for inter-State transmission of Electricity) Regulations, 2017 in Jan'24 which also mandated that users shall provide communication interfaces with multiple ports, cards, gateways etc. to avoid failure of single hardware element.

To meet this requirement for new ISTS stations, CTU has started to include this requirement in the RFP inputs for the TBCB projects from Aug'23 onwards. For the existing substations are also required these requirements of 2+2 channels to main and backup RLDC.
The issue was deliberated in 53rd TCC/ERPC meeting and in principle approval was accorded. However, cost implication aspect needs to be discussed.
In 17th TeST Meeting, ERLDC proposed for dual channel reporting from ISGS/IPPs/private transmission licensees. Accordingly, all ISGS/IPP/ Private licensees were advised to assess the feasibility of dual-channel reporting to ERLDC and confirm their progress to ERPC and ERLDC.
Powergrid and CTU may submit the cost estimate for the scheme. ISGS/IPPs/private transmission licensees may update.

Deliberation in the 54th Meeting:

- *CTU updated dual channel reporting from all the ISTS channel has been completed except for Durgapur S/s which will be completed by March 2026.*

- *It was further updated that for establishing dual channel connectivity from ISGS, IPPs, and private transmission licensee, RTU/SAS upgradation work has to be carried out.*

TCC decision:

TCC advised all ISGS/IPP/ Private licensees to carry out SAS upgradation work and to establish dual channel connectivity to main & backup RLDC.

TCC urged Powergrid to extend necessary technical support, if sought by utilities.

TCC suggested to discuss the issue in TeST meeting.

2.29 Recovery of Relinquishment Charges as per the direction of CERC in order dated 08.03.2019: CTU

Issue:
CERC Order dated 08.03.2019 in Petition No. 92/MP/2015, directed CTU to assess the stranded transmission capacity and calculate the charges payable towards relinquishment and the relinquishment charges paid by LTA customers shall be used for reducing transmission charges payable by other long term and medium term customers in the year in which such compensation is due in the ratio of transmission charges payable for that year by such long term customers and medium term customers. Accordingly, the relinquishment charges had been computed by CTUIL and uploaded on its website (before the CERC Order, many IPPs/generators had relinquished the LTA and the charges were being recovered from the beneficiaries).
Deliberation in 53rd TCC meeting:
Current litigations in APTEL led to delays in the recovery of relinquishment charges and have impacted the beneficiaries across regions. There is a limited representation by state DISCOMs in the judicial proceedings of this matter. As the recovery of charges will reduce transmission charges burden of the discoms across the country, the discoms may actively participate in the proceedings of APTEL by including themselves as party in the petition. It was suggested that if state-wise financial quantification of the charges can be determined, it would help state discoms to take appropriate decisions. CTU agreed to work out the state-wise quantification.

Deliberation in 53rd ERPC meeting:
CTUIL updated that they already have the state-wise bifurcation of the relinquishment charges and the same would be shared. ERPC advised that state discoms may take a decision based on the data received from CTUIL for their participation in the proceedings of APTEL on the issues of relinquishment of LTA charges.

CTUIL and the Discoms may update the status.

Deliberation in the 54th TCC meeting:

TCC advised that CTUIL may take suo-moto decision for refund of the money. CTUIL expressed that it may be tantamount to contempt of court. TCC advised that CTUIL may consider taking leave of the court from APTEL in this regard.

TCC referred the matter to ERPC for guidance.

2.30 Workforce adequacy – MoP guidelines

The *Workforce Adequacy Guidelines for Load Despatch Centres*, issued by the MoP on 30.10.24, propose a 2–10 day short-term exposure programme to enable peer-to-peer knowledge exchange and promote best practices between SLDCs and RLDCs through reciprocal rotational assignments. The Guidelines for Deputation of Workforce from SLDCs to Grid-India focus on fostering collaboration and knowledge-sharing among various LDCs. As part of this to strengthen the capabilities of SLDC persons, short-term exposure programmes are being organized.

Executives from SLDCs of DVC, Sikkim, Bihar & WB were deputed at ERLDC for participation in the programme in the month of April. This initiative aimed to enhance the technical competencies of SLDC personnel in system operations, market operation and grid management by facilitating peer to peer learning & propagating best practices. A total of 29 man-days of knowledge sharing sessions have been completed as follows:

Sl No	SLDC	No. of Executives	Duration in days	Man-days	From Date	To Date
1	DVC	1	2	2	03.04.2025	04.04.2025
2	Sikkim	4	5	20	07.04.2025	11.04.2025
3	Bihar	2	2	4	16.04.2025	17.04.2025
4	WBSLDC	1	3	3	21.04.2025	23.04.2025
	Total Man-days completed			29		

To continue the process, SLDCs are requested to depute officials for their capability enhancement.

TCC may discuss.

Deliberation in 54th TCC Meeting:

TCC advised all concerned SLDCs to depute their officials to ERLDC for their capability enhancement.

2.31 Update on Islanding scheme: ERPC

A. Patna Islanding Scheme

- The Patna islanding scheme would be formed with Units of NPGCL along with loads of Patna city.
- NTPC was entrusted for carrying out study of NPGC units and M/S Solvinia had submitted report on study of islanding scheme dated 08th May 2024. Thereafter based on comments received from ERLDC, replies were submitted by M/S Solvinia. NTPC had communicated the report to all concerned including SLDC Bihar.
- Some further tests needed could not be carried out due to non-receipt of relevant data from Bihar.
- The proposed Patna islanding scheme aims to isolate one running unit of NPGC (660 MW) with pre-identified load of Patna city and nearby areas. After isolation of selected loads and NPGC through the identified network, run the island in islanded mode to cater the city load and to extend start-up supply to generating stations in adjoining area to facilitate early restoration.
- Patna city and nearby loads will be islanded with one of the running units of NPGC (660 MW).

As per 53rd ERPC meeting:

ERPC agreed with the proposal of Patna Islanding Scheme and advised Bihar to go ahead with the implementation scheme in a **time bound manner**.

226th OCC	227th OCC
SLDC Bihar submitted: • *Bids have been submitted by vendors, but the element-wise cost breakup has been provided only by M/s Siemens. The final DPR, along with the cost breakup,*	*SLDC Bihar informed that cost estimate for purpose of DPR has been received only from one vendor i.e Siemens.* *Decision:*

will be submitted after receiving the element-wise cost breakup from the other vendors. ***OCC Decision*** ✓ *OCC raised concern on the delay in finalization of DPR for Patna islanding scheme despite being accorded approval for approaching PSDF in 53rd ERPC meeting.* ✓ *The Patna islanding scheme will be discussed in the next NPC meeting. Therefore, OCC advised SLDC Bihar to expedite the submission of the final DPR for the Patna islanding scheme, along with the detailed cost breakup from the other vendors.*	*OCC suggested SLDC Bihar to expedite the submission of final DPR in view of upcoming NPC meeting.*

In 228th OCC Meeting, Bihar SLDC has informed that complete proposal with cost estimate has been prepared and waiting for the administrative approval. (OCC referred).

SLDC Bihar may update.

Deliberation in the 54th TCC Meeting:

Director(Op) BSPTCL mentioned that the cost considered in DPR was composite cost amounting to Rs. 5.5. Cr. However for tendering, the component wise cost was sought from the vendor. The revised cost received from the vendor is Rs 9.78 Cr. He informed that the scheme will be implemented by utilizing their own fund.

TCC Decision:

TCC advised BSPTCL to ensure speedy implementation of Patna Islanding Scheme.

B. IB-TPS Islanding Scheme

IB valley TPS Islanding scheme has been put on hold for long time. The status regarding the same has been recently sought on urgent basis by Ministry of Power (Govt of India).

In 228th OCC Meeting, OPTCL informed that

a) There was some disagreement with OPGC on earlier proposed islanding scheme.
b) New scheme is being designed for islanding of IB TPS and the same shall be ready in a month's time.

OCC expressed concern over the delay in finalization of IB TPS islanding scheme in view of strict follow up by MoP/CEA on the progress of such proposed schemes.
OCC advised OPGC/SLDC Odisha to mutually design the islanding scheme of IB TPS and present the scheme in next OCC.

OPGC/SLDC Odisha may update.

Deliberation in the 54th TCC meeting:

Director(Op), OPTCL informed that both units of IBTPS are old and have limited ramp up or ramp down capability. Further he informed that maintaining load of 160 MW exclusively for the islanding scheme is difficult in the current OPTCL network around Budhipadar. He intimated that the load arrangement is being reviewed and it will be finalized soon.

TCC Decision:

TCC advised OPGC/OPTCL to finalize the scheme at the earliest and present the same in the next OCC meeting.

2.32 Bus split operationalization at NTPC Kahalgaon: ERPC

As decided in **219th OCC** Meeting, a committee comprising of members from ERPC and ERLDC visited NTPC Kahalgaon on 17-10-2024 to assess the status of Bus splitting at 400 kV level and way forward for operationalization of 400 KV Bus sectionalizer.

Following works need to be done to complete the installation of ICT 3 & 4:

1. Determination of underground cable conduit path for 400/132 kV ICT-3, 4 and 5 allocated for stage 2 supply.
2. Excavating the existing cable and relaying from Stage-1 132kV to New Stage-2 132 kV switchyard, where ICT 3 & 4 will be connected.
3. Laying of additional 22.8 ckt. km control cable for STs.
4. Jumpering of ICTs in 132kV & 400kV level.
5. Bay equipment testing.

- NTPC apprised that determination of underground power cables is one of the major challenges to proceed further with laying of cables between two 132kV switchyards.
- Meanwhile in view of increased fault level of NTPC Kahalgaon and to facilitate interim arrangement of standby ISTS connectivity to Godda Thermal Power project of M/s Adani Power (Jharkhand) Ltd. (APJL) with Indian grid, Bus splitting at 400KV Kahalgaon needs to be done on priority.

As per 227th OCC minutes
NTPC updated present status of bus -splitting of this line which will be finished by July 2025.

OCC asked NTPC to expedite their bus-splitting operation work as per the submitted deadline so that ongoing project at Goda substation may not get hampered.

Deliberation in 228th OCC meeting:

NTPC updated that 132kV bay commissioning and testing activity shall be completed by June 2025. It was further updated that all testing activities of 400/132kV ICT 3 & 4 shall be completed by 1st week of July 2025.

NTPC informed that there was failure of 132 KV power cable at station transformer 3 on 22.05.2025 and proposed for extension of timeline for the completion of Bus -splitting to Dec,2025.

OCC Decision:

i) OCC raised serious concerns regarding repeated delay in completion of Bus-splitting work at Kahalgaon by NTPC in view of sustained operation in high fault level scenario.

ii) OCC referred the matter to TCC.

TCC may discuss.

Deliberation in the 54th TCC meeting:

As the issue is long pending, TCC sought a firm timeline from NTPC for its completion.

NTPC informed that the delay was caused by the intermittent rain and failure of a 132 kV power cable. He updated that to expedite the process, NTPC approached Bihar for providing the cable jointing kit. Bihar agreed to supply the required kit within a week and accordingly, the work is expected to be completed by August 2025.

TCC Decision:

TCC advised NTPC to strictly adhere to the timeline and implement the bus splitting scheme at Kahalgaon within Aug-2025.

2.33 Third party protection audit for critical substations: ERPC

In 52nd ERPC Meeting, ERPC approved expenditure of Rs. 35 lakhs (including taxes) for hiring of outsourcing services through an agency to assist in carrying out third party protection audit in some of the critical substations of ER in FY 2024-25.

Consequently, a bid was floated on 4th Jan 2025 by ERPC secretariat for hiring third party agency to assist in carrying out third party protection audit for 7 number of substations listed as follow-

1. 400/220 k V Tenughat S/s
2. 400k V Kahalgaon S/s
3. 400/220 k V Jeerat S/s
4. 400/220 k V Lapanga S/s
5. 220/132 k V Biharsharif S/s
6. 400/220 k V Meeramundali S/s
7. 220/132 k V Ramchnadrapur S/s

and after complete bid evaluation bid work order was issued to M/s PRDC on 20th May 2025 for price Rs 29,79,500 including GST and all taxes as applicable.

Third Party Protection audit for 400/220 k V Jeerat S/s was done from 2nd June 2025 to 5th June 2025 and it is expected that protection audit for remaining substations will be completed by middle of Aug 25.

Though approval for above expenditure was taken in FY 2024-25, the expenditure will now be incurred and booked in FY 2025-26.

TCC may concur.

Deliberation in the 54th TCC Meeting:

i. ERPC Secretariat informed that third party protection audit has been carried out for Jeerat S/S and the audit for the remaining 6 substations will be completed by August, 2025.

ii. ERPC Secretariat informed that although the budget for carrying out the above work had been sanctioned for FY 2024-25, the actual expenditure will be made in FY 2025-26.

TCC referred the matter to ERPC for approving the expenditure during current FY 2025-26.

2.34 Status Update on pending issues:

<table>
<tr><th>Serial No</th><th>Issue</th><th>Decision taken in the previous TCC/ ERPC Meetings</th></tr>
<tr><td>1</td><td>Spare Reactor procurement under Eastern Regional Pool as per CEA norms</td><td>217th OCC consented to the proposal of reactor spares as follows:
<table>
<tr><td>STATE</td><td>VOLTAGE</td><td>SIZE</td><td>STORAGE PLACE</td></tr>
<tr><td>WEST BENGAL</td><td>400 KV</td><td>125 MVAR</td><td>DURGAPUR SS</td></tr>
<tr><td>80 MVAR</td><td>BINAGURI SS</td><td></td><td></td></tr>
<tr><td>SIKKIM</td><td>220 KV</td><td>31.5 MVAR</td><td>NEW MELLI SS</td></tr>
<tr><td>JHARKHAND</td><td>400 KV</td><td>125 MVAR</td><td>NEW RANCHI SS</td></tr>
<tr><td>ODHISSA</td><td>400 KV</td><td>63 MVAR</td><td>ROURKELLA SS</td></tr>
</table>
Assessing merit of the proposal, 52nd ERPC concurred estimated expenditure of Rs. 55.67 Crores (exclusive of GST but including transportation cost) towards procurement of spare reactors in ER pool by Powergrid ER-II as per CEA spare norms.
updated:
In 53rd TCC Meeting, Powergrid updated that
▪ Cost estimate towards procurement of approved spare reactors of different capacity has been prepared and proposal is under approval.
▪ LOA is expected by May’25.
In 54th TCC meeting, Powergrid intimated that the tender evaluation is on progress.</td></tr>
<tr><td>2</td><td>Update on Implementation of Bus Bar protection at 220 KV Substations.</td><td>The issue of busbar protection at 220 kV Ramchandrapur S/s, 220 kV Tenughat S/s was also highlighted in many of the PCC Meetings but no progress has been made in order to make them functional.

BSPTCL: 220 kV Biharsharif S/s

JUSNL: 220 kV Ramchandrapur S/s, 220 kV Chaibasa S/s

TVNL: 220 kV Tenughat S/s (electromechanical relay)

In 52nd TCC Meeting

❖ JUSNL updated that Bus bar Protection at 220 kV Ramchandrapur S/s & 220 kV Chaibasa S/s shall be implemented by December-2024.</td></tr>
</table>

		❖ BSPTCL submitted that they are constructing new control room at 220 kV Biharsharif S/s which shall be completed by end of 2024.During shifting of the equipment from Old S/S to New S/S, bus bar Protection shall be implemented. BSPTCL & JUSNL may update. ***In 54th TCC meeting:*** *The target date of completion was updated as follows:* ➢ *Ramchandrapur: Dec-2025* ➢ *Biharsharif: March-2026* ➢ *Tenughat: March-2026*

2.35 Status of upcoming Generation Projects: ERPC Secretariat

Generating unit	***Update as per 53rd TCC meeting***	***Update as per 54th TCC meeting***
Barh stage-I U#3 (660 MW)	✓ *Delay is attributed to transport of Generator stator from Russia.* ✓ *Barh stage-I U#3 (660 MW) will complete synchronization by March 2025.*	✓ *NTPC updated that CoD of the said unit is scheduled for the 1st week of July.*
Patratu	✓ *JUSNL was requested to update on the commissioning of transmission line for evacuation of Patratu generation.* ✓ *As information received from JUSNL, one unit of Patratu (800 MW) is expected by March 2025.*	✓ *The transmission line for evacuation of Patratu generation will be ready by 15th July 2025.*
Buxar TPP(SJVN)	*Representative from SJVN updated that Unit#1 is likely to be synchronized by March 2025.*	*Informed the forum that said unit is likely to be synced by July 15,2025 and CoD may be done in Aug, 2025.*
Teesta-VI(500 MW)		*To be commissioned by 2027.*

Deliberation in 54th the meeting:

The updated status is given in the table.

2.36 Concern Regarding Non-Compliance in Power Supply under Long-Term Duration Contract (LDC) through PXIL: WBSEDCL

In view of the prevailing dynamics of the power market, the utilization of various products available on power exchanges has been recognized as a key measure for optimizing the power purchase portfolio & providing Resource adequacy of DISCOMs. Accordingly, such operations are being meticulously undertaken by WBSEDCL to ensure cost-effective and uninterrupted power supply to its consumers.

It is generally perceived that once power is transacted through the exchange platform, the beneficiary is reasonably assured of timely scheduling and delivery of the contracted quantum. However, a recent instance has raised significant concerns regarding the reliability of such mechanisms.

A substantial quantity of power was procured in advance by WBSEDCL through the PXIL platform under a Long-Term Duration Contract (LDC) the detail of which is furnished below. Despite fulfilling all commercial and procedural obligations, the Seller failed to supply the committed power. Market reports indicate that during the same period, the Seller, identified as JSW, was engaged in supplying power to other buyers, suggesting a deviation from the contractual commitment towards WBSEDCL.

Although compensation at the rate of ₹40/MWh has been arranged by PXIL in accordance with the prevailing provisions of its Business Rules, the fundamental assurance associated with traded power on the exchange platform was compromised. Consequently, WBSEDCL was compelled to resort to emergency procurement at significantly higher rates to meet its demand obligations.

This incident not only compromises the reliability of the power exchange mechanism but also raises broader concerns regarding the enforceability and sanctity of contracts executed through energy exchange platforms. It is respectfully submitted that this issue warrants urgent attention and may be deliberated upon at the appropriate Platform to ensure that such breaches do not recur and that the security of supply through exchanges is preserved in the interest of all DISCOMs operating across the country.

WBSEDCL may explain. TCC may discuss.

Deliberation in 54th the meeting:

TCC acknowledged the concerns of WBSEDCL. TCC opined that the contract need to be sacrosanct & performed and in case any default, heavy penalty mechanism should be in place.

TCC suggested that ERPC Secretariat may refer the matter to NPC since the matter concerns to other discoms in the country also.

2.37 Request for Intervention in Recovery of Outstanding Dues from Government of Sikkim: WBSEDCL

- **Background and Context**

The Energy and Power Department of the Government of Sikkim has an agreement with WBSEDCL for the purchase of power at a tariff based on the generation cost of the Rammam Hydel project operated by WBSEDCL. In line with this arrangement, the Government of Sikkim has been drawing power from WBSEDCL on a regular basis but has been reluctant to settle the bills since 2017. Additionally, WBSEDCL previously purchased power from the Government of Sikkim on a consumer basis until June 2023. The volume of power purchased by WBSEDCL was significantly less compared to the amount of power sold to the Government of Sikkim. After accounting for adjustments related to purchases and sales, as well as surprise payments made by Sikkim for November , December 2021 and April 2025,the current outstanding dues as on 01.06.2025 from the Government of Sikkim amount to approximately Rs.100.22Crores. This figure includes a Late Payment Surcharge (LPSC) of Rs. 45.77Crores as on 31.03.2025.

➢ **Previous Meeting References**

- 42nd Commercial Sub-committee Meeting (Agenda B-5).
- 43rd TCC & ERPC Meeting (Agenda B-18).
- 52th CCM Meeting (Agenda B-8)

The issue of the outstanding dues was raised in the aforementioned meetings. However, there has been no positive response or payment from the Government of Sikkim thus far.

➢ **Conclusion**

Till date WBSEDCL has made several attempts to resolve this issue but has found no satisfactory remedy. In view of the prolonged nature of this issue and the substantial outstanding amount, WBSEDCL is again seeking intervention from the ERPC platform with a request to take necessary actions to address the issue with the appropriate higher platform like CEA & MOP.

WBSEDCL may explain. TCC may discuss.

Deliberation in the 54th TCC Meeting:

As Sikkim representative was not present in the meeting, TCC advised ERPC Secretariat to write a letter to Power Dept, Govt of Sikkim requesting the clearing of dues at the earliest. TCC also suggested that ERPC Secretariat may approach NPC/CEA to incorporate provision in PRAPTI portal of MoP for realization of outstanding dues of DISCOMs' from another state/ discom/ generator (as applicable).

This is for the information of ERPC.

2.38 Long outstanding payment: ERLDC

Pending payment issues is a matter of great concern for ERLDC. Pending payments status for various accounts were placed for discussion in the 53rd CCM. CCM Forum requested all the entities to release their outstanding amount at the earliest.

However, ERLDC particularly placed the following before the TCC for kind deliberation and necessary direction to the concerned entities to clear the outstanding amount at the earliest.

Outstanding details of constituents pertaining to Deviation, Legacy, Deficit recovery charges:
The details of major outstanding as on 17.06.2025 considering the ERPC bills upto Wk-26/05/25 to 01/06/25 for DSM charges along with Legacy Dues and Deficit Recovery Charges are tabulated below.

Bihar:

	Bihar
Legacy dues	₹ 99.02 Cr (Instalment 3 to 17)
Deficit recovery Statement (post 16.09.25) dated 13.01.25	₹ 9.28 Cr /-

Sikkim:

	Sikkim
DSM (in Cr)	₹ 36.09 Cr /-

Legacy dues	₹ 23.39 Lakhs (Instalment 15 to 17)
Deficit recovery Statement (post 16.09.25) dated 13.01.25	₹ 14.66 Lakhs /-

Deliberation in the 54th TCC Meeting:

TCC advised all concerned constituents to clear outstanding dues (as detailed above) at the earliest.

3. PART-C: ITEMS FOR INFORMATION

3.1. Monetization of Transmission Assets- Capital recycling of robust Grid:CEA

F& CA division, CEA vide letter dated 24.02.2025 (enclosed as Annexure-3.1) circulated Guiding Principles for Monetization of Transmission Assets in the Public Sector through Acquire Own Maintain Transfer (AOMT) based Public Private Partnership model issued by the Ministry of Power on 3 October, 2022.

Monetization of assets unlocks their value, eliminates their holding cost and enables scarce public funds to be deployed to new projects, thus fast-tracking new infrastructure creation. India has developed a solid track record of attracting institutional investment in infrastructure assets utilizing innovative structures such as Infrastructure Investment Trusts (InvITs) and PPP based models [Toll Operate Transfer (TOT), Operation, Management and Development Agreement (OMDA) etc.] to monetize assets such as toll roads, transmission assets, pipelines and telecom.

States also have a significant potential of monetisation of their transmission assets, so that the much needed capital for creation of transmission assets in the states is available.

The agenda is put up on the request of CEA for wider circulation among the state utilities.

Deliberation in the 54th TCC Meeting:

TCC noted.

3.2. Intimation regarding commissioning of OPGW in 400kV Bokaro (A) - Koderma line before the schedule date of completion: Powergrid

Installation & Commissioning of OPGW in 400kV Bokaro (A) - Koderma link in ER1 was approved under project "Communication schemes approved by NCT'. The above ISTS link was approved in 51st ERPC meeting and NCT in its 18th meeting held on 05.03.2024, in line with MoP office order dated 28/10/2021 and MoP guideline dated 09.03.2022 regarding "Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)". The project has been awarded to CTUIL for implementation under RTM mode and POWERGRID is the implementing agency for this link.

The OPGW installation work in this line (104 Km) was approved with financial implication of Rs. 6.83 Cr. with completion schedule as 18 months (i.e. up to 11.09.2025) from the date of allocation of the project by CTU i.e. 12.03.2024.

The installation & Commissioning of OPGW in 400kV Bokaro (A) - Koderma link was completed on priority and accordingly, the link has been commissioned successfully on

30.03.2025, which is before the completion date of 11.09.2025. The DOCO for this link is w.e.f. 31.03.2025.

Deliberation in the 54th TCC Meeting:

TCC noted.

3.3. Final list of executed links under the Project "Reliable Communication Scheme under Central Sector for Eastern Region: Powergrid

Approval was accorded in the 36th TCC meeting (MOM at Annex-2.1) of ERPC for establishment of fibre optics connectivity of various stations/lines under central sector as part of subject project. Following is the final list of executed links under the Project:

Name of the Link	Approved Link Length (in KM)	Executed Link length (in KM)	DOCO Date	Remarks
Jindal-Angul	55	75.186	07-03-2025	**Commissioned**
GMR-Angul	30	30	16-02-2024	**Commissioned**
Part of Angul - Srikakulam (Angul portion)	120	121.19	19-02-2025	**Commissioned**
Alipurduar - Salakati	42	109.264	23-02-2022	**Commissioned**
IB Valley-Bhudhipadar	26	00	NA	OPGW exist, State owned Line. Proposed for deletion.
NALCO-Meeramundali	12	00	NA	NALCO owned line. NALCO, not an IPP, proposed for deletion.
LANCO-Angul	24	00	NA	Transmission Line does not exist. Proposed for deletion as per recommendation in 36th ERPC meeting.
Monet-Angul	31	00	NA	Transmission Line does not exist. Proposed for deletion as per recommendation in 36th ERPC meeting.
Indbhart-Jharsuguda	50	00	NA	Line belongs to Indbharth & Line was in break-down condition during execution period. IBEUL under NCLT.
TT Pool-New Melli	25	00	NA	Transmission Line does not exist.

				Proposed for deletion as per recommendation in 36th ERPC meeting.
Mangon-Rangpo	70	00	NA	Transmission Line does not exist. Proposed for deletion as per recommendation in 36th ERPC meeting.
Sterlite-Jharsuguda	40	00	NA	OPGW exist, Line belongs to Sterlite. Proposed for deletion.
Total	**525**	**335.64**		

Deliberation in the 54th TCC Meeting:

TCC noted.

3.4. AMR Network Upgrade (Layer3/Layer4) Project status update: POWERGRID ER-II

In 52nd TCC ERPC meeting, members approved the technical solution for Layer3/Layer4 network upgradation in the existing AMR system. Members have provided their consent to carry out the job through M/S TCS in single tender via consultancy mode under AMR Phase5 scope addition with cost implication of 69,96,263.00 INR without taxes. (for Supply of hardware, Installation & Commissioning).

LOA was awarded on 27.01.2025 with timeline of 06 months implementation and another 06 months warranty services. Necessary activities were initiated, and PO was placed to CISCO for the Network Routers.

Delivery of Routers was competed on 21-Apr-2025 and the configuration setup was completed in another 07 days. WB States were planned for 1st round of router installation vis-à-vis upgradation of AMR Network for SEM data communication. Router was installed at WB SLDC office on 30-Apr-2025 and it was connected with the DCUs and the Central AMR router at ERLDC. The IP subnet was changed for WB locations DCUs. Total 23 number of DCUs are migrated to the upgraded AMR network and 58 number SEM data flow started from station to ERLDC over the upgraded network system. This was the 1st Live implementation of AMR Network Upgrade which was under discussion for quiet a time.

The further plan for AMR Network upgradation is mentioned below:

Location/Zone	Total DCU	Total SEM	NW Upgrade Status	Planned Completion Date
WB	23	58	Completed	30-Apr-2025
Generator,IPP, Others	43	384	WIP	15-May-2025
DVC	18	50	Planned	21-May-2025
Odisha	21	44	Planned	28-May-2025
Jharkhand	17	38	Planned	04-Jun-2025
Bihar	54	143	Planned	11-Jun-2025
PG + Sikkim	89	825	Planned	18-Jun-2025

Deliberation in the meeting

TeST Decision

- *TeST Committee noted the update as well as future action plan shared by Powergrid i.r.o AMR network upgradation to layer 3/layer 4 across all ER constituents as detailed above.*
- *TeST Committee advised SLDCs of Bihar, Jharkhand, Sikkim and Odisha to arrange for single dropping point i.r.o AMR data communication to ERLDC. All SLDCs were urged to extend assistance to Powergrid in this regard.*

TCC may note.

Deliberation in the 54th TCC Meeting:

TCC noted.

3.5. Review of Automatic Under Frequency Load Shedding (AUFLS) scheme in Eastern Region: ERLDC

The latest status of implementation of Automatic Under Frequency Load Shedding (AUFLS) scheme in Eastern Region is as under:

State	Stage	UFR Req (MW)	UFR Inst. (MW)	Pending	SCADA Integrated feeders	Data Updating of UFR feeders	Remarks
BSPTCL	Stg 1	315	292	23	0	0	Feeders identified for all 4 stages. UFR integration for rest feeders in progress.
	Stg 2	379	344	35	18	12	
	Stg 3	442	361	81	0	0	
	Stg 4	442	394	48	362	118	
	Total	**1578**	**1391**	**187**	**380**	**130**	
DVC	Stg 1	172	173	0	173	159	Installation and testing complete for all 4 stages
	Stg 2	207	209	0	72	72	
	Stg 3	241	242	0	32	32	
	Stg 4	241	239	2	38	17	
	Total	**861**	**864**	**0**	**315**	**280**	
JUSNL	Stg 1	87	85	2	89	26	Feeders identified for St.3 & 4. Installation in progress.
	Stg 2	105	104	1	105	71	
	Stg 3	122	**45**	77	33	33	
	Stg 4	122	0	122	0	0	
	Total	**436**	**234**	**202**	**227**	**131**	
OPTCL	Stg 1	306	316	0	297	286	Shortage of 13, 94 and 64 MW in St.2,3 ad 4 respectively. As stated by OPTCL, peak load of identified feeders will increase to required quantum in the coming summer.
	Stg 2	367	354	13	281	255	
	Stg 3	428	334	94	314	260	
	Stg 4	428	364	64	299	276	
	Total	**1529**	**1368**	**161**	**1190**	**1076**	
West Bengal (WBSEDCL)	Stg 1	377	440	0	436	368	3nos. 11kV feeders from NBU (4MW) remaining for SCADA integration
	Stg 2	457	434	0	434	434	
	Stg 3	536	552	0	427	427	Arambag (125MW) remaining for SCADA integration
	Stg 4	536	555	0	355	355	3nos. 33kV feeders (12MW) from Darjeeling and all feeders from Barasat (188MW) remaining for SCADA integration
West Bengal (CESC)	Stg 1	120	120	0	120	120	CESC- Installation and testing complete for all 4 stages
	Stg 2	140	140	0	140	140	
	Stg 3	160	160	0	160	160	
	Stg 4	160	160	0	160	160	
WBSEDCL+CESC	**Total**	**2486**	**2561**	**0**	**2232**	**2164**	
Sikkim	Stg 1	5	0	0	0	0	
	Stg 2	6	0	0	0	0	
	Stg 3	7	0	0	0	0	
	Stg 4	7	0	0	0	0	
	Total	**25**	0	0	0	0	
ER Total		**6916**	**6418**	**498**	**3070**	**2553**	

TCC may note.

Deliberation in the 54th TCC Meeting:

TCC noted.

3.6. List of Assets commissioned in the recent past in Eastern Region (ER)

List of new elements integrated in ER grid in the recent past is attached at Annexure-3.6
TCC may note

Deliberation in the 54th TCC Meeting:

TCC noted.

GOVERNMENT OF SIKKIM
POWER DEPARTMENT
Kazi Road, Gangtok – 737101, Sikkim

Ref. No. 009/Power/No/IPP/2024-25/29 Date: 09/05/2025

To,

The PCCF-cum-Secretary,
Forest Department,
Government of Sikkim,
Deorali, Sikkim.

URGENT

Subject: Request for Removal of Excess River Bed Material Deposit near 400 kV D/C Teesta-III – Kishanganj Transmission Line due to Flash Flood at Teesta River Bank, Rangto Village, Dung Dung Thasa GPU, Gangtok District, Sikkim

Sir,

Please find attached herewith letter no. SPTL/HO/TL/2025-26/85 dated 7th May 2025, received from the Chief General Manager, Sikkim Power Transmission Limited, informing about the scouring taking place at the river bank on the tower side (Mingley Village Side). The details of this issue are enclosed within the aforementioned letter.

You are requested to kindly direct the concerned authority to take necessary measures before the onset of the monsoon. This 400 kV D/C Teesta-III – Kishanganj transmission line is of vital importance as it is used for evacuating a major portion of power from the Hydro Electric Projects (HEPs) in the Sikkim Hydro Generating Complex. Any disruption to this line due to further damage near the riverbanks will endanger its structural integrity and could lead to a shutdown, causing significant generation loss in the Sikkim complex and the National Grid. This will also result in substantial financial losses to the State of Sikkim and the Nation.

Therefore, you are requested to kindly take emergent measures as requested in the SPTL letter dated 7th May 2025.

Thanking you.

Yours Sincerely,

(T.T. Lepcha)
Secretary - IPP
Power Department, GoS

Encl: a/a.

Office of the Secretary/ Forest & Env. Department 9/5/25

POWER DEPARTMENT GOVT. OF SIKKIM, GANGTOK

Sikkim Power Transmission Limited

[Formerly: Teestavalley Power Transmission Limited | CIN: U40109DL2006SGC151871j
JV of Sikkim Urja Ltd. & POWERGRID

Ref no. SPTL/HO/TL/2025-26/85

Dated : 07.05.2025

To,
The Secretary - IPP
Power Department
Government of Sikkim
Gangtok, East Sikkim

Kind Attention: Shri. T.T. Lepcha

Sub: 400 kV D/C Teesta-III – Kishanganj Transmission Line – reg. removal of excess river bed material deposit due to flash flood at river bank of Teesta river near Rangto Village, Dung Dung Thasa GPU , Gangtok District, Sikkim for Safety of Tower no. 91 of the line.

Sir,

Sikkim Power Transmission Limited (formerly Teestavalley Power Transmission Ltd.), (SPTL), a JV of Sikkim Urja Limited & POWERGRID (A Govt. of India Enterprise), was entrusted with the responsibility to construct, operate & maintain the 400 kV Inter-State D/C Transmission Line Project of length 215 km from Mangan in Sikkim to Kishanganj in Bihar including 2 no. line bays along with 2 no. 63 MVAR line reactors at Kishanganj GIS Substation. The line was commissioned in the year 2019 and is in operation since then.

The transmission line of length 215 km (589 towers) passes through Mangan, Gangtok & Namchi Districts of Sikkim, Darjeeling District of West Bengal and Kishanganj District of Bihar. The ISTS line evacuates power from the various hydro-electric projects (HEP) in Sikkim including Teesta III HEP of 1200 MW, with a total capacity around 2800 MW to the Eastern Region for onward transmission to the National Grid.

The Flash Flood of October 2023 in Sikkim had caused massive damages to the infrastructure, roads, power projects, erosion of river banks etc. along the Teesta river basin. The Flash Flood caused erosion of river banks at multiple locations along the Teesta River course and also resulted in change of river course. It is informed that the river bank near Mingley Village, Yangyang GPU , Namchi District was severely scoured during the flash flood upto 40m approx. The flash flood caused huge deposition of river bed material on the opposite bank on Rangto Village side and shifted the flow of river to the bank along Mingley Village. Before the flash flood, the natural course of river was on the opposite bank on Rangto Village side. The Tower no. 91 of the 400 kV D/C Teesta-III – Kishanganj Transmission Line is located near the river bank on Mingley Village side. The distance of the tower from the river bank after the flash flood has reduced to 23m from 70m earlier. (The photographs of river banks are enclosed for your reference as Annexure-1).

a. River bank of Teesta river near Mingley Village, Yangyang GPU , Namchi District in Sikkim near to Tower no. 91. (27°16'28.29"N, 88°26'12.97"E).

Registered Office: 15th Floor, Hindustan Times House 18-20, Kasturba Gandhi Marg, New Delhi 110001
T # +91-11-44880000 | E: contact@sikkimurjalimited.in | W: tvptl.com
Site Office: F-504, 5th Floor, Office Block, City Centre, Matigara, Siliguri, District Darjeeling, West Bengal - 734010

Due to deposition of huge amount of river bed material on the opposite bank (Rangto Village side) ,the river flow is directly impacting the river bank on tower side (Mingley Village side). The river flow level is also high near the bank and scouring is taking place in river bank at the tower side.

The 400 kV D/C Teesta-III – Kishanganj transmission line of SPTL is an ISTS line evacuating a major portion of power from HEPs in Sikkim Hydro Generating Complex. Any disruption in the line due to any further damage near the riverbanks will endanger the line and will lead to shutdown of line causing generation loss in the Sikkim complex and also in the National Grid. This will also result in huge financial losses to the State of Sikkim and Nation.

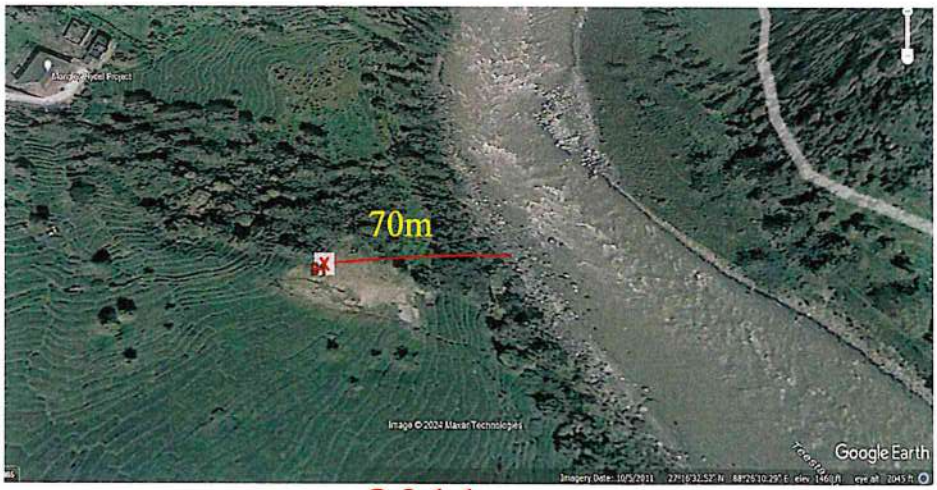
In order to protect the river bank and safety of tower and surrounding area , the river bed material deposited on opposite bank is to be removed so that the width of the river channel is increased and velocities are reduced at both the banks and the infrastructure located along both the banks is safe. In view of the above, we request your kind intervention in the matter and direct the concerned department to remove the river bed material on opposite bank near Rangto Village, Dungdung Thasa GPU, Gangtok District for safety & protection of the tower and surrounding area. SPTL will be grateful for your cooperation in this regard.

Thanking you,

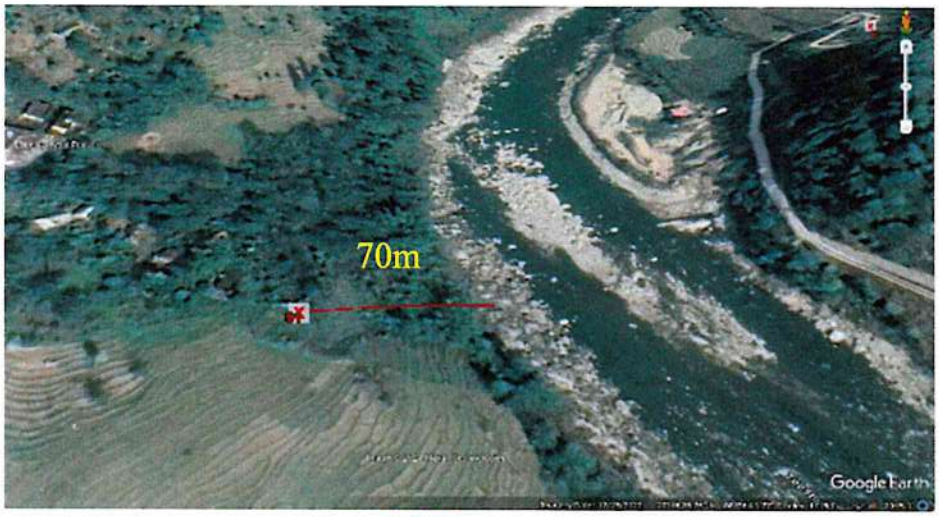
Yours Sincerely,
For **Sikkim Power Transmission Limited**

Sikkim Power Transmission Limited ★ New Delhi

(Prabhat Kumar)
Chief General Manager



2011



2022

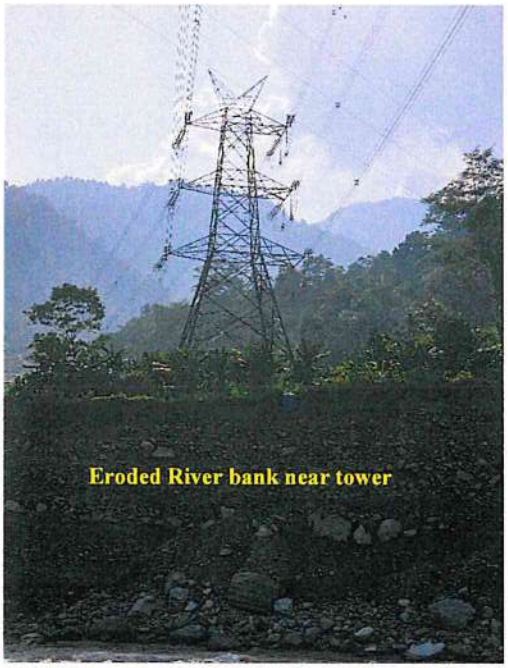
Distance b/w tower & river bank was 70m in year 2011 and 2022

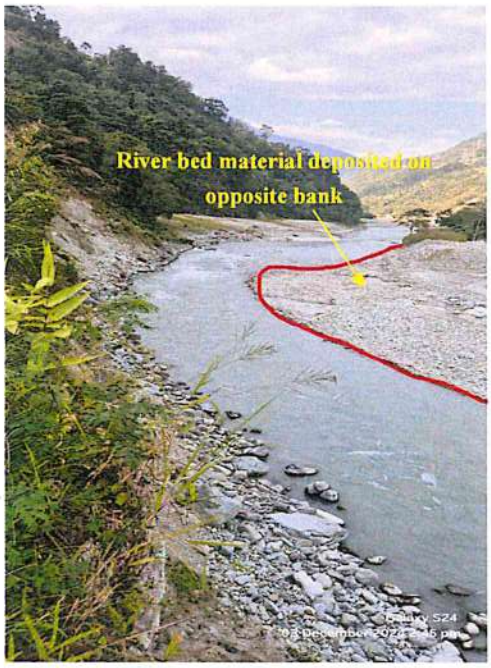
After Flash Flood in 2023 , the distance reduced to 25m

Power Transmission Sikkim Limited New Delhi

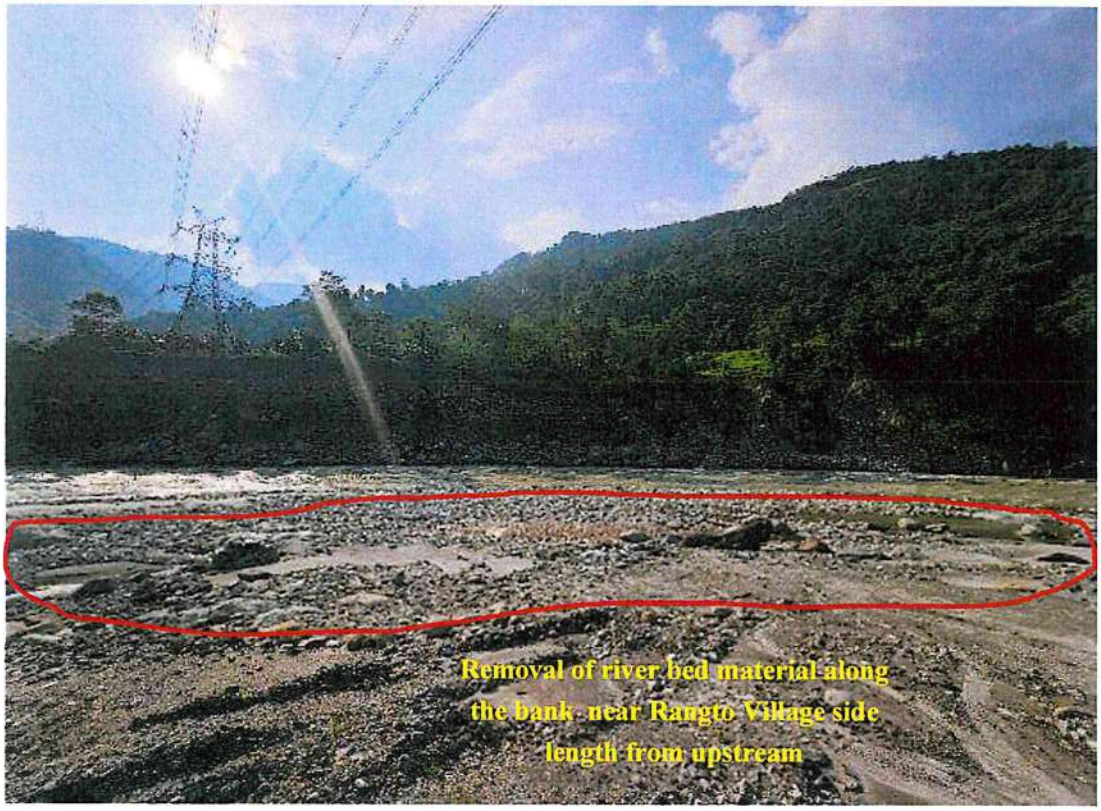
Photographs after Flash Flood

Sikkim Power Transmission Limited
New Delhi

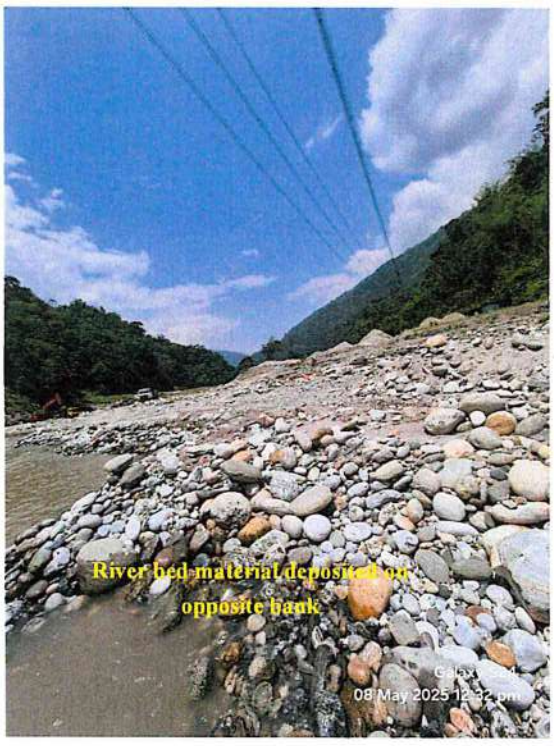




Sikkim Power Transmission Limited
New Delhi



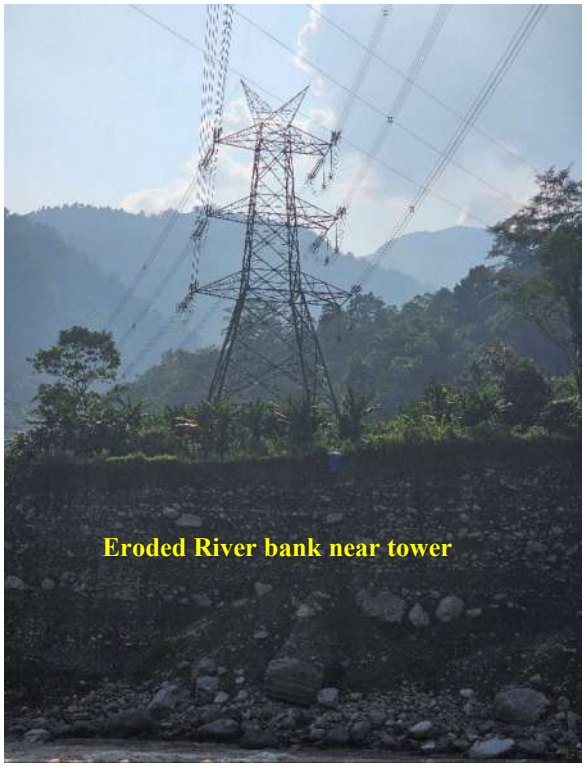
Removal of river bed material along the bank near Rangto Village side length from upstream



River bed material deposited on opposite bank

Sikkim Power Transmission Limited ★ New Delhi

Annexure B.2.13A



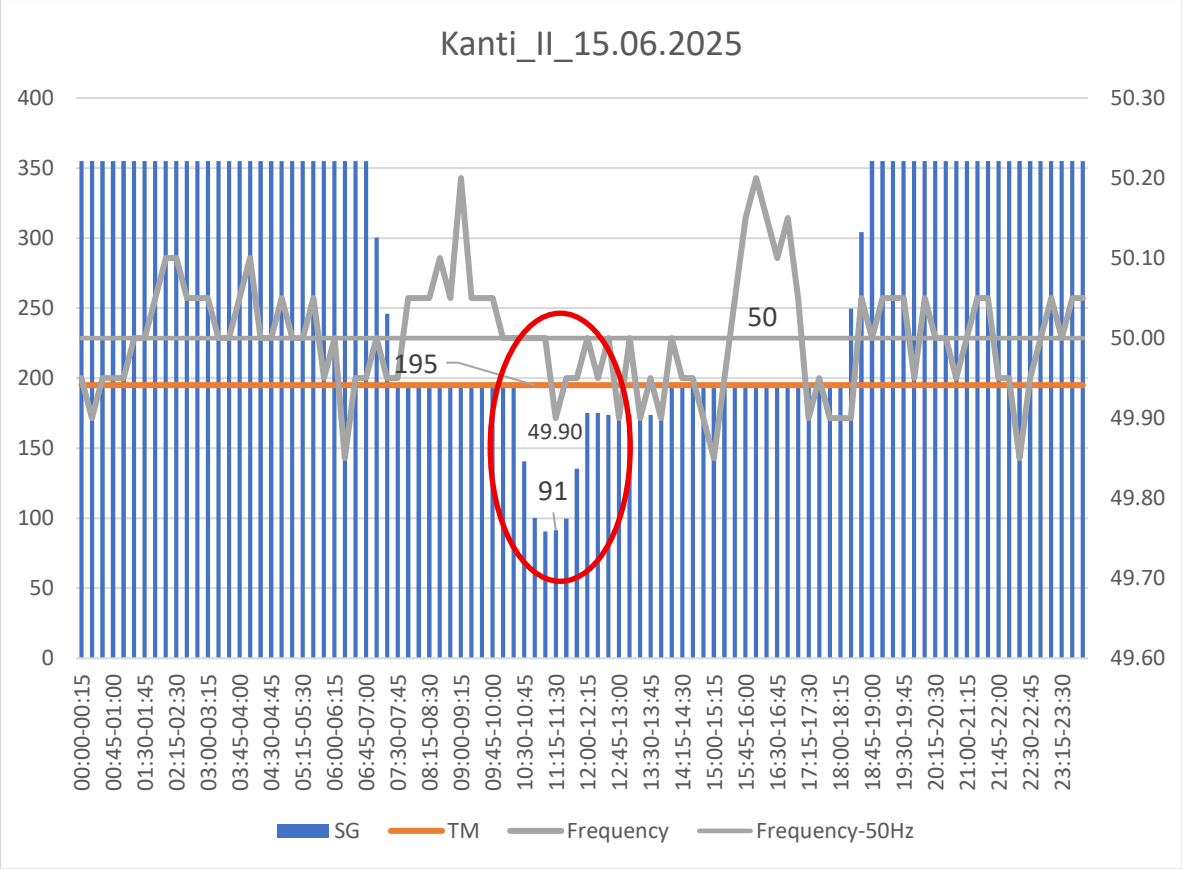

Removal of river bed material along
the bank near Rangto Village side
length from upstream

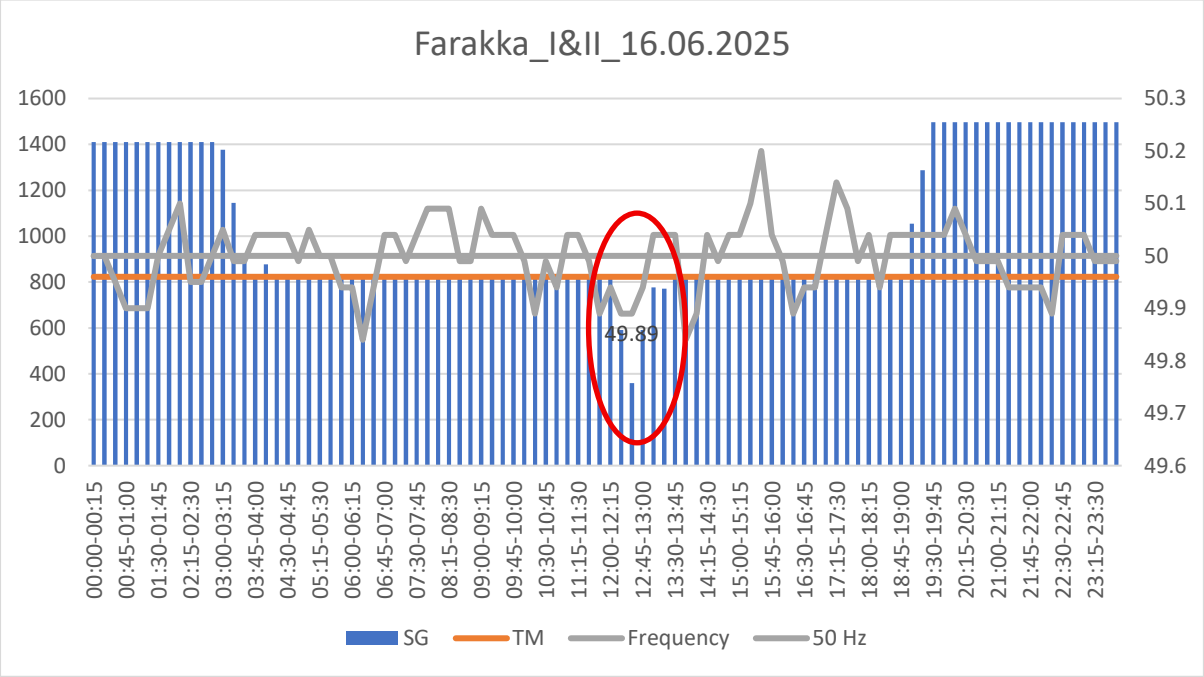

Galaxy S24
08 May 2025 12:06 pm


River bed material deposited on
opposite bank
Galaxy S24
08 May 2025 12:32 pm

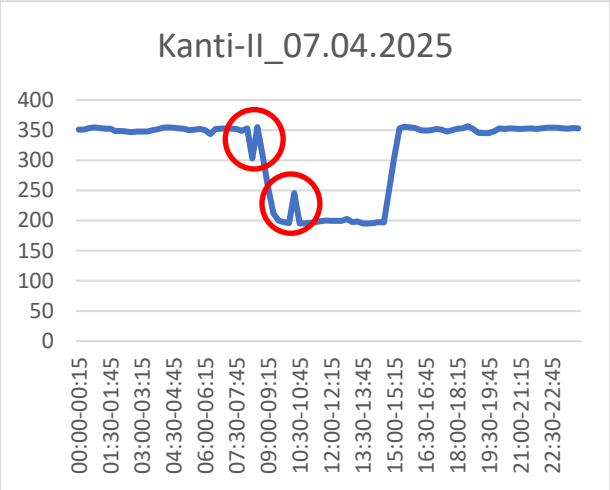
Annex-B.2.14

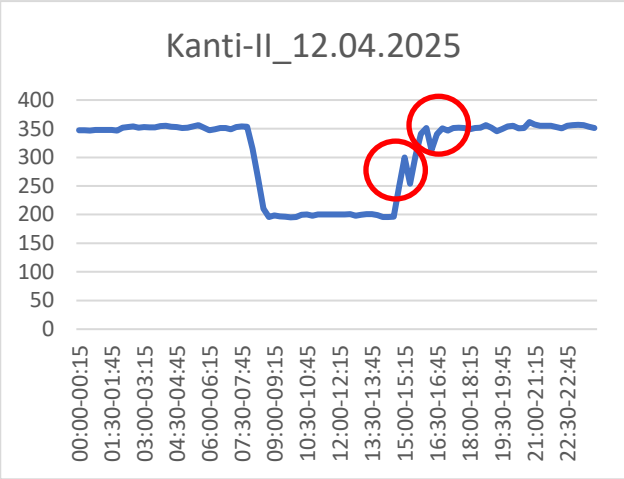
Annexure B.2.21

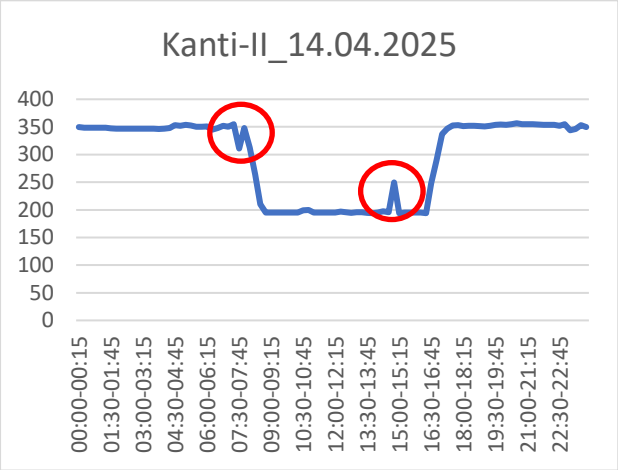


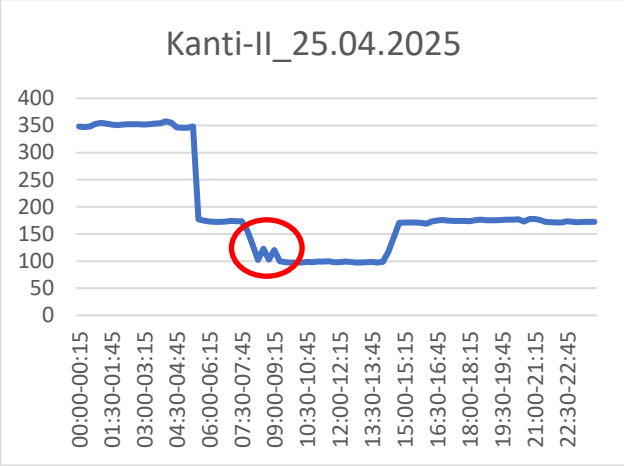


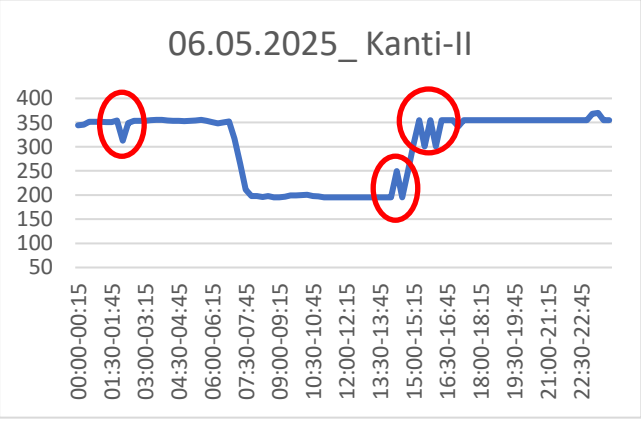
Annexure-B.2.22

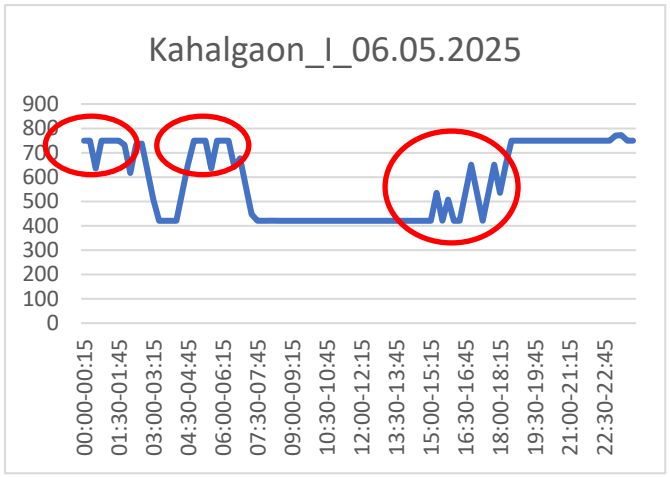








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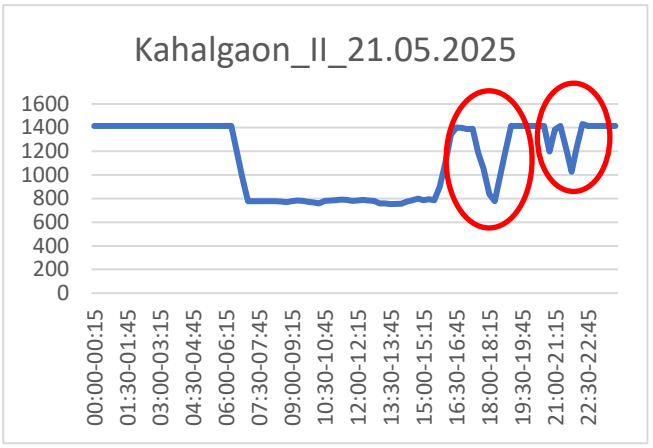
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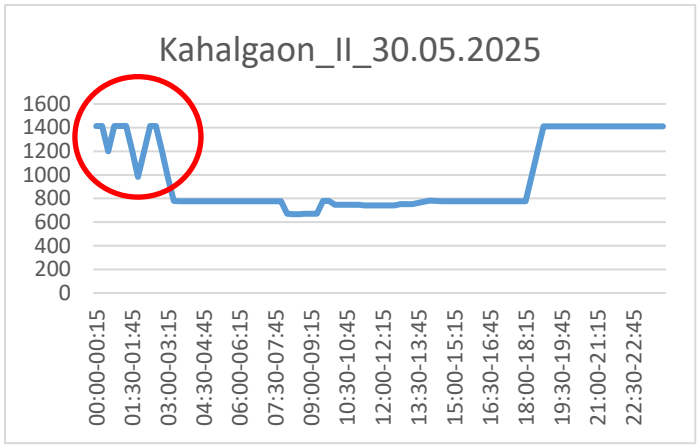
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22:30-22:45

Annexure B.2.22

ERLDC Presentation

54th TCC Meeting

23rd & 24th June 2025, Chennai

All India Demand Scenario

Inclement weather in various area

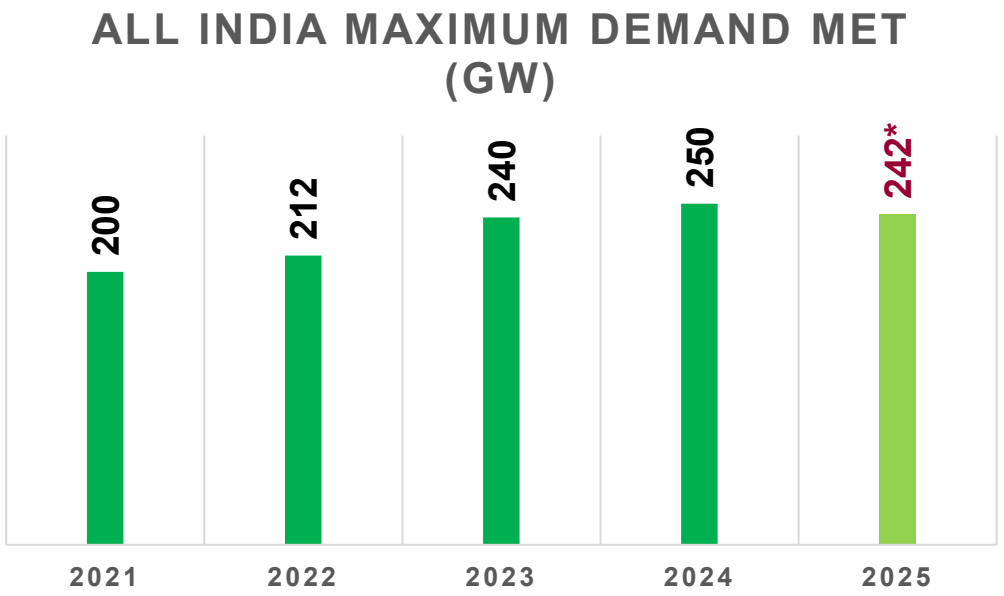
High RE penetration

Demand less than Forecast

Projected All India Demand – 270GW

Max Demand Met (2025) - 242GW

Year on Year Growth rate -



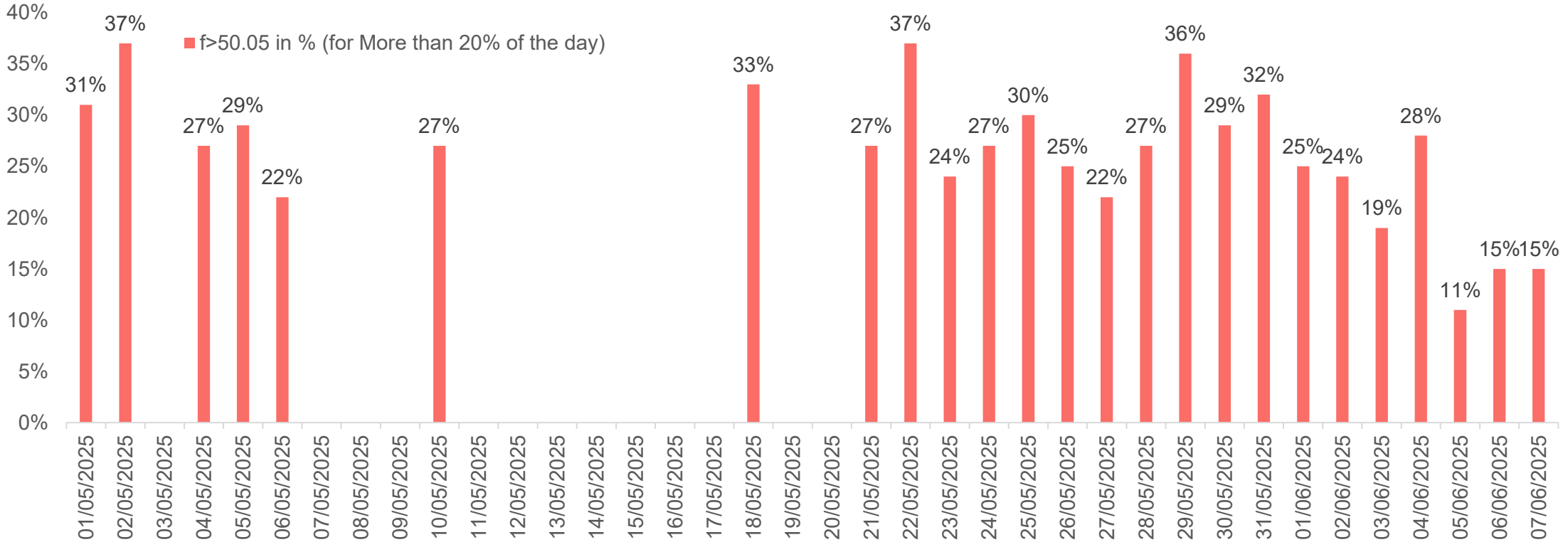
High Frequency Event

Annexure B.2.22

25 Days Out of **38**

f>50.05 for More than 20% of the day

High Frequency (f>50.05) Stats 1st May – 7th June 25



Tertiary Frequency Control (TRAS)

Market

DAM

RTM

- All generators in the country are eligible
  - Bidding at Power exchange
- Clearing engine at NLDC (Pay as bid)

Shortfall

62 (Mandatory)
/63 (Voluntary)

Regulated or Declared price(+- 10% Mark up)

Emergency

(Mandatory)

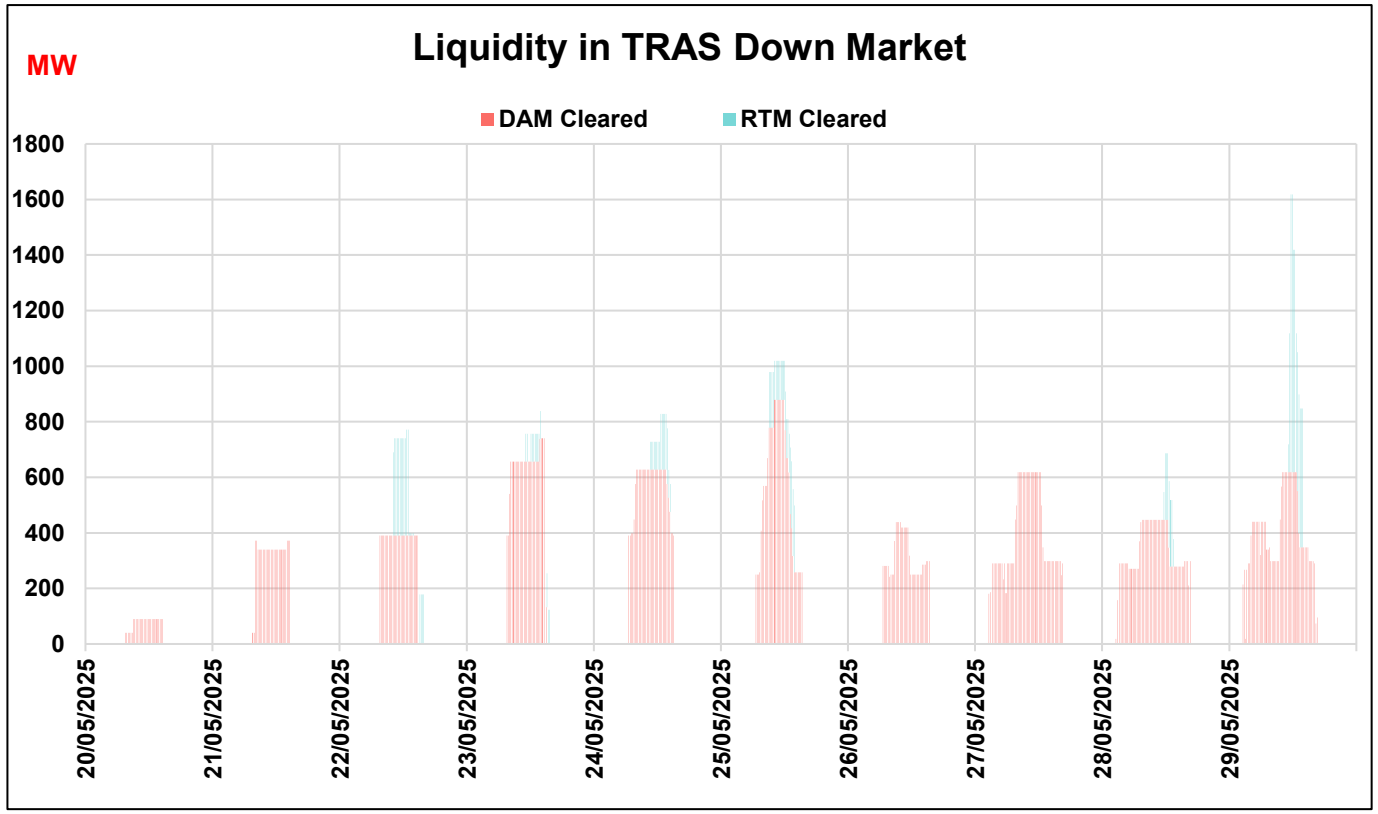
Price declared

Settlement in Regulated or Declared price

Price not declared

Settlement in CERC approved price

Market Status

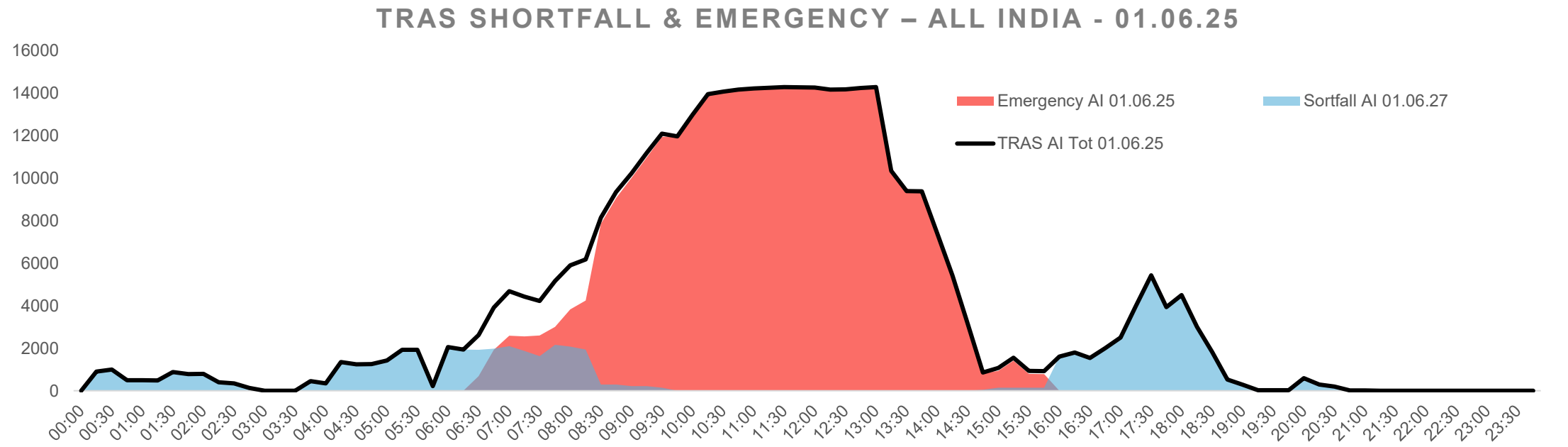


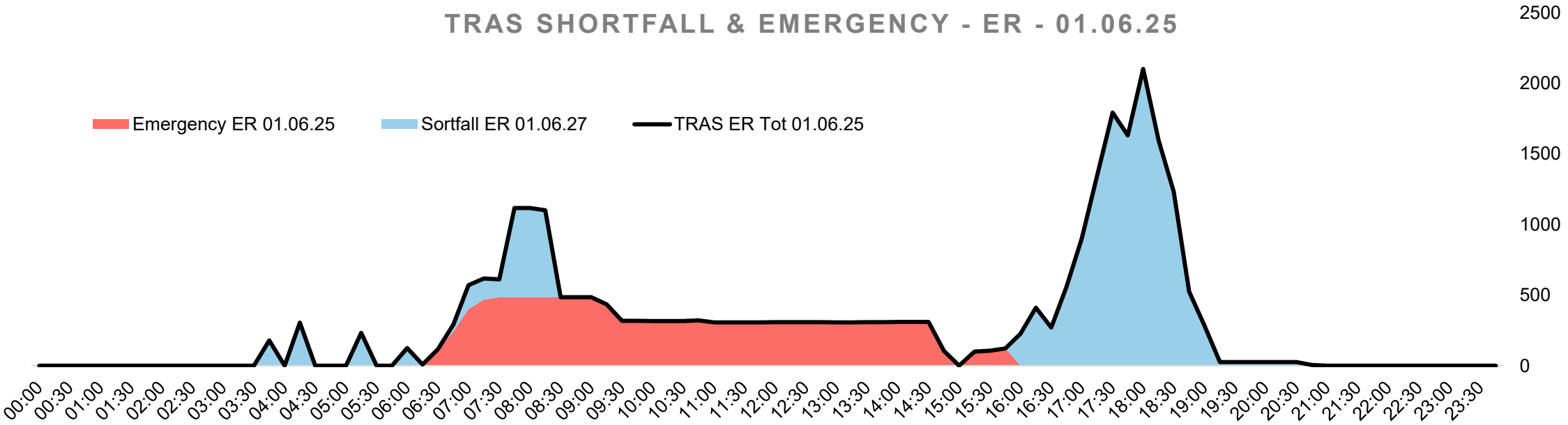
Less quantum available under Market category – Limited participation

Less quantum available under Shortfall category (Mainly 62 Gen)

Triggering of TRAS under Emergency category (Mainly 63 Gen)

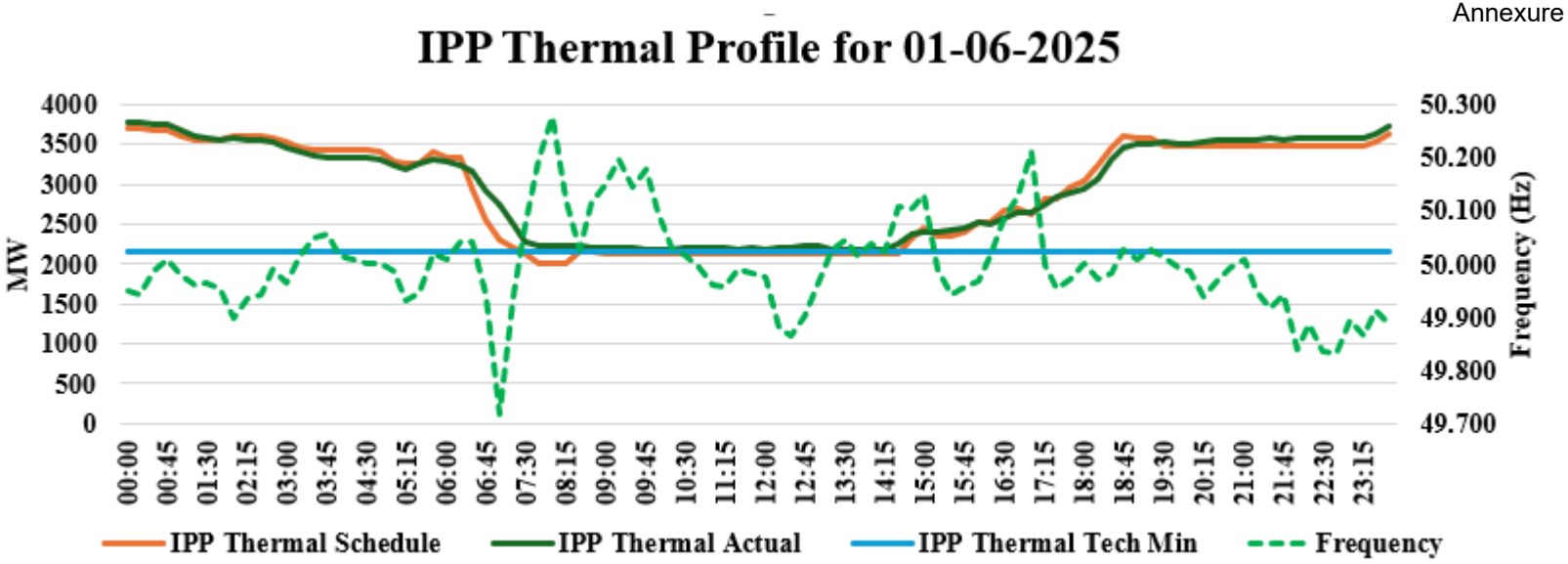
TRAS Down Despatch under shortfall & Emergency Category

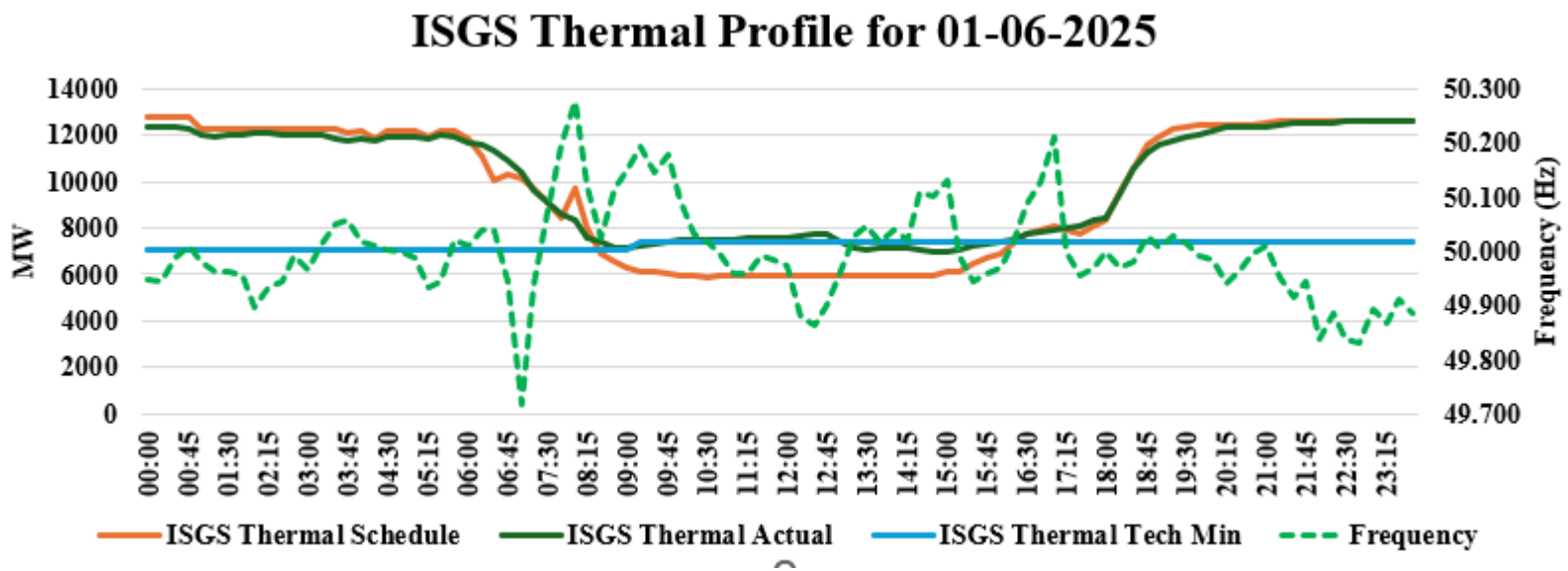




TRAS Emergency Performance

NLDC instructed for TRAS Emergency 01-06-25





Annexure B.2.22

Status of IPP (ER)

Sr. No.	Utility Name	Capacity (MW)	Registration on NOAR Portal for AS	Consent for Shortfall Category	Rates Ps/Kwhr
1	Adhunik Power and Natural Resources Limited	540	Yes	Yes	270
2	Maithon Power Ltd	1050	Yes	Yes	**CERC Regulated**
3	GMR KAMALANGA ENERGY Ltd.	700	Yes	No	33
4	Jindal India Power Limited	1200	Yes	No	172
5	IND BARATH ENERGY UTKAL LIMITED	700	Yes	Yes	205.6

16 IPPs Out of 34 In **India** declared Price in NOAR

5 IPPs Out of 5 In **ER** declared Price in NOAR

State Sector Generation on 01-06-25

Annexure B.2.22

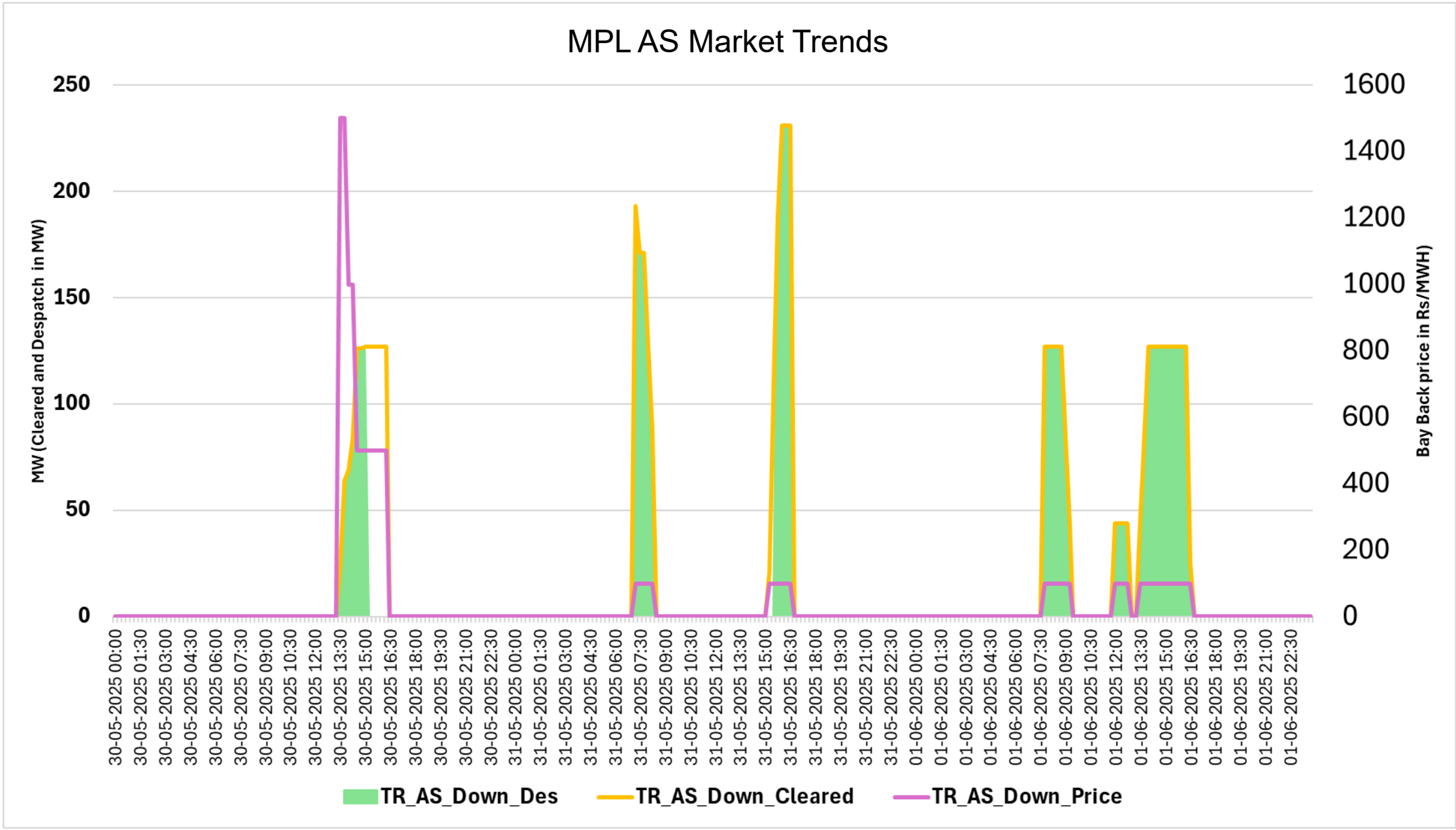
Plant Name	I/C	Owner	SLDC	Min Gen %
Kolaghat TPS	4x210	WBPDCL	WB	86%
Bandel TPS	210+75	WBPDCL	WB	86%
DPL TPS	250+300	WBPDCL	WB	84%
HALDIA GEN	2x300	HEL	WB	80%
IPCHL WB GEN	2x150	HIEL	WB	75%
GMR U3	350	GMR	Odisha	72%
Tenughat TPS	2x210	TVNL	Jharkhand	71%
Bakreswar TPS	5x210	WBPDCL	WB	71%
Santaldih TPS	2x250	WBPDCL	WB	68%
IB Valley TPS	2x210	OPGC	Odisha	65%
SAGARDIGHI TPS	2x300 + 2x500	WBPDCL	WB	65%
OPGC_STU	2x660	OPGC	Odisha	62%
Raghunathpur	2x600	DVC	DVC	60%
BOKARO A TPS	2x500	DVC	DVC	55%
Mejia'B TPS	2x500	DVC	DVC	55%
Durgapur STPS	2x500	DVC	DVC	54%
Chandrapura TPS	2x250	DVC	DVC	54%
Barauni TPS	2x250	NTPC	Bihar	54%
Koderma TPS	2x500	DVC	DVC	54%
Budge-Budge TPS	3x250	CESC	WB	53%
Mejia TPS	2x250+4x210	DVC	DVC	47%

80GW All India State Sector I/C

64GW All India State Sector on bar

9.6GW Down Capacity potential

(considering avg 70% MTDL achieving by states)


MPL AS Market Trends
MW (Cleared and Despatch in MW)
Bay Back price in Rs/MWH)
250
200
150
100
50
0
1600
1400
1200
1000
800
600
400
200
0
30-05-2025 00:00
30-05-2025 01:30
30-05-2025 03:00
30-05-2025 04:30
30-05-2025 06:00
30-05-2025 07:30
30-05-2025 09:00
30-05-2025 10:30
30-05-2025 12:00
30-05-2025 13:30
30-05-2025 15:00
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01-06-2025 16:30
01-06-2025 18:00
01-06-2025 19:30
01-06-2025 21:00
01-06-2025 22:30
TR_AS_Down_Des
TR_AS_Down_Cleared
TR_AS_Down_Price

MPL settlement diagram

Annexure B.2.22

Format-TRAS-II: TRAS Settlement Account by ERPC (Day Ahead & Real Time Market)

TRAS Account For Week : 26-05-2025 to 01-06-2025

Net Charges Payable/Receivable by the TRAS Provider(s) to/from the Regional Deviation and Ancillary Service Pool Account

Sr.	TRAS Provider	TRAS-Up in Day Ahead AS Market				TRAS-Up in Real Time AS Market				Total Charges/ Compensation Charges For TRAS-Up (Rs.)	TRAS-Down in Day Ahead AS Market		TRAS-Down in Real Time AS Market		Net Charges (Rs.) (+) Payable From Pool To AS Provider (-) Receivable By Pool From AS Provider
		TRAS-Up Cleared (MWh)	TRAS-Up Energy Scheduled (MWh)	TRAS-Up Energy Charges (Rs.)	TRAS-Up Commitment Charges (Rs.)	TRAS-Up Cleared (MWh)	TRAS-Up Energy Scheduled (MWh)	TRAS-Up Energy Charges (Rs.)	TRAS-Up Commitment Charges (Rs.)		TRAS-Down Energy Scheduled (MWh)	TRAS-Down Charges to be paid back to Pool (Rs.)	TRAS-Down Energy Scheduled (MWh)	TRAS-Down Charges to be paid back to Pool (Rs.)	
		A	B	C	D	E	F	G	H	I = C+D+G+H	J	K	L	M	N = I-K-M
1	[redacted]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	1153.67	218492.25	-218492.25
	Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1153.67**	**218492.25**	**-218492.25**

Approx Difference savings corresponding to 1154 MWH during 26th May to 1st June week

Variable cost =Rs. 2893 /MWH

From energy Buyer IPP-1 receives
=Rs.1154X2893
=Rs. 3347201
=33.47 Lakhs

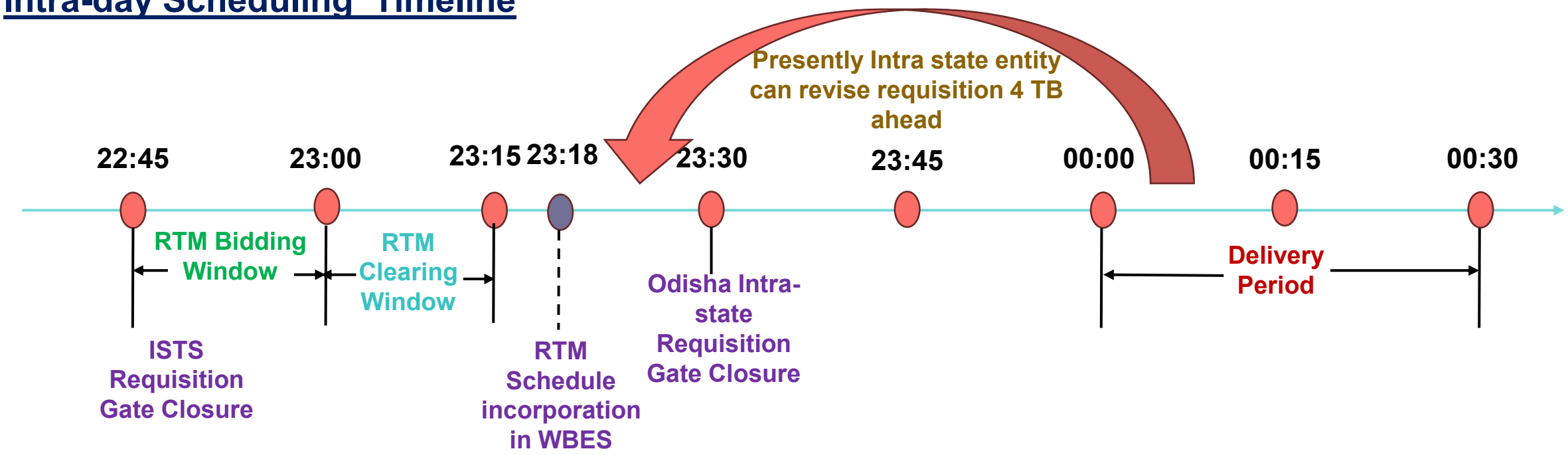
Net Difference
31.29 Lakhs

IPP-1 give money to DSM & AS pool
=2.18 Lakhs(* RPC statement)

Approx Difference of same IPP 2nd June to 8th June – 31.22Lakhs

Need for Updating State Grid Codes: Syncing with IEGC 2023

Intra-day Scheduling Timeline



- **Intra-state entities are allowed to revise requisitions 4 TBs ahead, after finalization of RTM schedules.**
- **Alignment of the provisions of State Grid Code with IEGC 2023 like aligning the intra state gate closure timeline with IEGC may be envisaged (4th TB to 7th / 8th TB)**

Need for Updating State Grid Codes: Syncing with IEGC 2023

Sir

As per the advise of the ERLDC during the meeting held with ERLDC and SLDC with the Honble Chairperson of Sikkim State Electricity Regulatory Commission , SSERC has drafted the State Grid Code Regulations 2025.

A public notice seeking comments from stake holders on the draft has been issued.

The draft and the public notice are enclosed.
We solicit comments of the ERLDC on the draft regulations.

Thanks and regards
PD chaktha
Director
Sikkim State Electricity Regulatory Commission
Mobile: 9733151828

15th April 2025

- SLDC Sikkim and ERLDC team had interactions with Chairperson, Sikkim SERC in Gangtok

13th June 2025

- Based on feedback and suggestions, SSERC released Draft State Grid Code 2025 aligned with IEGC 2023
- Revision timelines have been made 7th/8th TBs

State Grid Codes of other states in Eastern Region

State	Published on
Odisha	August 2015
Jharkhand	Feb 2009 *Amendment: Oct 2019
Bihar	July 2010
West Bengal	April 2007 *Draft: June 2022

Workforce Adequacy

Eligibility

- All LDC officials working in System Op., Market Op., Logistics & REMC
- All LDC officials having min. 1 year regular service

- 2-10 days Assignments
- Eligible functions: System Op., Market Op., Logistics
- LDCs will share Annual Rotation Plan to FOLD
- Classroom session along with hands-on activities

MoP Letter on "Workforce Adequacy Guidelines for Load Despatch Centres":
22-1306/4/22 – OM E 262577 dated 30th October 2024

Workforce Adequacy

Sikkim:
4 Persons
7-11 Apr 25

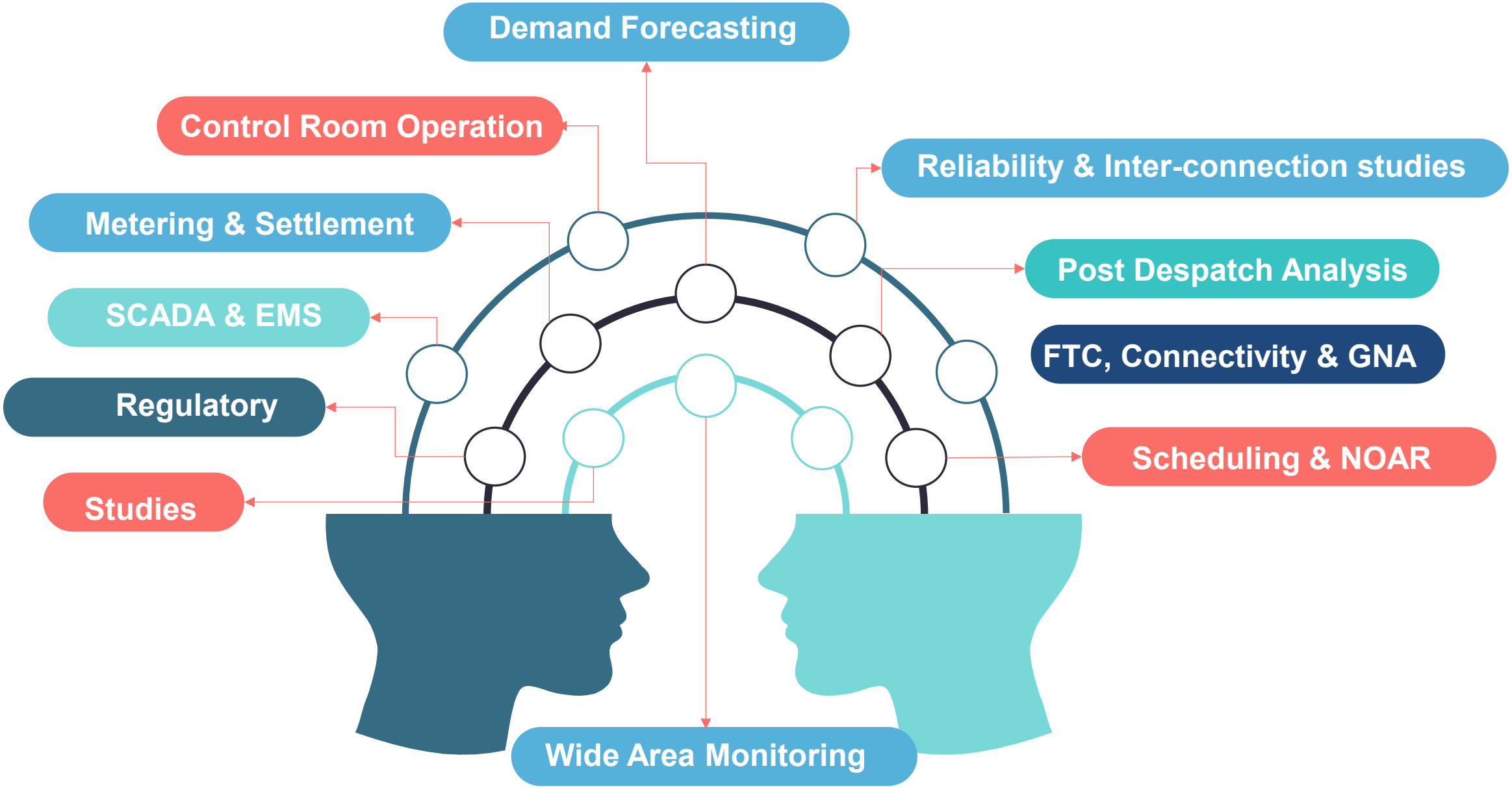
WB: 1 person
21-23 Apr 25

DVC: 1 person
3-4 Apr 25

Bihar: 2 persons
16-17 Apr 25

Area Covered

Annexure B.2.22



Annexure B.2.22

THANK YOU

No. CEA-EC-11-18(12)/1/2023-FCA Division/1170
भारत सरकार /Government of India
विद्युत मंत्रालय/Ministry of Power
केंद्रीय विद्युत प्राधिकरण/Central Electricity Authority
वित्तीय और वाणिज्यिक मूल्यांकन प्रभाग/Financial and Commercial Appraisal Division

Sewa Bhawan,
R K Puram, New Delhi-66
Dated 24.02.2025

To
Member Secretary (NRPC, WRPC, SRPC, ERPC, NERPC)

Subject: Request for Inclusion of "Monetization of Transmission Assets" in Agenda items in RPC Meetings-reg.

Sir,
I am directed to refer the Guiding Principles for Monetization of Transmission Assets in the Public Sector through Acquire Own Maintain Transfer (AOMT) based Public Private Partnership model issued by the Ministry of Power on 3rd October, 2022 (copy enclosed). Monetization of assets unlocks their value, eliminates their holding cost and enables scarce public funds to be deployed to new projects, thus fast-tracking new infrastructure creation. lndia has developed a solid track record of attracting institutional investment in infrastructure assets utilizing innovative structures such as lnfrastructure lnvestment Trusts (lnvlTs) and PPP based models [Toll Operate Transfer (TOT), Operation, Management and Development Agreement (OMDA) etc.l to monetize assets such as toll roads, transmission assets, pipelines and telecom.

2. The States also have a significant potential for monetisation of their transmission assets, so that the much needed capital for creation of transmission assets in the States is available. With growing demands for investment in infrastructure development, monetization of existing assets presents a valuable opportunity to unlock new revenue streams and improve sectoral efficiency. A one day "Workshop on Monetization of Transmission Assets" was organised by Central Electricity Authority in collaboration with PFCCL, PGInvIT and NIIF on 06.12.2024 at NRPC Conference Room, Katwaria Sarai, New Delhi-110016. The workshop was a huge success and was attended by senior level participants from more than 20 State/UTs and representatives of Central Ministries/Departments. The workshop focussed on key strategies for unlocking value in brownfield transmission assets. The key strategies identified for successful monetisation of transmission assets include selection of relative new assets, appropriate size of assets bundle to get investors' interest, pipelines of assets, continuous engagement with regulators in terms of revenue certainty of selected

assets, engaging in comprehensive consultations with investors, putting into place adequate payment security mechanism etc. The outcome document is enclosed.

3. In order to take forward the engagement with the States, Regional Power Committee Forum would be needed. Therefore, it is requested that an agenda item for presentation by CEA on "Monetization of Transmission Assets—Capital recycling for a robust grid" may be kept in the forth coming RPC meeting.

This issues with the Approval of Member (E&C), CEA

Encl: as above

Yours faithfully

Mrityunjay 24/02/25

(Mrityunjay Varshney)
Deputy Director & SA to Member(E&C)

Copy to:

1. Sr PPS/PPS Member (E&C)/Chief Engineer (F&CA), CEA

No. CEA-EC-11-18(12)/1/2023-FCA Division

भारत सरकार /Government of India

विद्युत मंत्रालय/Ministry of Power

केंद्रीय विद्युत प्राधिकरण/Central Electricity Authority

वित्तीय और वाणिज्यिक मूल्यांकन प्रभाग/Financial and Commercial Appraisal Division

Sewa Bhawan, R K Puram, New Delhi-66

Dated 01.01.2025

To

1. Chief Secretary of all States/UT
2. Principal Secretary (Energy) of all States/UTs
3. Secretary of all State Regulatory Commissions
4. Secretary, Forum of Regulators
5. Secretary, Central Electricity Regulatory Commissions

Subject: Workshop on Monetisation of Transmission Assets organised by Central Electricity Authority in association with PGInvIT, PFCCL, and National Investment and Infrastructure Fund (NIIF) on 06.12.2024 in New Delhi-Outcome Document

Madam/Sir

You are aware that one day "Workshop on Monetization of Transmission Assets" was organised by Central Electricity Authority in collaboration with PFCCL, PGInvIT and NIIF on 06.12.2024 at NRPC Conference Room Katwaria Sarai, New Delhi-110016. The workshop was attended by senior level participants from more than 20 State/UTs and representatives of Central Ministries/Departments.

2. The workshop focussed on key strategies for unlocking value in brownfield transmission assets. The key strategies identified for successful monetisation of transmission assets include selection of relative new assets, appropriate size of assets bundle to get investors' interest, pipelines of assets, continuous engagement with regulators in terms of revenue certainty of selected assets, engaging in comprehensive consultations with investors, putting into place adequate payment security mechanism etc.

3. An outcome document highlighting the focus areas of discussion and way-forward has been prepared and the same is enclosed for information and necessary action please.

Encl: as above

Yours faithfully

Mrityunjay 01/01/2025

(Mrityunjay Varshney)

Deputy Director (F&CA)

Copy to:

1. Secretary, Ministry of Power, New Delhi
2. Chairperson, CEA/Member (E&C), CEA
3. All Speakers, Panelists and Participants in the Workshop
4. CEO, PFCCL, Gurgaon
5. CEO, PGInvIT, Gurgaon
6. Director, NIIF, New Delhi
7. Director (IT Division), CEA -with a request to upload the same in CEA website

Workshop on Monetization of Transmission Assets -Outcome Document

Held on

06.12.2024

at NRPC Conference Room, New Delhi

Workshop on Monetization of Transmission Assets

-Outcome Document

Background

Central Electricity Authority, in collaboration with National Investment and Infrastructure Fund (NIIF), PFC Consulting Limited (PFCCL), and PGInvIT organized a workshop on monetisation of transmission assets on 6th December 2024, at New Delhi. The workshop was attended by representatives of 24 States/UTs.

This document provides a consolidation of key discussions undertaken by the participants during the workshop. *Annexure I* – presents the key points made by the respective participants, and *Annexure II* – contains list of key speakers, panellists and participants.

[1] Key discussion points:

(i) Private investment in infrastructure

As per CEA's National Electricity Plan 2023-32, about ₹9.16 lakh crore investment would be required for creation of new transmission infrastructure during the period 2023-32, and out of that, more than 30% will be required in intra-state level.

The Government of India as well as in States have been investing heavily in infrastructure. Given other social and economic needs, it may not be feasible for Governments to continue this high level of public financing of infrastructure. As such, there is a need to increase private investment. Monetisation of brownfield assets offers a less risky and more attractive way for private investment.

There is limited experience in monetisation of transmission sector in India but States could adopt learnings from monetisation models in other infrastructure sectors, such as TOT model in highways and experience of monetisation of operating non-metro airports.

(ii) Learnings from International experience

International experience from New South Wales in Australia, Philippines, Oman and other markets indicated the willingness of countries to hand over operations of the entire grid to private companies. The model of monetisation of specific assets or bundle of assets within the publicly operated larger grid as proposed in India, is a prudent approach. Further, acceptability of monetisation would increase if it is preceded by a well-structured and articulated asset recycling program. Like New South Wales, States could consider setting up a ring-fenced fund for a structured recycling program to help overcome public apprehension of monetisation and to leverage funds for new infrastructure investments. Central Government could consider financial incentives to States that recycle proceeds from monetisation to infrastructure investment.

(iii) Models for Asset Monetisation

The two models for asset Monetisation - (i) Structured Financing models (InvIT) and (ii) Direct Contractual Approach (AOMT model) were discussed.

(a) InvIT Monetisation model: intricate but successfully tested

The InvIT model has been successfully implemented by POWERGRID and Sterlite. The model seems somewhat intricate as it involves several participants such as the Sponsor, Trustee, Unit holders, Investment Manager and Project Manager. However, it operates under a robust regulatory framework overseen by SEBI that gives confidence to investors. POWERGRID operational assets developed through tariff based competitive bidding (TBCB) when monetized through the InvIT route offer assured revenues to investors and help in discovery of optimum value.

(b) **AOMT Monetisation model: Requires enablers to boost investor interest**

The guiding principles for Monetisation of Transmission Assets through Acquire, Operate, Maintain and Transfer (AOMT) based Public Private Partnership model issued by Ministry of Power provides a reference point for States. States could modify the proposed structure as needed.

It was discussed that apart from a few TBCB assets, most assets at State level have been developed through Regulated Tariff Mechanism (RTS) and have tariffs that are subject to periodic regulatory determination.

Predictable cash flow through regulatory certainty is important. To provide predictability of cash flow for such RTM assets to be monetised, there should be a pre-agreed regulatory approach for tariff setting for assets that are to be monetized.

Some State representatives requested that Government of India could prepare and share draft model concession agreement.

Moreover, a well laid out pipeline of assets to be monetized helps attract investors as they need to have a line of sight on future opportunities that will help them achieve optimum scale of investments.

(iv) Key consideration of the investors

Investors emphasised the importance of certainty and transparency around bid process and certainty of revenues as the key value drivers. Investors also consider credit quality of state counterparties, track-record for timely payments and well working contracts while doing risk assessment.

The key recommendation from investor consultation include:

i. expected revenues to private investors should be predictable through the monetisation / concession term
ii. robust payment security mechanism – particularly important to establish payment security at State level projects as this shall be a cornerstone for bankability
iii. high quality technical, financial and legal diligence to be undertaken for the stock of assets to be monetised; this information to be made available to investors at bidding stage
iv. Unambiguous allocation of responsibilities between the Sponsoring Transco and private sector entity can assist in reducing scope of disputes
v. quick and smooth transfer of asset, for fast operational turnaround

(v) Key challenges flagged by States

Participating States endorsed the huge financing requirement required for creation of new transmission infrastructure and the need for tapping private capital through different means including monetisation of brown-field transmission assets. Challenges highlighted include unpredictability of tariff (for RTM assets, tariff changes every 5 year), regulatory concurrence, uncertainty on tax implication for RTM assets demerger, re-deployment of

man-power associated with monetized assets. Some of the suggestions given by States include:

i. This issue of revenue certainty for monetisation of RTM assets could be discussed by CEA / MOP with the Forum of Regulators so as to evolve a common approach across the country.
ii. The State Regulators concerned may be on-boarded on the issue of monetisation of transmission assets.
iii. The issue of tax-implication for assets, can be taken up with Ministry of Finance for clarity.
iv. Presently, States have one single Transmission Company. Once multiple transmission licensees are there in a State, there shall be a need for bringing out Regulation by concerned SERC on sharing of transmission charges by different transmission licensees operating in the State as has been done by CERC.

(vi) Developing a credible project structure

It was suggested that certainty around the bid process, high level of preparedness with respect to consultations with regulators, treatment of pre-existing litigations related to the transferred assets, treatment of existing human resource and associated costs that are directly connected to the transferred asset and payment security aspects are critical to encourage private sector participation.

State transmission utilities may consider taking up certain obligations prior to tendering or as a condition precedent to effectiveness to strengthen project's bankability. These include:

- obligations related to ROWs and transfer of land,
- treatment of warranties and defects liability assurances from suppliers,
- license transfer,
- approval for tariff (in case of RTM model) to provide tariff certainty and
- formulation of settlement plan of pre-identified asset specific risks.

(vii) Presumptive taxation on Terminal value:

The guidelines for the AOMT model propose the transfer of the monetized asset back to the Sponsoring Transco at a nominal cost of INR 1.00 at the end of the AOMT term.

However, investors are concerned that unless a waiver is specifically given by tax authorities, a nominal transfer price could still be subject to presumptive taxation. In any case investors should not be liable to pay tax on transfer back of asset.

(viii) Transfer of O&M obligations:

In the case of AOMT, the concessionaire would be responsible for operation and maintenance of the transmission assets. In case of InvIT model, while investors were comfortable with POWERGRID continuing to operate the monetized assets, however at State level, investors may require operation and maintenance to be done by a private third party rather than by the STU who is monetizing the assets. So, O&M obligations may be transferred on a case-to-case basis after evaluating developer's interest and risk appetite.

[2] Way-forward:

Sl No	Plan	Key Stakeholders
1	Developing a process to derive predictable long-term revenues from monetisation of transmission assets that are presently owned by state transmission companies (RTM assets)	Forum of Regulators (FoR)
2	Conceptualisation of a strong payment security mechanism that can support state level transmission assets monetisation	CEA in consultation with MoP, NIIF and selected State Governments
3	Developing a clear view of any incidents of taxes through the monetisation process (at the time of demerger/at the time of concession award / return of asset)	DEA
4	Pilot transmission asset monetisation initiative with willing States	Willing State Govt
5	Preparation of Model Bidding Documents based on experience of monetisation at one State.	CEA with support from BPCs

Annexure I: Highlights of discussion points made by various participants

Central Electricity Authority (CEA)

- Infrastructure is critically linked to growth and economic performance. Based on the National Electricity Plan (Transmission) published by CEA for 2022-32, additional capacity of about 9,45,00 ckm of Inter Sate transmission system and 9,70,00 ckm of Intra state transmission lines would be added in the country during the period 2022-32 and total investment required for creation of new transmission infrastructure is estimated at ₹ 9,16,200 crore. Out of that more than 30% investment will be required in Intra State level, while remaining in the Inter State level.
- Monetisation of assets unlocks their value, eliminates their holding cost and enables scarce public funds to be deployed in new projects, thus fast-tracking new infrastructure creation
- India has developed a solid track record of attracting institutional investment in infrastructure assets utilizing innovative structures such as Infrastructure Investment Trusts (InvITs) and PPP based models (TOT, OMDA etc.) to monetize assets such as toll roads, transmission assets, pipelines and telecom.
- Transmission assets provide a stable cash flow over the concession/licensee period is suitable for monetisation. POWERGRID has already monetised 5 nos of TBCB assets through InvIT route. The States have a significant potential for Asset Monetisation by leveraging brownfield transmission assets and mobilizing much needed proceeds for new infrastructure investment.
- CEA in consultation with few States and NITI Aayog prepared "Guiding Principles for monetisaiton of transmission asset monetisation through Acquire, Operate, Maintain, and Transfer (AOMT) model" and the same was issued by Ministry of Power in 2022.
- The model envisages limited period transfer of assets. The Guiding Principles cover various steps in monetisation process including identification of assets, demerger of assets in a separate SPV (for RTM assets), obtaining license from SERC for the SPV, appointment of technical consultant for carrying out technical due diligence, appointment of independent valuer for carrying out financial valuation, appointment of Bid Process Co-ordinators for carrying out bidding process, preparation of transfer

agreement with buyer, preparation of transmission service agreement, tenure of transfer agreement, tariff of the monetised assets, bidding and evaluation, need for Payment Security Mechanism etc.

- Issues in monetisation of transmission assets include challenges regarding demarcation of assets (meshed network, ARR for whole network), unpredictability of tariff (for RTM assets, tariff changes every 5 year), inadequate payment security mechanism, unclear O&M obligations and complex approval process of lenders as sponsoring agency takes loan on collective assets.
- Key enablers required to boost asset monetisation in transmission space include creation of a collective knowledge base, and setting the necessary ecosystem in place.

Ministry of Power

- Over the last decade, the central grid has seen significant investments through Tariff-Based Competitive Bidding (TBCB) mode with pace of investment accelerating in recent years, driven by the rapid deployment of renewable energy.
- A similar approach can be adopted at the state level to expand grid infrastructure where monetisation of state transmission assets can fund future grid expansions.
- Monetisation involves a fixed period of transfer of assets, addressing fears of privatization of transmission systems, effective communication with stakeholders is critical to ensure acceptance and clarity on this approach.
- Specific assets should be demerged and identified for monetisation, ensuring they are litigation-free and along with support to the staff managing them.
- A transparent bidding process and identification of investors are necessary to build trust and accountability.
- For states lacking investor confidence regarding payment security, PSUs can manage bidding, and enter back-to-back agreements with state governments and service providers.
- Funds collected upfront from monetisation can be parked with state transmission entities to strengthen financial stability.

Department of Economic Affairs (DEA)

- Investment in infrastructure has multiplier effects on the respective state economies.

- Infrastructure can be financed through multiple mechanisms – Grant, Debt instruments and Equity
- Central government has designed various policies (high budgetary capex, National Infrastructure Pipeline, National Monetisation Pipeline, PM Gati Shakti National Monetisation Plan) and has been working towards establishing enabling financial infrastructure (NABFID, Infrastructure financing reforms by way of REITs, InvITs, VGF) to boost investment in infrastructure.
- As the private sector is wary of greenfield asset due to higher risk, state should consider monetisation of brownfield assets.
- States should adopt learnings from monetisation models in other infrastructure sectors (TOT, securitization model) to attract private investors in transmission sector, so states can generate significant returns.

POWERGRID Infrastructure Investment Trust (PGInvIT)

- PGCIL has monetized five tariff-based competitive bidding (TBCB) assets through the infrastructure investment trust (InvIT) route during 2021.
- It was brought to attention that while the management of InvIT model is intricate with various stakeholders – the Sponsor, the Trustee, the Unit holders, the Investment manager and the Project Manager, InvITs provides an opportunity to monetize brownfield assets with predictable cash flows.
- It was suggested that as bulk of state's assets belong to the regulated assets category, (RTM) which are housed in the parent entity's balance sheet and not under separate SPVs, monetisation for such assets hence may require a scheme of arrangement / demerger process which may pose associated transaction overheads such as continuation of tax holiday on assets, capital gains tax, stamp duty etc., due to asset transfer. The Forum of Regulators may be approached to seek guidance on providing a uniform approach for monetisation of RTM assets.
- Learnings were shared on the approach adopted by PGCIL towards identification of assets which included the following:
    - adoption of SEBI InvIT Regulations (Investment by InvIT shall be in holdco and or SPVs or Infrastructure projects or securities in India, InvIT shall invest not less than 80% of the value of the assets in completed and revenue generated infrastructure projects, InvIT holding controlling interest and not less than 51% of the equity

share capital or interest in the SPV, SPVs under successful commercial operation for more than 1 year)
    - Addressing investor expectations on revenue visibility (Transmission charges were discovered through competitive bidding and fixed for 35 years as per TSA – No regulatory reset) and revenue stability (Transmission charges linked to availability & not power flow)
    - Assets housed in project specific SPVs with 100% shareholding of PGCIL
    - Relaxation in equity lock in condition (Transfer of 51% holding permitted after 2 year of commercial operation)
- Key valuation drivers include revenue stability and predictability, quality of asset and remaining useful life, expansion opportunities, scale of project to attract reputed investors and strengthening of regulatory frameworks with clarity on tax incentives.

International Finance Corporation

- Internationally, many countries like Australia, Philippines, US have adopted various transmission assets monetisation models.
- Learnings from Australia (privatized their entire electricity networks):
    - Central government provided financial incentive to States (15% of price of an asset as incentive to States that sell infrastructure assets and re-invest 100% proceeds into new infra) to link monetisation to recycling and trigger infrastructure investment.
    - States could consider setting up a ringfenced fund for a structured recycling program to help overcome public apprehension of monetisation
- Learning from Philippines:
    - Concession was more acceptable than privatization because permanent ownership of strategic assets was not transferred
    - However, concessioning whole-of-grid still creates private monopoly, which puts a heavy burden on regulatory capacity and has higher potential for disputes
- Whole of grid tenders typically attract only a few specialized investors. Less competition means price may not reflect the true value of the business. Concessions for specific transmission assets within a larger network are less complex and may attract more competition.
- Learning from other examples include:

- A defined concession period matching the remaining useful life of asset is preferred for cashflow visibility for investors
- Requirement for better governance on the relationship and risk allocation between key stakeholders

Shardul Amarchand Mangaldas

- The strategic objective of Asset Monetisation is to unlock the value of investments in public sector assets by tapping private sector capital and efficiencies, which can thereafter be leveraged for augmentation/greenfield infrastructure creation
- Substantial investment is required for developing the country's transmission infrastructure, including lines, substations and reactive compensation at 220 kV and above voltage levels which provides justification for monetisation of existing assets.
- It was suggested that certainty around the bid process, high level of preparedness with respect to consultations with regulators, treatment of pre-existing litigations related to the transferred assets, treatment of existing human resource and associated costs which are directly connected to the transferred asset and payment security aspects are critical to encourage private sector participation.
- State transmission Utilities may consider taking up certain obligations prior to tendering or as a condition precedent to effectiveness to strengthen project's bankability. This includes:
  - Asset transfer:
    - Prior to bid completion, assets to be transferred to SPV. Maybe by demerger (i.e through MCA) or through a slump sale (i.e direct contractually) or through G.O in case of statutory corporations / departments.
    - ROWs and land to be transferred and duly registered in the hands of SPV
  - Treatment of warranties and defects liability assurances from suppliers and contractors to be assigned such that SPV operates with the same level of protection as currently available
  - License transfer
    - Transmission license by the CERC/SERC under Section 14, r/w 15 (1) of the Electricity Act for grant of transmission license to be transferred to SPV

  - Other licenses such as from CEA, or from other central and state governments to be transferred to SPV such that SPV has all requisite licenses to operate the transmission business
- Tariff approval
  - In case of RTM model, fresh tariff approval to be taken from ERC. Long term tariff certainty to be provided to investor. In other sectors, a floor tariff principle has been used to underwrite a minimum cash flow
  - In case of TBCB projects, the relevant SPV itself could be used as the monetisation vehicle
- Recasting of TSAs & other agreements: As part of the asset transfer process, all TSAs and other key agreements entered into with respect to the assets under consideration to be transferred to SPV.
- Formulation of Settlement / risk assumption of pre-identified asset specific risks
  - With respect to ongoing claims (employees / contractors / regulatory) or ongoing disputes, a clear settlement plan or a strategy for assumption of risks by the STU will need to be created.
  - Learnings from other sectors (for e.g. Airport sector) on issues of employee claims / pre-existing disputes may be useful
  - Any pre-existing encumbrances / encroachments will need to be considered and dealt with.
- Assets to be 'going concern' ready at the time of acquisition, such that upon acquisition, there is continuity of business operations in the hands of the acquirer.

IndiGrid

- Emphasized the importance of certainty and transparency around bid process and certainty of revenues as the key value drivers.
- Additional factors to be considered to boost investor participation:
  - high quality technical, financial and legal diligence details for assets to be made available to investors prior to bidding.
  - robust payment security mechanism to be put in place to provide comfort to investors as infrastructure monetisation projects entail heavy investments.

  - Cost of capital and valuation: for high quality assets, following assumptions may be considered: ~12% RoE, ~70% debt, and cost of debt at 7-8%; 9x to 9.5x of annual EBIDTA
  - quick and smooth transfer of asset to be ensured for fast operational turnaround
  - clear risk allocations to minimize scope of disputes in future
- It was highlighted that large investors take concentrated positions with investments with platforms, and hence may not be able to make fragmented investments.
- Investors also consider credit quality of state counterparties, track-record for timely payments and well-working contracts while doing risk assessment.

National Investment and infrastructure Fund (NIIF)

- High investment demand in state transmission infrastructure; the AOMT model offers a viable framework for asset monetisation, requiring enablers like model documents and a supportive ecosystem.
- PowerGrid's monetisation experience highlights the importance of regulatory robustness, revenue assurance, and intricate InvIT model management for value discovery.
- The government has been leading infrastructure creation; private sector involvement is crucial, with opportunities to learn from successful monetisation processes.
- Globally, large-scale transmission asset monetisation has attracted significant capital; AOMT/TOT models for specific assets with defined concession periods show promise.
- Certainty in bid processes, high-quality diligence, and robust payment security mechanisms are critical to ensure investor confidence and predictability.
- Successful monetisation requires clear processes, including asset transfer under SPVs, personnel management, and tariff predictability.
- States are increasingly proactive in engaging stakeholders; examples like Orissa show the need for careful handling of asset and personnel transfers.
- Large investors prefer concentrated investments in platforms, emphasizing the importance of ensuring creditworthiness and timely payments from state counterparties.

- Collaborative efforts between stakeholders can mobilize the required resources, ensuring a transparent, bankable process for long-term success.

Annexure II: key speakers, panellists and participants

Key speakers:

- Mr. Ghanshyam Prasad, Chairperson, Central Electricity Authority (CEA)
- Shri Srikant Nagulapalli, Additional Secretary, Ministry of Power
- Mr. Ajay Talegaonkar, Member, Central Electricity Authority
- Mr. Soloman Arokiaraj, Joint Secretary, Department of Economic Affairs (DEA)
- Mr. Goutam Ghosh, Chief Engineer, Central Electricity Authority
- Mr. Sanjay Sharma, Director, PUTL
- Mr. Bhanu Mehrotra, Principal Investment Officer, International Finance Corporation (IFC)
- Mr. V.R. Neelakantan, Partner, Shardul Amarchand Mangaldas

Panel Discussion: Perspective of Investors

Panelists:

- Mr. Amit Garg, Director, PUTL
- Mr. Harsh Shah, Chief Executive Officer and Director, IndiGrid
- Mr. Rohit Acharya, Principal, Infrastructure and Sustainable Energies Group, CPP Investments

Moderator:

- Mr. Saurabh Suneja, National Investment and Infrastructure Fund (NIIF)

Panel Discussion: Perspective of State Government

Panelists:

- Dr. D. Sai Baba, Joint Secretary, Ministry of Power, GOI
- Ms. Puja Kulkarni, CEO, Tamil Nadu Infrastructure Development Board (TNIDB)

- Mr. Bhaskar Jyoti Sarma, Chairman & MD, Odisha Power Transmission Corporation Limited.
- Mr. Nathmal Didel, Managing Director, Rajasthan Rajya Vidyut Prasaran Nigam Limited

Moderator:

- Mr. Ajay Talegaonkar, Member, CEA

List of Participants

- Sh. V.K Singh, Member Secretary, NRPC, CEA
- Sh. Debasish Prusty, Secretary(Finance), Rajasthan
- Dr. Arun , Secretary(Power), UT of DNH&DD
- Sh. Vishu Mahajan, JMD, TNPDCL, Tamil Nadu
- Sh. Pralay Majumdar, Additional Secretary, Power Dept Govt of W.B
- Sh. Panicker Harishankar, Special Secretary Finance, Govt of W.B
- Sh. Mohammad Tayyab, DTA cum Secretary to Govt. of Punjab, Dpt. Of Finance, Punjab
- Sh. Jatinder Tageja, Financial Advisor, PSPCL, Punjab
- Sh. Uttam Kumar, PSTCL, Punjab
- Sh. Sourabh Maheshwari, Deputy Manager, DNHDDPCL
- Sh. C.A Parmar, Chief Engineer, DNH& DD power Corporation Ltd.
- Sh. T Nengshi wati, Investment officer, IDAN, Government of Nagaland
- Sh. T. Lithrichum Sangtam, SE(GEN), Deptt. Of power Nagaland
- Ms. Bhakti Shamal, Joint Secretary, Energy & Petro Dept. Gujarat
- Sh. Jaynish Modi, GM , GETCO, Gujarat

- Sh. Ganesh Shaw, CFM, GETCO, Gujarat
- Sh. G.P Fanse, O.S.D, F.D, Finance Department, Gujarat
- Sh. Debasish Chakraborty, Chief Engineer, MPPTCL, Madhya Pradesh
- Sh. Birendra Prasad, Director (Operation), DTL, Delhi
- Sh. Radheyshyam Meena, GM, DTL, Delhi
- Ms. Kamna Gupta, AGM, DTL
- Sh. Satish Chavan, Director (op), MSETCL, Maharashtra
- Sh. Kishor B. Garud, Chief Engineer (Design), MSETCL, Maharashtra
- Sh. A.K.V Bhaskar, Director, APTRANSCO, Andhra Pradesh
- Sh. K.V.S Murty, FA&CCA, APTRANSCO, Andhra Pradesh
- Sh. Pankaj Pandey, MD, KPTCC, Karnataka
- Sh. K.N. Gangadhar, KPTCL, Karnataka
- Sh. B.S Lakshmikantha, Chief Engineer, KPTCL, Karnataka
- Sh. B H Shivashankar, Controller of Account, KPTCL, Karnataka
- Sh. Vivek Singh Elangbam, Joint Secretary (Finance), Govt of Manipur
- Sh. S. Priyananda, Executive Director(tech) , MSPCL, Manipur
- Sh. Zahoor A. Wani, Director finance, Power Deptt J&K
- Sh. Vikas Anand , Chief Engineer(Transmission), JKPTCL (Jammu)
- Sh. Jigmet Namgyal, Joint Director , Power deptt UT ladakh
- Sh. Sushil Kumar , SE, SLDC (D&C), HVPNL, Haryana
- Sh. R.S Dahiya, Executive Engineer, HVPNL, Haryana
- Sh. Alok Mehrotra, Chief Engineer, U.P Power corporation Ltd
- Sh.Rajiv Kumar, Sr. Advisor, UPPTCL, Uttar Pradesh
- Sh. Vijay Kumar, Director (Operation) , SBPDCL, Bihar

- Sh. K.R Prasant, Chief Engineer, BSPTCL, Bihar
- Sh. G.S Budiyal, Director (Operation), PTCUL, Uttarakhand
- Sh. R.K Shukla, MD, CSPTCL, Chattisgarh
- Sh. M.S Chauhan , ED (finance), CSPTCL, Chattisgarh
- Sh. Manoj Verma, EE, CSPTCL, Chattisgarh
- Sh. Mrinal Kanti Das, DGM, TPTL, Tripura
- Sh. Pranab Saha , DGM, AEGCL, Assam
- Sh. Sanjeev K. Rawat, DGM (Project), HPPTCL, Himachal Pradesh
- Sh. T. Chanemougam, SE cum HoD, Puducherry
- Sh. V.Suresh , Deputy Chief Engineer, KSEBL, Kerala
- Sh. G.D Pamnani, SE, RRVPNL, Rajasthan
- Sh. Naveen Nikhil Pandey, Assistant Engineer, RVPN, Rajasthan
- Sh. Rohit Maheshwari, Account officer, RVPN, Rajasthan
- Sh. Mahfoz Alam, Resident Engineer , GRIDCO Ltd., Odisha
- Sh. Rahul Srivastav, VP , NaBFID
- Ms. Roli Agarwal, Investment Officer, IFC
- Sh. Abhishek Neotia, Principal, NIIF
- Ms. Kirti Manjusha, Consultant , NIIF
- Sh. Ayush Goyal, VP M&A, IndiGrid
- Sh. Venkataprashanth, AGM, CEO office, IndiGrid
- Sh. Lokendra Singh Ranawat, Head Regulatory, IndiGrid
- Ms. Samridha Nevpane, Partner Shardul Amarchand
- Sh. Neeraj Singh , CGM , PFCCL
- Sh. Sanjay Nagar, SGM, PFCCL

- Sh. Dheeraj Kumar, Dy. Manager, PUTL
- Sh. Gaurav Malik, CFO, PUTL
- Ms. Neela Das, CEO, PUTL
- Sh. Vipin Joseph, DGM, PGInvIT
- Sh. Subhro Paul, Director, CEA
- Sh. Anzum Parwej, SE, NRPC
- Sh. Praveen Jangra, Deputy Director, CEA
- Sh. Manish Maurya, Deputy Director, CEA
- Sh. Saurabh Mishra, Deputy Director, CEA
- Sh. Sharad Chandra, Deputy Director, CEA
- Sh. Mrityunjay Varshney, Assistant Director, CEA
- Sh. Ayush Srivastav, Assistant Director, CEA
- Sh. Ajay Devedwal, Assistant Director, CEA

Powergrid informed that many places OPGW is 15 years old and those need to be replaced.

TCC advised Powergrid to place the details in lower forums and then place in TCC/ERPC for approval.

ERPC may advise.

Deliberation in the ERPC meeting

ERPC advised all the constituents to initiate the replacement of old RTUs as per the guidelines finalized by the committee.

ITEM NO. B4:	Reliable Communication Scheme under Central Sector for Eastern Region—PGCIL

34th TCC has approved reliable communication scheme for 525Kms of OPGW based communication network of an estimated cost of Rs.14 Cr. under central sector for Eastern Region as per the following requirements:

i. Fiber Optic connectivity along with Communication Equipment and associated items from following stations under Central Sector scheme is required to be established for data and voice communication to ERLDC for efficient grid management.

Sl. No.	Name of Power Station	Name of the Line	Voltage Level in kV	Length in km
1	IB Valley (Budhipadar)	IB Valley-Budhipadar		
2	NALCO (Meeramundali)	NALCO-Meeramundali		
3	Jindal (Angul)	Jindal-Angul	400 KV	55
4	GMR (Angul)	GMR-Angul	400 KV	30
5	LANCO (Angul)	LANCO-Angul	400 KV	24
6	Monet (Angul)	Monet-Angul	400 KV	31
7	Indbharat (Jharsuguda)	Indbharat-Jharsuguda	400 KV	50
8	TT Pool (New Melli)	TT Pool-New Melli	400 KV	25
9	Mangon	Mangon-Rangpo	400 KV	70
10	Sterlite Power (Jharsugoda)	Sterlite-Jharsugoda	400 KV	40
		TOTAL		**363**

ii. Fiber Optic connectivity along with Communication Equipment and associated items is also required to be established on following lines of Central Sector to provide redundancy in the system for connectivity with SR and NER:

Sl. No.	Name of the Line	Voltage Level in kV	Length in km
1	Part of Angul - Srikakulam (Angul portion)	400	120
2	Alipurduar - Salakati-I	400	42
	Total		**162**
	Grand Total		**525**

Subsequently, as informed by POWERGRID they have worked out detailed cost estimate of the scheme and prepared DPR for the same. The estimated cost comes out to Rs. 19.75 Cr (Feb'2017 Price Level). However, actual cost shall be discovered only after bidding process and implementation of the project. Tender activities have also been initiated based on DPR.

Member may please note the same.

Deliberation in the TCC meeting

Powergrid informed that the project cost has been revised in view of Make in India initiative. Powergrid has prepared the DPR for above schemes and the estimated cost is revised to Rs. 19.75 cr.

ERLDC informed that Monnet should be excluded from the scheme as Monnet generating station is not coming up.

TCC advised Powergrid to consider views of ERLDC while finalising the bidding process and exclude those stations, which are not coming in near future.

ERPC may approve.

Deliberation in the ERPC meeting

ERPC endorsed the TCC decision and approved the estimated cost.

ITEM NO. B5:	**OPGW on 400kV Kishenganj – Patna line under 'Eastern Region Fibre Optic Expansion Project' (Additional Requirement)- PGCIL**

Under ERSS-XXI transmission system new 400kV Sub-station at Saharsa is proposed to be created through TBCB route with LILO of existing 400kV Kishenganj – Patna Transmission Line. OPGW is being proposed for communication connectivity in LILO portion alongwith construction of transmission line portion in said project. The existing 400kV Kishenganj – Patna Transmission Line is not having OPGW presently and 347Km of OPGW is required to be laid to provide connectivity from Saharsa Substation through OPGW in LILO portion.

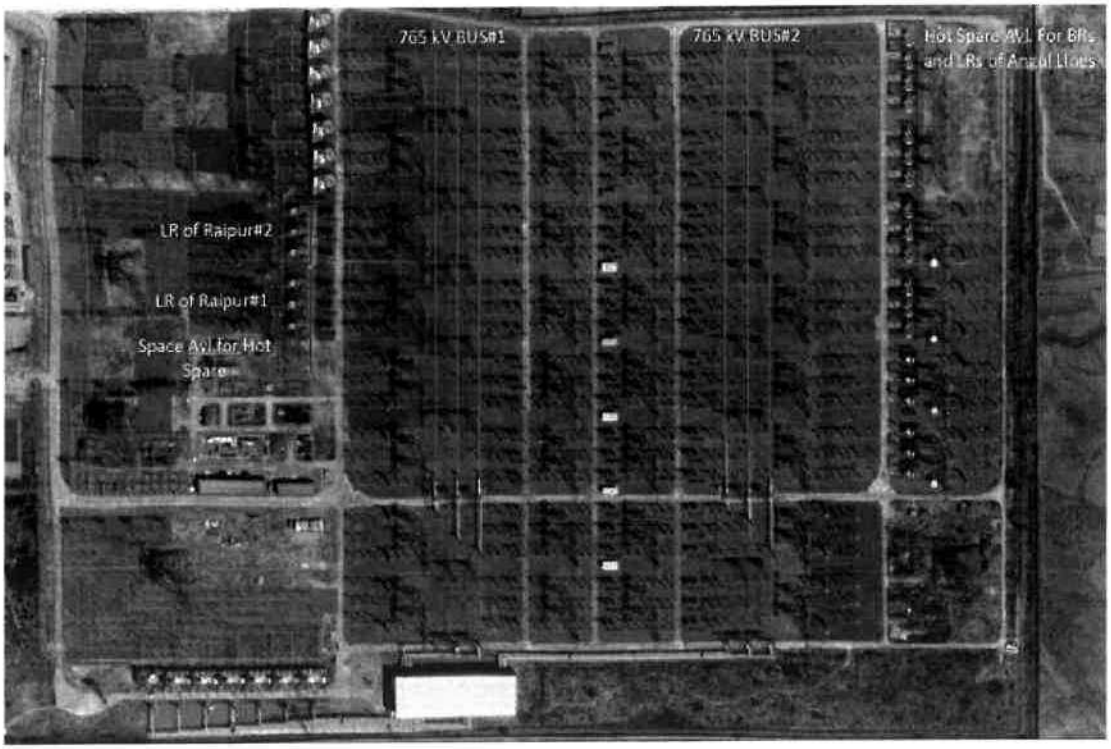
This link is proposed to be implemented under 'Eastern Region Fibre Optic Expansion Project (Additional Requirement)' which was approved in 33rd ERPC. The DPR Cost Estimate (June'16 price level) was Rs. 35.08 Cr comprising 1147 Km of OPGW and associated communication equipment. After inclusion of OPGW laying on 400 kV Kishenganj – Patna line, the network size of 'Eastern Region Fibre Optic Expansion Project (Additional Requirement)' would become 1494 Km of OPGW with communication equipment. The revised tentative cost of this project would become Rs. 46 Cr. However, actual cost shall be discovered only after bidding process and implementation of the project. This project cost shall be recovered as a tariff to be determined by CERC and shall become part of the commercial agreement signed by the constituents of Eastern Region in ULDC scheme.

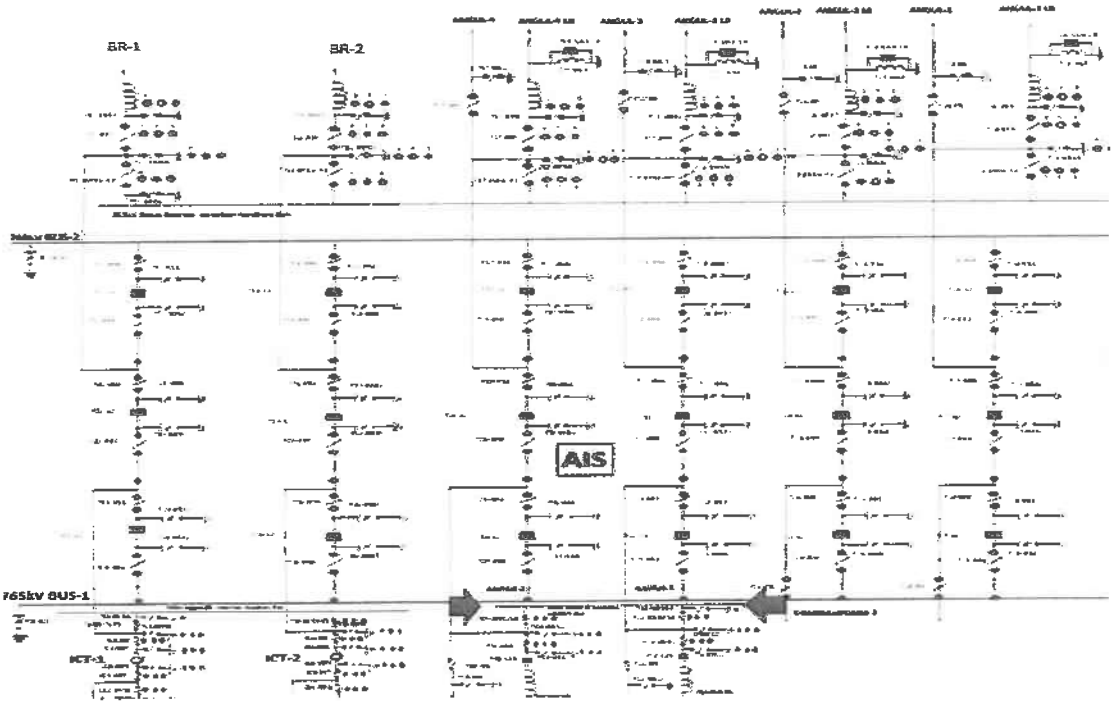
Member may discuss and approve.

- ✓ *Feasibility study for bay shifting along with tower profile needs to be conducted by Powergrid at 765 kV Angul S/S.*
- ✓ *The cost implications for the bay shifting may also be worked out.*
- ✓ *The technical modalities of shifting the bays may be placed in the CMETS-ER meeting for information.*

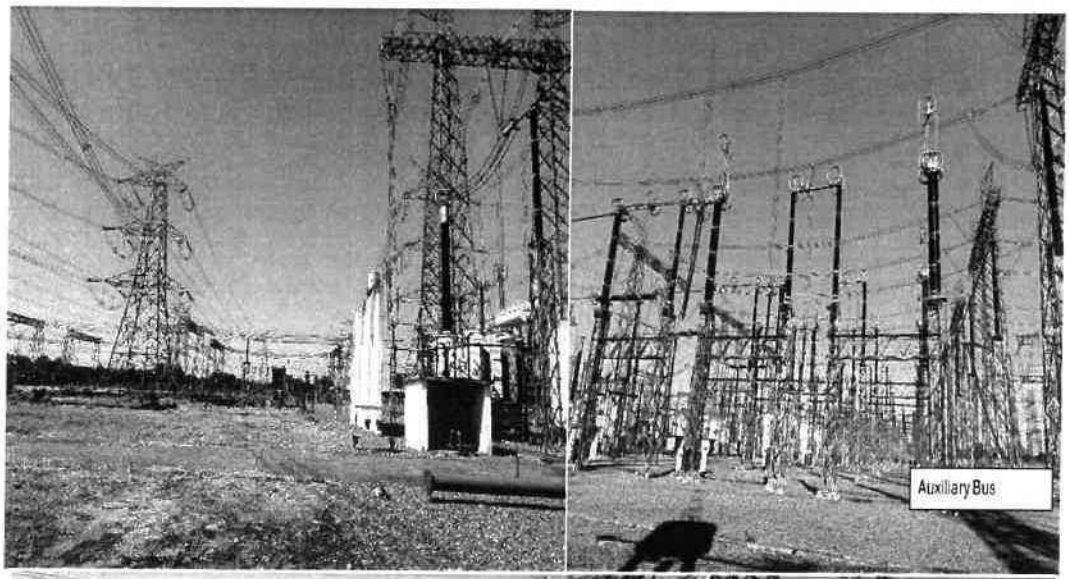
2.4 Provision of Hot Spare for 765 kV Sundargarh-Raipur#1&2 Lines at Sundargarh Substation: Powergrid Odisha

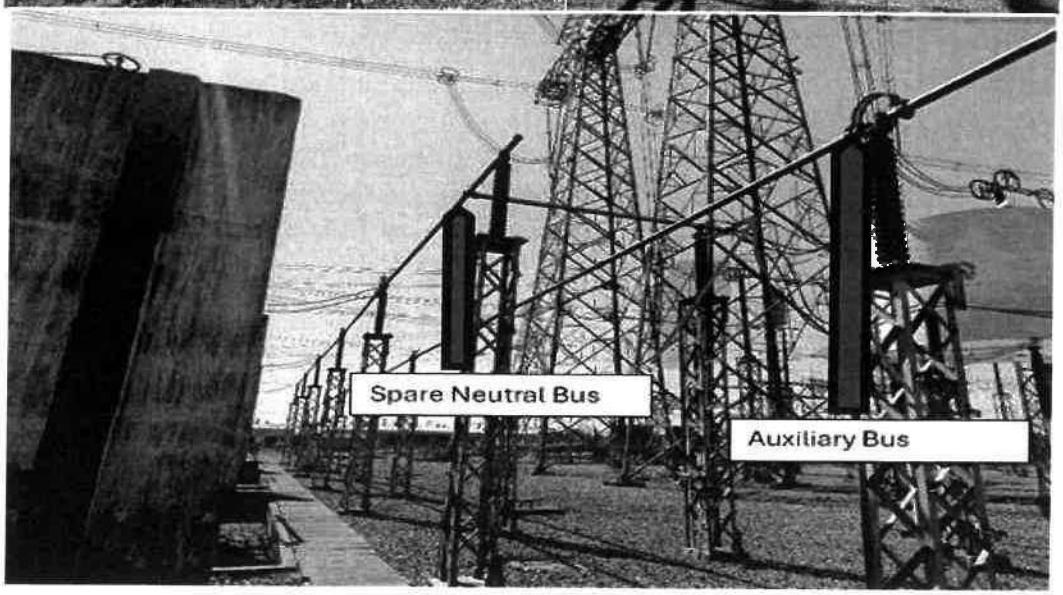
- ➢ 765 kV Sundargarh-Raipur#1&2 along with their respective 240 MVAR (3x80MVAR) switchable Line Reactors were commissioned on 29th & 30th March 2019
- ➢ The Reactors were supplied under the package: RT01 (under TBCB) for: -
  - o 6x80MVAR, 765kV Shunt Reactor at Jharsuguda S/S.
  - o 6x80MVAR, 765kV Shunt Reactor at Raipur Pooling S/S under Odisha Phase-II (DPR-2).
  - o 2x80MVAR, 400kV Shunt Reactor with 400-ohm NGR at Kishanganj GIS S/S under HEP's in Bhutan under POWERGRID works associated TBCB line under Common Transmission System for Phase-II Generation Projects in Odisha.
- ➢ Presently there is no provision for Hot Spare for Switchable Line Reactors of 765 kV Sundargarh-Raipur #1 & 2. However, Hot Spare of Line reactors are available at Raipur end for the same line.
- ➢ The existing 80 MVAr Hot Spare of 765 kV Bus Reactors and Line Reactors of all four 765 kV Angul Lines is connected to 765 kV Bus#2 and positioned 400m apart from Raipur LRs. Line Reactors of Raipur Lines are connected to 765 kV Bus#1. Being physically positioned apart, there is no possibility for electrical connectivity of Raipur Line Reactors with the existing Hot Spare Unit to meet any type of exigency condition.


765 kV BUS#1
765 kV BUS#2
Hot Spare AVL For BRs and LRs of Angul Lines
LR of Raipur#2
LR of Raipur#1
Space Avl for Hot Spare


BR-1
BR-2
AIS
765kV BUS-1

- It is noteworthy to mention that there is repetitive switching of Line Reactors of Raipur Lines for Voltage Regulation and these Line reactors are being taken into service as Bus Reactors based on the System conditions as per the instruction of ERLDC.
- Being an oil filled equipment and exposed to higher switching surges in 765 kV system, requirement of hot spare is very much important for grid reliability. The availability of spare unit shall ensure quick restoration of these reactors in case of any major breakdown issue in any of the unit.
- Therefore, it is felt prudent to provide spare Reactor for these Line Reactors for smooth, reliable and flexible system operation with minimum outage to Line.





- As per the site condition there is availability of space in proximity to B-Ph unit of Raipur#1 Line Reactor.
- Auxiliary Bus and Neutral Bus for Spare rotation is already available at site as part of the above-mentioned Package considering future provision for accommodating spare unit.

Powergrid Odisha may explain. Members may discuss.

Deliberation in the meeting:

Powergrid Odisha apprised:

- *No hot spares are currently available for the 80 MVAR single-phase line reactors pertaining to the Sundargarh–Raipur Line #1 and Line #2 at the Sundargarh end.*
- *The existing 80 MVAR hot spare unit for the 765 kV bus reactors and line reactors of all four 765 kV Angul lines is connected to 765 kV Bus #2. This spare unit is physically located approximately 400 meters away from the Raipur line reactors, which are connected to 765 kV Bus #1.*
- *Due to this considerable physical separation and different bus connections, it is not possible to establish electrical connectivity between the existing hot spare and the line reactors of the Sundargarh–Raipur lines.*

OCC Decision

✓ *Powergrid was advised to clarify on non-provisioning of the line reactor at Sundargarh end during the planning stage of TBCB project.*

2.5 Deviation in SCADA vs SEM data: ERPC

This agenda was discussed in the **15th NPC** meeting on **14.11.2024** and the following action point was decided:

✓ Detailed deliberation is required at the RPC level to address reported discrepancies between SCADA and SEM data, with the aim of minimizing errors and ensuring data accuracy.

As per deliberation in **16th TeST** meeting:

During the 15th NPC meeting, the issue of deviations between SEM and SCADA data was discussed in detail. It was noted during the meeting that detailed deliberation are required at the RPC level to address the reported discrepancies by RLDCs, with the objective of minimizing errors and ensuring data accuracy.

ERLDC informed:

- Letters are being sent weekly to the concerned utilities, highlighting observed errors between SEM and SCADA data. All utilities have been requested to take necessary corrective actions to reduce these discrepancies.

16th TeST Decision:

✓ TeST committee opined that addressing SCADA vs SEM deviations is critical, as they have a significant impact on real-time grid operation and deviation management by the constituents.

Central Electricity Authority
प्रणाली योजना एवं परियोजना मूल्यांकन प्रभाग
System Planning & Project Appraisal Division
सेवा भवन, आर. के. पुरम, नई दिल्ली-110066
Sewa Bhawan, R. K. Puram, New Delhi-110066

No.66/5/2013-SP&PA/12-23-35 dated: 11.07.2014

1. Managing Director, Bihar State Power Transmission Company, Vidyut Bhavan, Baily Road,Patna-800021. Tel. 0612-2504442 Fax No. 0612-2504968	2. Director (System), Damodar Valley Corporation DVC Towers, VIP Road,Kolkata-700054. Tel. 033-23557934 Fax No. 23554841
3. Member Secretary, Eastern Regional Power Committee, 14, Golf Club Road, Tollygange, Kolkata-700033. Tel. No. 033-24235199 Fax No.033-24171358	4. Director (Commercial), Grid Corporation of Orissa Ltd, Jan path, Bhubaneshwar-751022. Tel. No. 0674-2541127 Fax No. 0674-2543452
5. Director (Transmission), Orissa Power Transmission Corporation Ltd, Jan path, Bhubaneshwar-751022. Tel. No. 0674-2540098 Fax No.0674-2541904	6. Director (System Operation), West Bengal State Electricity Transmission Company Ltd, Vidyut Bhavan, 5th Floor, Block-D, Bidhannagar, Sector-II, Kolkata-700091. Tel. No. 033-23370206 Fax No.033-2337206
7. Principal Chief Engineer cum Secretary, Power Department Government of Sikkim, Sikkim. Tel. No. 03592-2022440 Fax No.03592-202927	8. Director (Projects), Power Grid Corporation of India "Saudamini" Plot No. 2, Sector-29,Gurgaon-122001 Tel. No. 0124-2571816 Fax No.0124-2571979
9. Director (Technical), NTPC Limited, Engineering Office Complex, A-8, Sector 24, Noida. Tel. No. 24362050 Fax No. 24362421	10. Member (Transmission), Jharkhand State Electricity Board, In front of Main Secretariat, Doranda, Ranchi-834002. Tel. No. 0651-2400827 Fax No. 0651-2400799
11. Executive Director (T&RE), NHPC Ltd, NHPC Office complex, Sector 33, Faridabad-121003. Tel. No. 0129-2255805 Fax No. 0129-2256055	12. General Manager, Eastern Regional Load Dispatch Center, 14, Golf Club Road, Tollygange, Kolkata-700033. Tel No. 033-24235867 Fax No. 033-24235809
13. Shri S. K. Soonee, CEO, POSOCO B-9, Qutub Institutional Area, Katwaria Sarai, New Delhi-110016 Tel. No. 26524525 Fax No. 26852843	

Sub: Summary record of discussions of the 1st - 2014 meeting of the Standing Committee on Power System Planning of Eastern Region on 02.05.2014 at NRPC, New Delhi.

Sir,

Minutes of the meeting for the Standing Committee Meeting on Power System Planning in Eastern Region was held on 02.05.2014 at NRPC, Katwaria Sarai, New Delhi is uploaded on the CEA website: www.cea.nic.in. (path to access: *Wings of CEA/Power Systems/Standing Committee on Power System Planning/EASTERN REGION)* for kind perusal.

Yours faithfully,
Santosh 11.7.14
(Santosh Kumar)
Dy. Director (SP&PA)

transmission system is commissioned however the scheduling under LTA would commence only when the dedicated transmission system upto Jharsuguda is commissioned.

26. Common Transmission System for Phase-II Generation Projects in Odisha

Director(SP& PA), CEA informed that 4 no. generation projects in Odisha with total installed capacity of 3270MW and LTA quantum of about 2600MW have been granted connectivity /LTA under Phase-II. The list of the generation projects along with associated transmission scheme is given below.

A. Generation Projects

Sl No	Applicant	Installed Capacity (MW)	LTA Quantum (MW)	Commissioning Schedule	Target Beneficiary Regions			
					WR	SR	NR	ER
1.	Sterlite Energy Ltd.	Included under Phase-I (2400 MW)	1000	Already Commissioned	400	-	400	200
2.	GMR Kamalanga Energy Ltd	350 (1x350)	220	Sep, 2017	220	-	-	-
3.	OPGC	1320 (2x660)	600	July, 2017	200	200	200	-
4.	Darlipalli	1600 (2x800)	793.25	Oct 2016	-	-	-	793.25
	Sub-Total	**3270**	**2613.25**		**820**	**200**	**600**	**993.25**
5.	Srikakulam	1320 (2x660)	1240	Jun'15		1240		
	Total	**6990**	**3853.25**		**820**	**1440**	**600**	**993.25**

B. Transmission System

B1. Transmission System for Immediate Evacuation of Generation Projects

1. **GMR Kamalanga Energy Ltd (350 MW) :** Through Ph-I System i.e. GMR-Angul 400kV D/c line
2. **Sterlite Energy Ltd. (2400 MW) :** Sterlite – Jharsuguda 400 kV D/c line
3. **OPGC (1320 MW) :** OPGC – Jharsuguda 400 kV D/c (triple snowbird) line
4. **Darlipalli (1600 MW) :** Darlipalli – Jharsuguda 765 kV D/c line
5. **Srikakulam (1320 MW) :** Srikakulam – Srikakulam Pool 400 kV D/c line

B2. Common transmission system:

1. Being Implemented by POWERGRID

- Angul – Jharsuguda (Sundargarh) – Dharamjaygarh 765 kV D/c line.

  This line is being implemented by POWERGRID as a part of evacuation system from generation projects in Srikakulam area of Andhra Pradesh in Southern region. The same would also be utilized for evacuation of power phase-II generation projects in Odisha.

2. To be implemented through Tariff based Competitive Bidding Route

- Jharsuguda (Sundargarh) – Raipur Pool 765 kV D/c line. (350 km)
- LILO of both circuits of Rourkela - Raigarh 400 kV D/c (2nd line) at Jharsuguda (Sundargarh). (50 km)

3. To be implemented by POWERGRID

- Addition of 2x1500MVA, 765/400kV ICT at Jharsuguda (Sundargarh).
- Addition of 2x1500MVA, 765/400kV ICT at Angul
- Split bus arrangement at 400kV and 765kV bus in both Angul and Jharsuguda (Sundargarh) substations.

As mentioned above, the scheme includes Angul-Jharsuguda-Dharamjayagarh 765kV D/c (2nd) line, which has already been taken up for implementation by POWERGRID as part of transmission system associated with evacuation of power from generation project of East Coast Energy Pvt. Ltd. at Srikakulum. The item no. 2 of the common transmission scheme is to be implemented through Tariff based Competitive Bidding Route, details of which are given below :

Transmission Scheme	Estimated Line Length (km)
i) Jharsuguda (Sundargarh) – Raipur Pool 765 kV D/c line	350
ii) LILO of both circuits of Rourkela - Raigarh 400 kV D/c (2nd line) at Jharsuguda (Sundargarh)	2x400kV D/c line : each about 30 km

Note :

- CTU to provide 2x240 MW switchable line reactor at Jharsuguda (Sundargarh) end on Jharsuguda (Sundargarh) – Raipur Pool 765 kV D/c line.
- CTU to provide 2x240 MW switchable line reactor at Raipur Pool end on Jharsuguda (Sundargarh) – Raipur Pool 765 kV D/c line.
- CTU to provide 2 no. of 765kV line bays each at Jharsuguda (Sundargarh) and Raipur Pool for termination of Jharsuguda (Sundargarh) – Raipur Pool 765 kV D/c line.
- CTU to provide 4 nos. of 400kV line bays at Jharsuguda (Sundargarh) for termination of LILO of both circuits of Rourkela - Raigarh 400 kV D/c (2nd line).

The scheme has been approved in the meeting with constituents of Eastern Region regarding connectivity and LTA on 05-01-2013 and 24th TCC/ERPC meeting on 26-27 April, 2013.

Members noted and agreed.

27. Immediate Evacuation System for OPGC (1320 MW) Project

Director (SP& PA), CEA informed that the immediate evacuation system for OPGC generation project, which is a part of phase-II generation projects in Orissa is proposed to be implemented through Tariff based Competitive Bidding Route. The scope of the transmission system is as below:

Scope:

Transmission Scheme	Estimated Line Length (km)
i) OPGC (IB TPS) – Jharsuguda (Sundargarh) 400kV D/c line with Triple Snowbird Conductor alongwith 2 no. 400kV line bays at Jharsuguda (Sundergarh) substation. Bays at OPGC end of the line would be under the scope of the generation developer.	50

The scheme was approved in the meeting with constituents of Eastern Region regarding connectivity and LTA on 05-01-2013 and 24th TCC/ERPC meeting on 26-27 April, 2013.

Members noted and agreed.

28. Status of Connectivity/LTA Applicants not considered under Phase-II Generation Projects in Orissa

Director (SP& PA), CEA requested the generation developers to update the status of progress of the generation projects which were not considered under Phase-II generation projects in Orissa. Based on deliberations, the updated status is given below:

Sl No	Project/Applicant	Unit Size	Ins. Capacity (MW)	Connectivity / LT(O)A(MW)	Time Frame	Status of Application
1	VISA Power Ltd	2x660	1320	1250/842	Sep'16	No Progress, To be Closed
2	NSL Odisha Power & Infratech	2x660	1320	1240/	Jan'16	No Progress, To be Closed
3	Tata Power company Ltd	2x660	1320	1000/1000	Uncertain	To be reviewed after 6 months
4	J R Power Gen Pvt Ltd	3x660	1980	1980/1830	Uncertain	To be reviewed after 6 months
5	Jindal India Thermal (Phase-II)	1x600	600	522/522	Uncertain	To be reviewed after 6 months
6	Sahara India	2x660	1320	1100/	Jan'18	To be reviewed after 6 months
7	Odisha UMPP	5x800	4000	4000/4000	N. A.	System under discussion
8	Gajamara(NTPC)	2x800	1600	1600/	Under revision	To be reviewed after 6 months
9	Bhushan	4x660	2640	2640/	Uncertain	No Progress, To be Closed

Annexure C.3.5

State	Stage	UFR Req (MW)	UFR Inst. (MW)	Pending	SCADA Integrated feeders	Data Updating of UFR feeders	Remarks
BSPTCL	Stg 1	315	292	23	0	0	Feeders identified for all 4 stages. UFR integration for rest feeders in progress.
	Stg 2	379	344	35	18	12	
	Stg 3	442	361	81	0	0	
	Stg 4	442	394	48	362	118	
	Total	**1578**	**1391**	**187**	**380**	**130**	
DVC	Stg 1	172	173	0	173	159	Installation and testing complete for all 4 stages
	Stg 2	207	209	0	72	72	
	Stg 3	241	242	0	32	32	
	Stg 4	241	239	2	38	17	
	Total	**861**	**864**	**0**	**315**	**280**	
JUSNL	Stg 1	87	85	2	89	26	Feeders identified for St.3 & 4. Installation in progress.
	Stg 2	105	104	1	105	71	
	Stg 3	122	**45**	77	33	33	
	Stg 4	122	0	122	0	0	
	Total	**436**	**234**	**202**	**227**	**131**	
OPTCL	Stg 1	306	316	0	297	286	Shortage of 13, 94 and 64 MW in St.2,3 ad 4 respectively. As stated by OPTCL, peak load of identified feeders will increase to required quantum in the coming summer.
	Stg 2	367	354	13	281	255	
	Stg 3	428	334	94	314	260	
	Stg 4	428	364	64	299	276	
	Total	**1529**	**1368**	**161**	**1190**	**1076**	
West Bengal (WBSEDCL)	Stg 1	377	440	0	436	368	3nos. 11kV feeders from NBU (4MW) remaining for SCADA integration
	Stg 2	457	434	0	434	434	
	Stg 3	536	552	0	427	427	Arambag (125MW) remaining for SCADA integration
	Stg 4	536	555	0	355	355	3nos. 33kV feeders (12MW) from Darjeeling and all feeders from Barasat (188MW) remaining for SCADA integration
West Bengal (CESC)	Stg 1	120	120	0	120	120	CESC- Installation and testing complete for all 4 stages
	Stg 2	140	140	0	140	140	
	Stg 3	160	160	0	160	160	
	Stg 4	160	160	0	160	160	
WBSEDCL+CESC	**Total**	**2486**	**2561**	**0**	**2232**	**2164**	
Sikkim	Stg 1	5	0	0	0	0	
	Stg 2	6	0	0	0	0	
	Stg 3	7	0	0	0	0	
	Stg 4	7	0	0	0	0	
	Total	**25**	0	0	0	0	
ER Total		**6916**	**6418**	**498**	**3070**	**2553**	

Annexure C.3.6

All India List of new elements whose integration was facilitated by Grid-India till May, 2025

Generating Units

REGION	S. NO.	ocation/ Pooling Statio	Owner/Unit Name	Unit No/Source	Capacity added (MW)	Total/Installed Capacity (MW)	Date of First Time Energization & Integration	Date of Issuance of Trial Run certificate by RLDC	Commercial Operation Date (COD)	Remarks
ER	NIL									
				Total Coal Generation Addition	0					
				Total Solar Generation addition	NA					
				Total Wind Generation addition	NA					

Interconnecting/Generator/Station Transformers

REGION	S.NO.	Agency/Owner	Sub-Station	ICT/GT/ST No.	Voltage Rating (kV)	Capacity (MVA)	Date of First Time Energization & Integration	Date of Issuance of Trial Run certificate by RLDC	Commercial Operation Date (COD)	Remarks
ER	1	WBSETCL	Jeerat	400KV/220KV 315 MVA ICT 5 AT JEERAT	400	315	26/05/2025 18:51	As Intrastate element, We donot issue TRC	-	
	2	WBSETCL	SATGACHIA	400KV/220KV 500 MVA ICT 1 AT SATGACHIA	400	500	11/05/2025 17:37	As Intrastate element, We donot issue TRC	-	
	3	WBSETCL	SATGACHIA	400KV/220KV 500 MVA ICT 2 AT SATGACHIA	400	500	13/05/2025 20:22	As Intrastate element, We donot issue TRC	-	
					Total (MVA)	1315				

New transmission Lines

REGION	S.NO.	Agency/Owner	Transmission Line Name	Line Length (km)	Conductor Type	Date of First Time Energization & Integration	Date of Issuance of Trial Run certificate by RLDC	Commercial Operation Date (COD)	Remarks
ER	1	Aditya Aluminium	400 kV Lapanga-Aditya Aluminium Ckt-1	5.37	AAAC MOOSE	23/05/2025 17:49	As Intrastate element, We donot issue TRC	-	Idle charge from Lapanga side only
	2	Aditya Aluminium	400 kV Lapanga-Aditya Aluminium Ckt-2	5.37	AAAC MOOSE	23/05/2025 18:12	As Intrastate element, We donot issue TRC	-	Idle charge from Lapanga side only
			Total length (km)	10.7					

Anti-theft charging of New transmission Lines

REGION	S.NO.	Agency/Owner	Transmission Line Name	Line Length (km)	Conductor Type	Date of First Time Energization & Integration			Remarks
ER	NIL								

LILO/Re-arrangement/Re-conductoring of Existing Transmission Lines

REGION	S.NO.	Agency/Owner	Transmission Line Name {LILO at/ Re-arrangement of/Reconductoring}	Line Length (km) after LILO/Re-arrangement	Conductor Type	Date of First Time Energization & Integration	Date of Issuance of Trial Run certificate by RLDC	Commercial Operation Date (COD)	Remarks

ER	1	WBSETCL	400KV-NEW CHANDITALA-SATGACHIA-2	88/ LILO Length - 2.5	ACSR MOOSE	09/05/2025 17:05	As Intrastate element, We donot issue TRC	-	LILO of 400 kV Gokarna–New Chanditala D/C Line at 400 kV Satgachia GIS for FTC of the Substation's 400 kV System
	2	WBSETCL	400KV-GOKARNA-SATGACHIA-2	98/LILO Length-3.4	ACSR MOOSE	09/05/2025 16:55	As Intrastate element, We donot issue TRC	-	LILO of 400 kV Gokarna–New Chanditala D/C Line at 400 kV Satgachia GIS for FTC of the Substation's 400 kV System
	3	WBSETCL	400KV-NEW CHANDITALA-SATGACHIA-1	88/LILO length-2.5	ACSR MOOSE	09/05/2025 15:42	As Intrastate element, We donot issue TRC	-	LILO of 400 kV Gokarna–New Chanditala D/C Line at 400 kV Satgachia GIS for FTC of the Substation's 400 kV System
	4	WBSETCL	400KV-GOKARNA-SATGACHIA-1	98/LILO Length-3.4	ACSR MOOSE	09/05/2025 15:21	As Intrastate element, We donot issue TRC	-	LILO of 400 kV Gokarna–New Chanditala D/C Line at 400 kV Satgachia GIS for FTC of the Substation's 400 kV System
	5	SPTL	400KV-DIKCHU-RANGPO-2	71.482	QUAD MOOSE	10/05/2025 18:38	As Intrastate element, We donot issue TRC	-	FTC of 400 kV DIKCHU- RANGO TL bypassing Teesta 3

Bus / Line Reactors

REGION	S.NO.	Agency/Owner	Element Name	Voltage Level (kV)	Rating (MVAr)	Date of First Time Energization & Integration	Date of Issuance of Trial Run certificate by RLDC	Commercial Operation Date (COD)	Remarks
ER	1	PGCIL ER-II	63MVAR NON-SWITCHABLE L/R OF 400KV-MAITHON-KHSTPP-1 AT MAITHON	400	**63**	12.04.2025			The existing 50 MVAr line reactor with Neutral Grounding Resistor (NGR) on this line was replaced with a 63 MVAr line reactor, also equipped with an NGR, at Maithon.
	2	WBSETCL	125MVAR 400KV B/R-1 AT SATGACHIA	400	125	11/05/2025 14:37	As Intrastate element, We donot issue TRC	-	LILO of 400 kV Gokarna–New Chanditala D/C Line at 400 kV
				Total (MVAr)	**125**				

HVDC /AC Filter bank / FACTS DEVICE associated System

REGION	S.NO.	Agency/Owner	Element Name	SUB-STATION	Voltage Level (kV)	Date of First Time Energization & Integration	Date of Issuance of Trial Run certificate by RLDC	Commercial Operation Date (COD)	Remarks
ER		NIL							

Bus /Bay

REGION	S.NO.	Agency/Owner	Element Name	SUB-STATION	Voltage Level (kV)	Date of First Time Energization & Integration	Date of Issuance of Trial Run certificate by RLDC	Commercial Operation Date (COD)	Remarks
ER	1	NTPC Kahalgaon	400KV TIE BAY OF (FSTPP-1 AND BARH-2) AT KHSTPP	NTPC Kahalgaon	400	05.04.2025			NTPC has upgraded the bay (3252) equipment(s) at the Kahalgaon switchyard to match the capacity of the Kahalgaon-Patna 400kV (Quad) D/C line, increasing the rating of Circuit Breaker from 2000A to
	2	OPTCL	400KV TIE BAY OF (ADITYA ALUMINIUM(AA)-2 AND FUTURE) AT LAPANGA	Lapanga	400	31/05/2025 12:15			
	3	WBSETCL	400KV BUS COUPLER BAY AT JEERAT	Jeerat	400	26/05/2025 19:45			
	4	OPTCL	400 kV Main Bay of Aditya Aluminium Ckt-1 at Lapanga	Lapanga	400	23/05/2025 17:49			
	5	OPTCL	400 kV Main Bay of Aditya Aluminium Ckt-2 at Lapanga	Lapanga	400	23/05/2025 18:12			

ER	6	WBSETCL	400KV MAIN BAY OF 315 MVA ICT 5 AT JEERAT	Jeerat	400	26/05/2025 18:51			
	7	WBSETCL	00KV TIE BAY OF (NEW CHANDITALA -2 AND 500 MVA ICT 2) AT SATGACH	Satgachia	400	13/05/2025 23:10			
	8	WBSETCL	400KV TIE BAY OF (GOKARNA -2 AND 500 MVA ICT 1) AT SATGACHIA	Satgachia	400	11/05/2025 19:52	As Intrastate element, We donot issue TRC	-	
	9	WBSETCL	400KV Main Bay of 125MVAR B/R-1 AT SATGACHIA	Satgachia	400	11/05/2025 14:37			
	10	WBSETCL	400KV Main Bay of 125MVAR Gokarna-1 AT SATGACHIA	Satgachia	400	09/05/2025 15:21			
	11	WBSETCL	400KV Main Bay of 125MVAR Gokarna-2 AT SATGACHIA	Satgachia	400	09/05/2025 16:55			
	12	WBSETCL	400KV Main Bay of New Chanditala-1 AT SATGACHIA	Satgachia	400	09/05/2025 15:42			
	13	WBSETCL	400KV Main Bay of New Chanditala-2 AT SATGACHIA	Satgachia	400	09/05/2025 17:05			
	14	WBSETCL	400KV Main Bay of ICT 1 AT SATGACHIA	Satgachia	400	11/05/2025 17:37			
	15	WBSETCL	400KV Main Bay of ICT 2 AT SATGACHIA	Satgachia	400	13/05/2025 20:22			

Annexure – A

54th TCC Meeting dated 23.06.2025

Sl No.	Organisation	Name	Signature
1	ERPC	N S Mondal	
2	WRPC	Deepak Kumar	
3	ATL	Nihar Raj	
4	BERC	A K Sinha	
5	BRBCL	Bimal Kumar Saha	
6	BSPTCL	Perwez Alam	
7	BSPTCL	Abdesh Kumar Singh	
8	CESC	Sandip Pal	
9	CESC	Koushik Banerjee	
10	CTUIL	Rajesh Kumar	
11	CTUIL	Manish Ranjan Keshari	
12	CTUIL	Manju Gupta	
13	DANS Energy	Shivam Kotwal	
14	DMTCL	Nimish Seth	
15	DVC	S Srivastava	
16	DVC	Durgesh Maiti	
17	DVC	S. K.Sharma	
18	DVC	Arup Sarkar	
19	ERLDC	Rajiv Sutradhar	
20	ERLDC	Bilash Achari	

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Sl No.	Organisation	Name	Signature
21.	ERLDC	Manash Protim Nath	
22	ERLDC	Ayush Raj	
23	ERPC	Anup Das	
24	ERPC	S Kejriwal	
25	ERPC	I K Mehra	
26	ERPC	P K De	
27	ERPC	P P Jena	
28	ERPC	K Swati	
29	ERPC	A Basu	
30	ERPC	B S Ray	
~~31~~	GMR	P.K Senapathy	
32	GMR	Raghunath P.V	
33	GRIDCO	Bibhu Prasad Mohapatra,	
34	GRIDCO	Sanjit Kumar Maharana, GM, (Electrical)	
~~35~~	GRIDCO	T Panda	
36	GRIDCO	Umakanta Sahoo,	
37	IndiGrid (ENICL)	Lokendra Singh Ranawat	
38	IndiGrid (ENICL)	Sanil Namboodiripal	
~~39~~	JBVNL	Saurav Kumar Sinha	
40	JBVNL	Satyajeet Ghosh	

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Sl No.	Organisation	Name	Signature
41	JIPL	Sanjay Mittal	
42	JIPL	Shubhang Nandan	
43	JIPL	Vijaya Bhaskar Reddy Duggempudi	
44	JSW Energy Utkal Ltd. (member as Private Genco.)	Ashesh Kumar Padhy	
45	JSW Energy Utkal Ltd. (member as Private Genco.)	Baliram Jadhav	
46	JUVNL	Rakesh Pandey	
47	JUSNL	Mukesh Kumar Singh	
48	JUSNL	M K Karmali	
49	JUSNL	Parween Kumar	
50	JUSNL	Arun Kumar	
51	JUVNL	Kumar Sambhav	
52	JUVNL	Abhishek Kumar	
53	MPL	Sudip Dash	
54	NHPC	S. K Mishra	
55	NHPC	Jaganath Pani	
56	NkTL	Abhishek Kukreja	
57	NTPC	Manish Jain	
58	NTPC	D K Patra	
59	OHPC	Amiya Kumar Mohanty	
60	OHPC	Arjun Kumar Sahu	

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Sl No.	Organisation	Name	Signature
61	OPGC	Haresh Kumar Satapathy	
62	OPTCL	P K Pattanaik	
63	OPTCL	S K Das	
64	OPTCL	B B Mehta	
65	OPTCL	C R Mishra	
66	POWERGRID	Partha Ghosh	
67	POWERGRID	Arvind Kumar Pandey	
68	POWERGRID	Siddhartha Jyoti Lahiri	
69	POWERGRID	A. K. Naik	
70	~~POWERGRID~~	~~Naveen Srivastava~~	
71	~~POWERGRID~~	Rajil Srivastava	
72	PTC	Bharat Sharma	
73	PVUNL	Rakesh Kumar	
74	SBPDCL	Alok Kumar	
75	SBPDCL	Bhupendra Umrao	
76	Sigha Energy	Abhilash Gour	
77	Sikkim Urja Ltd.	Yogendra Kumar	
78	Sikkim Urja Ltd.	Iyappan Dillikumar	
79	SJVN (Buxar Plant)	Prabhakar Kishore ~~Bintu Das~~	
80	SLDC Odisha	Subhas Chandra Dash,	

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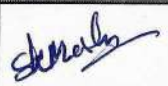
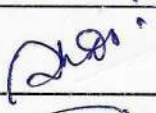
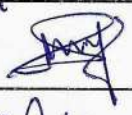
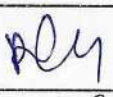
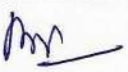
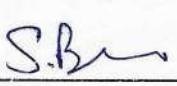
Sl No.	Organisation	Name	Signature
81	SLDC Odisha	Sanjaya Kumar Mishra	
82	Sneha Kinetic PPL and GI Hydro Pvt. Ltd	D.P Bhargav	
83	SPTL	V K Bhaskar	
84	SPTL	Prabhat Kumar	
85	TATA Steel UISL	V P Singh	
86	TVNL	Anil Kr Sharma	
87	TVNL	Ashish Kr Sharma	
88	WBPDCL	Rabindra Nath Sahoo	
89	WBPDCL	Rajat Koley	
90	WBSEDCL	Ajay Kumar Pandey	
91	WBSEDCL	Preetam Banerjee	
92	WBSEDCL	Shyamal Kanti Das	
93	WBSETCL	Sabyasachi Roy	
94	WBSETCL	Rita Chakraborty	
95	WBSETCL	Ranjan Das	
96	WBSETCL	Shouvik Banerjee	
97	NTPC	S K PRADHAN	
98	TCS	ABHISHEK DAS	
99	TCS	SOURAV BERA	
100			

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101			
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103			
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