भारत सरकार Government of India
विद्युत मंत्रालय Ministry of Power
उत्तर पूर्वी क्षेत्रीय विद्युत समिति
North Eastern Regional Power Committee
एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय
NERPC Complex, Dong Parmaw, Lapalang, Shillong - 793006, Meghalaya

Ph. No: 0364 - 2534077
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Website: www.nerpc.gov.in

No. NERPC/OP/Committee/2022/3122-3201 Date: Dec 29, 2023

To,

1. Hon'ble Minister of Power, Govt. of Assam, Dispur - 781006
2. Hon'ble Minister of Power, Govt. of Manipur, Imphal – 795 001
3. Hon'ble Minister of Power, Govt. of Meghalaya, Shillong – 793001
4. Hon'ble Minister of Power, Govt. of Mizoram, Aizawl - 796 001
5. Hon'ble Minister of Power, Govt. of Nagaland, Kohima - 797001
6. Hon'ble Minister of Power, Govt. of Tripura, Agartala-799001
7. Member (GO&D), CEA, Sewa Bhavan, R. K. Puram, New Delhi - 110 066
8. Commissioner & Secretary (Power), Govt. of Arunachal Pradesh, Itanagar – 791 111
9. Principal Secretary (Power), Govt. of Assam, Dispur, Guwahati - 781 006
10. Commissioner & Secretary (Power), Govt. of Manipur, Imphal - 795001
11. Commissioner & Secretary (Power), Govt. of Meghalaya, Shillong - 793001
12. Commissioner & Secretary (Power), Govt. of Mizoram, Aizawl - 796001
13. Principal Secretary (Power), Govt. of Nagaland, Kohima - 797001
14. Principal Secretary (Power), Govt. of Tripura, Agartala – 799001
15. CMD, MeECL (MePDCL/MePGCL/MePTCL), Lumjingshai, S. R. Road, Shillong - 793 001
16. Managing Director, AEGCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
17. Managing Director, APDCL, Bijuli Bhavan, Paltan Bazar, Guwahati - 781 001
18. Managing Director, APGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
19. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
20. Managing Director, MSPDCL, Secure Office Building Complex, South Block, Imphal –01
21. Managing Director, TSECL, Agartala - 799001
22. Managing Director, TPGL, Agartala - 799001
23. Chairman & Managing Director, NEEPCO Ltd., Lower New Colony, Shillong - 793 003
24. Director (Technical), NHPC Ltd., NHPC Complex, Sector-33, Faridabad - 121 003
25. Director (Finance), NTPC Ltd. NTPC Bhawan, Scope Complex, Institutional Area, Lodhi Road – 03
26. Managing Director, OTPC, 6th Floor, A-Wing, IFCI Tower -61, Nehru Place, New Delhi - 110019
27. Director (Operation), POWERGRID, Saudamini, Plot No. 2, Sector-29, Gurgaon, Haryana – 122 001
28. CEO, NVVNL, Core 5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi – 03
29. Chairman & Managing Director, PTC, NBCC Tower, 15 Bhikaji Cama, Place, New Delhi – 110066
30. COO, CTUIL, Plot No.2, sector-29, Gurgaon, Haryana – 122001
31. ED, NLDC, B/9, Qutub Institutional Area, Katwaria Sarai, New Delhi – 16
32. ED, NERLDC, Dongtieh-Lower Nongrah, Lapalang, Shillong- 793006
33. Head, Transmission, KMTL, 7th Floor, Fulcrum, Sahar Road, Andheri (E), Mumbai-400099

Sub: Minutes of the 25th TCC & 25th NER Power Committee Meetings – Reg.

Sir/Madam/महोदय/महोदया,

Please find enclosed herewith the minutes of the 25th TCC meeting and 25th NER Power Committee meeting held on 8th & 9th Dec 2023 respectively at Kolkata for your kind information and necessary action. The same is also available on NERPC website: www.nerpc.gov.in.

Yours faithfully,

(K. B. Jagtap)
Member Secretary

Copy to:

1. PS to Chairman, NERPC & Hon'ble Dy. Chief Minister & In-charge (Power), Govt. of AP, - 791111
2. PS to TCC Chairman & Chief Engineer (P), CEZ, DoP, Govt. of Arunachal Pradesh, Itanagar- 791111

Copy for kind information to:

1. Director (Distribution), MePDCL, Lumjingshai, S.R. Road, Shillong – 793 001
2. Director (Generation), MePGCL, Lumjingshai, S.R. Road, Shillong – 793 001
3. Director (Transmission), MePTCL, Lumjingshai, S.R. Road, Shillong – 793 001
4. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
5. Managing Director, MSPDCL, Secure Office Bldg. Complex, Near 2nd MR Gate, Imphal – 795 001
6. Director (Tech.), TSECL, Bidyut Bhaban, Banamalipur, Agartala -799 001.
7. Director (Generation), TPGL, Bidyut Bhaban**,** Banamalipur, Agartala -799 001.
8. GM (Transmission), TPTL, Bidyut Bhaban, Banamalipur, Agartala -799 001.
9. Executive Director (O&M), NEEPCO Ltd., Lower New Colony, Shillong-793003.
10. Regional ED (East –II), NTPC, 3rd Floor, OLIC Bldg., Pl No- N.17/2, Nayapalli, Bhubaneswar-12
11. Executive Director, NERTS, PGCIL, Lapalang, Shillong - 793006
12. Executive Director (O&M), NHPC, NHPC Office Complex, Faridabad-121003.
13. Executive Director (Marketing), PTC, NBCC Tower, 15 Bhikaji Cama, Place, New Delhi – 110066
14. Chief Engineer (GM), CEA, 6th Floor, Sewa Bhawan, R.K.Puram New Delhi-110066.
15. Engineer-in-Chief, P&E Dept., Govt. of Mizoram, Aizawl – 796 001
16. Engineer-in-Chief, Dept. of Power, Govt. of Nagaland, Kohima – 797 001.
17. Chief Engineer (TPMZ), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 1
18. Chief Engineer (WEZ), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 1
19. Chief Engineer (EEZ), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 1
20. Chief Engineer (Commercial) -cum- CEI, Deptt. of Power, Govt. of Arunachal Pradesh, Itanagar- 11
21. VP (Plant), OTPC, Palatana, P.O Udaipur, Gomati Dist., Tripura – 799105
22. GM (BD), NVVNL, Core 5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi-3
23. CGM, AEGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
24. CGM, APGCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
25. CGM, APDCL, Bijuli Bhawan, Paltan Bazar, Guwahati – 781 001
26. CGM (LDC), SLDC Complex AEGCL, Kahelipara, Guwahati-781019.
27. Head of SLDC, Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791111
28. Head of SLDC, Dept. of Power, Govt. of Manipur, Keishampat, Imphal-795001
29. Head of SLDC, MeECL, Lumjingshai, S.R. Road, Shillong-793001
30. Head of SLDC, P&E Dept., Govt. of Mizoram, Aizawl-796001
31. Head of SLDC, Dept. of Power, Govt. of Nagaland, Dimapur
32. Head of SLDC, TSECL, Agartala – 799001
33. ED, NLDC, Grid-India, B-9 (1st Floor), Qutab Institutional Area, Katwaria Sarai, New Delhi-16
34. Dy. COO, CTUIL, Plot No.2, Sector-29, Gurgaon, Haryana-122001
35. Executive Director, NERLDC, Grid-India (POSOCO), Lapalang, Shillong – 793006
36. Head, Transmission, KMTL, 7th Floor, Fulcrum, Sahar Road, Andheri (E), Mumbai-400099

Special Invitee(s):

37. Member (Power System), CEA, Sewa Bhawan, R. K. Puram New Delhi-110066.
38. Member Secretary, ERPC, 14 – Golf Club Road, Tollygunge, Calcutta – 700 033
39. Member Secretary, NRPC, NRPC Complex, 18-A, S.J.S. Marg, Katwaria Sarai, New Delhi – 16
40. Member Secretary, WRPC, MIDC Area, Marol, Andheri (E), Mumbai – 400 093
41. Member Secretary, SRPC, 29 – R.C. Cross Road, Bangalore – 560 009
42. MD, NETC, #2C, 3rd Floor, D-21, DMRC Building, Corporate Park, Sector-21, Dwarka, Delhi-77
43. CISO-MoP & Member (Hydro), CEA, Sewa Bhawan, R. K. Puram New Delhi-110066.
44. Chief Engineer (NPC), NRPC Complex, Katwaria Sarai, SJSS Marg., New Delhi – 110016
45. Chief Engineer (Power Data Management & Load Forecasting Division), CEA, 6th Floor, Sewa Bhawan, R. K. Puram, New Delhi-110066

(K. B. Jagtap)
Member Secretary

Government of India

Ministry of Power

North Eastern Regional Power Committee

RECORD NOTE OF DISCUSSION

OF

25TH TCC MEETING

&

25TH NERPC MEETING

(under the aegis of NTPC Ltd.)

Venue &Date (TCC) : Taj Bengal, Kolkata | 8th Dec.,2023

Venue &Date (NERPC) : Oberoi Grand, Kolkata | 9th Dec., 2023

A B B R E V I A T I O N

A	Amperes
ACSR	Aluminum Conductor Steel Reinforced
ADB	Asian Development Bank
ADDCAP	Additional Capital Expenditure
AEGCL	Assam Electricity Grid Corporation Limited
AGBPP	Agartala Gas Based Power Plant
AMC	Annual Maintenance Contract
AP / Ar. P	Arunachal Pradesh
APDCL	Assam Power Distribution Company Limited
AWS	Automatic Weather Station
BHEL	Bharat Heavy Electricals Limited
BNC	Biswanath Chariali
BOQ	Bill of Quantities
BgTPP/ BTPS	Bongaigaon Thermal Power Project/ Station
CBIS	Capacity Building & Institutional Strengthening
CCM	Commercial Sub-Committee Meeting
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
Ckt / ckt	Circuit
CoD/ DoCO	Date of Commercial Operation
CPRI	Central Power Research Institute
CS	Central Sector
CSST&DS-AP	Comprehensive Scheme for Strengthening of Transmission & Distribution system in Arunachal Pradesh
CT	Current Transformer
CTU	Central Transmission Utility
DAM	Day Ahead Market
D/C	Double Circuit
DDUGJY	Deen Dayal Upadhyaya Gram Jyoti Yojana
DGA	Dissolved Gas Analysis
DHEP	Doyang Hydro Electric Project
DISCOMs	Distribution Companies
DMS	Distribution Management System
DoNER	Development of North Eastern Region
DoP / DOP	Department of Power
DPR	Detail Project Report
DSM	Deviation Settlement Mechanism
E/F	Earth Fault
EHV	Extra High Voltage
EMS	Energy Management System
ERS	Emergency Restoration System

FDS	Frequency Domain Spectroscopy
FY	Financial Year
GENCO	Generation Company
GIS	Gas Insulated Substation
GNA	General Network Access
GOI	Government of India
GSS	Grid Sub Station
GST	Goods and Services Tax
GTP	Gas Turbine Plant
GW	Giga Watt
HEP	Hydro Electric Project
HVDC	High Voltage Direct Current
HPO	Hydro Power Purchase Obligation
HQ	Head Quarter
HTLS	High temperature Low Sag
ICT	Inter Connecting Transformer
IEGC	
IMD	India Meteorological Department
IPDS	Integrated Power Development Scheme
IR	Insulation Resistance
ISTS	Inter State Transmission System
JV	Joint Venture
KM / Km/ km	Kilometer
KV / kV	Kilo Volt
KWH / kwh	Kilo Watt Hour
LADF	Local Area Development Fund
LC	Letter of Credit
LILO	Loop In Loop Out
LoA	Letter of Award
LTA	Long Term Access
MeECL	Meghalaya Energy Corporation Limited
MePDCL	Meghalaya Power Distribution Corporation Limited
MePGCL	Meghalaya Power Generation Corporation Limited
MePTCL	Meghalaya Power Transmission Corporation Limited
MLHEP	Myntdu Leshka Hydro Electric Project
MNRE	Ministry of New and Renewable Energy
MOM	Minutes of Meeting
MoP	Ministry of Power
MoU	Memorandum of Understanding
MSPCL	Manipur State Power Company Limited
MSPDCL	Manipur State Power Distribution Company Limited
MTOA	Medium Term Open Access
MVA	Mega Volt Ampere

MVAR	Mega Volt Ampere Reactive
MW	Mega Watt
MYT	Multi Year Tariff
NCT	National Committee on Transmission
NE / NER	North Eastern Region
NEC	North Eastern Council
NEEPCO	North Eastern Electric Power Corporation Limited.
NERES	North Eastern Region Expansion Scheme
NERLDC	North Eastern Regional Load Dispatch Centre
NERPC	North Eastern Regional Power Committee
NERPCTP	North Eastern Regional Power Committee Transmission Planning
NERPSIP	North Eastern Region Power System Improvement Project
NERSCT	North Eastern Regional Standing Committee on Transmission
NERSS	North Eastern Region Strengthening Scheme
NERTS	North Eastern Regional Transmission System
NESIDS	North East Special Infrastructure Development Scheme
NETC	North East Transmission Company Limited
NETeST	NER Telecommunication, SCADA & Telemetry Coordination Sub-Committee
NHPC	National Hydroelectric Power Corporation Limited
NLDC	National Load Dispatch Centre
NoC	No Objection Certificate
NPC	National Power Committee
NPTI	National Power Training Institute
NTPC	National Thermal Power Corporation Limited
NVVN	NTPC Vidyut Vyapar Nigam Limited
O/C	Over Current
OCC	Operation Coordination Sub-Committee
OEM	Original Equipment Manufacturer
O&M	Operation and Maintenance
OPGW	Optical Ground Wire/Optical Fibre
OSD / O/s	Outstanding Dues
OTPC	ONGC Tripura Power Company Limited
P&ED	Power and Electricity Department
PFC	Power Finance Corporation Limited
PG/ PGCIL/ Powergrid	Power Grid Corporation of India Limited
PLCC	Power Line Carrier Communication
PLI	Performance Linked Incentive
PMO	Prime Minister's Office
POC	Point of Connection
POSOCO	Power System Operation Corporation Limited
P/S	Power Station
PSDF	Power System Development Fund
PT	Voltage (Potential) Transformer
PPA	Power Purchase Agreement
RAM	Random Access Memory
RAPDRP	Restructured Accelerated Power Development and Reforms Program
RECPDCL	REC Power Development and Consultancy Limited
RHEP	Ranganadi Hydro Electric Project
RLDC	Regional Load Dispatch Centre
RMC	Regional Met Centre
RMSE	Root Mean Square Error
RoW	Right of Way
RPC	Regional Power Committee
RPO	Renewable Purchase Obligation
RTM	Regulated Tariff Mechanism
RTU	Remote Terminal Unit
R&U	Renovation and Upgradation
SAMAST	Scheduling Accounting Metering and Settlement of Transactions in Electricity
S/C	Single Circuit
S/S / Ss	Sub Station
SCADA	Supervisory Control and Data Acquisition
SCM	Standing Committee Meeting
SHP	Small Hydro Project
SLDC	State Load Dispatch Centre
SPS	System Protection Scheme
Stg	Stage
STOA	Short Term Open Access
TBCB	Tariff Based Competitive Bidding
TCC	Technical Coordination Committee
TFA	Tower Footing Resistance
TL	Transmission Line
TLSA	Transmission Line Surge Arrester
TSECL	Tripura State Electricity Corporation Limited
TS	Transmission System
ULDC	Unified Load Dispatch Scheme
VSAT	Very Small Aperture Terminal
YTC	Yearly Transmission Charge

CONTENTS

ANNEXURES

SUMMARY RECORD OF DISCUSSIONS
25TH TECHNICAL COORDINATION COMMITTEE MEETING
&
25TH NORTH EASTERN REGIONAL POWER COMMITTEE MEETING

The 25th Meeting of the Technical Coordination Sub-Committee (TCC) and 25th Meeting of NER Power Committee meeting were held on 8th & 9th December 2023 respectively at Kolkata. The meetings were hosted by NTPC Ltd.

The list of participants is enclosed at **Annexure – I & II.**

I : PROCEEDINGS OF THE 25TH TCC MEETING

The meeting started with felicitation of all the delegates with flower bouquet by NTPC followed by traditional lighting of lamps by Shri Ginko Lingi, Chairman, TCC & CE (P), Arunachal Pradesh, Shri K. B. Jagtap, Member Secretary, NERPC, Sh. Irfan Ahmed, CE, CEA, Sh. N.S. Mondal, Member Secretary, ERPC, Sh. V.K. Singh, Member Secretary, NRPC, Sh. Deepak Kumar, Member Secretary, WRPC, Sh. H. ShantiKumar Singh, MD, MSPDCL, Sh. Ng. Subhachandra, MD, MSPCL, Shri D. Sarkar, MD, TSECL, Sh. Bibhu Bhuyan, MD, APGCL, Sh. A. Kharpan, Director(T), MePTCL, Sh. M Shangpliang, Director (D), MePDCL, Sh. M. Rymbai, Director (G), MePGCL, Smt. Debjani Dey, ED, NEEPCO, Sh. U. Kataki, ED, NERTS, Sh. S. Adhikari, ED (O&M), NHPC, Shri Amaresh Mallick, CGM (i/c), NERLDC, Sh. Harish Saran, ED, PTC India Ltd. and Shri S. M. Aimol, Director, NERPC. This was followed by welcome address by Shri P. Majumdar, Regional ED, NTPC.

Shri P. Majumdar, Regional ED, NTPC in his welcome address extended a warm welcome to all esteemed members to the 25th TCC meeting in the

beautiful City of Joy, Kolkata. He wished all the delegates a pleasant stay and fruitful deliberations in the meeting.

Shri Ginko Lingi, Chairman, TCC & CE, DOP, Arunachal Pradesh, in his address, extended a warm welcome to all esteemed members gathered for the 25th TCC meeting. He stated that NorthEastern Region, with its unique challenges and opportunities, plays a critical role in the nation's energy landscape. The TCC, comprising experts from various facets of the power industry, ensures the seamless integration and reliability of the power infrastructure. Acknowledging the dedication of the NERPC Team and professionals, he emphasized the multifaceted challenges faced, from optimizing resources to embracing renewable energy solutions. Reflecting on the resolutions from the previous meeting, he urged concerted efforts for their implementation. He expresses gratitude to NTPC for their exceptional arrangements. In conclusion, he urged the members to recommit ourselves to technical coordination, innovation, and reliability, shaping the energy landscape and contributing to the region's and nation's progress. He wished fruitful discussion and continued collaboration and success.

His full speech is placed at **Annexure – III**.

Sh. K. B. Jagtap, Member Secretary, NERPC welcomed all the delegates of the 25th TCC meeting on behalf of NERPC Secretariat. He expressed immense gratitude to NTPC for hosting the 25th TCC & 25th NERPC meetings in Kolkata and for making excellent arrangement and providing a comfortable stay for the delegates. He acknowledged the active participation of NER utilities in various meetings and outlined recent achievements, including SCADA upgradation and successful commissioning of power lines. Addressing the increasing power demand, he emphasized the need for resource planning and highlighted recent regulations by MoP/CEA/CERC. Notable points included subsidy accounting rules, financial sustainability frameworks, guidelines for pumped storage projects, IEGC Regulation 2023, and safety regulations. Stressing regulatory compliance, he urged efficient transmission planning,

citing intra-state constraints and interdependence between transmission systems. He concluded by seeking permission to discuss the agenda items.

Thereafter, Chairman, TCC requested Member Secretary, NERPC to take up the agenda items for discussion.

II : PROCEEDINGS OF THE 25TH NERPC MEETING

The 25th NER Power Committee meeting commenced with a traditional welcome and bouquets presentation to the dignitaries. This was followed by ceremonial lighting of lamps by Shri Chowna Mein, Chairman, NERPC & Hon'ble Dy. Chief Minister, Govt. of Arunachal Pradesh, Smt. Nandita Garlosa, Hon'ble Power Minister, Govt. of Assam, Sh. A. T. Mondal, Hon'ble Power Minister, Govt. of Meghalaya, Sh. K.G. Kenye, Hon'ble Power Minister, Govt. of Nagaland, Shri Ratal Lal Nath, Hon'ble Power Minister, Govt. of Tripura, Shri Balo Raja, Hon'ble MLA & Adviser (Power), Govt. of Arunachal Pradesh, Sh. K. B. Jagtap, Member Secretary, NERPC and Sh. J. Srinivasan, Director (Finance), NTPC.

Shri J. Srinivasan, Director (Finance), NTPC delivered the welcome address. In his brief address, he extended warm welcome to all the delegates in the 25th Meeting of the North East Regional Power Committee at beautiful city of Kolkata. He expressed hope that all the participants are having comfortable stay at the venue.

Smt. Nandita Garlosa, Hon'ble Power Minister of Assam, expressed appreciation at convening the meeting in Kolkata to discuss comprehensive plans for the development of the power sector in the North Eastern region. Acknowledging the challenges of transmission network expansion in the region's challenging terrain, she commended the efforts of both central and state transmission licensees. The Minister highlighted the state's ambitious plans for grid substations and associated transmission systems to meet growing electricity demand, emphasizing the need for supportive collaboration within the NERPC platform. Smt. Nandita Garlosa also addressed specific

issues, including the revival of a defunct transmission circuit and the importance of resolving pricing intricacies for sustained gas-based power generation. She thanked all participants, government officials, and power utilities for contributing to the success of the meeting, extending special gratitude to NTPC for hosting it effectively.

Her full speech is placed at **Annexure – IV**.

Shri A. T. Mondal, Hon'ble Power Minister, Govt. of Meghalaya, in his address expressed gratitude to the Chairman, NERPC, and the Hon'ble Deputy Chief Minister of Arunachal Pradesh for the invitation to the 25th NERPC meeting, hosted by NTPC Ltd. The region, with its challenges, held significant potential for contributing to the country's growth, particularly in the power sector. He exuded hope and confidence that informed decisions will be taken in NERPC forum, emphasizing the region's hydro and thermal generation potential. Despite challenges, milestones were achieved, such as synchronizing the Ganol Small Hydro Project by Govt. of Meghalaya. On transmission, the importance of early project completion and addressing right-of-way concerns was stressed, along with the crucial need for Downstream Lines and Substations for power evacuation. In distribution, Meghalaya aimed to strengthen rural networks, reduce losses, and adopt smart metering initiatives, emphasizing financial constraints and the need for optimal funding for a robust regional power system. The Hon'ble Minister also emphasized the need for capacity building to ensure that the workforce stayed abreast of technological advancements, working collaboratively for sector development.

Full text of the speech of Hon'ble Power Minister, Govt. of Meghalaya is placed at **Annexure – V**.

Shri K. G. Kenye, Hon'ble Power Minister, Govt. of Nagaland, addressed the 25th NERPC meeting. The Hon'ble Power Minister of Nagaland expressed gratitude to the Chairman, NERPC, and participants, emphasizing the importance of unity among North Eastern States. He highlighted the

challenges faced by the under-developed region, including poor logistics, remote terrain, and a limited working season. Addressing specific concerns, he urged the forum to present practical realities to the Central Government, advocating for Viability Gap Funding or Preferential Financing for projects in the NE region. The Minister discussed issues related to the Revamped Distribution Sector Scheme, SCADA/EMS upgradation, and the establishment of a training center, seeking support for expedited funding and implementation. He also emphasized the need for cooperation among states and agencies for the timely execution of projects and proposed solutions to address common problems in the NE Region. He concluded with optimism for a fruitful and positive outcome from the meeting.

Full text of the speech of Hon'ble Power Minister, Govt. of Nagaland is placed at **Annexure – VI**.

Shri Ratal Lal Nath, Hon'ble Power Minister, Govt. of Tripura conveyed gratitude to Chairman, NERPC Shri Chowna Mein and all participants for the opportunity given to him to address the 25th NERPC meeting. He thanked NERPC for organizing the 25th NERPC meeting under the aegis of NTPC Limited. Acknowledging the unique challenges faced by the North Eastern Region, he emphasized the need for collective efforts and recommended viability gap funding for projects. The Hon'ble Minister appreciated the Government of India's support and discussed initiatives in clean energy. He also highlighted ongoing projects like NERPSIP and collaborations with ADB. He commended the focus on distribution sector improvement, cyber security, and proposed future projects. Expressing optimism for positive outcomes, he thanked NTPC for organizing the meeting and concluded with best wishes for the continued enhancement of the power sector in the NE Region.

Full text of the speech of Hon'ble Power Minister, Govt. of Tripura is placed at **Annexure – VII**.

Shri Chowna Mein, Chairman, NERPC & Hon'ble Dy. Chief Minister, Govt. of Arunachal Pradesh, addressed the 25th NERPC meeting in Kolkata. He extended a warm welcome and expressed gratitude to NTPC for hosting the event. Reflecting on progress since the last meeting, he highlighted key areas for discussions on the power sector's resilience and preparedness, including disaster management plans and proactive measures. The Chairman also acknowledged important schemes under implementation, emphasizing the Guwahati Islanding Scheme and SCADA/EMS upgradation. He urged the exploitation of hydro potential for green power generation and addressed challenges faced by the North Eastern Region. The Chairman stressed the need for revamped distribution sector schemes, highlighted issues of commercial sustainability, and called for resolving gas supply shortages for NER gas plants. Specific challenges in the power scenario of Arunachal Pradesh were also highlighted, along with proposals for strengthening the inter-state transmission system. In conclusion, the Chairman expressed confidence in meaningful deliberations contributing to the region's progress, extending appreciation to NTPC and NERPC Secretariat for their roles in organizing the event.

Full text of the speech of Hon'ble Dy. Chief Minister, Govt. of Arunachal Pradesh & Chairman, NERPC is placed at **Annexure – VIII**.

Shri K. B. Jagtap, Member Secretary, NERPC welcomed and expressed gratitude to all delegates for their participations. He highlighted the successful convening of the meeting, emphasizing the importance of decisions for the national interest and the North Eastern Region in particular. Appreciating NTPC's hosting efforts, he credited them for their hospitality. He informed about the achievements made since the last NERPC meeting, which includes SCADA/EMS upgradation PSDF funding for NER State, progress on the Guwahati Islanding Scheme and initiation of new islanding scheme for Itanagar and review of Tripura Islanding scheme. He outlined recent additions to the NER power grid, improvements in the protection system and formation of Protection system analysis group, disaster management group for NER. Addressing challenges, he stressed the need for coordinated efforts to resolve

operational constraints and preparedness for increased demand. Appreciating all delegates for their commitment, he anticipated success through active participation. The address of Member Secretary, NERPC is placed at **Annexure – IX**.

After this Chairman, NERPC requested Member Secretary, NERPC to take up the agenda for discussion.

The meeting concluded with the vote of thanks by **Shri S. M. Aimol, Director, NERPC**.

1. SCHEDULE

SN	Meeting	Date	Time	Venue
1	TCC	08.12.2023	10:30 Hrs	Taj Bengal, Kolkata
2	NERPC	09.12.2023	11:00 Hrs	The Oberoi Grand, Kolkata

2. CONFIRMATION OF THE MINUTES OF 24th TCC MEETING & 24th NERPC MEETING

The minutes of the 24th TCC meeting & 24th North Eastern Regional Power Committee (NER Power Committee) meetings held on 27th June, 2023 & 28th June, 2023 respectively at Tawang, Arunachal Pradesh were circulated vide letter no. NERPC/OP/Committee/ 2022/*1332-1408* dated 24th July 2023.

No comments or observations were received from constituents.
The TCC and NER Power Committee confirmed the minutes of the 24th TCC & 24th NER Power Committee meetings.

ARRANGEMENT OF AGENDA OF THE 25TH NERPC MEETING:

SN	DESCRIPTION	CATEGORY
1	ITEMS FOR DISCUSSION	A
2	ITEMS FOR APPROVAL	B
3	COMMERCIAL ISSUES	C
4	ITEMS FOR INFORMATION	D
5	ITEMS RECOMMENDED TO BE REFERRED TO THE SUBCOMMITTEES/CMETS/PSDF ITEMS	E

1. CATEGORY - A : ITEMS FOR DISCUSSION

ITEM NO. A.01 : ALLOCATION OF GAS TO OTPC PALATANA STATION: TSECL

MOP has allocated OTPC power to all beneficiary of NER.As per allocation, Tripura was allocated for 196 MW but presently getting only 125 to 130 MW. TSECL buys power for consumption of its consumers from various entities like NEEPCO, NHPC, NTPC, OTPC and various own generation. Power supply obligations of TSECL have gone up considerably due to the supply of power to Bangladesh as per the terms of agreement between India and Bangladesh. The power market prices are also too high due to unavailability of power in the market. NE region presently facing huge demand. Power is not available in the summer in the DAM as well as RTM market also. In this critical period sometimes BGTPP, OTPC, Monarchak generates less due to Coal and Gas shortage. NERPC/NERLDC has taken the BGTPP matter seriously.

OTPC Palatana is one of the most economical and reliable projects for NER and Tripura state has been regularly requesting more power from Palatana in various forums of NERPC. However, due to various reasons OTPC has not been able to provide higher than the allocated quota of TSECL. As such energy needs of TSECL as well as other NER states shall be somewhat satisfied if Palatana generates more power.

In such a scenario, it would be prudent if economical and efficient plants like Palatana can be assured higher fuel gas supply so that the competitive power can be availed by NER discoms like TSECL & others. This matter of making available higher fuel gas supply to Palatana has been discussed earlier in NERPC forums and was supported by several delegates due to economic power and high efficiency machines being available at Palatana.

In view of the above, TSECL request the forum to consider supply of higher quantum of fuel gas to OTPC Palatana station so that it can provide higher allocated contracted capacity of its beneficiaries. TSECL also requests the forum to take up the matter with CEA/MOP for necessary directions to the

Fuel supplier.

The matter was deliberated in 208th OCC and referred to TCC/RPC for further deliberation.

Deliberation of TCC: Following a thorough deliberation, the forum noted the importance of addressing the issue of low gas supply to OTPC to ensure adequate power availability for NER States. It was recommended that NERPC would take up the matter to MoP/CEA for further action.

Deliberation of RPC: A formation of a Power Ministers' Forum of NER States was mooted in the meeting to discuss and address the challenges thwarting the development of power sector in North Eastern Region. However, it was agreed by the Power Ministers present in the meeting that the issue may be taken up separately among themselves.

To address the issue of low gas supply to OTPC, RPC forum decided that NERPC will take up the matter with MoP/CEA as suggested by the TCC forum.

ITEM NO. A.02 : TARIFF OF LOWER SUBANSIRI HEP OF NHPC: TSECL

It is expected that Subansiri Lower HEP 2000MW of NHPC in Arunachal Pradesh is in under advance stage of execution and expected commissioning of first 2 (Two) units are to be in the month of January/February, 2024. The expected generation from Subansiri HEP is far beyond its declared (Scheduled) commissioning time for which the tariff may be (have been) increased. Hence,

TSECL requests NHPC to inform the suitable tariff of the project so that Beneficiaries can review the same.

Deliberation of TCC: NHPC provided information that, in the current scenario, the levelized tariff for the Lower Subhansiri Hydro Electric Project (HEP) stands at Rs. 5.6 per unit. Regarding the commissioning timeline, NHPC mentioned that this matter would be deliberated in the RPC meeting.

Deliberation of the RPC: Director (Technical), NHPC intimated the forum that unit 1 and 2 were scheduled to be commissioned in February'24 and

March'24 respectively. However, due to geological events the commissioning schedules may likely be postponed by three to four months. He however stated that all the units of the project (8x250 MW) will be positively commissioned by May 2025.

He further informed that the project is funded through 30% equity and 70% loan. Due to stalled work for reasons beyond their control and geological challenges, execution time have increased and thus increased in establishment cost and maintenance cost etc which has effects on tariff of the project.

Hon'ble Power Minister of Meghalaya suggested if the forum can request for waiver of loan to which NHPC clarified that loans were taken from various lenders and it would be difficult to ask for the waiver.

After further deliberation, the forum decided that matter of loan waiver needs to be taken by State directly to Ministry of Power.

RPC noted as above.

ITEM NO. A.03	**:**	**RESTORATION OF 220KV MARAINAI-SAMAGURI CKT 1 BY AEGCL ON PRIORITY TO ADDRESS REDUCTION/CURTAILMENT OF GENERATION IN UPPER ASSAM AREA: NERLDC**

Upper Assam Gate flow is monitored and controlled in real time by backing down generation in Upper Assam System, under any shutdowns of tie lines connecting Upper Assam with the rest of the Grid.

Upper Assam Gate consists of:

- 220 kV Mariani (AS) –Samaguri II
- 220 kV AGBPP – New Mariani (PG)
- 220 kV Mariani – New Mariani (PG)
- 132 kV Mariani - Golaghat

Considering N-1 reliability gate flow limit is 320 MW

Name	**Installed Capacity**
AGBPP	291

LTPS	97.2
NTPS	64.5
LRPP	69.8
NRPP	98.5
Amguri (Jakson)	70
Total Installed Capacity	691 MW
Typical Generation	380-420 MW

Typical Load of Upper Assam System:

- 180 MW (Off-Peak)
- 357 MW (Peak)

In 24th TCC/RPC meeting, AEGCL representative updated that the survey is underway for rerouting the 1st circuit along the 2nd circuit to utilize the existing corridor of ckt2. The tentative commissioning schedule for the line will be within 2 years' time.

AEGCL/SLDC, Assam is requested to update the status/progress for commissioning of 220 kV Samaguri – Mariani 1.

Deliberation of TCC: CGM, AEGCL conveyed that the detailed survey for the alternative route would be concluded within 3-4 months, followed by the preparation of estimates. The commissioning of the line is anticipated to take a minimum of three years.

Deliberation of the RPC: CGM, AEGCL reiterated that circuit 1 will be routed along ckt II due to forest clearance issues and the detailed survey would be concluded within 3-4 months. He further stated that commissioning of the circuit will take upto 3 years.

The RPC forum decided that the issue may be monitored in the Subcommittee meeting on regular basis.

RPC noted as above.

ITEM NO. A.04	**:**	**RE-CONDUCTORING OF 4 NOS OF 132 KV TRANSMISSION LINES IN TRIPURA POWER SYSTEM: NERLDC**

At present, the power carrying capability of the below 4 lines leads to requirement of reduction of Bangladesh and Tripura loads under the condition of outage of any of the below lines.

a) 132 kV Surajmaninagar (Sterlite) – Surajmaninagar (TSECL) line,
b) 132 kV Surajmaninagar (Sterlite) – Bodhjungnagar (TSECL) line,
c) 132 kV PK Bari (Sterlite) – PK Bari (TSECL) line,
d) 132 kV PK Bari (Sterlite) – Ambassa line

TSECL may update the status of re-conductoring of the 4 nos of above 132 kV Transmission lines.

***Deliberation of TCC**:* GM (TPTL) stated that the project has been delayed because proposal of T&P has not been accepted by PSDF. TPTL requested the forum to take up with PSDF to agree for consideration of 1 set of T&P under PSDF, along with the upgradation of the line.

***Deliberation of RPC*:** GM(TPTL) stated that as reconductoring is of special type of conductor, inclusion of T&P is necessary. He requested the forum to recommend to PSDF for consideratioin of atleast 1 set of T&P under PSDF, along with upgradation of the line.

RPC noted and recommended to consider 1 set of T&P under PSDF for TPTL.

ITEM NO. A.05	**:**	**EARLY COMMISSIONING OF 400/132 KV SURAJMANINAGAR (TSECL) S/S: NERLDC**

The status of JV formation has been monitored in various subsequent meetings such as OCC, CMETS etc. However, the issue is still pending.

TSECL is requested to intimate the timeline for commissioning of 400/132 kV Surajmaninagar (TSECL) S/s.

***Deliberation of TCC**:* GM (TPTL) provided information that the government has granted in-principle approval for the upgrade of Surajmaninagar S/S to 400 kV. Additionally, he mentioned that the fund tie-up process is currently

underway, and subsequent to its completion, the tendering process will commence.

Deliberation of RPC: Hon'ble Power Minister, Tripura assured the forum that the upgradtion of Surajmaninagar (TSECL) S/S from 132kV level to 400kV level will be completed at the earliest possible time.

RPC noted as above.

ITEM NO. A.06	**:**	**RESTORATION OF LONG PENDING PASHIGHAT-ROING 132KV TRANSMISSION LINE OF POWERGRID: ARUNACHAL PRADESH**

Due to erosions of foundation of one of the towers between Roing and Pashighat on the bank of Dotum River in Dibang valley collapsed in the month of April in 2020 amidst corona pandemic. The line was temporarily restored via ERS system then the matter was discussed on many occasions in Operation Coordination Meeting of NERPC. Powergrid has been promising of restoring the line in so many meetings where the issue was discussed. The matter is still remaining as unresolved issue in the OCC forum. Now, therefore it has become necessary to discuss this outstanding serious problem in the TCC forum. The location is in a flood prone area and therefore it becomes precarious in every successive monsoon.

The matter may be accordingly discussed.

Deliberation of TCC*:* CGM (AM), NERTS has informed that there was some issue with award of the contract, however the re-tendering has been done now. He further assured that the line will be restored on permanent basis by April 2024.

Deliberation of RPC: ED, NERTS intimated the forum that re-tendering had done due to some issues with the original contract. NERTS further informed that pile foundation for location no.214 will be completed by December 2023 and open cut foundation for location no. 212 will be completed by March 2024. NERTS assured that the line will be restored on permanent towers along with OPGW stringing by end of April, 2024.

RPC noted as above.

ITEM NO. A.07 : CHAIRMANSHIP OF NERPC FOR FY 24-25

Deliberation of TCC: Tripura stated that Tripura Chairmanship was supposed to be from 1st April 2022 to 31st March 2023. However, Chairmanship of Tripura commenced from July 2022 as the earlier tenure of Nagaland continued till June 2022 after due deliberation and discussion of the RPC. In view of above, Tripura would like to request that Tripura may be allowed the opportunity to hold the chairmanship for FY 24-25.

Deliberation of RPC: After detailed deliberation the forum noted that the term of chairmanship of Tripura (FY 2022-23) was cut short by around three months due to unavoidable circumstances. However, in order to maintain the continuity, the forum decided that the chairmanship will be transferred to Assam for FY 2024-25, as per extant guidelines.

2. CATEGORY - B : ITEMS FOR APPROVAL

ITEM NO. B.01 : RECONDUCTORING REQUIREMENT OF 132KV NEHU-NEIGHRIEMS -KHLIEHRIAT LINE: MEPTCL (205TH OCCM)

132KV NEHU-NEIGHRIMS – Khliehriat S/C line has been in service since 1991 and with ageing, the ACSR Panther conductor deployed has become very brittle along with insulation deterioration. This line, along with 132 KV NEHU-Mawlyndep-Mustem-Khliehriat S/C line, provides the only flow gate with NER 132 KV pocket.

Besides, this corridor caters to evacuation of the existing 126 MW generation of MyntduLeshka power station towards Shillong load center. In the event of outage of 132 KV NEHU-Mawlyndep-Mustem-Khliehriat S/C line, N-1 redundancy is almost violated and considering the ageing of 132KV NEHU-NEIGHRIMS – Khliehriat S/C line, reconductoring with a higher current carrying capacity conductor would be required to cater to the increased power flow and demand in the coming years.

The approval of the forum is, therefore, requested for reconductoring of 132KV NEHU-NEIGHRIMS – Khliehriat S/C line with a higher current carrying capacity conductor on the existing towers for which funding through PSDF can be sought.

In 205th OCCM, NERLDC stated that Meghalaya SLDC has done related system study and NERLDC concurs with the findings of the study. Further, NERLDC suggested that SLDC Meghalaya should also consider requirement of reconductoring of other circuit, i.e. 132kV NEHU-Mawlyndep-Mustem-Khliehriat S/C line.

After detailed deliberation, the forum recommended reconductoring of 132KV NEHU-NEIGHRIMS–Khliehriat S/C line along with end equipment with a higher current carrying capacity conductor on the existing towers and referred the matter to TCC/RPC meeting for approval.

Deliberation of the TCC **:** *TCC noted and recommended for the approval of RPC*

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.02 : RECONDUCTORING OF INTRA-STATE LINES: MEPTCL (208TH OCCM)

MePTCL had sent Load flow studies to NERPC and NERLDC for vetting in respect of HTLS Reconductoring of the following lines to be funded under PSDF:

1.132kV Khliehriat(PG) – Khliehriat line II

2.132kV Umiam stg I -Mawlai line

3.132kV Umiam stg I – Umiam - NEHU line

4.132kV NEHU -Mawlai Line

In line with separate deliberation between NERPC/NERLDC and as stated by Meghalaya SLDC, vetting of RPC forum is required. Therefore it was requested to approve HTLS reconductoring of the above lines.

In the 208th OCCM, NERLDC stated that the study report, as provided by MePTCL, has been vetted and the same supports the requirement of HTLS reconductoring of the mentioned lines. After due deliberation, the forum agreed for the requirement of HTLS reconductoring of the lines.

The same is put up for approval of the TCC/NERPC.

Deliberation of the TCC **:** *TCC noted and recommended for the approval of RPC*

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.03 : EMERGENCY RESTORATION SYSTEM (ERS) FOR INTRA-STATE EHV LINES: TPTL (208TH OCCM)

The most important aspect of a transmission line is to provide continuous and reliable power. In Tripura, it has been experienced that there are outages

of substation/ Generating Station/ EHV element /s due to natural calamities. The high wind velocity during storm, cyclone and local phenomenon of whirlwind, etc., might have exceeded the wind speed for which the tower is designed. This type of wind is difficult to predict. These disasters cause extensive damage to transmission networks resulting in wide spread disruption of many important transmission links and substations affecting power supply for long periods due to the time taken in restoration.

Under such adverse situations, the availability of an effective mechanism for emergent restoration of transmission lines the shortest possible time is of utmost importance. Immediate and temporary restoration of transmission networks is possible by deploying the "Emergency Restoration Systems (ERS)." Grid Standards notified by the Central Electricity Authority (CEA) stipulate that every Transmission Licensee shall have an arrangement for restoration of transmission lines through the use of ERS.

Emergency Restoration System a temporary structure are designed to bypass the existing transmission towers of any voltage in any terrain. It is a proven technique to deal with disaster management in the transmission sector.

The transmission network of Tripura is of 132 KV level. In view of above, to meet the exigencies in case of natural calamities for restoration in the existing transmission network, 1 (One) set of Emergency Restoration Systems (ERS) at 132 kV level is proposed for the state.

NERLDC & NERPC also stressed the need for Emergency Restoration Systems (ERS) in various forums. Cost Estimates along-with Detail Project Report (DPR) of the proposal will be submitted for exploring funding of the project.

The agenda was discussed in the 208th OCC meeting and the forum recommended for approval of the TCC/NERPC forum.

Deliberation of the TCC **:** *TCC noted and recommended for the approval of RPC*

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.04 : PREVENTIVE SHIFTING OF TOWERS IN PILE FOUNDATION DUE TO MASSIVE & WAYWARD EROSION OF RIVER IN NORTH EASTERN REGION: NERTS (205TH OCCM & 49TH CCM)

Recently, in Northeastern Region, it is observed that some of river stretches suffering unpredictable and wayward erosion for which every year some of towers of different transmission lines become endangered and prone to collapse. It is to be mentioned that such situation is prevailing in Dikrong river for which every alternate year tower collapse was encountered for 400kV Ranganadi – Balipara D/C Line till 2015. To arrive in permanent solution, the issue was deliberated in 111th OCC Meeting for preventive shifting of 10 nos. of tower from open cast foundation to pile foundation, which was subsequently, approved in 15th NERPC Meeting with financial implication of Rs. 22.00 Crores on POC Mechanism. Accordingly, preventive shifting to pile foundation was done and issue of tower collapse could be resolved permanently.

In accordance to above, POWERGRID, NERTS assessed vulnerability of some more towers in different river stretches of the Region detailed below where erosion is un-predictable and similar action is required for stable operation of Transmission Lines.

SN	LINE	RIVER	AREA	TOWER NO.
1	132 kV S/C Salakati - Gelephu TL.	Deosiri	Shantipur, Chirang, Assam	123 & 121
2	132 kV S/C Roing - Pashighat TL	Siang	Arunachal Pradesh	153, 154, 155 & 156
3	220 kV S/C Misa - Kopili TL	Kopili	Kopili, Dima-Hassao, Assam	002
4	400 kV D/C Balipara - Bongaigaon ckt 1&2 TL.	Nonoi	Tangla, Udalguri, Assam	305
5	400 kV D/C Balipara - Bongaigaon ckt 1&2 TL.	Mara pagladia	Barama, Baksa, Assam	458 & 459
6	400 kV D/C Binaguri - Bongaigaon TL.	Anthihara	Gorufella, Kokrajhar, Assam	90

7	400 kV D/C BNC-Ranganadi TL.	Chatrang	Gohpur, Assam	174
8	400 kV D/C Misa - Mariani TL	Manjha	Manjha, Karbi-Anglong, Assam	822 & 844
9	400kV D/C Alipurduar – Jigmilling Line	Hell	Dotma, Kokrajhar, Assam	260
10	400 kV D/C Balipara - Bongaigaon ckt 3&4 TL.	Belsiri	Upper Benchimari, Sonitpur, Assam	126
11	800KV HVDC BNC-Agra Line	Pasnoi	Gejenga-guri, Sonitpur, Assam	276
TOTAL NO. OF TOWERS =				17 NOS.

The tentative rate for different voltage class of tower will be approximately as below:

SN	Voltage	Cost of Pile Shifting (In Rs. Lakhs)			Total Cost (In Rs. Lakhs)	Remarks, If any
		Foundation	Tower Cost	Execution		
1	132 KV HVAC	200	11.08	21.25	232.33	
2	220 KV HVAC	250	16.68	26.28	293.36	
3	400 KV HVAC	300	40.63	47.99	388.62	
4	800 KV HVDC	325	43.00	50.00	418.00	
NOTE: Execution cost inclusive of Survey, Soil investigation, Dismantling and Erection, De-stringing, and re-stringing, ERS shifting etc. etc.						

Accordingly, approximate expenditure is calculated as below:

SN	VOLTAGE CLASS	NO. OF TOWERS (In Nos.)	RATE (In Rs. Lakh)	AMOUNT (In Rs. Lakh)	REMARKS
1	132 KV HVAC	6	232.33	1393.98	
2	220 KV HVAC	1	293.36	293.36	
3	400 KV HVAC	9	388.62	3497.58	
4	800 KV HVDC	1	418.00	418.00	
TOTAL =				5602.92 Lakhs (Say 57 Crores)	
RUPEES FIFTY-SEVEN CRORES ONLY					

Agenda was discussed in 205th OCC meeting wherein the forum accorded in-principle approval and referred to CCM.

Agenda was discussed in 49th CCM wherein the forum accorded the approval with cost booking in POC mechanism and forwarded the proposal for approval of TCC. [Item no. C.7 of 205th OCC and 6.5 of 49th CCM]

Deliberation of the TCC **:** *TCC noted and recommended for the approval of RPC*

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.05	**:**	**STRINGING OF NEW 132KV S/C LINE ON D/C TOWERS FROM TAMENGLONG TO KARONG ALONG WITH THE ASSOCIATED LINE BAYS: MSPCL**

The execution of the above work with possible funding from PSDF or other funding agencies was proposed in the 24th TCC and NERPC meetings held on the 27th & 28th of June 2023 respectively at Tawang, Arunachal Pradesh. However, the forum deliberated that the item is to be first discussed in Sub-Committee meeting(s) for detailed study and was therefore referred to the Sub-Committee (s) of NERPC.

Hence the same agenda was discussed in several OCC meetings with NERLDC studying the effect of 132kV Karong-Tamenglong and 132kV Karong-Hundung lines on the Manipur grid. After due deliberation in the 207th OCC Meeting held on the 17th of October, 2023 at Guwahati the forum in-principal agreed to the proposal of stringing of 132kV Tamenglong- Karong and 132kV Karong-Hundung lines in 2030-31 timeframe. Also, the matter will be referred to CMETS for further discussion and approval.

Considering the above facts and circumstances, the committee may kindly approve the stringing of new 132kV line from Tamenglong to Karong.

TCC may kindly deliberate the request of MSPCL and approve the proposal for execution with possible funding from PSDF or other funding agencies, in the interest of NER Grid security and smooth supply management of Manipur.

CTU vide mail to NERPC dt. 24/11/2023 stated: quote *"Intra state transmission system strengthening requirement of North Eastern States and Sikkim by the year 2030" Report prepared by CEA (Feb 2023 version) inter alia has following lines for strengthening of transmission system in Tamenglong, Karong, and Hundung areas in Manipur:*

1. Tamenglong- Karong 132 kV S/c line-70 km

2. 2nd circuit stringing of Rengpang-Tamenglong 132 kV S/c on D/c lines-30 km

3. LILO of Imphal-Dimapur 132 kV line at 132 kV Karong S/s by HTLS-6 km

4. 132 kV Yaingangpokpi-Hundung 2nd circuit stringing-30 km

In view of the above, it is prudent that intra-state strengthening scheme proposed by MSPCL viz. Karong - Tamenglong and Karong - Hundung 132kV lines may be taken up with CEA for deliberation/approval. CTU can assist CEA & MSPCL for carrying out system studies for future time-frame, as per requirement.

Further, as the proposed Karong - Tamenglong and Karong - Hundung 132kV lines which are purely intra-state in nature and also not connected to ISTS would not be taken up in CMETS-NER for deliberations." unquote.

In view of above, put up to TCC/RPC for approval.

Deliberation of the TCC **:** *TCC noted and recommended for the approval of RPC*

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.06	**:**	**STRINGING OF NEW 132KV SC LINE ON DC TOWER FROM KARONG TO HUNDUNG ALONG WITH ASSOCIATED BAYS: MSPCL**

The execution of the above work with possible funding from PSDF or other funding agencies was proposed in the 24th TCC and NERPC meeting held on the 27th & 28th of June 2023 respectively at Tawang, Arunachal Pradesh. However, the forum deliberated that the item is to be first discussed in Sub-

Committee meeting(s) for detailed study and was therefore referred to the Sub-Committee(s) of NERPC.

Hence the same agenda was discussed in several OCC meetings with NERLDC studying the effect of 132kV Karong-Tamenglong and 132kV Karong-Hundung lines on the Manipur grid. After due deliberation in the 207th OCC Meeting held on the 17th of October, 2023 at Guwahati, the forum in-principal agreed to the proposal of stringing of 132kV Tamenglong- Karong and 132kV Karong-Hundung lines in 2030-31 timeframe. Also, the matter will be referred to CMETS for further discussion and approval.

Considering the above facts and circumstances, the committee may kindly approve the stringing of new 132kV line from Karong to Hundung.

TCC may kindly deliberate the request of MSPCL and approve the proposal for execution with possible funding from PSDF or other funding agencies, in the interest of NER Grid security and smooth supply management of Manipur.

CTU vide mail to NERPC dt. 24/11/2023 stated: quote "*Intra state transmission system strengthening requirement of North Eastern States and Sikkim by the year 2030" Report prepared by CEA (Feb 2023 version) inter alia has following lines for strengthening of transmission system in Tamenglong, Karong, and Hundung areas in Manipur:*

1. Tamenglong- Karong 132 kV S/c line-70 km

2. 2nd circuit stringing of Rengpang-Tamenglong 132 kV S/c on D/c lines-30 km

3. LILO of Imphal-Dimapur 132 kV line at 132 kV Karong S/s by HTLS-6 km

4. 132 kV Yaingangpokpi-Hundung 2nd circuit stringing-30 km

In view of the above, it is prudent that intra-state strengthening scheme proposed by MSPCL viz. Karong - Tamenglong and Karong - Hundung 132kV lines may be taken up with CEA for deliberation/ approval. CTU can assist CEA & MSPCL for carrying out system studies for future time-frame, as per requirement.

Further, as the proposed Karong - Tamenglong and Karong - Hundung 132kV lines which are purely intra-state in nature and also not connected to ISTS would not be taken up in CMETS-NER for deliberations." unquote.

In view of above, put up to TCC/RPC for approval.

Deliberation of the TCC **:** *TCC noted and recommended for the approval of RPC*

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.07 : NERPC SECRETARIAT BUDGET ESTIMATES (BE) FOR FY 2024-25 AND ANNUAL CONTRIBUTION TOWARDS "NERPC SECRETARIAT ESTABLISHMENT FUND" FOR FY 2024-25: NERPC

The proposed BE for FY 2024-25 is placed below:

Sub-Head/Minor Head/Name of Scheme	**Proposed Budget Estimates 2024-25 (in thousands INR)**	**Remarks**
Salary	**0**	Budget for Salary would continue to be provided by CEA/MoP
Medical (MED)	**1000**	
Domestic Travelling Alowances	**2500**	
Fuels and Lubricants	**500**	
Printing Publication	**60**	
Advertising and Publicity	**250**	
Professional Services	**10**	
Office Expenditure	**10000**	

Minor Work	**6000**	NERPC Complex is not under any annual maintenance contract. Budget includes estimates as per CPWD, Shillong for Annual Electrical Maintenance & Annual Civil Maintenance. And other Minor works for Office Complex
TOTAL	**20320.000**	

The actual contribution amount towards FY 2024-25 will be intimated by NERPC Secretariat separately, after adjusting unspent amount (if any) from current FY 2023-24, post reimbursement to CEA for the budget already provided during FY 2023-24.

Put up for approval of the TCC/RPC.

Deliberation of the TCC **:** *TCC noted and recommended for the approval of RPC*

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.08 : INSTALLATION OF TRANSMISSION LINE SURGE ARRESTOR: TPTL

Tripura's vulnerability to lightning and thunder strikes is of moderate to high intensity. The lightning strike injects a current into the power system when it hits a transmission line. There have been several incidents of tripping of intra-state transmission lines due to severe thunder strikes resulting in puncture of insulators etc. which has caused major disruption in Tripura power system and disturbances in intra-state grid.

In order to arrest tripping of 132kV Transmission lines of NER during lightning; installation of TLSA was explored. Line surge arresters are designed to arrest surges and prevent ground faults and short circuits in power lines caused by lightning or switching over voltages.

SLDC, Tripura maintains record of lines frequently tripped due to thundering.

Those lines are required to be included for installation of Surge Arrestor.

Installation of Transmission Line Surge Arrester are to be implemented on a Pilot Project basis in the following EHV line sections being frequently tripped due to thundering:

i) 132 KV Agartala (79 Tilla) – Rokhia Double circuit Transmission line.

ii) 132 kV Udaipur – Monarchak Transmission line.

Cost Estimate along-with Detail Project Report (DPR) of the proposal will be submitted for exploring funding of the project.

In the 208th OCC meeting, the subcommittee in-principle recommended for approval of TCC/RPC with the remarks that TSECL may furnish more details about the no. of lightning incidences, Tower Footing Resistance to quantify number of TLAs, cost estimate etc.

Put up for the deliberation and approval of TCC forum.

Deliberation of TCC: TPTL submitted a report comprising details of tower footing resistance etc. It was recommended that wherever tower footing resistance is higher than regulatory standard, the TLSA to be installed and according recommended for RPC approval.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.09 : MOBILE SUB-STATION FOR EMERGENCY RESTORATION OF EHV SYSTEM: TPTL

In Tripura, it has been experienced that there are outages of substation/ Generating Station/ EHV element /s due to natural calamities. These disasters cause extensive damage to transmission networks resulting in wide spread disruption of many important transmission links and substations affecting power Supply for long periods due to the time taken in restoration.

For restoration of EHV systems in time, insurmountable constraints is faced like tough terrain, poor response from vendors for supply & services especially in remote locations within stipulated period.

Under such adverse situations, the availability of an effective mechanism for emergent restoration of transmission lines the shortest possible time is of utmost importance. Immediate and temporary restoration of transmission networks is possible by deploying the "Emergency Restoration Systems (ERS)." Grid Standards notified by the Central Electricity Authority (CEA) stipulate that every Transmission Licensee shall have an arrangement for restoration of transmission lines through the use of ERS.

In view of above, mobile substation may be kept available where the affected station (suffering outage) in part can be bypassed under urgency and Incoming & Outgoing transmission lines be directly connected/ terminated to transmission line towers through the mobile station solution) till the main station is restored to its shape.

The transmission network of Tripura is of 132 KV level. Hence, the Mobile substation with bay modules is proposed to be procured for emergency restoration of 132kv Intra-state EHV System pertaining to the state Tripura.

NERLDC & NERPC also stressed the need for mobile substation in various forums.

Cost Estimate along-with Detail Project Report (DPR) of the proposal will be submitted for exploring funding of the project.

The agenda is hereby placed before the 25th TCC meeting & 25th NERPC meeting for consideration and approval.

Deliberation of TCC: After detail deliberation, the forum recommended for approval of RPC to be implemented by TSECL from their own resource/fund. The forum recommended for the approval of RPC.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.10	**:**	**BUILDING CONSTRUCTION AND ASSOCIATED INFRASTRUCTURE REQUIREMENTS FOR ESTABLISHMENT OF BACKUP SLDC AT TRIPURA UNDER ULDC PHASE-III IN NORTH EASTERN REGION.: TPTL**

The ongoing SCADA-EMS system of Tripura SLDC was established under ULDC Phase-2 scheme during period of 2014-2016 with M/s GE T&D India Limited as the Contractor and all these systems at SLDC are near to its life-cycle completion. Most of the hardware and software systems are obsolete and getting its support from OEMs is proving difficult with time. SLDC has already completed seven (07) years AMC cycle. Considering round-the-clock operations of SCADA-EMS systems at SLDC, the associated systems need to be upgraded/replaced at the earliest.

As per letter ref. NLDC-PSDF/21st MoCo/2023-24/ dated 18th October 2023, the PSDF Secretariat at NLDC (Grid-India) informed that Monitoring Committee of PSDF has agreed for the funding of SCADA/EMS project (incl. AMC) for the seven (07) NER states and has directed TESG to examine these proposals.

Apart from Main SLDC, establishment of Backup SLDCs has been mandated in "Disaster Management Plan for Power Sector" by CEA released in December 2022 and available at web-link on CEA website at https://cea.nic.in/wp-content/uploads/ps___lf/2023/01/Disaster_Management_Plan_DMP_2022_for_power_sector.pdf which states that - "Back up EOC/ Control room should also be set up preferably at remote location & kept ready to manage adverse situations if main control room dysfunctions or gets affected due to any disaster. Back up control room should be set up keeping all important features/functions of main control room with full access control so that officials can operate the entire system without any difficulty. Backup control room should be tested periodically for intended functionality by making it main control room."

Presently, Tripura SLDC has submitted its signed BoQ to NERLDC and an initial meeting among nodal officers from all SLDCs, NERLDC and Corporate-Engineering dept. of Grid-India had been conducted on 22-Nov-2023 at NERLDC, Guwahati premises. In this meeting, Tripura has brought out that the locations of Backup SLDC has been finalized as P. K. Bari (150 km away from main Control Centre) but necessary infrastructure readiness (such as building, manpower deployment, basic amenities, security, earth pits, DG set platform, etc.) shall need to be ensured prior to delivery of material at Backup Control Centre site (P. K. Bari).

As building expenditure for Backup SLDC does not get covered under PSDF guidelines; hence, it is requested that NERPC forum may take a notice of it and explore funding from any other kind of Central Govt. scheme towards funding for building and other associated infrastructure so that Backup SLDC of Tripura can be established within time. Same scheme may be collectively implemented for all NER states.

TCC forum may like to deliberate.

Deliberation of TCC: GM TPTL stated that building infrastructure is necessary for backup SLDC / SCADA. Most of the other states also agreed and requested to incorporate the construction of buildings and civil works within the proposal for SCADA /Backup SLDC. NERLDC stated that inclusion of building under the proposal will delay the implementation of the upgradation of SCADA. After due deliberation, the forum unanimously decided to include building of backup SLDC in the Detailed Project Report (DPR). Accordingly, NERLDC was advised to include it in the DPR of SCADA upgradation. The forum recommended for the approval of RPC.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.11 :	**VETTING AND RECOMMENDATION OF THE SCHEME "IMPLEMENTATION OF AUTOMATIC REACTIVE POWER SOLUTION ON 33/11 KV SUB STATIONS IN ARUNACHAL PRADESH, STUDY REPORT FOR THE REQUIREMENT OF THESE CAPACITOR BANKS.: DOP, ARUNACHAL PRADESH**

PSDF, TESG committee advised DoP, Arunachal Pradesh in its 80th TESG meeting for vetting of the Study Report on requirement of the Capacitor Banks. DoP, Arunachal Pradesh has requested NERPC for recommendation of the above scheme to PSDF.

Placed for consideration and approval of TCC/RPC.

Deliberation of TCC: The forum requested Arunachal Pradesh to furnish the study report on requirement of capacitor bank to NERLDC / NERPC, so that comments of the constituents may be sought. NERPC may take necessary action based on the comments.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.12	**ESTABLISHMENT OF 220 KV GRID SUBSTATION INSTEAD OF 132KV GRID SUBSTATION AT MARIGAON (PROPOSED NOW AT DHARAMTUL): AEGCL**

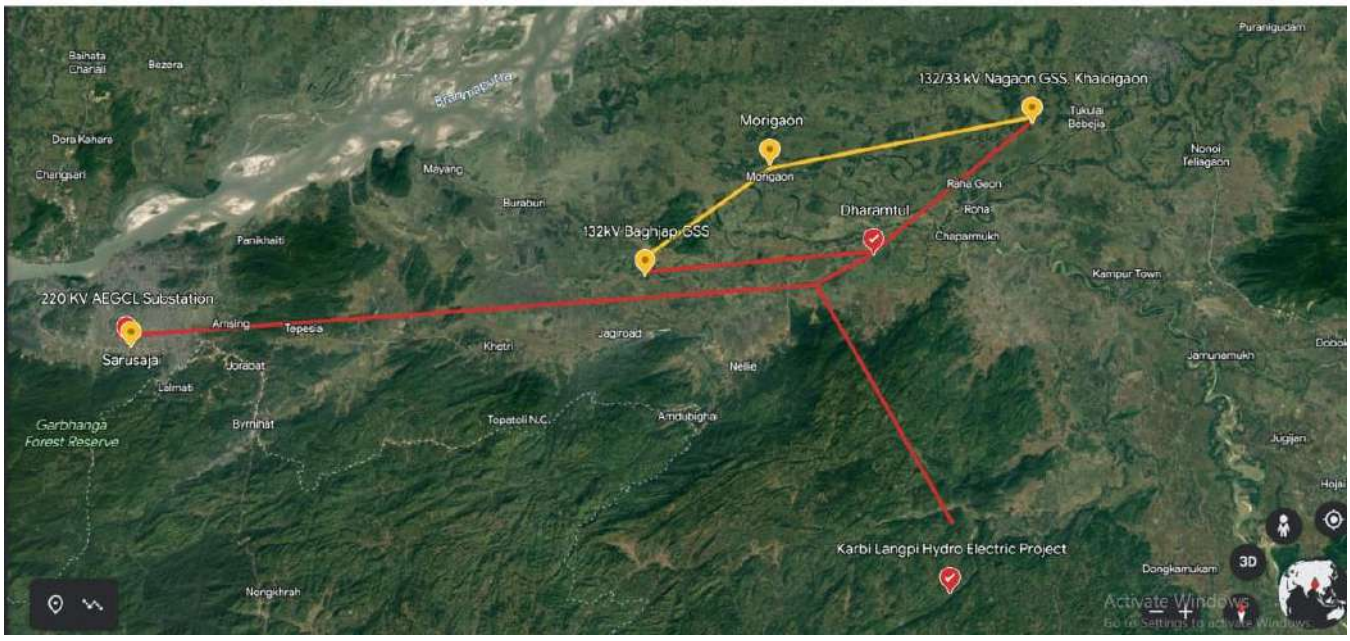
Associated Lines: 220kV D/C LILO of 220kV Sarusajai-Langpi line, 132kV D/C Marigaon-Khaloigaon line and 132kV D/C Morigaon-Baghjap line

The proposed Grid Substation at Marigaon approved vide 1st NERSCT Meeting dated 29.11.2018 is now required to be constructed at 220kV level instead of 132kv level. The voltage upgradation proposal is on account of the fact that no land is available for the substation connectivity at 132kV level, and on the other hand, the requisite land has already been made available for the substation, and 220kV connectivity is easily accessible (220kV Sarusajai-Langpi line passes through the immediate vicinity of the site for the

substation). Also, the load flow study has shown favorable results for establishment of 220kV Marigaon Substation instead of 132kV level.

The matter was placed before 24th TCC & 24th NERPC Meetings held on 27th & 28th June, 2023, for approval. However, in the meeting it was referred to subcommittee of NERPC.

In 206th OCCM, AEGCL stated that due to space constraint at Marigaon, a new substation at Dharamtul is proposed with connection at 220kV level and 132 KV level (figure below). AEGCL further updated that the load at the substation will increase significantly in the next 3 to 4 Years. After due deliberation, the forum decided that a joint load flow study will be conducted between NERLDC and SLDC Assam and a special meeting will be held among NERPC, NERLDC and AEGCL to examine the study results.



In the 208th OCCM, NERLDC stated that the study has been conducted for 2027 time-frame with 70MW load at Dharamtul (including load of upcoming industries). The study shows that connecting 220kV lines and 132 kV lines are lightly loaded, even in N-1 contingency. Thus, the requirement of 220kV lines and transformers is not justified. CGM AEGCL stated that additional industrial load is coming up in the area by 2030. He further intimated that the project is proposed to be funded under 2nd Phase of AIIB and it has to be finalized early to qualify for the same. He requested the forum that a joint study may be conducted with participation from NERPC, NERLDC and

AEGCL at the earliest to further study the network in 2030 timeframe and finalize the project.

Subsequently, as requested by AEGCL, a special meeting was held online on 30th November 2023 among NERPC, NERLDC and AEGCL wherein it was agreed in principle (based on joint study by NERLDC and AEGCL) that upgradation to 220kV level will lead to strengthening of Assam grid. It will also help cater to the high load projected to come up by 2030 timeframe. Therefore, it was agreed in-principle to the proposal of AEGCL and referred to TCC/RPC for consideration and approval.

Deliberation of the TCC **:** *TCC noted and recommended for the approval of RPC*

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.13 : IMPLEMENTATION OF GUWAHATI ISLANDING SCHEME: NERLDC

In 24th TCC/RPC meeting, it was informed that a special review meeting on Guwahati Islanding scheme was held on 17th April, 2023 by the empowered committee. After detailed deliberation, it was decided that the communication part of this scheme shall be executed under State Reliable communication scheme and M/s GE is being consulted for simplification of the scheme & reduction of the cost. M/s GE has submitted the techno-commercial offer on e-mail dated 16.11.2023 with a price implication of ₹ 11.17 crores (excl. GST) considering major items. In addition to above, certain items such as Firewalls, power/control cabling, BCU, 42U racks, GPS devices at control centres, etc. will also be require and cost can further get escalated by around 20%.

In 26th NETeST meeting, NERLDC informed that subsequent to the meeting held on 29th September 2023, SLDC Assam has submitted details regarding priority of load, feeders to be disconnected during island formation, SLDs of 132 kV GMCH and 132 kV Paltan Bazar. POWERGRID has also provided the requirement of UFRs and heavy-duty relays for 400 kV Bongaigoan (PG).

SLDC Assam has also provided details for UFRs and heavy-duty relays for Assam owned stations.

Draft DPR has been prepared by NERLDC and the same has been shared with all concerned utilities for review and suggestions. A physical meeting is also being scheduled on 1st Dec'23 wherein logic of island formation and draft DPR will be discussed and finalized.

Deliberation of TCC: NERLDC intimated that the DPR is under final stage of preparation and cost (approx..) estimate is Rs. 20.35 cr. + 18% GST.
TCC noted as above and referred to RPC for approval.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.14 : CAPACITY BUILDING PROGRAM FOR NER CONSTITUENTS UNDER PSDF FUNDING

A capacity building program for NER Constituents can be organized through PSDF fund in the pilot and demonstrative projects of Green Hydrogen, Battery Energy Storage, e-mobility and technical studies of emerging field of Pumped Hydro Storage, integration of renewable energy with Flexibilization of the thermal power plants etc.

Deliberation of TCC*:* The forum asked PTC India Ltd. to act as consultant to conduct study tour (2 weeks) in capacity building by identifying suitable foreign countries for above mentioned merging field for NERPC constitutes/members for gaining technical expertise and finalize the proposal in consultation with NERPC Secretariat at the earliest. It will be sent to PSDF committee for approval.
After due deliberation, TCC forum recommended for approval of RPC.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.15 : LIVE LINE WORK TECHNIQUES FOR INTRA-STATE EHV SYSTEM: TPTL

To avoid or minimize the need to shutdown electrical networks for maintenance services, it is mandatory to develop safe and practical techniques that would allow the continuous electrical power supply, reducing the risks and minimizing the costs forthe transmission companies.

In the current scenario of remarkable expansion within industrial, agriculture, tourism, service and commercial sectors of Tripura electricity demand is steadily increasing and inescapable tripping and breakdowns of transmission lines may generate serious concerns and threaten a very fundamental objective of reliable electrical power supply to consumers.

Live line maintenance is a comprehensive solution to restrict outages and breakdowns substantially by systematic implementation of condition monitoring and preventive maintenance schedules with appropriate use of human resources and machinery.

Therefore, Tripura Power Transmission Limited (TPTL) looks forward to adopt the modern techniques of maintaining transmission lines and switchyards to position on par with global trend of maintenance techniques.

In view of above, TPTL propose to use Live Line maintenance technique of 132 KV Transmission Lines throughout the State to reduce the interruptions and increase the availability of transmission system which is vital for survival and to prevent regulatory penalties.

Cost Estimate along-with Detail Project Report (DPR) of the proposal will be submitted for exploring funding of the project.

Deliberation of TCC: After due deliberation, TCC forum recommended for approval of RPC, for Tripura to implement from their own source of funding.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.16 : DRONE SURVEILLANCE MECHANISM FOR MONITORING OF EHV TRANSMISSION LINES: TPTL

Transmission line safety is critical for maintaining an uninterrupted and reliable power supply. However, factors like environmental conditions, vegetation encroachment, and structural deterioration pose risks to the integrity of these lines, leading to power outages and often safety hazards. Proactive, or preventative, maintenance can help to mitigate these incidents.

Traditional manual inspections have limitations in terms of time, labor, and potential oversight of many hidden risks. To address these challenges drone technology can be used for transmission line maintenance inspections.

Drones equipped with advanced sensors and machine learning software can conduct efficient and thorough inspections, enabling the utility to detect and address potential risks promptly while ensuring the safety of personnel and the public.

Drone solutions automate inspections and provide accurate data on all parts of the power grid, enabling timely repairs, removing risk of accidents, and reducing downtime.

In view of the above, Tripura Power Transmission Limited (TPTL)propose to use Drone Surveillance Mechanism for all Intra-state Transmission Lines to detect hotspots, loose jumpers, faulty locations etc, and ensure reliable power supply throughout the State.

Cost Estimate along-with Detail Project Report (DPR) of the proposal will be submitted for exploring funding of the project.

Deliberation of TCC: After due deliberation, TCC forum recommended for approval of RPC, for Tripura to implement from their own source of funding.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

ITEM NO. B.17 : INSTITUTIONAL FRAMEWORK FOR DISASTER MANAGEMENT IN POWER SECTOR: NERPC

As per Section 36 of Disaster Management Act, it shall be the responsibility of every Ministry or Department of the Government of India to —

a) take measures necessary for prevention of disasters, mitigation, preparedness and capacity building in accordance with the guidelines laid down by the National Authority;

b) integrate into its development plans and projects, the measures for prevention or mitigation of disasters in accordance with the guidelines laid down by the National Authority;

c) respond effectively and promptly to any threatening disaster situation or disaster in accordance with the guidelines of the National Authority or the directions of the National Executive Committee in this behalf;

d) review the enactments administered by it, its policies, rules and regulations, with a view to incorporate therein the provisions necessary for prevention of disasters, mitigation or preparedness;

e) allocate funds for measures for prevention of disaster, mitigation, capacity-building and preparedness;

f) provide assistance to the National Authority and State Governments for—

(i) drawing up mitigation, preparedness and response plans, capacity-building,

data collection and identification and training of personnel in relation to

disaster management;

(ii) carrying out rescue and relief operations in the affected area;

(iii) assessing the damage from any disaster;

(iv) carrying out rehabilitation and reconstruction;

g) make available its resources to the National Executive Committee or a State Executive Committee for the purposes of responding promptly and effectively to any threatening disaster situation or disaster, including measures for—

(i) providing emergency communication in a vulnerable or affected area;

(ii) transporting personnel and relief goods to and from the affected area;

(iii) providing evacuation, rescue, temporary shelter or other immediate relief;

(iv) setting up temporary bridges, jetties and landing places;

(v) providing, drinking water, essential provisions, healthcare, and services in an affected area;

(vi) take such other actions as it may consider necessary for disaster management.

Disaster Management Groups (DMG) in Power Sector

To achieve the above objectives, a four-tier structure has been put in place at Central, Regional, State and Local Unit Levels, with intervention and response depending on the severity of the disaster /calamity for effectively dealing with disaster situations in power sector. Though the prime focus of activities would be at the actual installations that are affected due to the impending or actual event, it is envisaged to have a comprehensive disaster management system in place with initiatives/ support at the regional and central level, especially in case of major disasters affecting the plant, installation or site. While the Central & State Level interventions are necessitated for major calamities, the local agency should respond to minor incidents.

The Regional Level Disaster Management Group (RDMG) has to be constituted under the chair of Member Secretary, Regional Power Committee with composition of following members:

a) Member Secretary (RPC) - Chairman

b) Representative of Secretary in-charge of Rehabilitation and Relief of the affected State of the Region

c) Representatives of each State Civil Defence

d) Regional HODs CPSUs (NTPC, NHPC, PGCIL etc.)

e) CMDs State TRANSCOs/Power Departments

f) SLDC in charge of each state.

g) Chief Engineer, Central Water Commission (CWC), for floods related early warnings.

h) Deputy Director-General, Indian Meteorological Department (IMD), for Earthquake, and Cyclone related early warnings.
i) Group Head, Ocean Information and Forecast Services Group (ISG), for Tsunami related early warnings.
j) Head of RLDC

Further the Responsibilities of the RDMG shall be as follows:
a) To interact with CDMG for proper coordination.
b) To ensure that disaster management plans are in place.
c) To provide inter-state emergency & start-up power supply
d) To coordinate the early restoration of the regional grid.
e) To participate in damage assessment.
f) To facilitate resource movement to affected state (s) from other regional states

The matter regarding formation of Regional Level Disaster Management Group (RDMG) for Power Utilities in North Eastern Region shall be discussed in ensuing Sub-Committee /TCC/RPC meeting and expedite the same to make the effectively implementation of DMP/CMP at regional level in Power sector.

The matter was discussed in the 206th OCCM. The Subcommittee noted and referred to TCC/NERPC forum for further deliberation.

Deliberation of TCC: The Chief Engineer (PDM&LF), CEA, made a ppt. presentation on the Disaster Management Plan prepared by CEA. He informed the forum about the establishment of a regional-level disaster management group.

Member Secretary stated that the Regional Level Disaster Management Group (RDMG) has to be constituted under the chair of Member Secretary, Regional Power Committee with composition of members from various stake holder as mentioned in DMP/CMP. NERPC secretariat will constitute the Regional Level Disaster Management Group in NER region and get nomination from the concerned stakeholder and issue the necessary order accordingly at the earliest.

TCC recommended for approval of Regional Level Disaster Management Group (RDMG) in NER.

Deliberation of the RPC **:** *The RPC noted and approved the recommendation of TCC.*

3. CATEGORY - C : COMMERCIAL ISSUES

ITEM NO. C.01 : OUTSTANDING DUES OF MIZORAM TO TRIPURA: TSECL

As on date, an amount of Rs 9.36 crores is outstanding including the surcharge with Mizoram. It is to mention that TSECL is to make timely payment to Gail/ONGC regularly to avoid surcharge etc as well as to avoid regulation of Gas supply. Therefore, Mizoram is requested to ensure monthly payment to avail rebate as well as to avoid surcharge, regulation of power supply etc. LC of Mizoram is also expired. Mizoram is requested to kindly renew the LC at an early date.

Deliberation of the TCC **:** *TCC noted as above and placed for deliberation of RPC.*

Deliberation of the RPC **:** *RPC noted as above and requested Mizoram to clear their outstanding dues at the earliest.*

ITEM NO. C.02 : OUTSTANDING DUES OF MANIPUR TO TRIPURA: TSECL

Outstanding with Manipur is only Rs 7.96 lacs as on date excluding surcharge. Manipur has discontinued drawing power from Baramura. Hence, it is requested kindly to make payment immediately so that all the codal formalities be maintained to avoid any audit observation. The matter was also discussed in the last CC meeting.

Deliberation of the TCC **:** *TCC noted as above and placed for deliberation of RPC.*

Deliberation of the RPC **:** RPC noted as above and requested Manipur to clear their outstanding dues at the earliest.

ITEM NO. C.03 : ALLOCATION OF MERCHANT POWER OF OTPC TO TRIPURA: TSECL

Tripura is managing increased power demand of the State including Cross Border commitment through IEX Purchase during any kind of outage of ISGS

as well as State Generation. To mitigate the power management criticality considering further increase of State demand in near future, Tripura has already communicated to OTPC for allocation of their 40 MW Merchant power. Hence NERPC is requested kindly to look into the matter so that OTPC may expedite for allocation of their merchant power to Tripura as per CERC tariff. TSECL requested OTPC for consideration of allocation of merchant power. In the commercial forum the matter was discussed so many times. The matter was also discussed in the last TCC/NERPC meeting.

Hence NERPC is requested kindly to look into the matter so that TSECL can enjoy the merchant power on long term basis at an early date.

Deliberation of the TCC **:** *TCC noted as above and requested OTPC and Tripura to discuss bilaterally.*

Deliberation of the RPC **:** *RPC noted as above and suggested TSECL and OTPC to resolve the matter bilaterally.*

ITEM NO. C.04	**:**	**DE-ALLOCATION OF SHARED POWER FOR THE STATE OF MIZORAM FROM FARAKKA SUPER THERMAL POWER STATION (STPS)-I&II, KAHALGAON STPS-I AND TALCHER STPS-I UNDER NTPC WITH IMMEDIATE EFFECT: P&ED, MIZORAM**

The proposal for deallocation is already conveyed to the Director (RCM), Ministry of Power (RCM Division), Government of India vide letter no. T 13016/01/15-EC(P)/Com/127 dt.03.10.2023. This proposal is based on Govt. of India, Ministry of Power, Director (RCM Division) letter no. F 23/23/2020-R&R/RCM Dt. 20.04.2023.

Deliberation of the TCC **:** *Forum requested other NER states, in case of power requirement, to approach MoP. TCC noted as above and placed for deliberation of RPC.*

Deliberation of the RPC **:** *RPC noted as above*

ITEM NO. C.05 : RLDC FEES & CHARGES OUTSTANDING: NERLDC

MSPDCL and P&E, Mizoram are yet clear the dues against RLDC Fees & Charges.

MSPDCL Outstanding – ₹ 47,91,694.00 against monthly RLDC Charges Bill from June,2023 to October,2023 along with surcharge bill for Q2, FY2023-24.

P&E, Mizoram Outstanding – ₹ 26,54,553.00 against monthly RLDC Charges Bill from July,2023 to October,2023 along with surcharge bill for Q1 and Q2, FY2023-24.

NERLDC issued letter to MSPDCL and P&E, Mizoram on 17.11.2023 to MSPDCL and P&E, Mizoram requesting to clear the dues.

MSPDCL and P&E, Mizoram are requested to take immediate necessary action in this regard.

Deliberation of the TCC **:** *TCC noted as above and placed for deliberation of RPC.*

Deliberation of the RPC **:** RPC noted as above and requested Manipur and Mizoram to clear their outstanding dues at the earliest.

ITEM NO. C.06 : DEVIATION POOL ACCOUNT OUTSTANDING: NERLDC

Manipur is the consistently defaulting in payment of Deviation charges.

Manipur – Net O/s Payable to Pool is ₹ 4.09 Crores (till week no. 32) DSM Principal O/s greater than 90 days (13 Weeks) is ₹ 3.34 Crores Clearance of O/s payable had been regularly followed up.

Manipur is requested to take immediate necessary action in this regard.

Deliberation of the TCC **:** *TCC noted as above and placed for deliberation of RPC.*

Deliberation of the RPC **:** RPC noted as above and requested Manipur to clear their outstanding dues at the earliest.

ITEM NO. C.07 : REACTIVE CHARGES OUTSTANDING: NERLDC

For a long period, Reactive Charges Payable to Pool are pending for the following

constituents:

O/s Payable to Reactive Pool by Manipur - ₹ 10.25 Lakhs (till week no. 32).

O/s Payable to Reactive Pool by Mizoram - ₹ 11.93 Lakhs (till week no. 32).

Manipur & Mizoram are requested to take necessary action in this regard

Deliberation of the TCC **:** *TCC noted as above and placed for deliberation of RPC.*

Deliberation of the RPC **:** RPC noted as above and requested Manipur and Mizoram to clear their outstanding dues at the earliest.

ITEM NO. C.08 : OUTSTANDING DUES OF NER BENEFICIARIES TOWARDS OTPC: OTPC

The current total outstanding dues of OTPC against the NER beneficiary states (as on 30.11.2023) are as under:

(Amount in Rs. Crores)

S. No.	Beneficiary	Outstanding Dues (>45 Days)	Total Outstanding
1	Manipur	9.21	18.17
2	Mizoram	6.94	13.93
3	Tripura	35.29	70.23
	Total	**51.44**	**102.33**

The forum is requested to impress upon Manipur, Mizoram and Tripura to clear their outstanding dues.

Deliberation of the TCC **:** *TCC noted as above and placed for deliberation of RPC.*

Deliberation of the RPC **:** RPC noted as above and requested Manipur, Mizoram and Tripura to clear their outstanding dues at the earliest.

4. CATEGORY - D : ITEMS FOR INFORMATION

ITEM NO. D.01 : RECOVERY OF COST OF VSAT SCHEME IN ROING, TEZU, NAMSAI AND SHILLONG: NERPC (49TH CCM)

It was approved in 20th NERPC meeting that the project implementation cost for VSAT scheme for Telemetry data communication purpose at NERLDC, Shillong in Roing, Tezu, Namsai and Shillong station would be recovered one time from NER States. However, the modalities for recovery process and sharing with each constituent State of NER has not yet been decided. It may also be noted that the system has already been commissioned on 00:00hrs dtd 09.04.2021 and is functional. Total project cost for the said scheme as per LOA is INR 68,15,021(Excl. of GST). This agenda point was also deliberated in 25th NeTEST meeting held on 25.05.23 at Shillong and referred to the Commercial Committee (CC) forum for further deliberation.

In the 49th CCM, the forum decided that this cost would be shared by the NER DICs based on the proportion of Weighted Average Long-Term Agreement (LTA)/Medium-Term Open Access (MTOA) in Megawatts (MW) for April 2021, the month in which the project was commissioned.

In this context, the amount owed to each DIC was calculated and is provided in a table below. The DICs are kindly requested to make their respective payments at the earliest convenience.

Site	LTA / MTOA (MW)	Proposed One time recovery Rate iro VSAT system (Excl. of GST) in INR	Additional GST @ 18%	Total in INR
Ar. Pradesh	287.76	623677.13	112261.88	735939
Assam	1621.87	3515162.71	632729.29	4147892
Manipur	237.32	514355.91	92584.06	606940
Meghalaya	336.28	728837.03	131190.67	860028
Mizoram	136.41	295648.45	53216.72	348865
Nagaland	170.05	368558.16	66340.47	434899
Tripura	353.27	765660.34	137818.86	903479
Total	3142.96	6811899.72	1226141.95	8038042

***Deliberation of the TCC*:** *TCC noted and approved as above and placed to*

RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.02	**:**	**UPGRADATION ACTIVITIES OF SCADA-EMS SYSTEMS AT REGIONAL/STATE LEVEL IN NORTH-EASTERN REGION: NERLDC**

The SCADA-EMS systems of NERLDC and SLDCs in NER were established under ULDC Phase-2 scheme during period of 2016-2018 with M/s GE T&D India Limited as the Contractor and all these systems at SLDCs & NERLDC are near to its life-cycle completion. Most of the hardware and software systems are obsolete and getting its support from OEMs is getting difficult with time. Most of the SLDCs have already completed seven (07) years AMC cycle and entered into extended AMC period of two (02) years with M/s GE T&D India Limited. Considering round-the-clock operations of SCADA-EMS systems at SLDCs and NERLDC, the associated systems need to be upgraded/replaced at the earliest.

As the SLDCs had applied for PSDF funding which got rejected in Techno-economic sub-group forum of PSDF Secretariat; subsequently the cognizance of the matter was taken by the Appraisal Committee of PSDF Secretariat on request made by Chairperson-NERPC vide letter dated 04th May 2023.

As per Minutes-of-meeting held on 19th June 2023 by Appraisal Committee, it has been mentioned that – *"The Appraisal committee discussed the SCADA upgradation proposals of entities of NER (DPR 375 to 381). The Appraisal Committee suggested that SCADA Upgradation proposal of NER states may be considered as a special case for PSDF funding due to their poor financial conditions. It was discussed that the SCADA projects may be coordinated/ monitored by NERLDC (GRID-INDIA) for all NER states. In this regard, NERLDC may prepare the technical document along with BOQ and a combined tender may be floated for all states of NER. As per PSDF guidelines, the funds will be sanctioned and released to the respective states of NER through TSA account. Accordingly, NLDC to get the revise DPR from NER states. NLDC was also requested to put the above decision to Monitoring Committee for concurrence."*

Accordingly, NERLDC shared draft Technical Specifications & BoQ with all SLDCs and requested for nomination of nodal-officer(s) to discuss and finalize upon the Technical Specifications & Bill-of-Quantity. Subsequently, in-person meetings were held with all SLDCs (except Manipur SLDC which was done in online mode) and majority of the clarifications were given regarding the ULDC Phase-3 project. The present status in this regard is mentioned in *table* below.

Sl. No.	**Description**	**Signing of MoU**	**Nomination of Nodal Officer(s)**	**Initial BoQ and other Appendices**	**Tentative Location(s) of Backup SLDC**
1	Meghalaya	Signed on 28th October 2021.	Received on 28th September 2023.	Received.	Mawphlang
2	Mizoram	Signed on 01st November 2021.	Received on 10th July 2023.	Received.	Kolasib or Serchhip
3	Assam	Signed on 06th January 2022.	Received on 12th September 2023.	Received.	Samaguri
4	Tripura	Signed on 20th May 2022.	Received on 10th August 2023.	Received.	P.K. Bari
5	Arunachal Pradesh	Signed on 07th July 2022.	Received on 03rd August 2023.	Received.	Namsai, Roing or Pasighat.
6	Nagaland	Signed on 01st March 2022.	Received on 13th July 2023.	Received.	Zhadima

Sl. No.	Description	Signing of MoU	Nomination of Nodal Officer(s)	Initial BoQ and other Appendices	Tentative Location(s) of Backup SLDC
7	Manipur	Signed on 11th June 2022.	Received on 13th July 2023.	Received.	Thoubal

Moreover, as per letter ref. NLDC-PSDF/21st MoCo/2023-24/ dated 18th October 2023, the PSDF Secretariat at NLDC (Grid-India) informed that Monitoring Committee of PSDF has agreed for the funding of SCADA/EMS project (incl. AMC) for the seven (07) NER states and has directed TESG to examine these proposals.

Establishment of Backup SLDCs has been mandated in "Disaster Management Plan for Power Sector" by CEA released in December 2022 and available at web-link https://cea.nic.in/wp-content/uploads/ps___lf/2023/01/Disaster_Management_Plan_DMP_2022_for_power_sector.pdf which states that - *"Back up EOC/ Control room should also be set up preferably at remote location & kept ready to manage adverse situations if main control room dysfunctions or gets affected due to any disaster. Back up control room should be set up keeping all important features/functions of main control room with full access control so that officials can operate the entire system without any difficulty. Backup control room should be tested periodically for intended functionality by making it main control room."*

In 26th NETeST meeting, it was decided to include "Video conferencing system with LED displays" and "Maintenance of the existing RTUs" in aforementioned project.

Presently, signed BoQ has been received from all NER SLDCs and an initial meeting among nodal officers from SLDCs, NERLDC and Corporate-Engineering dept. of Grid-India had been conducted on 22-Nov-2023 at

NERLDC, Guwahati premises. Major outcomes of the meeting had been as follows –

- Finalization of BoQ items
- Suggestions recorded for modifications in Technical Specifications as per observations
- Finalization of General/Special Conditions of Contract in sync with other regions without any changes
- Locations of Backup SLDCs and necessary infrastructure readiness (such as building, manpower deployment, basic amenities, security, earth pits, DG set platform, etc.) at cost of state-utilities itself prior to delivery of material at site.

After signing of MoM of aforesaid meeting along with BoQ/Appendices, the same will be used by Corporate-Engineering dept. of Grid-India for getting budgetary quotations from prospective bidders and subsequently DPR could be revised and re-submitted to PSDF Secretariat at NLDC through NERPC.

Placed for information of the forum.

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.03	**:**	**FORMATION OF NERPC WORKING GROUP FOR SMOOTH IMPLEMENTATION OF IEGC 2023 IN NORTH EAST REGION: NERPC**

In the 206th OCCM, it was agreed to form a working group comprising members from Utilities of NERPC to facilitate smooth implementation of various clauses of IEGC 2023 in a comprehensive manner. It was decided that the working group will comprise members from the following:

NERPC Secretariat, NERLDC, SLDCs, STUs, PGCIL, NEEPCO, NTPC, OTPC, NHPC,

DoPs/Discoms & coopted members (if necessary) by subgroup.

Accordingly, nominations have been received from almost all the above organizations except few States/Utilities. NERPC secretariat will issue necessary order for the formation of group.

Placed for information of the forum

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.04 : EXPENDITURE STATUS OF NERPC SECRETARIAT (FY 2023-24): NERPC

The latest expenditure status (as on 30.11.2023) as below:

Sl. No.	Head	Budget Estimates FY 23-24	Expenditure from NERPC Secretariat Establishment Fund	Balance	Expenditure from Budget provided by CEA, to be reimbursed from Establishment Fund	Net Balance (FY 23-24)
		(1)	(2)	(3) = (1 - 2)	(4)	(5) = (3 - 4)
1	**Medical**	800	32.12	767.88	370.51	397.367
2	**Domestic Travelling Allowances**	2500	654.586	1845.414	841.63	1003.786
3	**Fuels and Lubricants**	400	120.32	279.68	39.88	239.8
4	**Printing Publication**	60	0	60	24.77	35.23
5	**Advertising and Publicity**	250	0	250	24.9	225.1
6	**Professinal Services**	10	0	10	3.388	6.612
7	**Office Expenditure**	10000	588.035	9411.965	2422	6989.927
8	**Minor Work**	14556.539	182	14374.539	947.73	13426.81
Total		**28576.54**	**1577.061**	**26999.478**	**4674.847**	22324.630

Placed for information of the forum

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.05	**:**	**ADHERANCE TO TIMELINES AS PER IEGC 2023 FOR COMPUTATION OF STATE WISE TTC/ATC: NERLDC**

The following is the timeline for submission of data and TTC/ATC declaration by the SLDCs as per the approved procedure for carrying out Inter-Connection studies of new Power System Elements prepared in compliance to Clause 10 (3) of Central Electricity Regulatory Commission, Indian Electricity Grid Code Regulations, 2023.

M-12:

Data Submission: 10th Day of M-12

TTC Declaration: 26th Day of M-12

M-6:

Data Submission: 8th Day of M-6

TTC Declaration: 21st Day of M-6

M-1

Data Submission: 8th Day of M-1

TTC Declaration: 22nd Day of M-1

(M is the month for which calculation is to be done)

It is requested to all the SLDCs to adhere to the timeline strictly and submit the data for TTC declaration and submit the TTC/ATC values to NERPC/NERLDC on regular basis.

Placed for information of the forum

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

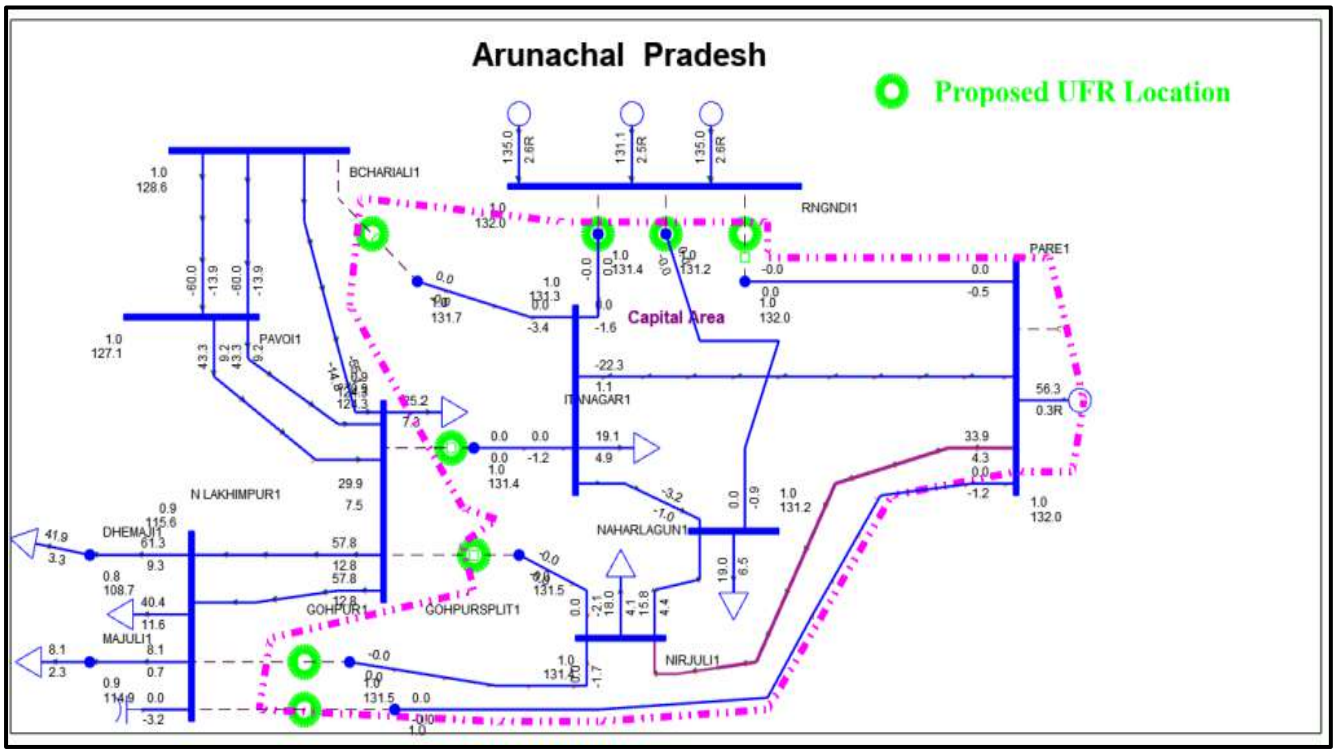
ITEM NO. D.06 : IMPLEMENTATION/REVIEW OF ISLANDING SCHEMES OF NER: NERLDC

a) Proposal of Islanding Scheme for Itanagar area of Arunachal Pradesh Power System

On 27th July'2023, 132 kV BNC-Itanagar D/C and 132 kV Lekhi-Itanagar lines had tripped. Due to tripping of these elements, Itanagar area and Pare HEP of Arunachal Pradesh Power System got separated from rest of the NER Grid and subsequently collapsed due to load generation mismatch in these areas. Such blackouts of capital areas of Arunachal Pradesh is highly undesirable. In order to prevent such outages, it is required to design Islanding scheme to safeguard the capitals area and maintain the reliability and security of the grid.

A meeting was held on 09-11-23 through video conference (VC) with team compromising of NERLDC, NERPC, NEEPCO, PGCIL, Indi-Grid and SLDC Arunachal Pradesh for discussion on Proposed Islanding scheme for Capital area of Arunachal Pradesh Power System.

The scheme involves the utilization of one unit of Pare Machine and load at 132 kV Lekhi, 132 kV Chimpu and 132 kV Nirjuli substations.



The proposed Islanding Scheme has also been discussed in 208th OCCM held on 21st November 2023.

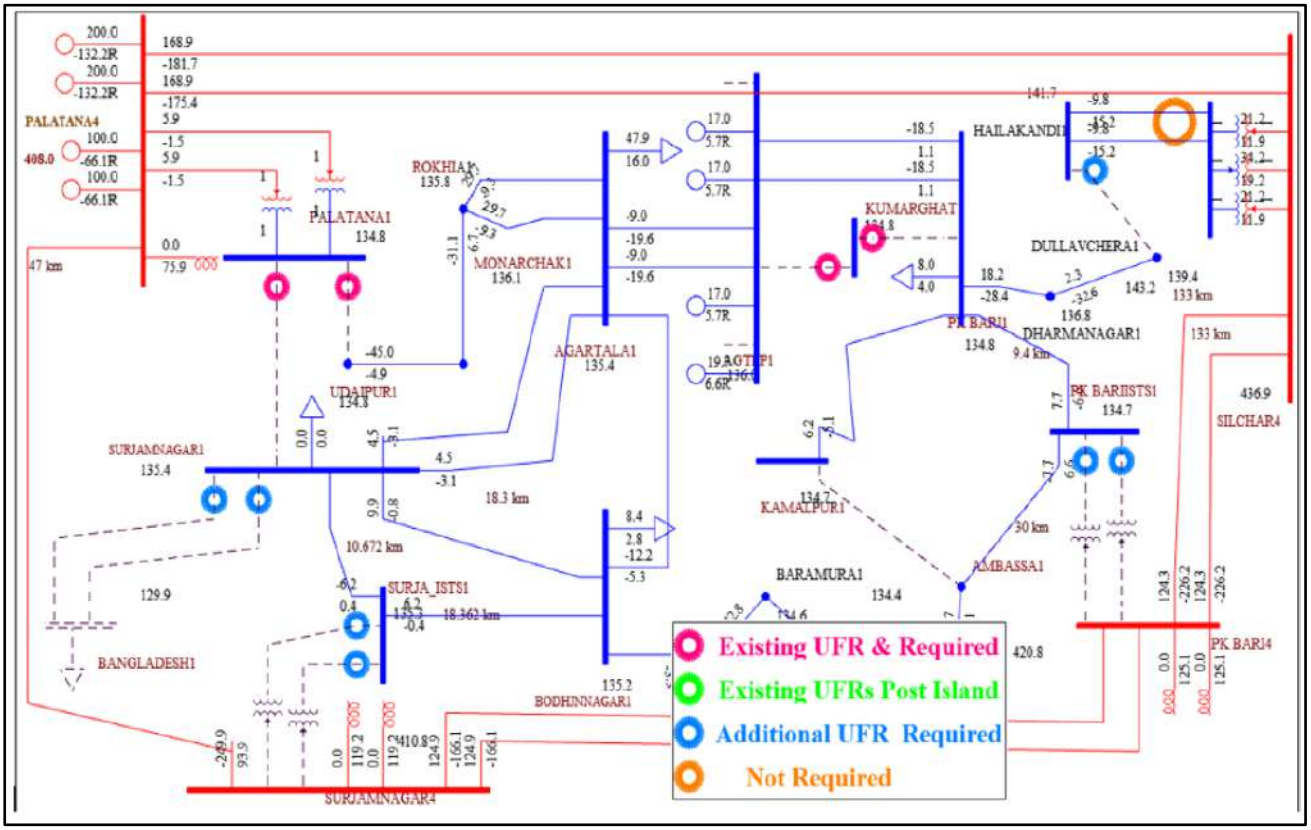
Placed for information of the forum

b) Modifications for Tripura Islanding Scheme

An Islanding Scheme for Tripura Power System is already existing but after few changes in the grid viz. commissioning of 400/132 kV PK Bari Substation (ISTS), 400/132 kV SM Nagar Substation (ISTS) and 132 kV PK Bari – AGTCCPP D/C, the islanding scheme requires revision.

ISLAND AT 48.80 Hz: Island comprising of generating units of AGTPP (Gas), generating units at Baramura (Gas), Rokhia (Gas) & Gumti (Hydro) and loads of Tripura system & Dullavcherra area (Assam). [Total Generation: 300MW and load: 163MW (off-peak)-240MW (peak)]

Sl. No	Existing	Comments on UFR
1	132 kV Palatana - Udaipur line at Palatana (OTPC)	Required
2	132 kV Palatana - Surajmaninagar line at Palatana (OTPC)	Required
3	132 kV Silchar - Dullavcherra line at Silchar (PG)	Not Required
4	132 kV AGTCCPP - Kumarghat line at Kumarghat (PG)	Required
5	132 kV P K Bari - Kumarghat line at Kumarghat (PG)	Required
6	**400/132 kV 2x315 MVA ICTs at Surajmaninagar (ISTS)**	**New Required**
7	**400/132 kV 2x315 MVA ICTs at P K Bari (ISTS)**	**New Required**
8	**132 kV Surajmaninagar (ISTS) – South Comilla D/C at Surajmaninagar (ISTS)**	**New Required**
9	**132 kV Hailakandi – Dullavcherra line at Hailakandi (TSECL)**	**New Required**



In 207th OCCM held on 17th October 2023, modification requirement for Tripura Islanding Scheme was discussed and requirement of extra UFRs was intimated to Tripura.

SLDC Tripura has been requested to specify the timeline for completion of the changes in the Tripura Island Scheme.

C. Review of Upper Assam Islanding Scheme:

The present existing Islanding Scheme at Upper Assam is under review in OCC as well as special meeting.

Placed for information of the forum

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.07	**:**	**FORMATION OF SUB-COMMITTEE GO-NER-CSCF NORTH-EASTERN REGION (REGIONAL CYBER SECURITY CO-ORDINATION FORUM): NERLDC**

As per Regulation 53 of IEGC, a Regional Coordination Forum shall be formed at the regional level (with LDCs as per the definition of Regional Entity of IEGC, 2023) in order to ensure proper coordination, information sharing, sharing of best practices, harmonizing the Cyber Security initiatives and preparedness of the Load Despatch Centres and to review the Cyber Security initiatives, incidences reported and actions taken to mitigate the risks. The representations required for sub-committee of GO-NER-CSCF in Regional Coordination Forum is given below –

a) Head of RLDC
b) CERT-GO Nodal or his authorised representative
c) Member Secretary RPC or his/her authorised representative
d) Heads of SLDCs or his/her authorised representative other than CISO.
e) Chief Information Security Officer of all SLDCs within the specific Region.
f) Cyber Security Nodal officer of RLDC
g) Representative of the NCIIPC
h) Any other member deemed necessary by the Forum for smooth coordination and monitoring

Accordingly, the members nominated by the respective organisations are listed in table below:

S. No.	**Nomination as per IEGC procedure**	**Name**	**Designation**	**Contact**	**E-Mail**
1	Head of NERLDC	Amaresh Mallick	CGM (I/c)	9436302720	amareshmallick @grid-india.in
2	CERT-GO Nodal or authorized representative	***Not yet officially communicated to NERLDC.***			

S. No.	Nomination as per IEGC procedure	Name	Designation	Contact	E-Mail
3	MS NERPC or authorized representative	Shaishav Ranjan	Deputy Director	8787892650	ranjan.shaishav@gmail.com
4	Head of Arunachal Pradesh SLDC or authorized representative	***Not yet received.***			
5	CISO Arunachal Pradesh SLDC	***Not yet received.***			
6	Head of Assam SLDC or authorized representative	Syed Md. Maswood Naser	Chief General Manager	9435233786	cgm.sldc@aegcl.co.in
7	CISO Assam SLDC	Mrs. Toushita Jigdung	DGM (logistics)	9707134351	dgmlogistic.sldc@sldc.co.in
8	Head of Manipur SLDC or authorized representative	N. Jasobanta Singh	General Manager	7085431282	gmsldcmanipur@gmail.com
9	CISO Manipur SLDC	Laishram Ritu	Deputy General Manager	9612 882984	ciso.sldc@mspcl.in
10	Head of Meghalaya SLDC or authorized representative	T. Gidon	Superintending Engineer	8974027950; 6009094044	se.sldc-meg@gov.in; sesldc.meptcl@gmail.com
11	CISO Meghalaya SLDC	T. Gidon	Superintending Engineer	8974027950; 6009094044	se.sldc-meg@gov.in;

S. No.	Nomination as per IEGC procedure	Name	Designation	Contact	E-Mail
					sesldc.meptcl@gmail.com
12	Head of Mizoram SLDC or authorized representative	Smt. Laltlanthangi	Superintending Engineer	9612100277	msldc.circle@gmail.com; sldc_mizoram@rediffmail.com
13	CISO Mizoram SLDC	Smt. Laltlanthangi	Superintending Engineer	9612100277	msldc.circle@gmail.com; sldc_mizoram@rediffmail.com
14	Head of Nagaland SLDC or authorized representative	Er. Rukongutuo Suohu	Superintending Engineer	8575000014	rokosuohu@gmail.com
15	CISO Nagaland SLDC	Smt. Pongmei Phom	SDO (IT/Comm)	8132862504	pongmeinew1@gmail.com; sldc.ngl@gmail.com
16	Head of Tripura SLDC or authorized representative	***Not yet received.***			
17	CISO Tripura SLDC	***Not yet received.***			
18	Cyber Security Nodal officer of NERLDC	S P Barnwal	Sr. GM (System Logistics), CISO-NERLDC	9433041812	spbarnwal@grid-india.in
19	Representative of the NCIIPC	***Not yet officially communicated to NERLDC.***			
20	Any other member	To be nominated by the committee members after formation of the committee.			

Placed for information of the forum with a request to all concern for necessary action

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.08	**:**	**ACUTE ROW ISSUE PREVENTING REGULAR MAINTENANCE OF VARIOUS TRANSMISSION LINE SECTION OF POWERGRID IN NORTH EASTERN REGION: NERTS (205TH OCCM)**

In North Eastern Region, there are various transmission line sections as listed below where acute ROW issue is persisting for which POWERGRID is not being able to carry out regular maintenance activity on transmission lines despite intermittent support from concerned administration. The vegetation growth in NER is very fast which demands frequent and regular vegetation clearance to avoid unwarranted trippings. Thus, due to the said situation which is beyond the control of POWERGRID some of the trippings in unresolved ROW stretches likely to occur on account of vegetation growth.

In view of above, it is requested to the forum to take up the issue at the highest level of concerned administration so that the ROW issues can be resolved permanently for better maintenance of Transmission Lines:

SN	NAME OF THE LINE	SPANS (IN NOS.)	STATE	NAME OF THE DISTRICT
1	800KV HVDC BNC -Agra	51	Assam	Udalguri, Baksa, Bijali, Barpeta, Chirang
2	132KV S/C Kumarghat-RC Nagar	2	Tripura	Dhalai
3	132KV S/C Kumarghat-Karimagnaj	14	Tripura	Unakoti, North Tripura

SN	NAME OF THE LINE	SPANS (IN NOS.)	STATE	NAME OF THE DISTRICT
4	132KV S/C Kumarghat-Aizawl	14	Tripura	Unakoti, North Tripura
5	132KV S/C Jiribam-Loktak	23	Manipur	Tamenglong, Nungba
6	400KV D/C Silchar-PK Bari	29	Assam	Cachar, Hailakandi, Karimganj
7	132KV S/C Badarpur-Kolasib	9	Assam	Hailakandi
8	132KV S/C Badarpur-Jiribam	6	Assam	Hailakandi, Cachar
9	132KV S/C Badarpur-Kumarghat	8	Assam	Karimganj
10	132KV S/C Haflong-Jiribam Line	10	Assam	Cachar
11	132KV S/C Badarpur-Khlierhiat	5	Assam	Cachar
12	400KV D/C Silchar-PK Bari	41	Assam	Hailakandi
13	220KV D/C Mariani-Kathalguri	59	Assam	Tinsukia, Dibrugarh, Sarideu, Sibsagar, Jorhat
14	132KVS/C Aizawl-Kolasib	8	Mizoram	Kolasib, Aizawl
15	132KV S/C Aizawl-Tipaimukh	9	Mizoram	Aizawl
16	132KV S/C Aizawl-Kumarghat	15	Mizoram	Mamit, West Phaileng
17	132KV S/C Roing-Tezu	5	Arunachal	Lower Dibang valley
18	132KV S/C Pasighat-Roing	2	Arunachal	Lower Dibang valley

SN	NAME OF THE LINE	SPANS (IN NOS.)	STATE	NAME OF THE DISTRICT
	TOTAL =	**310**		

In the 205th OCCM, forum noted that regular vegetation clearance is critical to reliable and robust operation of transmission lines and commiserated with POWERGRID in facing challenges for vegetation clearance in unresolved RoW stretches.

The matter is placed for information to TCC/RPC forum for sensitization at the highest level of administration

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.09 : INTER-REGIONAL TTC AND ISTS STRENGTHENING IN NER FOR 2029-30 TIME FRAMES: NERPC

Details of the intra-state transmission elements/ substations recommended by CEA for 2030 timeframe, may be provided to NERLDC/NERPC, so that study can be done to analyze TTC/ATC at intra-state level.

Placed for information of the forum with a request to all concern for necessary action.

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.10 : REQUIREMENT OF PERIODIC TESTING AS PER IEGC 2023: NERLDC

As per clause no. 40 of IEGC 2023, periodic tests have to be carried out on power system elements for ascertaining the correctness of mathematical

models used for simulation studies as well as ensuring desired performance during an event in the system.

The general features are as follows:

(a) The owner of the power system element shall be responsible for carrying out tests and for submitting reports to NLDC, RLDCs, CEA and CTU for all elements and to STUs and SLDCs for intra-State elements

(b) All equipment owners shall submit a testing plan for the next year to the concerned RPC by 31st October to ensure proper coordination during testing as per the schedule.

(c) The tests shall be performed once every five (5) years or whenever major retrofitting is done.

(d) The owners of the power system elements shall implement the recommendations, if any, suggested in the test reports in consultation with NLDC, RLDC, CEA, RPC and CTU

Power System Elements	**Tests**	**Applicability**
Synchronous Generator	(1) Real and Reactive Power Capability assessment. (2) Assessment of Reactive Power Control Capability as per CEA Technical Standards for Connectivity (3) Model Validation and verification test for the complete Generator and Excitation System model including PSS. (4) Model Validation and verification of Turbine/Governor and Load Control or Active Power/ Frequency Control Functions.	Individual Unit of rating 100MW and above for Coal/lignite, 50MW and above gas turbine and 25 MW and above for Hydro.

	(5) Testing of Governor performance and Automatic Generation Control.	
Non synchronous Generator (Solar/Wind)	(1) Real and Reactive Power Capability for Generator (2) Power Plant Controller Function Test (3) Frequency Response Test (4) Active Power Set Point change test. (5) Reactive Power (Voltage / Power Factor / Q) Set Point change test	Applicable as per CEA Technical Standards for Connectivity.
HVDC/FACTS Devices	(1) Reactive Power Controller (RPC) Capability for HVDC/FACTS (2) Filter bank adequacy assessment based on present grid condition, in consultation with NLDC. (3) Validation of response by FACTS devices as per settings.	To all ISTS HVDC as well as Intra State HVDC/FACTS, as applicable

As per **Clause no. 29 (11) of IEGC 2023**, Mock drill of the islanding schemes shall be carried out annually by the respective RLDCs in coordination with the concerned SLDCs and other users involved in the islanding scheme. In case mock drill with field testing is not possible to be carried out for a particular scheme, simulation testing shall be carried out by the respective RLDC.

All the NER stakeholders are requested to carry out the tests as per mandate and provide the testing plan of the respective equipment to NERPC.

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.11 : ISTS ELEMENTS AND INTRA-STS ELEMENTS INCIDENTAL TO ISTS AGREED UPON IN THE CMETS MEETING OF CTU: NERPC

Following ISTS and Intra-STS elements incidental to ISTS have been discussed and agreed upon in the CMETS meeting of CTU:

As approved in 24th CMETS (17.11.2023)

a. Strengthening of intra-state 132kV corridor from Gerukamukh – Likabali – Niglok – Pasighat (New) through 2nd circuit stringing. DoP, Arunachal Pradesh mentioned that they shall immediately take up 2nd circuit stringing of Gerukamukh – Likabali – Niglok – Pasighat (New) 132kV S/c on D/c line under an intra-state scheme so as to bring this system prior to Gogamukh – Gerukamukh 132kV D/c high capacity ISTS line.

b. 2nd circuit stringing of Pasighat (Arunachal Pradesh) – Roing (POWERGRID) 132kV S/c on D/c line was in-principally agreed. Additional studies shall be carried out to assess the requirement of 2nd circuit stringing of Roing – Tezu – Namsai 132kV S/c on D/c line. DoP, Arunachal Pradesh and AEGCL would provide requisite data for system studies.

c. Implementation of the Bornagar 400kV S/s in ISTS for reliable and secure power supply to NER grid. The SS will be connected with grid, at 400kV level, through LILO of 440kV Bongaigaon -Balipara DC and 400kV Alipurduar after bypassing the Bonagaigaon SS.

d. Reconductoring of entire Khandong (NEEPCO) – Umrangshu (AEGCL) – Jiribam (POWERGRID) – Halflong (POWERGRID) 132kV ISTS corridor with HTLS of 600A.

e. Strengthening in Tinsukia area (reconductoring and ICT augmentation) may be reviewed after commissioning of Kathalguri – Namsai and Gogamukh – Gerukamukh links.

f. Loading on Chapakhowa – Rupai, Rupai – Margherita, Tinsukia – Rupai & Tinsukia – Margherita 132kV S/c lines and Tinsukia ICTs would be reviewed after commissioning of Kathalguri – Namsai 220kV D/c line and Gogamukh – Gerukamukh 132kV D/c (Zebra) line.

As approved in 21st CMETS (27.07.2023)

It was agreed that that AEGCL would construct the following scheme under intra-state -

(i) Establishment of 2x50MVA, 132/33kV Misamari substation

(ii) Balipara – Misamari 132kV D/c (ACSR Zebra) line (utilising the 132kV line bays vacated upon bypassing of Balipara – Sonabil and Balipara – Ghoramari 132kV lines at Balipara substation) alongwith associated line bays at Misamari substation.

(iii) LILO of Depota – Rowta 132kV S/c line at Misamari substation along with associated line bays

As approved in 20th CMETS (23.06.2023)

1. i. APDCL – Bokajan 400kV S/c line for evvacutaion of REGS in Karbi Anglong (APDCL)
   ii. Establishment of new 400kV switching station (to be upgraded to 400/220kV level in future) at Bokajan in Assam
   ii. ILO of both circuits of Misa (POWERGRID) – New Mariani (POWERGRID) 400kV D/c line at Bokajan

2. i. Upgradation of Single Main & Transfer Bus to Double Bus arrangement with GIS at 132kV Khliehriat

   ii. Upgradation of Single Main & Transfer Bus to Double Bus arrangement with Green GIS at 132kV Badarpur

Placed for information of the forum

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.12 : PROTECTION PROTOCOL FOR NER REGION: NERPC

In compliance with clause 12(2) and clause 13 of IEGC 2023, NERPC secretariat had prepared draft protection protocol for NER and circulated to the constituents to invite comments and feedback. The protocol was further deliberated upon in 60th and 61st Protection sub-committee meetings. Subsequently, NERPC has finalized the protection protocol after incorporating comments as received from the constituents. The protection protocol for NER will be published on NERPC website(nerpc.gov.in) shortly for implementation.

Placed for information of the forum

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.13 : OUTAGE PLANNING PROCEDURE FOR NER REGION: NERPC

As per regulation 32(4) of IEGC 2023, RPCs are to formulate a common outage planning procedure. In compliance with the regulation, NERPC secretariat had prepared a draft Outage planning procedure and circulated to the constituents for their perusal. Comments were received from various utilities. Comments were discussed in the 208th OCC meeting and procedure was finalized.

Placed for information of the forum

Deliberation of the TCC: *TCC noted as above and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.14 : IMPLEMENTATION OF CRISIS MANAGEMENT PLAN (CMP) AND DISASTER MANAGEMENT PLAN (DMP) IN POWER UTILITIES: NERPC

As per section 37 of the Disaster Management Act 2005, each Ministry/Department of the Government of India is required to prepare a Disaster Management Plan (DMP). Also, as per the Crisis Management Plan (CMP) of the Government of India prepared by the Cabinet Secretariat, each Central Nodal Ministry is required to prepare a detailed Crisis Management Plan for dealing with crisis situations falling in the areas of their responsibility.

Accordingly, the Ministry of Power prepares DMP and CMP for the power sector in association with Central Electricity Authority. The CMP for power sector is reviewed periodically by Secretary (Security), Cabinet Secretariat. The latest review meeting was held on 23.11.2022 wherein Secretary (Security) emphasized on the following points related to DMP and CMP:

i. Each power utility shall create a fund which would be 1.5% of the annual revenue of the Utility for meeting the requirement of crisis/disaster management plan.
ii. Power Utilities shall prepare Disaster Management Plan (DMP) and Crisis Management Plan (CMP) separately for their organisation.
iii. The Plan/report shall cover the management of different crisis scenarios as enlisted in the Ministry of Power Crisis management plan given in the table below:

S. No.	Crisis Situations in Power Sector
1.	Terrorist Threats and Attacks
2.	Bombs Threats, Hoax & Bomb Explosions
3.	Explosion in Equipment
4.	Crowd or Mob Attack
5.	Threat from UAV(Drone) attack
6.	Strike

7.	Sabotage
8.	Cyber-attack
9.	Fire/Forest Fire

iv. The report shall also indicate the response of the various teams, observations, and effectiveness for handling the emergency situation and the scope for improvements (new learnings, DOs, and Don'ts), etc,:

v. Sensitize and motivate both public and private sector power utilities to conduct mock drills on regular basis and submit the quarterly report.

vi. Involvement of other agencies such as District-level authorities/ NDRF/SDRF during the mock drill exercises conducted.

vii. Sharing the calendar of mock drills to be conducted by power utilities for next Year.

These plans/reports shall be up-dated and revised on a periodic basis to include any new inputs received from various stakeholders/new learnings during mock drill exercises conducted/ or on the directives of the National Disaster Management Authority or Cabinet Secretariat.

Secretary (Security) has repeatedly stressed the aforementioned points in the review meetings held earlier and the same was communicated by CEA so many times. However, the majority of the power utilities have not communicated any action taken by them in this regard. They are also not submitting the quarterly mock drill report.

The power utilities in NE states shall furnish the Quarterly report for the mock drill exercises conducted for handling various crisis and disaster situations.

The matter was discussed in the 207th OCCM and the Subcommittee referred to TCC/NERPC forum for further deliberation.

Deliberation of TCC: During the meeting, Chief Engineer (PDM&LF), CEA, presented the Disaster Management Plan, emphasizing the importance of regularly conducting mock drills. He urged forum members to submit

quarterly compliance reports to CEA. Additionally, he requested the implementation of crisis management and disaster management plans by all utilities. During the presentation, it was emphasized that power utilities should allocate 1.5% of their annual revenue to create a disaster management fund.

GM (TPTL) highlighted that state utilities might need SERC approval for fund formation. MS, NERPC opined that all utilities to raise the fund on their own and advised to approach SERC if required.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.15	**:**	**CONSENT FOR PURCHASE OF POWER FROM 60 MW NAITWAR MORI HYDRO ELECTRIC POWER PROJECTS (NMHEP) OF SJVN LTD. AND SIGNING OF PPA: NERPC**

Request letter for purchase of power from Naitwar Mori Hydro Electric Power Projects (NMHEP) of SJVNL was forwarded vide mail dt. 02.11.2023 by IRP Division, CEA.

Interested States/DISCOMs are requested to convey their willingness to take power from this project and same may be communicated to IRP Division at the earliest.

Levelized tariff is Rs 9.51 per unit as per capital cost submitted to CERC. Efforts have been made to reduce tariff by lowering ROE, Loan restructuring etc. Accordingly, levelized tariff is worked out at **Rs 6.85 per unit**.

Deliberation of TCC: MS, NERPC opined that states can consider to purchase power from Naitwar Mori Hydro Electric Project based on their requirement.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.16 : FURNISHING OF DATA FOR FINALIZATION OF GENERATION PROGRAMME 2024-25: NERPC

Annual assessment and finalization of the generation program for the year 2024-25 is being undertaken by OPM Division, CEA. In this regard, the deadline provided to the Generating stations for furnishing the data was 31.08.2023

However, data from following stations of NER has still not been received for Generation program 2024-25

Station ID	Station Name	CAP	ST_NM	SH_NM	FUEL_NM
100712	Baramura GT	42.00	Tripura	TSECL	Natural Gas
100665	Kathalguri CCPP	291.00	Assam	NEEPCO.	Natural Gas
100705	Lakwa GT	97.20	Assam	APGCL	Natural Gas
100810	Lakwa Replacement Power Project	69.76	Assam	APGCL	Natural Gas
100707	Leimakhong DG	36.00	Manipur	ED, Manipur	Diesel
100708	Namrup CCPP	139.40	Assam	APGCL	Natural Gas
100053	Rokhia GT	63.00	Tripura	TSECL	Natural Gas

Concerned Utilities/States are requested to further the generation data to the OPM Division, CEA at the earliest without further delay.

Draft LGBR of NER (2024-25) has been shared by email dt. 29.11.2023 with all the constituents. All constituents are requested to furnish comments within one week.

Deliberation of TCC: MS, NERPC requested concerned utilities to provide necessary data for the annual generation program to CEA directly with intimation to NERPC.

GM, TPTL proposed a change in the generation capacity of the Rokhia Station, reducing it from 63 MW to 56 MW. MS, NERPC advised Tripura to communicate this modification to the CEA (Central Electricity Authority), with

intimation to NERPC. Additionally, GM, TPTL informed that comments on the draft have been forwarded to NERPC.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.17	**:**	**RENOVATION AND MODERNIZATION OF AGBPP PROJECT OF NEEPCO: TSECL**

The Renovation and Modernization of 291 MW Assam Gas Based Power Station for life extension for further period of 20 years was discussed in the last CC meeting. As the station is now nearly completed its useful life of 20 years which is due to expire in March 2024. Communication from NEEPCO has not been received till date.

It is requested that NEEPCO may inform tentative tariff to the forum so that beneficiaries may take decision for renewal.

Deliberation of TCC: ED, NEEPCO communicated that following the Renovation and Modernization, there will be a slight increase in fixed costs and energy charges will be contingent on fuel supply. As discussed in 49th CCM, the forum decided that NEEPCO will approach beneficiaries for extension of PPA.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.18	**:**	**REQUIREMENT OF 132/33KV, 2X25MVA SUBSTATION AT NONGPOH UNDER RI BHOI DISTRICT: MePTCL**

Explanatory note: Requirement of 132/33 kV, 2X25 MVA Sub Station at Nongpoh with LILO of 132 kV Stage-III - Umtru Line. This district has been declared as Aspirational District by NITI Aayog. It is also the most industrialized district of the State of Meghalaya contributing to the economy and development of the State and the region. It has the maximum number of Hydro stations in the state and also the oldest Hydro Power Station in the region. Besides this district lies between Shillong and Guwahati. Although a

number of Grid stations have been installed in the industrial area of the district but the head quarter is not having any 132KV substation to cater to the growing load demand and power supply reliability for the common public. Further, it may be stated that the power supply to Nongpoh and its adjoining areas at present is emanating from 33kV feeder at Stage-III power station which is a long line of about 30Km and passing through a thick and dense forest. Thus power interruption is frequent and affecting the public at large.

It is therefore proposed that following Grid substations and associated lines be set up in the interests of the general public.

i. 132/33KV Substation at Nongpoh with LILO of Stage III- Umtru line.
ii. 132/33kV Substation at the existing 400/220/132kV Killing Substation with LILO of 132 kV Umtru - Kahilipara D/C.

The same proposal was put up to CEA as part of 2030 Augmentation plan. After studies CEA has approved 132/33kV 2x25MVA Substation at Nongpoh with 132kV New Shillong-Nongpoh D/C line.

Tentative cost: Rs 90.00/- Crs

Recommendation: The CEA has recommended the above project in the 'Revised Report on Intra State Transmission System Strengthening requirement of North Eastern State and Sikkim by the year 2030 vide File No. CEA-PS-12-16/1/2022-PSPA-II Division 230 I/26432/2023 February 2023 at Item No. 8.4.1 Sl. No. 6.

Deliberation of TCC: The forum noted the proposal as per approval conveyed by CEA.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.19	**:**	**CONSTRUCTION OF 132KV D/C LINE FROM 220/132KV NEW-SHILLONG S/S TO PONGTUNG ALONG WITH THE CONSTRUCTION OF 132/33KV, 2X25 MVA SUB STATION AT PONGTUNG: MePTCL**

Explanatory note: It is worthwhile mentioning that there was a steep increase in the load in Shillong city in recent years. Since there is no scope to augment the 132/33KV substation located in Shillong i.e. Mawlai & NEHU, new substation at Umiam & Mawphlang in the outside of Shillong were constructed to reduce the overloading of inter connecting line and substation at Shillong. With increasing load at 132 KV Mawphlang substations, it is felt necessary to construct the Pongtung Sub Station is required in order to relief the loading at 132KV Mawphlang S/S and to ensure uninterrupted power supply to this area.

Tentative cost: Rs. 240.00/- Crs

Recommendation: The CEA has recommended the above project in the 'Revised Report on Intra State Transmission System Strengthening requirement of North Eastern State and Sikkim by the year 2030 vide File No. CEA-PS-12-16/1/2022-PSPA-II Division 230 I/26432/2023 February 2023 at Item No. 8.4.1 Sl. No. 11.

Deliberation of TCC: The forum noted that as per the CEA report, Pongtung S/S is approved with connection to Sohra S/S through 132 kV D/C line.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.20 : CONSTRUCTION OF 132/33KV, 2x25MVA SUBSTATION AT AMLAREM: MePTCL

Explanatory note: Amlarem (near Dawki) being a tourist place with substantial load growth, a reliable power supply is required. The voltage profile in most of the areas under Amlarem Block is poor and the power supply to these areas gets disrupted whenever there is failure/shutdown of the 33kV bus at 132kV Mustem Grid Substation. To overcome this problem and to ensure quality power supply, it is felt necessary to construct a 132kV D/C line from Leshka Stage-I Power Station (with a 2x25MVA, 132/33kV Substation at Amlarem or its adjoining areas) to 132kV Mustem Substation and to be LILO at proposed Amlarem 132/33kV, 2x25MVA Substation.

Tentative cost: Rs. 200.00/- Crs

Recommendation: The CEA has recommended the above project in the 'Revised Report on Intra State Transmission System Strengthening requirement of North Eastern State and Sikkim by the year 2030 vide File No. CEA-PS-12-16/1/2022-PSPA-II Division 230 I/26432/2023 February 2023 at Item No. 8.4.1 Sl. No. 5.

Deliberation of TCC: The forum noted the proposal as per approval conveyed by CEA.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.21	**:**	**MOCK BLACK START EXERCISE AS PER IEGC 2023 FOR NEEPCO GENERATING STATIONS: NERLDC**

As per regulation 34.3 of operating code of IEGC 2023, Mock Black Start shall be carried out by all the Users/CTU/STUs at-least once in a year.
Mock black start exercise of AGBPP and Kameng HEP of NEEPCO has never been carried out.

During 207th OCCM held on 17th October 2023, AGBPP, NEEPCO mentioned that the same will be carried out after upgradation of DG set under R&M and that the Petition for R&M is pending in CERC. Also, during the same meeting, the forum requested NEEPCO to delink upgradation of DG set from R&M plan and complete the required work at the earliest. NEEPCO also informed that discussion is going on with BHEL to sort out the issues related to facilitation of Mock Black Start Exercise for Kameng HEP.

After brief deliberation, the OCC forum strongly urged NEEPCO to expedite the matter and conduct Mock Black Start exercise as per IEGC 2023.

NEEPCO is requested to intimate the time line for conducting the Mock Black Start Exercises for AGBPP and Kameng HEP.

Deliberation of TCC*:* ED, NEEPCO informed the forum that concerning AGBP, diesel generators with higher capacities will be procured as part of the

Renovation and Modernization (R&M) project to facilitate the conduct of Mock Black Start. Additionally, for Kameng HEP, ongoing coordination with BHEL is in progress to address and rectify the reactive power issue. The forum requested NEEPCO to comply with the IEGC 2023 regarding Mock Black Start.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.22	**:**	**STATUS OF AUTOMATIC DEMAND MANAGEMENT SYSTEM: NERLDC**

During 207th OCCM held on 17th October 2023, SLDC, Tripura informed that financial approval for ADMS installation at Takerjhala and Bishalgarh is still awaited. Further SLDC, Tripura stated that ADMS installation work has been initiated at Khayarpur substation.

During 207th OCCM held on 17th October 2023, DoP Arunachal Pradesh stated that work for shifting of ADMS installation to less important feeders is in the process. He further informed that feeders have been identified at three substations.

During 207th OCCM held on 17th October 2023, it was informed that ADMS and UFR feeder segregation to be done at Mongshangei substation for Stage-I. Status is still pending as informed by SLDC Manipur.

SLDC Tripura, SLDC Arunachal Pradesh and SLDC Manipur to expedite the work and submit the timeline for implementation of the ADMS for safe operation of the grid.

Deliberation of TCC*:* Tripura informed that they will implement ADMS in 5 substations by March 2024. Arunachal Pradesh communicated their intention to expand ADMS coverage to include additional (less critical) feeders. Manipur shared that they would segregate the UFR and ADMS feeders shortly.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.23	**:**	**OPERATION OF 400 KV SWITCHYARD ON SIGNLE BUS MODE SINCE COMMISSIONING AT PANYOR LOWER HEP (PLHEP): NERLDC**

The existing 400 kV Bus scheme of Panyor Lower HEP is double main scheme, however 400 kV Bus-1 is not available since commissioning. This does not comply with clause no. 44.2(a) CEA Technical Standards for Construction of Electrical Plants and Electric Lines), 2022.

NEEPCO is requested to specify the timeline for availability of 400 kV Bus-1 at Panyor Lower HEP.

Deliberation of TCC*:* NEEPCO conveyed that the commissioning of the second bus at Ranganadi Hydro Electric Project (HEP) is scheduled to be completed by September 2024.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.24	**:**	**EARLY RESTORATION OF 132 KV RANGANADI – PARE LINE AND 132 KV RANGANADI – ITANAGAR LINE: NERLDC**

Temporary 132 kV Pare – Itanagar line has been formed in Mar'23 using 132 kV Ranganadi – Pare line and 132 kV Ranganadi – Itanagar line to prevent the collapse of endangered tower no 04. of 132 kV Ranganadi – Itanagar line.

The above condition has lead to increase in loading of 132 kV Ranganadi – Lekhi line well beyond the thermal rating, thereby requiring opening of the same when the generation of Ranganadi is available. 132 kV Ranganadi – lekhi line can be kept closed only when there is 1 unit at RHEP and 2 units at Pare HEP

DoP, Arunachal Pradesh is requested to update the status on the restoration of 132 kV Ranganadi – Pare line and 132 kV Ranganadi – Itanagar line.

Deliberation of TCC*:* CE, DoP Arunachal Pradesh affirmed that the specified lines would be restored within two months upon receiving the restoration cost

from NEEPCO. NEEPCO provided assurance that they would communicate the financial sanction of the cost within one week.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.25 : ISSUES RELATED TO BYRNIHAT S/S: NERLDC

a) 400/220 kV ICT-3 at Byrnihat S/S is on long outage since 02-02-2023 due to SF6 gas pressure in Y-ph line chamber on the HV side reaches the stage-I alarm level.

b) 63MVAR Bus Reactor at Byrnihat to be replaced with 80MVAR Reactor.

SLDC, Meghalaya may update the present status and specify the timeline for bringing the above elements into service.

Deliberation of TCC*:* ACE, MePTCL informed that both ICT 3 and bus reactor will be commissioned by end of Jan-2024.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.26 : CONSTRUCTION OF 2ND TRANSMISSION LINE TO TUIRIAL POWER STATION OF NEEPCO: NEEPCO

NEEPCO is facing problem in operating 2x30 MW power station with only one power evacuation line i.e. 132 KV single Circuit Bawklang (Kolasib) - Tuirial line. The matter has been discussed with Power and Electricity Dept. Govt of Mizoram on various occasions in the past and the Govt. of Mizoram has agreed to construct the same.

However, NEEPCO has observed that till date no progress on ground has been made for construction of the second circuit.

This may please be noted that a generating station which is based on reservoir operation cannot operate for long with a single evacuation transmission line and is also not fulfilling redundancy condition.

The matter was discussed in the 23rd TCC meeting and it was resolved that the issue will be resolved at RPC level. However, no further information/development in this regard has taken place till date.

Mizoram may kindly update the status and timeline.

Deliberation of TCC*:* Mizoram informed that construction of second circuit of Turial to Kolasib, will take tentatively 2 years, subject to the fund availability.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.27	**:**	**CONSTRUCTION OF 132KV MONARCHAK-SURJAMANINAGAR TRANSMISSION LINE: NEEPCO**

The proposed evacuation system from 110 MW TGBPS to Surajmaninagar is yet to be commissioned. Due to poor existing evacuation system, frequent tripping of both the Units have been experienced by NEEPCO. Though the matter has time and again been discussed in several Operation Coordination Committee Meetings of NERPC, M/s TSECL has still not indicated the proposed commissioning date.

Due to frequent tripping of existing lines and subsequent tripping of Units, NEEPCO has already observed major damages in the critical components of machines which in turn will reduce the expected life of the Units of TGBPS.

The issue is presently under monitoring in the OCC forum of NERPC under the item "Status of commissioning for upcoming projects"

TSECL may please be requested to complete the construction work of the said line at the earliest.

Deliberation of TCC*:* TPTL informed that the construction 132kV Monarchak- Surjamaninagar Transmission line will be completed by March 2024.

TCC noted as above and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.28 : INFORMAL MANPOWER DEPUTATION TO NERPC SCRETARIAT: NERPC

NERPC has been given enhanced responsibilities under the IEGC 2023 and other various CERC Regulations and by the central government. NERPC Secretariat is facing shortage of manpower to cater to various tasks specially the introduction of Protection Code chapter in IEGC 2023 and timebound furnishing of compliance and protection audit (internal/external) by the stakeholder and review of protection protocol/philosophy.

Therefore, in order to tide over the manpower shortage specially in the protection related activities as per mandate of various clauses of IEGC, it is proposed that CPSUs may depute some officers informally to NERPC Secretariat.

***Deliberation of TCC*:** MS, NERPC informed that NERPC Secretariat is having shortage of manpower vis-à-vis a lot of responsibilities given by CERC/MoP etc. He opined that CPSUs may depute their officers in NERPC Secretariat to assist the work related to protection and other IEGC compliance matters.

TCC noted as above with suggestion that States may also depute and placed to RPC for information.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.29 : ANNUAL CONTRIBUTION TOWARDS "NERPC SECRETARIAT ESTABLISHMENT FUND" FOR FY 2023-24: NERPC

In the 24th NERPC Meeting held on 28th June 2023, it was decided that the NERPC members will finance all NERPC Secretariat Expenses except for 'Salary'. The forum had approved the proposed Budget Estimate (BE) of Rs. 285.76 lakhs (approx.) for FY 23-24, which is to be shared by State Utilities/Departments and CPSUs/Private members in the ratio of 1:3, respectively. The contribution amount for each member/Utility for FY 2023-24 has been agreed upon and recommended by the NERPC forum as provided below.

Utilities	Annual contribution in INR
State Utilities / Departments	Rs. 7.52 Lakhs each
Central Utilities & Private Members	Rs. 22.56 lakhs each

Constituents are requested to kindly deposit their respective amount towards NERPC Secretariat Establishment Fund for FY 2023-24 at the earliest (if not yet deposited). The account details have been shared vide our letter dated 28.08.2023. As per latest update, the following Utilities/DoPs have made the requisite payment:

F.Y 2023-24			
Constituents	**Status of Payment**	**Constituents**	**Status of Payment**
NTPC	Payment Received	Ar. Pradesh	Payment Received
NHPC	Payment Received	AEGCL	Payment Received
PTC	DUE	APDCL	Payment Received
NVVN	Payment Received	APGCL	Payment Received
OTPC	Payment Received	MePTCL	Payment Received
NEEPCO	Payment Received	MePDCL	Payment Received
PGCIL	Payment Received	MePGCL	Payment Received
KMTL	Payment Received	MSPCL	DUE
TPTL	DUE	MSPDCL	Payment Received
TPGCL	DUE	Mizoram	Payment Received
TSECL	DUE	Nagaland	DUE

Constituent members are requested to kindly deposit their respective contribution amount at the earliest. MS, NERPC emphasized the importance of timely payments to the NERPC Establishment Fund and urged all concerned members to fulfill their financial obligations. GM, TPTL acknowledged that despite the unbundling of the Tripura power department into three utilities, the financial account separation is pending. He proposed that, until the bifurcation is completed, TSECL will be responsible for making the payment contributions for each utility (i.e. for TSECL, TPTL & TPGL).

Deliberation of TCC**:** *TCC noted as above with request to all organizations who have not yet contributed to make the requisite contribution at the earliest and placed to RPC for information.*

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. D.30	**:**	**INSTALLATION OF 0.2 CLASS ABT METER FOR THE TRANSMISSION LINE FROM 132KV RENGPANG TO 132KV TAMENGLONG AND 132/33KV TAMENGLONG SUBSTATION: MSPCL**

In the state of Manipur, Manipur State Power Company Limited (MSPCL) owns from 33kV sub-transmission up to 400 kV transmission systems; while the Manipur State Power Distribution Company Limited (MSPDCL) owns the 11kV distribution system.

In order to assess transmission and distribution losses in the state system by the State Load Despatch Centre (SLDC), Manipur, three interface metering points viz. transmission level i.e. (i) 400kV &132kV, (ii) sub-transmission level i.e. 33kV and (iii) distribution level i.e.11kV are required to be defined.

At present, energy accounting, transmission and distribution losses could not be assessed by the SLDC due to unavailability of complete and accurate data from the intra state entities.

Thus, the project for "**Implementation of Scheduling, Accounting, Metering And Settlement Of Transactions In Electricity (SAMAST) - Manipur**" is being taken up in Manipur wherein Supply and installation of **475 nos.** of 0.2 Class ABT Meter with TTB mounted in the meter box are installed in

- 400kV, 132kV & 33kV feeders
- 400/132kV, 132/33kV and 33/11kV transformers

132/33 kV Tamenglong (Khongjaron) which will be fed from 132/33kV Rengpang is being constructed under NERPSIP by PGCIL and is on the verge of completion. Test Charging is planned within December 20, 2023.

In order to achieve automated and transparent operations related to ABT mechanism and complete automation of ABT related workflow in SLDC, ABT meters need to be installed in the new substation and the new feeder which PGCIL had deliberated that it is in the scope of MSPCL.

Considering the above facts and circumstances, the committee may kindly approve the installation of 0.2 Class ABT Meter for the transmission line from

132kV Rengpang to 132kV Tamenglong and 132/33kV Tamenglong Substation.

***Deliberation of TCC*:** The forum noted and recommended MSPCL to approach PSDF directly for funding under SAMAST Scheme.

TCC noted as above and placed to RPC for information.

***Deliberation of the RPC* :** *The RPC noted as above.*

ITEM NO. D.31 : SAMAST SCHEME FOR BALANCE METERING POINT: MSPCL

SAMAST scheme for **589 ABT meters** proposed by MSPCL for funding under PSDF (Power System Development Funding) was partly approved by the concerned authorities in February 2021, as detailed below:

SAMAST APPROVAL BY PSDF

No. of ABT Meter	Category	Approval status
475	Existing elements	Approved
60	Upcoming elements (at time of framing DPR)	Not approved
54	10% spare	Not approved

It may be highlighted that many of the projects which were then undergoing construction have now been commissioned. Furthermore, few other elements which were not included in the proposal have also come up in the past few years. Inclusion of all newly commissioned and yet to be commissioned interface points is of paramount importance in order to achieve the prime objective of the scheme which was envisaged to realize a complete and accurate metering and energy accounting and settlement.

All the new substations/transmission lines commissioned after considering the already accepted elements of SAMAST DPR and upcoming elements which will be commissioned by next few years are identified. A total of **230** metering points presented below is proposed for consideration.

IDENTIFIED METERING POINTS

Category	***Number of ABT meter***
Newly commissioned lines	24
Newly commissioned transformers	56
Upcoming Lines	50
Upcoming transformers	100

Considering the above facts and circumstances, the committee may kindly approve the SAMAST Scheme for the identified balance metering point.

***Deliberation of TCC*:** The forum noted and recommended MSPCL to approach PSDF directly for funding under SAMAST Scheme.

TCC noted as above and placed to RPC for information.

***Deliberation of the RPC* :** *The RPC noted as above.*

5. CATEGORY - E : ITEMS RECOMMENDED TO BE REFERRED TO THE SUBCOMMITTEES/CMETS/PSDF ITEMS

ITEM NO. E.01 : IMPLEMENTATION OF ADMS (ADVANCED DEMAND MANAGEMENT SYSTEM) IN MEPDCL THROUGH PSDF: MEPDCL

The rapidly expanding Indian Power system is becoming increasingly complex, dynamic and challenging in its operation. The intricate electricity market mechanism coupled with compliance of Regulatory provisions has also placed additional burden in maintaining a reliable, secure and economic power system. The transmission network notwithstanding the intricately woven distribution network has to be thoroughly equipped to cater first hand to the requirements of the consumers who are also becoming increasingly aware of the standards and power quality which are to be met. Moreover, there is the absence of the mechanisms whereby distribution losses can be monitored on real time basis. This is due to the real time visibility and assessment of the state of the network and determination of areas of losses which, as a consequence, has placed on the distribution utility the onerous task of being financially viable entity.

The overall power scenario of the State including scheduling and dispatch have to be monitored in cognizance with the MSERC State Grid Code 2012 along with the Indian Electricity Code 2010 and its subsequent amendments and related CERC Regulations with respect to real time availability of power to avoid Grid failures. Excessive overdraw may jeopardize the real time balance of load generation leading to Grid failure which may affect the balance of power in other regions too. This has necessitated real time monitoring of downstream 33KV Sub-Transmission System through which bulk of power are being transferred to consumers.

MePDCL intends to implement Advanced Distribution Management System for real time monitoring of the distribution network, identification of loss-making areas, enhanced reactive power management, better operational reliability, improved fault analysis and faster clearance of faults etc. Installation of state-of-the-art SCADA-EMS system, Feeder RTUs coupled with capacitors and installation of Fault Location, Isolation and Service Restoration technologies etc are being envisaged to serve the intended objectives. Automatic Demand Management System (ADMS) is also being envisaged to help MePDCL maintain grid discipline and comply with relevant Orders of Hon'ble CERC.

Due to fund constrain it is requested that the above proposal may be approved to be funded from PSDF (100% grant).

Deliberation of the TCC **:** The forum noted that the pilot ADMS has already been implemented in NER with funding from PSDF. Requirement of ADMS for additional s/s need to be discussed in the sub-committee first for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.02	**:**	**RENOVATION AND MODERNIZATION (R&M) OF TRANSMISSION AND DISTRIBUTION SYSTEMS FOR RELIEVING CONGESTION: MEPDCL**

PROPOSAL:

(a) Construction of 33/11KV Substations with associated 33KV lines at Umden, Umling, Jorabad, Patharkhmah and Mawlasnai to relieve congestion and low voltage problems.

(b) Reconductoring and re-engineering of 33KV Stage-III-Zero Point-Umsning-Nongpoh line.(33Kms)

(c) Construction of 33KV Line from 220/132/33KV, 2x50MVA GIS Substation Saisiej,New Shillong (25Kms)

Explanatory Note:

About 85 % of the Power stations of MeECL are located within Ri Bhoi District. But the power supply in the District is supplied mostly through long 11KV Lines which results in huge voltage drop and ultimately resulting in low voltage problems at the consumer's end. Interconnection of a large number of villages Substations to the long 11KV lines results in frequent interruption of power supply.

Many industrial Units are also located within the District which account for huge power consumption and hence huge revenue return to the Corporation.

It may be mentioned that under MDoNER's Program "Fortnightly visits of Hon'ble Union Ministers to North Eastern Region", the Hon'ble Minister of State for Commerce and Industry, Sri Som Prakash visited Ri Bhoi District from 1-12-2022 to 2-12-2022 where he commented that "The District also faces problem in power supply as there is only Single Source of power. There is need to upgrade power infrastructure in the District".

For stability and reliability of power supply in the District, an alternative power supply from 220/132/33KV 2x50 MVA GIS Substation, Saisiej, New Shillong by construction of a 33KV S/C line on Wolf Conductor, is also proposed

Due to fund constrain it is requested that Renovation and Modernization (R&M) of transmission and distribution Systems for relieving congestion may be funded from PSDF (100% grant).

Tentative Cost: Rs 76 Cr.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.03 : RENOVATION OF PROTECTION SYSTEM IN 33/11KV SUBSTATIONS (EXISTING): MEPDCL

PROPOSAL: Replacement of Control & Relay Panels (of old relay system) with latest Control & Relay Panels, CTs and PTs of high sensitivity, improvement of earthing system, replacement of Battery Bank/Charger, old Circuit Breakers for both 33KV and 11KV

Explanatory Note:

132/33KV Substations are equipped mostly with latest protection system (Relays, Circuit Breakers, earthing system etc) but the connected 33/11KV Substations remain in the old system. This mismatching of protection equipment has led to undesired power interruptions, when the faults in the 33KV system are reflected to the 132KV SS. Hence for better coordination and matching and to reduce interruptions at Grid Substations, the protection system in 33/11KV Substations directly connected with 132/33KV Grid Substations need to be replaced and upgraded. Due to fund constrain it is requested that Renovation of Protection System for some of directly connected 33/11KV Substations may be funded from PSDF (100% grant).

Tentative Cost: Rs 20.0Cr.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.04 : RECONDUCTORING OF 132KV BUS BAR AT UMIAM STG III: MEPGCL

It is to be mentioned here that agenda note for Re-engineering of existing 132 KV Bus Bar from ACSR Panther to ACSR Zebra including terminal connectors at 132 KV Switchyard of Stage – III, Power Station, MePGCL, Kyrdemkulai was put up in the **21st TCC and 21st** NERPC meeting.

In line with the above agenda, it is proposed that Re-engineering of existing 132 KV Bus Bar from ACSR Panther will be carried out with HTLS conductor with higher current carrying capacity than ACSR Zebra conductor at 132 KV Switchyard of Stage – III, Power Station, MePGCL, Kyrdemkulai.

PROPOSAL: Re-engineering of existing 132 KV Bus Bar of 132 KV Switchyard of Stage – III, Power Station with HTLS conductor.

Explanatory Note: The loading of the existing 132 KV Switchyard Bus Bar of Stage-III Power Station, Kyrdemkulai with Panther conductor has exceeded the permissible loading capacity, it is also to be informed that Re-conductoring and Strengthening of the D/C line from Stage-I to Stage-III with HTLS conductor was completed in the month of December 2022. In connection with the above completed re-engineering work of the Transmission lines with HTLS conductor. Re-engineering of Bus Bar at Stage-III Switchyard is urgently required to be taken up with HTLS conductor equivalent to ACSR Zebra conductor or with much higher current carrying capacity than that of ACSR Zebra.

Tentative Cost: 2.0 Cr (Rupees Two Crore) only

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.05	**:**	**5MW EACH SOLAR PARK AND BATTERY ENERGY STORAGE SYSTEM IN TWO LOCATION AT WEST AND EAST JAINTIA HILLS DISTRICT IN MEGHALAYA STATE, NAMELY IN THE VILLAGE OF THAMAR AND SUCHEN: MEPGCL**

Explanatory Note: Meghalaya Energy Power Generation Corporation Limited (MePGCL) has proposed to develop a Solar Park on Grid of 5 MW and Battery Energy Storage System each in the village of Thamar and Suchen West and

East Jaintia Hills District in Meghalaya State. The objective of this Project it is not only because it is clean and environment friendly but also because it is abundantly available and is affordable, further to meet the load demand in the lean seasons. It is also to be mentioned that the land is already acquired by MePGCL, cost implication of the land will not be there.

Solar Park will be able to supply Power during day time only. To overcome the supply at night and to increase the Power System flexibility Batteries Energy Storage system is required. Batteries have already proven to be commercially viable energy storage Technology. BESSs are modular system that can be deployed in standard shipping container. The low cost and high efficiency of the Lithium-ionBatteries has been instrumental in the wave of BESS deployment in recent year. The Batteries are technically better suited to frequency regulation than the traditionally spinning reserves from Power Plant Batteries also provide a cost-effective alternative to network expansion for reducing curtailment of solar energy Generation. Similarly, batteries enable consumer'speak charge avoidant by supplying off Grid Energy during on peak consumption hours.

Due to fund constrain it is requested that the above project may be funded as 100% grant.

Tentative Cost: 156.00 Cr. (Rupees One hundred and Fifty Six Crore) only

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.06	**:**	**CONSTRUCTION OF ADDITIONAL LINK TUNNEL AT UMIAM-UMTRU STAGE III HYDRO-ELECTRIC PROJECT, KYRDEMKULAI: MEPGCL**

Explanation Note: The Umiam-Umtru Stage III (Kyrdemkulai) Hydro-Electric Project, Kyrdemkulai (2 X 30 MW) is one of the cascading Projects of

Umiam-Umtru basin commissioned in 1979.To generate to the present installed capacity of 60 MW (2 units of 30 MW) which will be 66MW (2x30 MW) later after implementation of RMU (Renovation Maintenance and Upgradation) required 50.97 cumecs against the maximum available discharge through link tunnel of only 20 cumecs. This has resulted in underperformance of the power station and spillage of water through the gates of Stage-III Dam especially during monsoon period. The present Renovation, Modernisation and Upgradation (RMU) of the Stage III Power Station will be more meaningful if an additional link tunnel is provided, since the water availability to the Power Station will not be restricted by the only existing Link Tunnel.

The Annual Design Energy of Umiam-Umtru Stage IV HEP is 207 MU and the Annual Design Energy Umiam-Umtru Stage III HEP is 139 MU though, the Design discharge and the rated head of the above projects are comparably more or less the same. However, there is a big difference of Annual design energy by 68 MU. This difference in Energy Generation of the two Projects can also be noted from the daily discharge during monsoon season. If we consider a conservative loss of annual energy by 50 MU (actual difference of 68 MU) the loss of revenue per year is about Rs. 22 (Twenty-Two) Crores annually @ Rs 4.33 per unit (as per the approved average tariff rate of the project of MePGCL for FY 2023-24).

Tentative Cost: Rs.87.29 Cr (Rupees Eighty Seven Twenty Nine) Crore

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.07 : UPGRADATION OF 132/33KV TRANSFORMER CAPACITY OF MePTCL GRID SUBSTATION TO 2X50MVA: MEPTCL

Explanatory Note: Power has become a vital infrastructure to be developed and improved upon to meet the demand for reliable and quality power supply and to meet the load demand.

In view of space constraint and right of way hurdles, it becomes difficult to develop new extra high voltage Substations. Hence, it becomes vital to augment the following existing Substations.

i. 132/33KV, 2X20 MVA NEHU S/S to 2X50 MVA
ii. 132/33KV, 2X20 MVA EPIP-I S/S to 2X50 MVA
iii. 132/33KV, 1X50 MVA EPIP_II S/S to 2X50 MVA
iv. 132/33KV, 1X20 MVA Nongstoin S/S to 2X25 MVA
v. 132/33KV, 2X20 MVA Umiam S/S to 2X50 MVA

The existing loading of the transformers in the above mentioned Substation has exceeded the optimum level. Due to overloading of the transformers, load shedding during peak hours has to be resorted frequently during winter.

The objective of the proposal is to meet the growing load demand and to ensure reliable and quality power supply for Shillong and its adjoining areas. The Load demand projected by 2030 of the following Substations is as shown below:

i. 132/33KV NEHU S/S is 80MW
ii. 132/33KV EPIP-I S/S is 90MW
iii. 132/33KV EPIP-II S/S is 90MW
iv. 132/33KV Nongstoin S/S is 30MW
v. 132/33KV Umiam S/S is 80MW

Tentative Cost: Rs 80.00/-Crs

Recommendation: The CEA has recommended the above project in the 'Revised Report on Intra State Transmission System Strengthening requirement of North Eastern State and Sikkim by the year 2030 vide File No. CEA-PS-12-16/1/2022-PSPA-II Division 230 I/26432/2023 February 2023 at Item No. 8.4.4 Sl. No. 3, 7, 8, 9 & 11.

Deliberation of the TCC **:** The forum noted that the proposed augmentation plan needs to be studied in light of the CEA's report on Intra State Transmission System Strengthening requirement of North Eastern State and Sikkim by the year 2030. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.08	**:**	**ERECTION, PROCUREMENT AND COMMISSIONING OF 33KV BUS IN VARIOUS GRID SUB STATION: MEPTCL**

Explanatory note: Meghalaya Power Transmission Corporation Limited (MePTCL) proposed for construction of 33 KV Bus and outgoing 33 KV lines along with all terminal equipment where 33 KV bus are not available and all outgoing 33 KV feeders does not have any protection due to non-existence of 33 KV terminal equipment. The following 132 KV Grid Sub Stations are therefore proposed for construction and erection including commissioning of the 33 KV bus and outgoing feeders

1. 132/33 KV Umiam Grid Sub Station- 33 KV bus with 2 outgoing 33 KV feeders
2. 132/33 KV EPIP-I Grid Sub Station- 33 KV bus with 2 outgoing 33 KV feeder
3. 132/33 KV Khliehriat Grid Sub Station- 33 KV bus with 3 outgoing 33 KV feeders
4. 132/33 KV Lumshnong Grid Sub Station- 33 KV bus with 2 outgoing 33 KV feeders

During the power interruption as a result of the recent Sitrang cyclone, our grid substation and transformers were subjected to severe stress due to frequent unabated tripping of the 33kV feeders impacting our terminal equipments and causing damage to power transformers. This has resulted in

blackouts and load shedding and alternate arrangements of load causing hardship to paramilitary establishments and the common public.

The construction and renovation of new 33kV switchyards for grid substations will help in ensuring a more efficient operation in relay co-ordination and provide grid stability.

Separate 33 KV bus in the 132/33 KV Grid substation is very important for ease of operation and maintenance. It will give the flexibility in performing maintenance work and pin pointing the fault of the outgoing feeders and thus reduce the outage period.

As separate 33 KV bus in the above 4 (Four) sub stations are not available, the outgoing 33 KV feeders were directly connected from the 132/33 KV power transformer without any protection to the 33/11 KV Sub stations of the DISCOM. Thus whenever the aforesaid 33 KV outgoing feeders tripped due to earth fault or over current, the line fault reflected directly to the power transformer and as such if this occurs continuously, the insulation of the power transformer will not be able to withstand and thus lead to its failure.

Further, without the 33 KV bus not in place, maintenance of power transformer along with switchgear equipment become quite difficult.

Tentative Cost: The above proposal will include all terminal equipments viz. CT, PT, Isolators, CB, lightning arrester and bus coupler etc, with a tentative cost of Rs. 10,40,00,000.00 (Rupees Ten crores Forty Lakhs) only

Recommendation: The CEA has recommended the above project in the 'Revised Report on Intra State Transmission System Strengthening requirement of North Eastern State and Sikkim by the year 2030 vide File No. CEA-PS-12-16/1/2022-PSPA-II Division 230 I/26432/2023 February 2023 at Item No. 8.4.4 Sl. No. 5, 6, 7 & 11.

Deliberation of the TCC **:** The forum noted that the proposed plan needs to be studied in light of the CEA's report on Intra State Transmission System Strengthening requirement of North Eastern States and Sikkim by the year 2030. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.09	**:**	**CONSTRUCTION OF 132/33KV, 2X25 MVA SUB STATION AT EXISTING 400/220/132KV KILLING SUB STATION: MEPTCL**

Explanatory note: Killing being an industrial area with substantial load growth, a reliable power supply is required.

As the voltage profile in most of the Killing-Khanapara area is poor and there is a frequent interruption of power supply because of no alternative source in the event of failure of 33kV incoming line from Byrnihat Distribution Substation.

To overcome this problem and to ensure quality power supply, it is necessary to construct a 132/33kV Substation at the existing 400/220/132kV Grid Substation.

With the construction of the above 132/33kV, 2x25MVA Substation, the quality and reliability of power supply in the entire area will be improved. It also will provide alternative source of power supply to the Killing-Khanapara and its adjoining areas.

Tentative cost: Rs. 70.03 Crs

Recommendation: The CEA has recommended the above project in the 'Revised Report on Intra State Transmission System Strengthening requirement of North Eastern State and Sikkim by the year 2030 vide File No. CEA-PS-12-16/1/2022-PSPA-II Division 230 I/26432/2023 February 2023 at Item No. 8.4 Sl. No. 7.

Deliberation of the TCC **:** The forum noted that the proposed plan needs to be studied in light of the CEA's report on Intra State Transmission System Strengthening requirement of North Eastern States and Sikkim by the year 2030. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.10	**:**	**RE-CONDUCTORING OF 132KV NEHU-MAWLYNDEP-MUSTEM-KHLIEHRIAT LINE BY HTLS CONDUCTOR: MEPTCL**

Explanatory Note: In order that snapping of conductors due to overloading and de-capping can be avoided, it is proposed to re-conductor the 132NEHU-Maelyndep-Mustem-Khliehriat S/C line with HTLS conductor using the same towers. With this enhanced capacity the grid will be more flexible and this will lead to fewer disturbances in the grid**.** Power flow along the Khliehriat – Shillong corridor during high hydro season (with full MLHEP & NEEPCO generation) is at present along 132kV Khliehriat-Mustem-Mawlyndep-NEHU S/C line and 132kV Khliehriat-NEIGRIHMS-NEHU S/C line. Due to difference in line length and corresponding impedance, the flow is more pronounced along 132kV Khliehriat-Mustem line compared to 132kV Khliehriat-NEIGRIHMS line, approximately the ratio of 65:35.As such, tripping of 132kV Khliehriat-NEIGRIHMS line will cause loading of 132kV Khliehriat-Mustem line to approach close to thermal limit considering the projected increase in load at Mustem, Mawlyndep & NEHU substations. As such, it is proposed that Reconductoring of 132kV Khliehriat-Mustem-Mawlyndep-NEHU S/C line may be approved in principle.

Tentative cost: Rs **126.00/- Crores**

Recommendation: The CEA has recommended the above project in the 'Revised Report on Intra State Transmission System Strengthening requirement of North Eastern State and Sikkim by the year 2030 vide File No. CEA-PS-12-16/1/2022-PSPA-II Division 230 I/26432/2023 February 2023 at Item No. 8.4.3 Sl. No. 1.

Deliberation of the TCC **:** The forum noted that the proposed reconductoring needs to be studied in light of the CEA's report on Intra State Transmission System Strengthening requirement of North Eastern States and

Sikkim by the year 2030. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.11	**:**	**ENERGY TRANSACTION OF ASSAM WITH ARUNACHAL PRADESH AND NAGALAND AND ITS COMMERCIAL SETTLEMENT WITH RESPECT TO OFFICE MEMORANDUM OF MINISTRY OF POWER, GOVT. OF INDIA DATED 15TH JUNE, 2023: APDCL**

Assam has long relationship with the states of Arunachal Pradesh and Nagaland with respect to Power transaction. Presently, Assam supplies power to Arunachal Pradesh by 12 (twelve) nos. of Interstate points while Assam takes power from Arunachal Pradesh by 2 (two) nos. of Inter State points. Assam, at present, supplies power to Nagaland through 1 (one) no. of point.

The net power drawl between APDCL and DoP, GoAP is presently adjusted in Deviation Settlement Mechanism (DSM) in post-facto basis. Also, the state having net drawl pays the transmission charge for the quantum monthly to the net supplying state.

For the transaction between Assam and Nagaland also, the net drawal quantum is adjusted in the DSM Mechanism, but no transmission charge is being paid as Nagaland assured to have its own transmission system soon which is not done yet.

The NERPC Forum in earlier meetings had the view that this existing mechanism of adjustment of energy in DSM is incorrect as it is done only after the end of a month while the DSM is calculated in Real Time Basis. This mechanism has affected all the states Assam, Arunachal Pradesh and Nagaland in managing their deviation from the schedule as the adjusted quantum is not known beforehand. But, the system was continued for the

sake of power supply to the people of border areas and also for not having clear guideline for adjusting the same.

In this respect, it may be noted that Ministry of Power, Govt. of India has now come up with a Protocol for providing Electricity to Border areas of one State from Grid of Neighbouring State on 15.06.2023.

For the settlement of the energy transacted between two states, the Point No. (vii) to Point No. (xi) of the Office Memorandum may be seen where the tariff of power supplied from one state to the other and the tariff of consumers and the payment mechanism are clearly explained.

As such, to have a proper settlement of energy transacted between the States and accordingly its payment mechanism by following the Office Memorandum of the Ministry of Power, Govt of India and to avoid any loss being faced by the states with respect to DSM, the forum is requested to discuss the matter and have a permanent solution.

Deliberation of the TCC **:** The matter is of commercial nature and may be taken up first in the next Commercial Co-ordination Meeting of NERPC. The forum therefore referred to the Sub-Committee (CCM) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.12 : IMPACT OF GNA: TSECL

General Network Access (GNA) has been implemented from 1st October, 2023. It has seen GNA for Tripura is 311MW based on the last three years average data. Earlier in POC regime, TSECL was paying around 3 Crores, but presently TSECL is paying around 11 to 12 crores. Impact of GNA in the region may be discussed.

Deliberation of the TCC **:** The matter is of commercial nature and may be taken up in the next Commercial Co-ordination Meeting of NERPC. The forum therefore referred to the Sub-Committee (CCM) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.13 :	RELIABILITY ISSUES IN MIZORAM POWER SYSTEM: NERLDC

Mizoram Power System is connected to the rest of NER grid through 132 kV lines i.e Melriat (PG) – Zemabawk, Badarpur –Kolasib, Aizawl –Kolasib, Melriat-Shimui and Aizawl (PG) – Luangmual line.

Kolasib area is connected though 132 kV Aizwal-Kolasib line and 132 kV Badarpur-Kolasib line. Shimui area is connected through 132 kV Melriat-Shimui DC and Luangmual area is connected through 132 kV Aizwal-Luangmual. The rest of Mizoram is connected through 132 kV Aizwal-Luangmual and 132 kV Melriat (PG) – Zemabawk line.

132 kV Lunglei – Kawmzawl line is kept opened (shown by red arrow) with the aim of feeding max power via both the paths. This leads to breaking of the loop, thereby reducing the reliability of the Mizoram Power System.

Short term plan: SPS is proposed for reliable operation by keeping the loop in closed condition.

The SPS would reduce the load of Zemabawk and Luangmual area whenever there is tripping of 132 kV Melriat – Zemabawk line and 132 kV Aizawl – Luangmual line respectively.

Long term plan: For strengthening of Mizoram power system in 7th CMETS held on 31st May 2022, Reconductoring of the following line with HTLS conductor have been approved:

a) 132 kV Sihhmui (Mizoram) - Zuangtui (Mizoram) line.

b) 132 kV Zuangtui (Mizoram) - Serchip (Mizoram) line.

c) 132 kV Luangmual (Mizoram) - Melriat (Mizoram) line.

d) 132 kV Serchip (Mizoram) - Kawmzawl (Mizoram) line.

The same will help alleviate the constraints in Mizoram power system and the system can be kept in closed loop condition.

SLDC Mizoram may specify the time-line for completion of the Short Term and the Long-Term Plan.

Deliberation of the TCC **:** Mizoram stated that the proposed SPS needs to be studied and loads have to be identified. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.14	**:**	**RADIAL CONNECTIVITY OF RANGIA & BTPS AREA: NERLDC**

At present the following ICTs are available at Rangia and BTPS (Assam) and N-1 critieria is not met in those two areas:

220/132 kV, 2 x 100 MVA ICTs at Rangia.

220/132 kV, 2 x 160 MVA ICTs at BTPS (Assam)

SLDC Assam may mention the implementation activities and timelines for improving the reliabilty of Rangia and BTPS Area of Assam Power System.

NEEPCO is requested to intimate the timeline and expedite the Installation of 420 kV, 80 MVAr bus reactor at Ranganadi HEP.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.15 : UPGRADATION OF END BAY EQUIPMENTS OF HTLS RE-CONDUCTORED LINES IN NER GRID: NERLDC

Following lines (table below) have been reconductored with HTLS conductor in the NER Grid with enhanced ampacity as per HTLS Conductoring.
However, the re-conductoring feature of the lines could not be utilized fully in present condition as it is being limited by the CT Ratio of the end equipments.

Line	**Owner**	**Upgraded Ampacity of Line**	**Present CT Ratio**	
132 kV Jiribam-Loktak line	POWERGRID	800 A	800/1	366/1
220 kV BTPS-Salakati 1 & 2	POWERGRID	1100 A	800/1	800/1
220 kV Sarusajai-Mirza 1 & 2	AEGCL	1200 A	800/1	800/1
132 kV Rokhia-Agartala I & II	TSECL	800 A	600/1	600/1
132 kV Umiam III-Umiam I D/C	MePGCL	875 A	600/1	600/1
132kV Aizawl-Luangmual line	P&ED Mizoram	800	600/1	600/1

The owners of the above Transmission lines may specify the timeline for upgradation of the CTs.

Deliberation of the TCC **:** The forum noted that the matter is being continuously monitored in the sub-committee meetings. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

RPC noted as above.

ITEM NO. E.16 : STATUS UPDATE OF GRID ELEMENTS UNDER LONG OUTAGE: NERLDC

The following elements are under long outage:

Sl. No	Name of line	Owner	Since
1	400 kV Imphal - Thoubal I	MSPCL	18-10-2021
2	132 kV Kakching - Churachandpur	MSPCL	08-06-2023
3	132 kV Elangkangpokpi - Churachandpur	MSPCL	08-06-2023

SLDC, Manipur may specify the timeline for restoration of the transmission elements.

Deliberation of the TCC **:** The forum noted that the matter is being continuously monitored in the sub-committee meetings. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.17 : UTILIZATION OF 400/220 KV ICTS AT NEW KOHIMA SUBSTATION: NERLDC

The New Kohima Substation, operating at 400/220 kV, was energized in November 2020. However, the downstream 220 kV New Kohima-Zhadima line remains unchanged. Consequently, the 400/220 kV ICTs at the New Kohima Substation are currently not being utilized.

SLDC, Nagaland may specify the timeline for commissioning of the downstream elements of New Kohima S/s.

Deliberation of the TCC **:** The forum noted that the matter is being continuously monitored in the sub-committee meetings. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for

detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.18	**:**	**REMOVAL OF T–CONNECTION OF 132 KV BALIPARA-KHUPI S/C AT BHALUKPONG (TIPPI): NERLDC**

It is observed that the T-connection /Tapping of 132 kV Balipara –Khupi S/C at Bhalukpong (Tippi) Substation is under operation since long time. However, as per Cl. 46.4 of CEA Safety Regulation 2023, *"There shall not be tapping of another transmission line from the main line for 66 kV and above class of lines"*

In 207th OCCM dated 17th October 2023, after, due deliberation, the forum exhorted DoP Arunachal Pradesh to remove the T connection.

DoP, Arunachal Pradesh may specify the timeline for removal of the T-connection/Tapping and making some alternate arrangements for catering the load fed from Bhalukpong (Tippi) Substation.

Deliberation of the TCC **:** The forum was informed that in the 208th OCCM Ar. Pradesh stated that one substation at Bhalukpong is under construction, it will be connected through LILO of the 132kV Balipara-Tenga line. Wildlife clearance for the LILO line is pending and will be obtained soon. He further requested that the substation will tentatively be ready within 1 year and requested that the T connection be allowed to continue till then.

The forum opined that the matter needs to be regularly monitored in sub-committee. It is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.19	**:**	**STATUS OF STATE RELIABLE COMMUNICATION SCHEME: NERLDC**

State Reliable Communication Scheme consist of four (04) sections which are described below –

a) OPGW Links: States are requested to update the status of preparation of DPR for OPGW links.

b) Fiber Optics Terminal Equipment (FOTE): States are requested to update the status of preparation of DPR for all related FOTE (including DCPS, if required).

c) Remote Terminal Unit (RTU): The Detailed Project Reports (DPRs) for deployment of RTUs in selected stations under ownership of state-utilities in NER were submitted for PSDF funding. The cost-details in respective DPRs are – Arunachal Pradesh: ₹ 34.55 Crores; Assam: ₹ 9.104 Crores; Manipur: ₹ 0.828 Crores; Meghalaya: ₹ 5.517 Crores; Mizoram: ₹ 3.862 Crores; Nagaland: ₹ 12.139 Crores.

In 74th Techno-Economic Sub-Group Meeting held on 17th March 2023, various queries were raised on the DPRs and it was recorded in MoM that – ***"It was decided that the observations of TESG may be communicated to the entities for the proposals (382 to 387) and will be examined after receipt of the complete inputs. TESG also suggested entities not to include 33/11 kV substation and under construction Substation in the scope of work. Entities agreed for the same. NLDC is requested to communicate the above decision to the entities."***

The matter was deliberated on 26th NETeST meeting held on 10th October 2023 and it was decided with consent of all present state-utilities members that current DPRs will be taken back by SLDCs. Subsequently, SLDCs will review the list of stations again (66kV level and above) for RTUs deployment and merge respective DPR under its "State Reliable Communication Scheme" (which can include OPGW, End Equipment, RTUs & Any other associated equipment required for communication) for 90% PSDF funding. Balance 10% funding will be from state-utility side.

d) Other items (VSAT Communication)

The Detailed Project Reports (DPRs) for establishment of VSAT Communication in selected stations under ownership of state-utilities in NER were submitted for PSDF funding. The cost-details in respective DPRs are –

Arunachal Pradesh: ₹ 6.328 Crores; Assam: ₹ 0.951 Crores; Manipur: ₹ 0.422 Crores; Meghalaya: ₹ 0.317 Crores; Mizoram: ₹ 0.898 Crores; Nagaland: ₹ 2.696 Crores; Tripura: ₹ 0.792 Crores.

In 74th Meeting of Techno-Economic Sub-Group (TESG) meeting held on 17th March 2023, it was deliberated and recorded in MoM that – ***"TESG recommended these proposals (Proposal nos. 388 to 394) as deemed returned and suggested entities to submit a comprehensive DPR consist of installation OPGW, FOTE after assessing the proper requirement and consider VSAT communication (up to 66kV) for only in exceptional terrains where OPGW laying is not feasible. Entities agreed for the same. NLDC is requested to communicate the above decision to the entities."***

The same matter was put up in Appraisal Committee meeting held on 19th June 2023 and it was recorded in MoM that – ***"Regarding NER proposals of VSAT (DPR 382 to 388), Appraisal Committee accepted the suggestion of TESG that instead of installation of VSAT communication having low bandwidth, the entities may submit a comprehensive DPR consisting of the implementation of reliable communication network through the installation of OPGW based fiber optic network. VSAT communication (up to 66kV) may only be considered for only in exceptional terrains where OPGW laying is not feasible. The Appraisal committee returned the present proposal for the installation of VSAT communication network (i.e. DPR 382 to 388)."***

The DPRs were rejected by TESG on the grounds of low bandwidth, exploring OPGW as the primary option, some 33kV stations were also included in DPRs, etc. It seems that the urgent need of VSAT communication in NER due to difficult terrain and long execution period (of the order of several years) has not been put up with clarity in front of TESG and Appraisal Committee leading to rejection of the associated DPRs. Moreover, the bandwidth of 128kbps is sufficient to cater real-time power system operational data transfer requirements of SLDCs. SLDCs are dependent upon establishment of VSAT to meet various deadlines given to CERC in reply to petitions Petition No.

197/MP/2020 (Arunachal Pradesh), Petition No. 201/MP/2020 (Tripura), Petition No. 263/MP/2020 (Nagaland) and Petition No. 556/MP/2020 (Mizoram) against which an Order has also been issued by CERC on 04th August 2023 available on web-link https://cercind.gov.in/2023/orders/197_MP_2020-Ors.pdf.

The matter was deliberated on 26th NETeST meeting held on 10th October 2023 and the forum noted that the DPRs had been deemed returned by TESG/ PSDF Appraisal Committee. SLDCs stated that all stations upto 66kV level are being monitored for ensuring reliable operation of the electricity grid. However, improvement of real-time data availability is a big challenge due to issues in laying of OPGW in hilly terrains and remote stations. The NETeST forum noted that VSAT for NER electricity grid can act as a critical technology for faster installation at places as per following criteria –

- Locations with no OPGW planned.
- Locations with OPGW planned but will take several years to get commissioned.
- Locations where feasibility of alternate physical redundant OPGW is difficult.
- Station with hilly terrain or remote stations (66 kV level and above) where laying OPGW is not economically viable for state.

POWERGRID-NERTS has also informed the NETeST forum that VSAT technology had been put into its three (03) nos. of stations in Arunachal Pradesh i.e., Roing, Tezu and Namsai considering the long planning and implementation period of OPGW projects in NER.

The NETeST forum also deliberated that 128kbps bandwidth shall be sufficient for each station to transfer its data to respective SLDC and Extended-C band technology need to be used in order to avoid data interruption during bad weather conditions as tested during earlier demo-pilot projects at Killing and Tezu stations of NER. The NETeST forum unanimously agreed to the deployment of VSAT technology as it is very critical to improve the availability of real-time power system operational data at

SLDCs in NER. Currently, the OPGW projects are being planned in discrete manner and also taking several years for getting completed and operational. SLDCs agreed to review the list of stations again (66kV level and above) for VSAT deployment and merge respective DPR under its "State Reliable Communication Scheme" (which can include OPGW, End Equipment, RTUs & Any other associated equipment required for communication) for 90% PSDF funding. Balance 10% funding will be from state-utility side.

States are requested to update the status of DPR for reliable communication scheme incl. OPGW, End-equipment based on SDH technology, VSAT Communication and RTUs.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.20 : ISSUES RELATED TO GAS BASED ISGS POWER STATIONS: NEEPCO

Assam Gas Based Power Station (AGBPS) is a 291MW combined cycle Gas thermal power station of North Eastern Electric Power Corporation (NEEPCO), having 100% PPA with seven states of NE, India. AGPBS gets its fuel gas from the local network of gas wells of M/s Oil India Limited in the Dibrugarh and Tinsukia districts of Assam, India.

AGBPS is facing various generation related issues after implementation of CERC (IEGC) Regulations, 2023.

- **Ramping rate.:** Earlier, AGBPS was considered for only 20 MW Ramp up or Ramp down. Now, after implementation of the Regulation, anything up to 45% of ex-bus capacity is imposed as schedule variation.
- **Disturbance in Gas drawal:** While ramping up the generation at very high rate, as the gas network is a very small-isolated one, the gas pressure falls down and destabilizes the Gas network. As a result, AGBPS again needs to lower the generation causing penalty through DSM.

Similarly, sudden reduction in gas drawal due to steep fall in schedule causes high flaring of gas at the gas field resulting closure of the gas-well valves by Gas supplier or diversion of the gas quantum to other potential customers. Eventually, when a higher schedule is given afterwards, gas supplier denies to increase their gas. This leads to loss.

Gas supplier has requested to intimate them well in advance before change in gas drawal and to keep the gas drawal steady as much as possible. In the present scenario, both are not possible for a gas thermal generator due to Ancillary Services imposition in the just previous block.

In this regard, it may be noteworthy to mention here that in the CERC (Ancillary Services) Regulations, 2022, it has been written in 18(3) that, "The schedule for TRAS shall become effective from the time block starting 15 minutes after issue of the despatch instruction by the Nodal Agency". However, since implementation of this regulation, we are getting AS up /down effective in the schedule from very next block, i.e. practically we get only 12 minutes lead time. This is really very small time to get the gas supplier ready to increase the gas availability.

- **Difficulty in maintaining time block average MW:** As the Gas Turbine Generators have a certain ramping rate, it is not possible to increase the generation instantly. Furthermore, Combined cycle Gas Thermal stations have Steam Turbine Generators- which need some time to generate at the increased generation schedule, after increasing the GTG load. When the ramps are huge, it takes considerable time to increase the generation up to schedule level. Due to this delay, it is not possible to achieve the block average generation at the schedule level.

  Similarly, when a steep fall in schedule occurs, generation again cannot be reduced instantly and it needs some time. During this period, block average generation remains above the schedule, thereby causing loss by penalty imposition and excess gas feed too. The situation becomes more adverse when these ups and downs are repeated at very short interval of time.
- **Increase no of DC Revision:** Only 2 nos. of DC revision have caused a lot of trouble. Capacity may change within a day many a times considering various factors e.g. outage of machines, change in the gas network parameter- which

are not predictable in advance of around a day. Therefore, it is requested to allow More DC revision

- **Interlink between RTM power exchange and RLDCs:** Sometimes, it so happens that the blocks with RTM sale gets URS or increased demand too. In such blocks due to implementation of both RTM and URS, schedule becomes more than the DC. It is requested hereby to kindly arrange so that both are not triggered at the same time by some mechanism between RLDC and the power exchanges.
- **Adverse effect on the Gas Turbines:** Frequent ups and downs of load on Gas Turbine generators and Steam Turbine Generators are causing adverse effect on the hot parts of the units (that are mainly designed to run as base load at maximum load.
- **Difficulties in achieving MOU Target and Heat Rate:** Partial loading of the Gas Turbines due to very low schedule is becoming the hindrance in achieving the Heat Rate as well as MoU target.
- **Review of implementation TRAS in Gas Turbine Generators:** In comparison to the size of the national grid, Gas based Combined cycle Thermal generation under ISGS Category is very negligible. Considering the difficulties presently facing by Gas based Thermal Power plants, it may be reconsidered for implementation of TRAS and allow to run Gas Turbine Generator as a base load machine.

On 22.10.2023,	Total Generation	: 1,87,055 MW
	Gas Generation	: 3,291 MW (1.76%)
On 08.11.2023,	Total Generation	: 1,91,183 MW
	Gas Generation	: 3,199 MW (1.67%)
On 08.11.2023,	Total Generation	: 1,94,226 MW
	Gas Generation	: 2,554 MW (1.31%)

Similar issues are being faced by AgGBPS. It is therefore, requested discuss the above matter in the 25th TCC meeting.

Deliberation of the TCC **:** The forum opined that the operational & commercial challenges being faced by AGBPS need to be discussed in Sub-Committee meeting(s) for detailed analysis & resolution. It is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.21 : ISSUE PRETAINING TO CBIS-NERPSIP: POWERGRID

The following documents were drafted for the beneficiary utilities of NERPSIP which includes 16 nos. for transmission utilities and 3 nos. for distribution utilities. The details are as mentioned below:

List of documents (draft) submitted to the transmission utilities for system improvement:

1. Dissolved Gas Analysis Interpretation
2. Erection manual of ERS (Disaster Management)
3. Guidelines for Learning & Development
4. Guidelines for Preservation Procedure and Condition Monitoring of Spares
5. Guidelines for Prevention of Sexual Harassment Against Women at Workplace
6. Guidelines for Testing Instruments for EHV Substation
7. Guidelines for Testing Instruments for EHV Transmission Lines
8. Guidelines for VRLA Battery Bank And Battery Charger
9. Maintenance Guidelines for EHV Transformers and Reactors
10. Oil Sampling Procedure for Transformer and Reactors
11. Permissible Limit for Sub Station Equipment
12. Pre-Commissioning Procedure and Formats for Transmission Lines
13. Preventive Maintenance Formats and Schedules
14. Procedure for oil replacement in Transformer and Reactor at Site
15. Procedure for patrolling and maintenance of EHV transmission lines
16. Safety-Guidelines and Instructions

List of documents (draft) submitted to the distribution utilities for system improvement:

1. Guidelines for Learning & Development,
2. Guidelines for Prevention of Sexual Harassment Against Women at Workplace,

3. Procedure for Patrolling and Maintenance of Distribution Lines

Any suggestions on draft documents may be reviewed by utilities so that same may be finalized.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.22	**:**	**REQUIREMENT OF NODAL PERSON of UTILITIES FOR PROPER COMMUNICATION UNDER CBIS: POWERGRID**

Currently POWERGRID does not have an updated list of assigned representatives/nodal persons who shall be looking after the CBIS-NERPSIP (9 utilities) or CBIS-CTDS (2 utilites).

It will really be helpful if we have a main and standby nodal person for each of the 11 utilities. It will help for proper tracking and record keeping.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.23	**:**	**COMPLETION OF LINE UNDER NERPSIP-MIZORAM: POWERGRID**

Under the NERPSIP Scope in Mizoram, 132/33kV West Phaileng Substation, 132/33kV Marpara Substation along with 132kV West Phaileng Marpara Transmission line are being constructed.

As per the original plan, 132/33kV West Phaileng Sub-station is to be connected from existing Sihhmui substation via existing 132kV Zemabawk-Sihhmiu-West Phaileng line. Presently the line is charged at 33kV level

supported by poles at few locations and as gathered, there will be delays in rectification of the line.

Meanwhile, 132kV Bairabi – Mamit – W.Phaileng line and 132/33kV Sub-station at Mamit is also under construction by P&E Department which is expected to be ready prior to Zemabawk -Sihhmui – W.Phaileng line restoration.

P&E Department may expedite the completion of the line to energize the system being constructed under NERPSIP at rated voltage.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.24 : ISSUE PERTAINING TO NERPSIP – NAGALAND: POWERGRID

66/33kV Tuensang SS of DOPN is being upgraded to 132/33kV level under NERPSIP as an additional scope and the same is targeted for completion by December 2024. The existing lines connected to Tuensang from 132/66kV Mokokchung and 132/66kV Kiphire is presently charged at 66kV. DoP Nagaland may ensure that the associated system at Mokokchung and Khiphire for Tuensang is upgraded to 132kV level in commensuration with Tuensang upgradation for its gainful utilization.

Certain elements which are already commissioned, and few elements which are expected to be ready shortly under NERPSIP in Nagaland are likely to remain unutilized due to absence of downstream feeders. DOPN may expedite construction of downstream feeders to the following substations for gainful utilization:

a. 132/33 kV Longnak substation
b. 132/33 kV New Kohima (Secretariat) substation
c. 33/11 kV Longtho substation

d. 33/11 kV Chipobouzhou substation

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.25 : ISSUE PERTAINING TO NERPSIP – TRIPURA: POWERGRID

132/33 kV Gokulnagar S/S under NERPSIP Tripura shall be connected by LILO of 132 kV Surajmaninagar- Rokhia line. Construction works for the LILO portion under NERPSIP has been completed and construction of 132 kV Surajmaninagar- Rokhia line is being done by TSECL. Construction works by TSECL needs to be expedited for energization of the system under NERPSIP. In case of further delays with regards to completion of the line, TSECL may take over the Gokulnagar substation along with the completed LILO portion.

132kV Rabindranagar – Belonia line being constructed under NERPSIP Tripura. The line has already been completed except for around 200 meters which is being held up due to pending diversion of existing 132kV Monarchak – Rabindranagar by TSECL **(Bay shifting)**. The line diversion works by TSECL may be expedited for energization and gainful utilization of 132kV Rabindranagar – Belonia line.

Infringement free land for Township / Colony construction may be provided by TSECL for the following substations:

a. 132/33kV Satchand SS
b. 132/33kV Rabindranagar SS

If there is no immediate visibility towards availability of land, deletion of the above scope may be considered from NERPSIP.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.26 : ISSUE PERTAINING TO NERPSIP – MANIPUR: POWERGRID

RTU augmentation for data reporting to SLDC (MANIPUR) for obtaining "First Time Charging Clearance":

MSPCL needs to make necessary arrangements for RTU augmentation for data reporting to SLDC (Manipur) to obtain "First Time Charging Clearance for the following substations:

i. 132/33 kV Ningthoukhong (MSPCL) S/s.
ii. 132/33 kV Jiribam (MSPCL) S/s.
iii. 132/33 kV Rengpang (MSPCL) S/s.

As per the original scope, only renovation of 132 kV Yurembam Karong Mao line was to be done under NERPSIP Manipur. However as per the request of MSPCL, diversion portion of the said line in Senapati area **(27 towers to be shifted)** was included in the scope of NERPSIP. However, works have been stopped by villagers since first week of Oct' 21 due to demand of compensation, which was to be borne by ADC (Autonomous District Council) Senapati. Material against the additional scope has already been supplied. As the matter is long pending and no further development is visible, it proposed to drop the implementation of the additional scope and the supplied materials shall be handed over to MSPCL.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.27 : HANDING OVER OF ASSETS COMMISSIONED UNDER NERPSIP: POWERGRID

All state utilities are requested to Take Over the assets which are already energized or under operation. Due to contractual obligations with executing agencies, Handing over procedures may be prioritized for commissioned assets under NERPSIP.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.28 : RESOURCE ADEQUACY AND TRANSMISSION ADEQUACY: NERLDC

Resource Adequacy Assessment

As per Guidelines for Resource Adequacy Planning Framework for India (Framed under the Rule 16 of Electricity (Amendments) Rules, 2022), NLDC shall annually publish a one-year look-ahead Short-term National Adequacy Plan. Hence, planning studies in future includes studies for short term resource adequacy assessment for national level.

NERLDC has carried out a probabilistic resource adequacy study (considering10000 Monte Carlo) for all the NER region constituents from January 2024 to June 2024 in an open-source software.

Shortfall (MU) denoted in output signifies the additional procurement required to meet demand.

Several Data assumptions for the study have been considered

The STUs/SLDC shall prepare one-year look ahead ST-DRAP (Short term Distribution Resource Adequacy Plan) on an annual basis for operational planning, at the state level and shall review the ST-DRAP on a daily, monthly

and quarterly basis based on actual availability of generation resources to ensure sufficient electricity to power the growing economy of country.

The study results of Resource Adequacy will be presented by NERLDC

STUs/SLDCs are requested to conduct one-year look-ahead Short-term state Resource Adequacy Plan.

Transmission Adequacy

The anticipated peak demand of NER region to be met in 2024-25 would be 4284 MW (approx.) based on the demand projection.

NERLDC will present a study highlighting the system constraints including issues related to overloading of network, low voltages, ISTS drawl of respective control area of NER Region.

All constituents are requested to inform the action plan to alleviate the observed over-loading, and also the status of commissioning of planned network elements for relieving the constraints.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

The RPC noted as above.

ITEM NO. E.29	**:**	**SYSTEM CONSTRAINTS IN THE UPSTREAM OF ROING-CHAPAKHUWA 132 KV D/C TRANSMISSION LINE – MITIGATIONS TO RESTRICTED POWER FLOW TO ARUNACHAL PRADESH: DOP ARUNACHAL PRADESH**

After a prolonged wait and great deal of effort, the Roing-Chapakhowa 132 kV D/C transmission line was finally completed & commissioned in July 2023 to the much-expected redundancy relief to Central Arunachal Pradesh.

However, immediately after commissioning of the system, it is experienced that whenever any disruption occurs, or shutdown is taken at any element,

in between Panyor (Ranganadi) Hydro-Electric Plant and Pasighat node, quantum of power to Arunachal Pradesh is restricted to mere 10-15 MW through the Roing-Chapakhowa corridor despite its adequate transmission capacity, thereby forcing unabated load-shedding in Arunachal Pradesh. The reason of this constraint is reported to system inadequacies in the upstream systems at Chapakhowa-Rupai-Tinsukia and Rupai-Margherita and Rupai-Tinsukia networks.

Above persistent situation nullifies the very purpose of the installation of much touted Roing-Chapakhowa 132 kV D/C line. Therefore, the above constraints need to be discussed and remedies to the inadequacies be put in place and enforced at the earliest for benefit of all constituents.

The issue was deliberated in 204th OCCM, in which it was decided that -
i) Assam may consider HTLS reconductoring of Tinsukia-Ledo, Tinsukia-Rupai or any other associated lines in the area.
ii) Planning for new lines, for instance Tinsukia-Chapakhowa, may also be explored. iii) As an immediate measure, devising an SPS to disconnect loads of Assam or Arunachal Pradesh on tripping of critical lines, may be considered.

The forum further referred the matter to CMETS for further discussion.

Consequently, the matter was deliberated in 24th CMETS and following was decided-

i. With taking into service, Kathalguri – Namsai line, the critical loading in Tinsukia area and ICTs at Tinsukia subsides. Thus, presently the system may be operated as per instructions of NERLDC and if required, some SPS can be planned

ii. Strengthening in Tinsukia area (reconductoring and ICT augmentation) may be reviewed after commissioning of Kathalguri – Namsai and Gogamukh – Gerukamukh links.

iii. Loading on Chapakhowa – Rupai, Rupai – Margherita, Tinsukia – Rupai & Tinsukia – Margherita 132kV S/c lines and Tinsukia ICTs would be

reviewed after commissioning of Kathalguri – Namsai 220kV D/c line and Gogamukh – Gerukamukh 132kV D/c (Zebra) line.

Forum may like to deliberate.

Deliberation of TCC: After due deliberation, it was decided that a special meeting will be conducted to provide an interim relief to the constrained as raised by Arunachal Pradesh. The forum also requested AEGCL to implement, at earliest, the upgradation of Tinsukia – Rupai network. The forum referred the matter to sub-committee for further deliberation.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. E.30	**:**	**RE-CONDUCTORING OF 132KV TRANSMISSION LINE WITH HTLS CONDUCTOR: NAGALAND (208TH OCCM)**

Re-conductoring of 132kv transmission line with HTLS conductor of:

1. Nagarjan DoPN (Dimapur) - PGCIL (Dimapur) ckt – I&II : 1.3 Km
2. PGCIL (Dimapur) – Kohima: 60 Km
3. Kohima – Karong (Nagaland Portion): 21 Km

The 132kV S/C transmission line Nagarjan DoPN (Dimapur) – PGCIL (Dimapur) Ckt-I & II, 132kV S/C transmission line PGCIL (Dimapur) – Kohima and 132kV S/C transmission line Kohima – Karong (Nagaland Portion) were constructed during the late 1970's.

These 132kV transmission corridor serves as major lifeline to the State capital area i.e. Kohima Load Centre and the state commercial hub i.e. Dimapur Load Centre.

The 132kV Kohima – Karong transmission line is the only 132kV interstate line connecting Nagaland and Manipur state, the line serves as an important alternative to both the state during exigency. The need for re-conductoring of the said transmission lines are as explained below:

i). 132kV S/C transmission line Nagarjan DoPN (Dimapur) – PGCIL (Dimapur) Ckt. – I & II:

The 132/66/33kV, 2x100MVA Nagarjan sub-station is fed through 2(two) nos. of 132kV S/C line from 220/132kV PGCIL (Dimapur) sub-station. The line length of 132kV Ckt. I & II are 0.75KM and 0.55KM respectively. Nagarjan sub-station is the only grid connected station catering power supply to Dimapur Load Centre feeding four districts vis. Dimapur, Niuland, Peren & Chumoukedima districts. Dimapur being the commercial hub of the state, the maximum demand of Nagarjan sub-station is about 125MW as of May'2023. The conductors of both Circuit-I & II feeding Nagarjan sub-station is a single ACSR Panther and due to the old age of conductors, the line loading is restricted to 70MW on each circuit. Therefore, in the event of outage of one circuit, N-1 contingency criteria is not satisfied, and Dimapur Load Centre is constrained to impose load shedding.

ii). 132kV S/C transmission line PGCIL (Dimapur) – Kohima:

The 132kV S/C transmission line from PGCIL (Dimapur) sub-station to Kohima sub-station is one of the oldest Transmission Line in Nagaland, and has been in service for about 45 years. Kohima Load Centre caters power supply to the districts of Kohima, Wokha, Phek, Kiphire and Tseminyu. Kohima being the state capital, stability of power is a priority. The conductor of the 132kV PGCIL (Dimapur) – Kohima transmission line is single ACSR Panther with a line length of 60KM. Presently the installed capacity under Kohima Load Centre (Kohima, Meluri-Phek, Kiphire & Wokha) is about 95 MW. During exigency, additional load requirement of Manipur (Karong sub-station) is catered from Kohima restricting up to 40MW (due to transmission constraints).

Due to the old age of the transmission line the conductors, jumpers and insulators had deteriorated. Breakdown of jumpers and failure of disc insulators have become frequent which has resulted in grid disturbance in many occasions. The State has been warned on several occasions by NERLDC & CERC and only recently the Department was summoned by CERC vide Petition No. 259/MP/2020 and has directed DoPN to expedite the up-gradation of the said transmission line.

iii).132kV S/C transmission line Kohima – Karong (Nagaland Portion):

The 132kV Kohima – Karong (Manipur) line connecting Nagaland and Manipur is an important interstate line between the two states. During normal grid condition, the line provides stability for Kohima Load Centre. The conductor of transmission line in Manipur side is already under process for upgradation with HTLS conductor, whereas, proposal for upgradation of the transmission line on Nagaland side has not been processed till date. It may be noted that, due to the present system constraint, requirement of Manipur is restricted to 40MW during Manipur exigency. Requirement for enhancement of this line transmission capability has been in demand for a long time.

In the 208th OCCM, NERLDC stated that the mentioned lines are critical for Nagaland power system and system study supports for the reconductoring requirement for these lines.

After detailed deliberation, the forum recommended the proposal and refer to TCC/RPC for approval.

Deliberation of the TCC **:** CTU stated that the proposed lines are either ISTS or are connected/incidental to ISTS. So, the reconductoring plan needs to be discussed in CMETS. The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC/CMETS.

TCC noted as above.

This is for information of RPC.

Deliberation of the RPC **:** *The RPC noted as above.*

ITEM NO. E.31 : ESTABLISHMENT OF NEW 132/33 KV (2 X 50 MVA) AIS SUBSTATION AT HAFLONG: AEGCL

Associated Lines

132kV D/C Lumding (Upcoming) – New Haflong Line

The existing 132kv grid substation at Haflong was commissioned in late eighties to cater to the load of Haflong and its adjoining areas. This substation is however a very small substation with one single main bus without even

having any provision for transfer bus – neither there is any scope for further expansion or addition of any new 132kv bus due to limitation imposed by limited area and hilly terrain of the substation.

Haflong is the District HQ of Dima Hasao District which is mostly a tribal dominated territory. Haflong is the only tourist hill station of Assam which is frequented by thousands of tourists every year. However, during the period of the devastating flood and the widespread landslide witnessed in the year 2022, Haflong and other areas had remained without any power for about a week as both 132 kV connectivity through PGCIL transmission network had been under outage due to collapse of transmission towers. It is to be noted that 132kV Haflong- Jiribam section (PGCIL) witnesses repeated collapse of towers due to severe landslides. Considering these perennial problems & in view of the larger social issues like development of tribal areas, encouragement of tourism industry etc, NERPC also tabled a special agenda for exploring an alternative route to Haflong in an earlier OCC Meeting and the issue was discussed in several OCC forums.

Considering the ever growing of commercial and industrial activities in this hill district of Assam, and also in view of the need for stability and reliability of grid power in this part of the state, the said new Haflong substation is proposed for endorsement of the forum.

Deliberation of the TCC **:** The forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and is therefore referred to the Sub-Committee(s) of NERPC.

TCC noted as above.

This is for information of RPC.

Deliberation of the RPC **:** *The RPC noted as above.*

DATE & VENUE OF THE NEXT MEETING

The next meeting ie., 26th TCC & 26th NERPC meeting(s) is proposed to be held in the month of June 2024. The date and venue will be intimated separately.

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ANNEXURE – I

LIST OF PARTICIPANTS IN 25th TCC MEETING

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
1.	ASSAM	Sh. Bibhu Bhuyan	MD, APGCL
2.		Sh. Gunajit K. Bhuyan	CGM, AEGCL
3.		Smt. Jayashree Devi	CGM(O&M), AEGCL
4.		Sh. Deepanjal Das	GM, APDCL
5.		Sh. Tridip Borah	AGM, AEGCL
6.		Sh. Nilutpal Barua	AGM, AEGCL
7.		Sh. Indrajit Tahbildar	AGM (TRC), APDCL
8.		Sh. Nabajit Phukan	AGM, APGCL
9.		Miss Sisrikhya Dutta	DM (TRC), APDCL
10.	AR. PRADESH	Sh. Ginko Lingi	CE (P), CEZ, Chairperson TCC
11.		Sh. T.K. Tara	CE(P), TPMZ
12.		Sh. Nongkong Perme	SE (E)
13.		Sh. Zamba Nasho	EE(E)
14.		Ms. Tadu Yamung	Senior Estimator, TPMZ
15.		Ms. Ngompi Likar	PA, ETC, TPMZ
16.	MANIPUR	Sh. Ng. Subhachandra Singh	MD, MSPCL
17.		Sh. Hijam Shantikumar Singh	MD, MSPDCL
18.		Sh. Heigrujam ChitaJit Meetei	GM (F&A)
19.	MEGHALAYA	Sh. A. Kharpan	Director (Trans.), MeECL
20.		Sh. M. Shangpliang	Director (Dist.), MeECL
21.		Sh. M. Rymbai	Director (Gen.), MeECL
22.		Sh. B. Wahlang	CE (HP& HC)
23.		Sh. J. Hynniewta	CE (Transmission), MePTCL
24.		Sh. H. Shangpliang	ACE (T&T), MePTCL
25.		Sh.B.Saibon	SE (Gen-I), MePTCL
26.	MIZORAM	Sh. H. Zonunsanga	CE(RE), o/o Engineer-in-chief

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
27.		Sh J.H. Malsawma	SE(Planning)
28.		Sh. H. Lalrautkima	Sr. EE SLDC
29.	NAGALAND	Sh. Rukongutuo Suohu	SE(E)
30.		Sh. S.I Asangba Tikhir	EE
31.		Sh. Tiakaba Yimchunger	JE(IT)
32.	TRIPURA	Sh. Debashish Sarkar	MD
33.		Sh. Ranjan Deb Barman	GM (Trans.)
34.		Sh. Anil Debbrama	DGM, SLDC
35.		Sh. Debrata Pal	Sr. Manager, TSECL
36.	CEA	Sh. Irfan Ahmed	CE(PDM&LF)
37.	CTUIL	Sh. Manish Ranjan Keshari	Chief Manager CTUIL
38.	NETC	Sh. SP Dash	Director (Technical)
39.		Sh. Ratan S. Basnet	Manager (Projects)
40.	NERLDC	Sh. Amaresh Mallick	CGM I/c
41.		Sh. S.P. Barnwal	Sr. GM (SL)
42.		Sh. Bimal Swargiary	Chief Manager (SO)
43.		Sh. Chitra Bahadur Thapa	Manager(SO)
44.	POWERGRID	Sh. U. Kataki	ED, NERTS
45.		Sh. K. K. Gupta	Executive Director, NERPSIP
46.		Sh. Adish Kumar Gupta	ED, CS- AP
47.		Sh. P. Kanungo	CGM (AM), NERTS
48.		Sh. Balbir Singh	CGM- NERPSIP
49.		Sh. P. K. Das	Sr GM-NERPSIP
50.		Sh. H Talukdar	GM, CS- AP
51.		Sh. Ashish Agarwal	Sr. DGM CS-AP
52.	NTPC	Sh. Partha Mazumdar	RED ER-II
53.		Sh. Karunakar Das	HoP(BgTPS)
54.		Sh. S.K. Pradhan	AGM(Commercial)
55.		Sh. G.C. Mahapatra	AGM(Commercial)

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
56.	**OTPC**	Sh. Sanjay Garhwal	COO
57.		Sh. Arup C. Sarmah	CCO
58.	**NHPC**	Sh. S Adhikari	Executive Director (O&M)
59.		Sh. Amitabh Jha	GM
60.		Sh. Abhayanand Thakur	GM(O&M)-Unit-II Kolkata
61.		Sh. Rathindra Gangopdhyay	DGM(O&M)
62.	**KMTL**	Sh. Manoj Kumar Gupta	DGM- Transmission
63.	**NRPC**	Sh. V.K. Singh	MS, NRPC
64.	**WRPC**	Sh. Deepak Saran	MS, WRPC
65.	**ERPC**	Sh. N S Mondal	MS, ERPC
66.	**PTC INDIA LTD**	Sh. Harish Saran	ED
67.	**NEEPCO**	Smt. Debjani Dey	ED(O&M)
68.		Sh. Devpriya Choudhary	CGM(E/M) HoD(Commercial)
69.		Sh. Bivash Sen	GM(Tech) O&M
70.		Sh.Abhijit Majumdar	AGM(Commercial)
71.	**NERPC**	Sh. K.B. Jagtap	Member Secretary
72.		Sh. S.M. Aimol	Director
73.		Sh. A. Agrawal	Dy. Director
74.		Sh. Vikash Shankar	Asst. Director
75.		Sh. Somraj	Asst. Director

ANNEXURE – II

LIST OF PARTICIPANTS IN 25th NERPC MEETING

1. Sh. Chowna Mein — Hon'ble Dy. Chief Minister, Govt. of Ar. Pradesh & Chairman
2. Smt. Nandita Garlosa — Hon'ble Power Minister, Govt. of Assam
3. Sh. A.T Mondal — Hon'ble Power Minister, Govt. of Meghalaya
4. Shri K. G. Kenye — Hon'ble Chief Minister, Govt. of Nagaland
5. Sh. Ratan Lal Nath — Hon'ble Power Minister, Govt. of Tripura
6. Sh. Balo Raja — Hon'ble Adviser (Power), Govt. of Arunachal Pradesh

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
1.	ASSAM	Sh. Bibhu Bhuyan	MD, APGCL
2.		Sh. Gunajit K. Bhuyan	CGM, AEGCL
3.		Smt. Jayashree Devi	CGM(O&M), AEGCL
4.		Sh. Deepanjal Das	GM, APDCL
5.		Sh. Tridip Borah	AGM, AEGCL
6.		Sh. Nilutpal Barua	AGM, AEGCL
7.		Sh. Indrajit Tahbildar	AGM (TRC), APDCL
8.		Sh. Nabajit Phukan	AGM, APGCL
9.		Miss Sisrikhya Dutta	DM (TRC), APDCL
10.	AR. PRADESH	Sh. Anurag Garg	Commissioner (Power)
11.		Sh. Ginko Lingi	CE (P), CEZ, Chairperson TCC
12.		Sh. T.K. Tara	CE(P), TPMZ
13.		Sh. Nongkong Perme	SE (E)
14.		Sh. Zamba Nasho	EE(E)
15.		Ms. Tadu Yamung	Senior Estimator, TPMZ
16.		Ms. Ngompi Likar	PA, ETC, TPMZ
17.	MANIPUR	Sh. Sailash Kr Chourasia	Commissioner (power), Govt. of Manipur
18.		Sh. Ng. Subhachandra Singh	MD, MSPCL
19.		Sh. Hijam Shantikumar Singh	MD, MSPDCL

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21.	**MEGHALAYA**	Sh. Sanjay Goyal	CMD, MeECL
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31.		Sh. H. Lalrautkima	Sr. EE SLDC
32.	**NAGALAND**	Sh. Mao. Aier	E-in-C (Power)
33.		Sh. Rukongutuo Suohu	SE(E)
34.		Sh. S.I Asangba Tikhir	EE
35.		Sh. Tiakaba Yimchunger	JE(IT)
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37.		Sh. Ranjan Deb Barman	GM (Trans.)
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44.	**NERLDC**	Sh. Amaresh Mallick	CGM I/c
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54.		Sh. H Talukdar	GM, CS- AP
55.		Sh. Ashish Agarwal	Sr. DGM CS-AP
56.	NTPC	Sh. Jaikumar Srinivasan	Dir (Finance)
57.		Sh. Partha Mazumdar	RED ER-II
58.		Sh. Karunakar Das	HoP(BgTPS)
59.		Sh. Shankar Saran	GM(Commercial)
60.		Sh. S.K. Pradhan	AGM(Commercial)
61.		Sh. G.C. Mahapatra	AGM(Commercial)
62.	OTPC	Sh. Sanil C. Namboodiripad	Managing Director
63.		Sh. Sanjay Garhwal	COO
64.		Sh. Arup C. Sarmah	CCO
65.	NHPC	Sh. R.K. Choudhary	Director (Tech)
66.		Sh. S Adhikari	Executive Director (O&M)
67.		Sh. Amitabh Jha	GM
68.		Sh. Abhayanand Thakur	GM(O&M)-Unit-II Kolkata
69.		Sh. Rathindra Gangopdhyay	DGM(O&M)
70.	KMTL	Sh. Manoj Kumar Gupta	DGM- Transmission
71.	NRPC	Sh. V.K. Singh	MS, NRPC
72.	ERPC	Sh. N S Mondal	MS, ERPC
73.	PTC INDIA LTD	Sh. Harish Saran	ED
74.	NEEPCO	Smt. Debjani Dey	ED(O&M)
75.		Sh. Devpriya Choudhary	CGM(E/M) HoD(Commercial)

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79.		Sh. S.M. Aimol	Director
80.		Sh. A. Agrawal	Dy. Director
81.		Sh. Vikash Shankar	Asst. Director
82.		Sh. Somraj	Asst. Director

ANNEXURE-III

KEYNOTE ADDRESS OF

SHRI GINKO LINGI

CHAIRMAN TCC & CE GOVERNMENT OF Ar. Pradesh

ON THE OCCASION OF

THE 25th TCC MEETING

KOLKATA

8th DECEMBER 2023

Respected Member Secretary NERPC, Shri Kishore B Jagtap Ji, Director NERPC, Shri S M Aimol Ji, Chief Engineer Central Electricity Authority and Officials of Mop, State Government Power Departments, State Electricity Boards, CPSUs, PSUs, Ladies and distinguished gathering

I stand before you today as the Chairman of the Technical Coordination Committee of the North Eastern Region Power Committee, and it is both an honor and a privilege to address this distinguished gathering. I on behalf of Technical Coordination Committee of North Eastern Power Committee, extend a warm welcome to all esteemed members gathered here for the 25th TCC meeting.

Our region, with its unique set of challenges and opportunities, plays a critical role in the energy landscape of our nation. The North Eastern Region, known for its rich cultural diversity and breathtaking landscapes, is equally diverse in its energy needs. As we navigate the complexities of the power sector, our commitment to technical coordination becomes paramount.

The Technical Coordination Committee, comprising experts and professionals from various facets of the power industry, plays a pivotal role in ensuring the seamless integration and reliability of the power infrastructure in our region. Our collective responsibility is to address the intricacies of power generation, transmission, and distribution; all while adapting to emerging technologies and meeting the ever-growing energy demands of our region.

The challenges we face are multifaceted, ranging from optimizing existing resources to embracing sustainable and renewable energy solutions. Today, I would like to acknowledge the dedication and hard work of the NERPC Team and professionals

who form the backbone of our committee. Your technical expertise and unwavering commitment are instrumental in driving the progress we envision for our region.

Reflecting on the resolutions adopted in the 24th TCC & RPC meeting held at Tawang, I would like to draw reference to Resolution F2 of the 24th TCC and RPC meeting, which addresses the establishment of state-of-the-art training centres and video conferencing facilities in NER under the Comprehensive and NERSIP scheme. Similarly, many more important resolutions were also adopted and it is imperative for all of us to ensure that concerted efforts are made thereafter with follow-up actions.

This forum has served as a vital conduit between constituents and provided access for resolutions of matters of the highest level. Therefore, I would like to urge us all to avail the opportunity and conclude with affirmative resolutions. A special note of gratitude to NTPC for their exceptional arrangements, ensuring that the crucial matters discussed in the 25th TCC and RPC meetings are deliberated upon and resolved effectively. In conclusion, let us recommit ourselves to the ideals of technical coordination, innovation, and reliability. Together, we have the power to shape the energy landscape of the North Eastern Region and contribute significantly to the nation's progress.

Thank you for your dedication, and I look forward to our continued collaboration and success.

ANNEXURE-IV

SPEECH OF

SMT. NANDITA GARLOSA

HON'BLE POWER MINISTER, GOVERNMENT OF ASSAM

ON THE OCCASION OF

THE 25th RPC MEETING

KOLKATA

9th DECEMBER 2023

Hon'ble Chairman of NERPC, Hon'ble Power Minister of Meghalaya, Hon'ble Power Minister of Nagaland, Hon'ble Power Minister of Tripura, respected Member Secretary of NERPC and other senior officials of CEA, NERPC, central sector and state sector power utilities, Senior officials of Government of India and all other officials present here. I am really happy to be here at Kolkata on the occasion of 25th NERPC Board meeting. It is a rare opportunity for all of us to check and finalize our plans for all round development of Power Sector in North Eastern part of India through this esteemed forum. This is also an opportunity for all of us to resolve outstanding issues pertaining to Generation, Transmission and Distribution Systems of NER. I understand that this august forum is also instrumental in resolving various issues on the interstate Generation and Transmission of Power in North Eastern Region of our country. As you are aware that the Govt, of India has focussed on uninterrupted quality Power supply to all households and commercial establishments throughout the country. Towards the fulfilment of this goal, we have almost completed 100% electrification of our rural area. You are also aware of the fact that towards our efforts for reduction of global warming on account of excessive use of fossil fuel, our Govt. has taken initiative for harnessing green energy. We have also embarked upon a challenging task for establishment a no. of Solar Power Generating stations in Assam. Already we have commissioned solar generating plants at different parts of the state with a total capacity of more than 200MW. These Solar Generators have been producing 90MW to 120MW of generation depending upon the radiation level of a day. A mega Solar Generating station of 1000MW capacity is soon expected to come up at Laharijan in Karbi Anglong

districts of Assam. I take this opportunity to request this forum to do the needful for carrying forward the plan for creation of the associated transmission system for evacuation of the generated quantum of this solar generation. I understand that power transmission utilities including our own state transmission utility (AEGCL) have drawn up technically feasible plans for expansion and augmentation of their transmission network as a part of greater NER transmission system. Obviously, such plans once completed will contribute immensely towards improving the system stability in the entire region. Today our state demand stands at around 2500 MW catered by 80 number of Grid Sub Stations and more than 500 distribution substations with the connected extra HV transmission network of approximately 6000 circuit kilometres. The Assam State Grid demand is expected to cross 4000 MW by the year 2027 and we are gearing up ourselves to tackle the ever-growing growth of electricity demand of the state. We expect that by the year 2030 we will have more than 100 Grid Sub Stations with an associated transmission system of around 10,000 circuit kilometres. I am aware that our other sister states of NER (including Central utilities) have also prepared ambitious plans in this direction. I am given to understand that such plans have been discussed in detail in TCC meeting held yesterday. I hope the deliberation of the meeting will pave the way for onward approval of such schemes. Given the nature of terrain with sprawling forest cover including those coming other national sanctuaries and rivers, building up transmission corridor in this part of the country is really a challenging task. Inspite of such challenges and issues involving ROW (right of way), we will have to move forward. It is heartening to know that central and state transmission licensees have been doing wonderful job by way of planning and constructing transmission lines in hostile terrains of the region One specific transmission system related issue in my own state is our plan to revive the 220kV Samaguri-Mariani Ckt-I which has remained defunct for more than 15 years. This very important transmission circuit between Upper assam and Central assam needs to be put into service for avoiding overloading of the other available circuit. We hope to complete this work within a period of 3 (three) years by relocating part of the transmission line from the dense forests area under Kaziranga National Sanctuary to nearby plain area. I understand that this issue was also discussed as an agenda item in the TCC meeting yesterday. Our Govt is also making all round efforts for boosting up the Hydro Power generation

capacity in the region. The 120MW lower Kapili Hydro Generating Station is expected to be commissioned by the end of next year. Another issue of concern is that of availability of gas at cheaper price for the Gas based stations of NER. I know the pricing mechanism (as a part of the national policy) involves intricacies which has not been very encouraging for sustained gas-based generation. I call upon this high-level forum to make necessary efforts to resolve such issues in coordination with the ministry of Petroleum, Govt. of India for greater benefit of our people. You are aware that a number of new substations and associated lines have been planned in Assam. Many of these projects have already been commissioned and many more are coming up within the next 2-3 years. The state and the central govt. have been generously providing necessary fund under different schemes for implementation of these plans. All such plans will only be possible through the concerted efforts of all of us and here comes the important role of a platform like NERPC meetings for guiding and supporting the efforts of the power utilities. I once again thank all concerned ministers, all Govt. officials, concerned executives of power utilities for making this event a grand success. My special thanks go to NTPC Authority for hosting the meet successfully and in a splendid manner.

ANNEXURE-V

SPEECH OF

SHRI A.T. MONDAL

HON'BLE POWER MINISTER, GOVERNMENT OF MEGHALAYA

ON THE OCCASION OF

THE 25th RPC MEETING

KOLKATA

9th DECEMBER 2023

Hon'ble Chairman NERPC and my dear Colleague Ministers from other NorthEastern States, officials of Central Government and State Governments, 0fficials from other Central and State Power Utilities, distinguished Guests, special invitees, ladies and gentlemen. 1. First of all, I convey my sincere gratitude to the Chairman, NERPC and the Hon'ble Deputy Chief Minister of Arunachal Pradesh, Shri Chowna Mein, for having invited me to this 25th North East Regional Power Committee (NERPC) meeting here in Kolkata. I thank the National Thermal Power Corporation (NTPC Ltd.) for their gracious hospitality in hosting this important meeting. I take this opportunity to express my thankfulness to NERPC for their continuous efforts and contributions towards Power Sector in the region for all overall welfare of the people. 2. I am also delighted to again be a part of this Committee and hope to be able to arrive at important decisions which will enable us to jointly achieve our common objective of smooth and robust operation of the regional power system. While the North Eastern States face many issues, the Committee has enough leverage to see that the region uses its huge potential to contribute to the growth of the country especially through the power sector. It is a great pleasure for me to be a part of this august gathering and my earnest hope is that through this particular platform, we will be able to meet the challenges faced by the power sector for my state and the entire North Eastern region. I yearn to see that informed decisions are arrived at in this NERPC. I look forward with a lot of hope and expectation to the leadership of our current Chairman who is one of the senior most leaders of the North East. The NERPC, since its inception, has been relentless in its efforts to strengthen the power sector in the Northeast to ensure it remains reliable, efficient and economical. Deliberations of the past NERPCs have

been carried forward for the benefit of the constituent states of the Northeast. It is imperative to follow in the same spirit of cooperation to jointly put in our efforts to achieve our common objective of providing 24x7 quality and affordable Power for all. GENERATION 3. While the North Eastern States often face many challenges due to its geographical isolation, the region is however blessed with vast hydro potential 3 which could contribute to regional and national growth. However, the development in this sector remains slow due to many hurdles. In terms of hydro power, the North Eastern region has a vast potential of about 58,971 MW i.e. almost 40% of the country's total hydro potential. The region also has abundant resource of coal, oil and gas for thermal generation. The Government of India has very proactively addressed extending all support to develop the sector. With continual improvement of infrastructure and communication facilities, the North East Region stands to become a major power-house of India by utilizing its surplus power potential especially in the hydel sector. 4. Meghalaya is 100% Hydro based with generation of 80-90% of Installed Capacity during monsoon and 10% in the lean season. Therefore, requirement of additional source of energy in lean season (winter is necessary. We are all aware that the Region is seismically-sensitive with many geological issues causing delays to our projects which in turn increases our overall expenditure. Moreover, the State of Meghalaya receives heavy rainfall during the year, limiting the working season to about 4-5 months only. However, in spite of such difficulties and hurdles, we are pleased to state that all the three units of the Ganol Small Hydro Project (3X7.5MW) were synchronized to the Grid on 23.07.2023 and have been continuously injecting Power to the Grid. The project is expected to add another 67 MU of much needed energy to the State. In addition, the Riangdo Small HEP (2X1.5MW) is under execution with a design energy of 17.92 MU and is being planned to enhance its install capacity to (2 X 3 MW). 5. It is common knowledge that the Southern belt of Meghalaya around Cherrapunjee (Sohra) receives the maximum rainfall in the entire world. This phenomenon therefore, allows for exploiting and harnessing more rainfed hydro-electric projects which will improve the power position of the State once these are realized. In line with this, the Government of Meghalayahas endeavored to speed up the survey and investigation of Hydro Electric Projects located in this belt and it is anticipated that Myntdu Leshka Stage-II HE Project (3X70MW) will soon be ready for executionafter

completion of studies. The proposed Myntdu Leshka Stage-II HE Project is a RoR Scheme located in East & West Jaintia Hills District just downstream of the existing Myntdu Leshka Stage-I HE 4 Project (3X42MW). The Capacity of the proposed Leska-Phase-II Project is (3 X 70 MW) and the tentative Project Cost is Rs 2187.88 Cr. 6. I am pleased to inform that clearances on Nine (9) chapters out of total 14 (Fourteen) chapters against LESKA -II Project have been accorded by CEA/CWC/CSMRS/GSI as per CEA guidelines issued in August, 2022. Clearance on remaining five (5) chapters is still pending, out of which the proposal against four (4) Chapters have already been submitted and the Clearances are expectedto be obtained by Dec 2023. 7. MePGCL also intends to harness the available hydro-electric potential in the State. The survey and investigation of Small Hydro Projects totaling 107.70MW are being taken up with funds from MNRE, while medium & large projects, which include Mawblei HEP (2X38MW), Selim HEP (2X40MW), Nongkohlait HEP (2X31MW) and Umngi HEP (2X31MW), are under survey & investigation with funds from NEC. 8. MePGCL is also taking up the Renovation, Modernization and Up gradation (RM&U) of its Hydel Power Stations that have surpassed their service life in order to ensure that, as far as possible, power requirement in the State is met from the existing infrastructure of renewable clean energy. In the recent past, 2(two) of the Hydel Power Stations were renovated & modernized viz. Umiam Stage-I Power Station (4X9MW) in January, 2003 and Umiam Stage-II Power Station (2X10MW) in January, 2012. The Umiam Stage-II Power Station was also upgraded from (2X9 MW) to (2X10MW). 9. Presently, Renovation, Modernization & Up rating of the Umiam-Umtru Stage-III HEP is in progress. This Plant was commissioned way back in 1979 and has contributed enormously towards meeting the power requirement of the State of Meghalaya through years of operation and has since completed 44 years of service, during which time it has exhibited several problems causing many forced outages which resulted in loss of generation. The RM&U of the Plant is now being implemented through financial assistance from JICA (Official Development Assistance) under the EAP Scheme and the project cost is `407.36 Crores. The present installed capacity of the Station is (2X30MW) which is likely to be increased to (2X33MW) once the RM&U is completed. The Project is scheduled for completion in April 2026. 5 10. In the same line RLA (Residual Life Analysis) study shall be conducted for Umiam-

Umtru Stage-IV (2x30MW) and Umtru Power Station (4x2.8MW). Preliminary studies for exploring the possibility of undertaking Renovation and Modernization of Umtru Power Station (4x2.8MW) which was commissioned in the year 1957 is also being pursued through external funding. 11. The Dam Rehabilitation and Improvement Project Phase-II (DRIP-II) is one of the Flagship projects of the Ministry of Water Resources (MoWR), River Development (RD) and Ganga Rejuvenation (GR), Govt. of India, and the World Bank, with an objective to improve safety and operational performance of selected dams in the country. Under DRIP-II, 4(four) dams in Meghalaya have been approved at an amount of ₹441 Cr. The Loan Agreement was signed on 4th August, 2021 between Government of India and World Bank and the Loan Agreement has been made effective from 12th October, 2021. The project is scheduled to be completed by March, 2027. 12. The Government of Meghalaya has prioritized the Generation of Power as one of the top most priorities. In this regard I am privileged to state that the MOA was signed between the Government of Meghalaya and NEEPCO on 25th October 2022 for development of Wah Umiam Stage-I of capacity 50 MW and Wah Umiam Stage-II of Capacity -100 MW of Hydro Electric Project. Further in order to enhance/manage Power portfolio in professional and efficient manner, the Government of Meghalaya has entered into an MOU with NTPC on 10/07/2023. 13. We envisaged development of Solar Power Parks which is another source of renewable energy. At present, development of Solar Parks of 10 MW each is being taken up by the State at Suchen and Thamar, located in East & West Jaintia Hills District, respectively, totaling to 20MW. Further, Roof Top Solar (70MW) under “rent a roof model” for residential buildings with Net Metering is being implemented. We are in active consultation with Solar Energy Corporation of India (SECI) and other Government PSUs for implementation of the same. 14. As per the new RPO guidelines Large Hydropower projects with capacity more than 25MW and commissioned after 08.03.2019 shall be considered 6 as RPO under the non-solar RPO category. This is a welcome step and will benefit my State and other North Eastern States in view of the commissioning of Pare HEP and Kameng HEP as well as upcoming Projects. Further since free power is now being considered under RPO the states where the Hydro Electric Projects (HEP) are located will be immensely benefitted. Since, hydro power imported from outside India will not be considered as RPO, I urge the North-Eastern States to avail allocation from

all Hydro projects in the region. TRANSMISSION 15. Early completion of Transmission projects and ROW concerns is a shared concern in NER where the State has its own challenges, local laws and intrigues. In the ongoing NERPSIP projects, we have resolved many unforeseen issues and expect that the Implementing Agency i.e. Power Grid continues with its sincere efforts to commission all elements within this Financial Year. We shall continue to provide all assistance to Power Grid and earnestly hope that power flow will commence soon with the consideration that we do not face issues of load shedding due to the limitation of transfer of power from Misa-Khandong-Kopili corridor. Another concern is the need for evacuation of power from ISTS created/ proposed in our State. We sincerely hope that the NERPC has already discussed at length the need of Meghalaya and the region for early implementation of Downstream Lines and Substations for evacuation of power from the ISTS projects. The Government of Meghalaya is keen to seek sanction of Schemes for such projects and requests that the NERPSIP will follow up on completion of Priority projects in its next Tranche. 16. We also need to ensure early implementation of Downstream Lines and Substations for evacuation of power from the ISTS project in Nangalbibra. The Government of Meghalaya has already sanctioned 132 KV Nangalbibra to Nangalbibra (ISTS) Line and is keen to sanction the 220 KV Nangalbibra-New Shillong line, and the 132 kV New Shillong to Sohra line. I hope and trust that TCC have deliberated upon on the necessity for construction of 132/33 KV Sub Station at Nongpoh, Amlarem and Pongtung are felt for quality Power supply to these areas. I would appeal that these Projects should be considered for taking up soon. 7 17. With an understanding that Transmission is the most important for the Power system, we are in the process to notify the adoption of Tariff Based Competitive Bidding to develop transmission system with the threshold limit of Rs. 50 Crores and above with contract period of 35 Years. 18. The 132kV connectivity between Ampati in Meghalaya and Hatisingimari in Assam will provide power stability in the area and also serve as an alternate source for Tura in West Garo Hills which, till now, is solely dependent on power from Nangalbibra Grid Substation. 19. The TCC would have discussed the implementation of the ISTS 400kV line charged from Bongaigaon to Nangalbibra at length and the 220kV portion from Nangalbibra to Mawngap. We envision the construction of a 220kV line (to be upgraded to 400kV

in future) from Mynkre in Jaintia Hills to Ichamati to Sohra and then to Nangalbibra in Garo Hills to connect with the said line from Bongaigaon to Nangalbibra. This section of the line will automatically form a South Assam – South Meghalaya – Lower Assam Transmission corridor which will not only provide stability to Meghalaya but also to Assam and the entire NER Grid as a whole. Besides, line loss will greatly reduce with the implementation of this corridor. Further, the implementation of the 400/220/132kV Substation in Nangalbibra under ISTS will greatly benefit the region for which Meghalaya shall provide all assistance to the CTU as far as possible. 20. We have consistently been urging the forum to explore new avenues for the evacuation of surplus power from North East to Bangladesh. As Transmission Access Priority for Cross Border Trade of electricity is to be determined by CTU, it is proposed that PGCIL draw transmission lines for this purpose through Meghalaya preferably through Sohra Grid Sub-station as it is very near to Sylhet. Further, the Government of Meghalaya has already sanctioned the survey of the 220kV Sohra – Ichamati line and the work is completed and the DPR is being prepared accordingly. This would enable Meghalaya and other NER states to trade surplus power to Bangladesh and earn additional revenue by providing a transmission corridor to Bangladesh. 21. On tariff, Meghalaya wishes to state that its transmission tariff is amongst the lowest. It is felt that some form of uniformity is requested between Tariff of CTUs and STUs. 8 22. In the NERPSIP's 2nd tranche, we expect many projects to be covered which were left out of the 1st tranche. Transmission being a critical sector in the Power system, Meghalaya hopes to strengthen this through various schemes byRe-conductoring with HTLS conductor of old lines especially which have crossed their useful life of 35 years. LILO of 400kV line at Mynkre, Sohra and New Shillong along with 400/220/132kV Substations has been envisaged. Further, upgradation and modernization of EHV Substations with construction and enhancement of associated 33 KV Switchyards are being examined. Intra state transmission expansion 23. Meghalaya and NER have extreme weather conditions and Transmission lines get disrupted during monsoons, causing difficult and time-consuming restoration in the hilly rugged terrain. It is important to ensure ring main connectivity of Transmission lines. Alternate evacuation of power from Leshka Stage-I Power Station (126 MW) which is dependent on only one 132KV feeder to Khliehriat. An alternate link from this power station and Substation at Amlarem

near Dawki will go a long way in ensuring continuous power evacuation during high generation periods and reduce water spillage. Keeping in mind the importance of this Line, I urge upon the forum to consider the same on priority. 24. Expansion of Intra state Transmission network and connectivity of missing 132kV links is necessary for system stability for which new Grid Substations and Lines are to be created. Ensuring ring main connectivity at 132KV is crucial for the intra-state transmission system. There is also need for meeting future power requirements of expanding urban areas such as New Shillong Township. 25. Transmission infra build up in the Indo Bangla Border in Meghalaya is urgently required for power supply reliability as many 33KV substations have been constructed under various schemes which need to be connected to nearby Grid Substations. Funding for Improvement 33KV Switchyards for Transmission Substations 26. A concern for the State Transmission Utility's 132/33 KV Grid Substations in Meghalaya is the frequent tripping of 33 KV Lines emanating from 9 these stations especially during stormy weather conditions. It is imperative for the utility to improve the 33 KV Switchyards at the grid substations. While funding is available for 33 KV system improvements for the DISCOMS, funding for the 33 KV Switchyards at the Grid Substations is not available as the facilities are under the operational control of the Transmission utility, It is important that the forum looks into this aspect of funding the Transmission utility from PSDF or other sources for improving the 33 KV switching facilities as this has a major impact on the Transmission system and grid stability. Our immediate requirement is to construct new 33KV Switchyards in at least 5 (five) Grid Substations within the next one year or so. Meghalaya SLDC 27. Meghalaya SLDC Started functioning since 2003 under IE Act 2003 and is the apex body to ensure integrated operation of the power system of the state. In Grid Operation it has to abide by RLDC Instructions, MSERC Regulations and State Grid Code, CERC Regulations and IEGC and CEA Norms and Regulations. The functional independence of SLDC was notified by the Government of Meghalaya on 18.06.2013 wherein it was mandated that the SLDC shall work as a Strategic Business Unit (SBU) under the State Transmission Utility (STU), MePTCL. MSERC desires SLDC should be functionally independent as per IE Act 2003 and the Government is considering the same. 28. As of now SLDC is proposing four new projects which are to be funded under PSDF(i) Up gradation of SCADA/EMS System (ii) Establishment

of VSAT Communication in remote location in Meghalaya (iii) Deployment of Remote Terminal Units (RTUs) in select stations of Meghalaya (iv) Expansion of Automatic Demand Management System. The DPR for all the four projects have been submitted to NERPC. I earnestly urge the forum to consider it at the earliest. 29. In the matter of Cyber Security/Information Security, Meghalaya SLDC has been certified as ISO/IEC 270001:2013 and has been identified as Critical Information Infrastructure by National Critical Information Infrastructure Protection Centre (NCIIPC), Govt. of India. SLDC is currently implementing the SAMAST Project funded under PSDF. The 10 work has been completed in August, 2023. We thank the Government of India for sanctioning SAMAST for Meghalaya. DISTRIBUTION 30. Meghalaya's distribution sector being the most critical segment of the entire power supply value chain received a boost from the Govt. of India's assistance through various system improvement schemes and electrification schemes with the aim of providing 24x7 Power for All. The sub-transmission system shall be upgraded and strengthened for which Meghalaya is presently implementing several distribution projects. Meghalaya Power Distribution Sector Improvement Project 31. Under financial assistance from ADB, the project is expected to strengthen the State's rural distribution network, reduce AT&C losses, bridge the gap between ACS and ARR and adopt customer-centric initiatives for ultimate customer satisfaction, upgradation of the utility's existing infrastructure, to improve the consumer metering, billing and collection efficiency, improve the power quality and reduce the outages in the State of Meghalaya. The LOA under RDSS (Revamped Distribution Sector Scheme) has been awarded and it is expected to bring new challenges and opportunities to help improve the performance of the DISCOM. Smart Metering (ADB) 32. MePDCL is presently implementing smart meter project being funded by ADB to replace existing 180000 LT Consumer meters with smart meters. Around 16000 meters will be on prepaid mode. The remaining 4, 60,000 consumers will be covered under smart prepaid metering project to be implemented under RDSS. Under Integrated Power Development Scheme (IPDS), two Gas Insulated Substation (GIS) have been constructed at Shillong and Jowai Towns. With the aim of providing 24x7 power for the entire state other distribution projects being implemented includes DDUGJY, SAUBHAGYA, NERPSIP, PM KUSUM, Renewable Energy and Storage, Grid Connected Rooftop Solar Programme and Off-Grid Solar Power Plants

in RESCO model under MNRE. 33. In conclusion, I wish to state that Meghalaya is continuously making efforts to improve the power system at all levels such as increase of Generation Capacity and adding alternate sources of Power, and improvement of Transmissionavailability and capacity, limiting of Transmission constraints to the extentpossible and serving our consumers at the Distribution level. 34. I would also like to mention that, like all state power utilities, Meghalaya is constrained by its acute financial situation; I do hope that this forum will highlight these financial issues and see that funding for power sector is optimally made to enable the States to contribute to a robust regional power system. 35. Another aspect of power operations is the constant change in technology, which I request that the forum makes efforts to ensure robust Capacity Building mechanism to upgrade our existing Human Resources through Training and exposure so as to meet the technological advancement and to ensure innovation and research and development in the sector for the interests of the people at large.

ANNEXURE-VI

SPEECH OF

SHRI K. G. KENYE

HON'BLE POWER MINISTER, GOVERNMENT OF NAGALAND

ON THE OCCASION OF

THE 25th RPC MEETING

KOLKATA

9th DECEMBER 2023

Chairman of the NERPC Shri Chowna Mein, Hon'ble Deputy Chief Minister, Govt. of Arunachal Pradesh, Hon'ble colleagues from North Eastern States, all officials from the Central & State Governments and distinguished members.

At the outset, I would like to express my sincere gratitude to every one of you for giving me the opportunity to address this 25th NERPC meeting. I feel that our meeting today is not only to discuss issues but also to engender understanding and unity among the North Eastern States. We all should try to work out ways and means to strengthen the NERPC forum in order to function more effectively. Our sincere participation with unity can overcome many of our problems. Our Region is still under-developed and to come at par with the rest of the country we have many challenging tasks ahead specially, the overall economic development which can never be achieved without sufficient power supply.

NER States are predominantly under-developed and share similar problems such as:

1. Poor logistics & remote and difficult terrain.
2. Lack of local skilled manpower.
3. Limited working season because of climatic condition.

The above conditions are major concerning factors contributing to higher project costs and cause undue delay in execution, which the Central Government at times does not consider while sanctioning the

projects. I would therefore request this Forum to put up these practical realities to the notice of the Central Government. I also request the experts of this Forum to analyze these problems and recommend for Viability Gap Funding or Preferential Financing for the projects being executed in the NE region. I would like to dwell on some important issues pertaining to some projects in Nagaland, which may be relevant to other NE States as well.

A. Revamped Distribution Sector Scheme (RDSS)

I had earlier mentioned in my speech of 24th NERPC that the result or performance linked Revamped Distribution Sector Scheme (RDSS) launched by the GOI has a lot of potential to turnaround the power sector and leverage the sustainability of the Distribution Sector in particular. My fellow colleagues here in the forum may agree that the strict Prequalifying Criteria (PQCs) and the Result Evaluation Framework (REF) to be eligible for funding under the RDSS is a difficult proposition for a state like Nagaland and needs to be relaxed by the GOI as the conditions are framed mostly suitable for Discoms. In the context of Nagaland, the power utility is a Government Department operated through 100% budgetary support from the State Government and hence difficult to fulfil the stiff conditions of the RDSS scheme, which may result in depriving the state from availing the prestigious scheme. I urge upon the member colleagues of this Forum to collectively take up this issue with GOI in the larger interest of the NE region.

B. Supervisory Control And Data Acquisition (SCADA)/Energy Management System (EMS) - Up gradation of SLDC.

I am informed that the DPR for Up-gradation of SCADA-EMS of North Eastern Regional Load Dispatch Centre (NERLDC) and NER States including Annual Maintenance cost and Cyber Security cost is under preparation for 100% funding from Power System Development Fund (PSDF). During the 23rd TCC & NERPC meeting, all the NE States unanimously decided to let Grid-India (POSOCO) execute the up-gradation works of SCADA-EMS under PSDF funding. I request this Forum to take up with the Government of India in consultation with Grid–India (POSOCO)

to expedite the process of securing funding under PSDF for up-keep of the NERLDC and State Load Dispatch Centers (SLDCs).

C. Establishment of State- Of-The-Art Training Centre in all NE States within the CBIS under NERPSIP Project.

Today the power sector is rapidly evolving, driven by technological advancements, renewable energy integration, and digitalization. It is very important to develop a dedicated training institute, which can provide specialized education and training programs to develop the technical, managerial, and operational skills of the Executives and the workforce in the power sector.

In the case of Nagaland, the Department doesn't have a proper training institute till now. The existing Lineman Training Centre (LMTC) at Dimapur, which was set up during the 1970's, is ill equipped and outdated to provide the modern training pre-requisites.

Towards this, Nagaland had proposed to upgrade the existing LMTC to Nagaland Power Training Institute (NPTI) with an estimated cost of Rs.4.55 Cr under the CBIS (Capacity Building and Institutional Strengthening) of NERPSIP. The proposed NPTI building infra would be provisioned with all modern tools and equipment to provide hands on training, education on safety Protocol and regulatory compliance. It may be mentioned that under CBIS of NERPSIP an amount of Rs.14.80 Cr has been earmarked for Nagaland. Accordingly, the DoPN proposed to PGCIL (Implementing Agency of NERPSIP) for utilization of the fund as follows- 40% training 30% on policy and 30% on training infrastructure (NPTI). In this regard PGCIL Officials have visited the available proposed site at Dimapur, Nagaland. I request this Forum to take up the matter with MoP and PGCIL, the Implementing Agency of NERPSIP for early **establishment of State- Of-The-Art Training Centre in all NE States within the CBIS Project as resolved and committed during the 23rd and 24th NERPC meetings.**

D. Construction of Residential Buildings at various EHV sub-stations developed under NERPSIP Tranche-I.

The list of residential housing requirement in all the new EHV sub-stations was discussed and finalized with the Senior officials of Powergrid during March 2021 followed by reminders and discussions in various meetings. I am informed that LoA for only package-1 covering 132kV Substations at Longnak and Longleng have been awarded. Powergrid is requested to expedite the issue of LoA for the remaining package at the earliest.

It may be mentioned that many developmental activities such as implementation of Hydro Projects, Transmission Lines etc. in NER States are being taken up by different agencies of CPSUs and Private Companies. While executing the projects, they also face problems, which adversely affect the progress of the Projects. I impress that we must all extend full co-operation to enable them to execute the Projects in time. We know that we are not isolated and our problems are also not isolated. Likewise, any problem in any of our State has impact on the other States. We have to accept this fact and make an honest attempt to find ways to address these problems from time to time. I request this forum to deliberate and come out with solutions to address the common problems faced in the NE region**.**

I am hopeful that this meeting will bring more unity among us in the process of solving our problems. I look forward to a fruitful and positive outcome and I thank the organizers once again for convening this meeting and giving me an opportunity to share my thoughts. I wish all the participants a meaningful deliberation.

ANNEXURE-VII

SPEECH OF

SHRI RATAN LAL NATH

HON'BLE POWER MINISTER, GOVERNMENT OF TRIPURA

ON THE OCCASION OF

THE 25th RPC MEETING

KOLKATA

9th DECEMBER 2023

Hon'ble Dy. Chief Minister, Arunachal Pradesh and Chairman of NER Power Committee (NERPC) Shri Chowna Mein ji, my Hon'ble Colleague Ministers from other North-Eastern States, Officials of the Central and State Governments, Officials from other Central and State Power Utilities, Distinguished Guests, Special Invitees, Ladies and Gentlemen.

2. At the outset, I would like to express my sincere gratitude to each and everyone of you present here today for giving me this opportunity to address the 25th North Eastern Regional Power Committee Meeting here in Kolkata, West Bengal. I sincerely thank the North Eastern Regional Power Committee for organizing this meeting under the aegis of the National Thermal Power Corporation Limited. I feel that this forum is not only to discuss power sector issues but also to bring about harmony and unity among the North Eastern States. This opportunity should also be utilized to work out ways and means and collectively present the common views and issues to the Government of India in order to strengthen the entire North Eastern Power Sector more effectively.

3. The North Eastern Region of India is a region bound together by history and circumstances. The geographical isolation of the North East has resulted in many issues which are region specific in nature and thus we have many challenges that need to be dealt with and overcome together. It is also the region

which is predominantly rural with tribal population and share similar problems such as remoteness and inaccessible terrain, short working season because of climatic conditions, poor logistics and hostility risk. All these factors contribute to higher project costs and undue delay in execution of the projects in NE region. I would therefore request this forum to analyze these problems and recommend for viability gap funding and preferential financing for the projects in NE region.

4. However, on behalf of the North Eastern States, I would like to place on record my sincere gratitude to the Government of India for being very proactive in extending continued and constant support to develop the Power Sector in the North Eastern Region and I hope that the same spirit will be maintained till NER reaches at par with the rest of the country.

5. I am sure that many operational and technical issues were resolved in the 25th Technical Co-ordination Committee (TCC) Session held yesterday and that the TCC must have also discussed elaborately on how the power sector in North Eastern Region can be taken forward in a progressive manner for approval and further recommendations of the NERPC.

6. The Government under the able leadership of Hon'ble Prime Minister Shri Narendra Modi ji is committed to the ideals of "Sabka Saath, Sabka Vikas, Sabka Vishwas, Sabka Prayaas" to build an Aatmanirbhar Bharat and we all have to play our part earnestly and sincerely to materialize this vision.

7. The 18th G20 Summit was successfully conducted at Bharat Mandapam in New Delhi during 9-10 September, 2023. The theme of India's G20 Presidency - "Vasudhaiva Kutumbakam" or "One Earth · One Family · One Future" - is drawn from the ancient Sanskrit text of the Maha Upanishad. Essentially, the theme affirms the value of all life – human, animal, plant, and microorganisms – and their connectedness on the planet Earth and in the wider universe.

The theme also spotlights LiFE (Lifestyle for Environment), with its associated, environmentally sustainable and responsible choices, leading to globally transformative actions resulting in a cleaner, greener and bluer future.

8. Our country has remained steadfast in its transition towards clean energy achieving the fastest pace of renewable capacity addition amongst all major economies and ambitious transition goals articulated by the Hon'ble Prime Minister Shri Narendra Modi ji in India's Panchamrit declaration at the 2021 United Nations Climate change conference.

Through our dynamic leader's vision, India is committed to achieve the Net Zero emissions target by the year 2070.

The idea for "One Sun One World One Grid" (OSOWOG) initiative was also put forth by Our Hon'ble Prime Minister Shri Narendra Modi ji at the First Assembly of the International Solar Alliance in October 2018. The initiative aims at connecting energy supply across borders. The vision behind the OSOWOG initiative is the mantra that "the sun never sets". The OSOWOG initiative aims to connect different regional grids through a common grid that will be used to transfer renewable energy power and, thus, realize the potential of renewable energy sources especially solar energy.

9. Tripura is also taking special effort to boost up clean and green energy projects implementation towards achieving zero carbon emission declared by Government of India. So far a cumulative of 20 MW solar power with about 40,000 nos. solar street light, 2500 nos. solar pumps, 24 nos. solar micro grid, 3 MW solar rooftop have been achieved. Tripura is also exploring installation of 130 MW Floating Solar Power Plant on Dumbur Lake that falls in Gomati District of Tripura. Tripura has planned to install 500 MW renewable power plant by 2030.

Integrating battery energy storage system with renewable energy shall ensure availability of energy during peak hours utilizing surplus renewable energy

generated during day time / off-peak hours. Installation of storage battery is also being explored in Tripura to store the solar renewable energy for utilization during peak load period.

10. Various other renewable energy based schemes like Implementation of PM Kusum Scheme for New Stand-Alone Solar Pump & Solarisation of existing Pump, Implementation of Solar Street Lights & Solar High Mast in rural areas, Solar RO Water Plant, Offgrid & Grid connected Solar Plant and Biogas plant are being executed in our State. The RPO Obligation is being monitored by TREDA, the State Nodal Agency for Promotion & Implementation of New and Renewable Energy.

In line with entire India's target of Net Carbon Zero by 2070, these initiatives shall ensure future energy security, excessively based on clean and green energy and will make Tripura achieve fully the target of Net Carbon Zero emission.

11. Although the North Eastern States often face many challenges due to its geographical isolation, the region is however blessed with vast hydro potential. We appreciate the efforts of the Government of India for passing several policies to ensure transparent and fair compensation and rehabilitation for those displaced due to development of hydro-power projects.

12. Pumped Storage Projects will be developed in the State as per Guidelines of Ministry of Power, Government of India published on 10th April 2023 to promote development of Pump Storage Projects (PSPs). 05 Nos. PSP sites have been identified for preliminary assessment on account of feasibility and viability for around 25 GWh Pumped Storage Project. Implementation of these projects will be carried out after obtaining required sanction from the Government of Tripura.

13. To tap the huge power potential in the NE Region, state of art power evacuation infrastructure through intra and inter-state grid would be required along-with ventures into the new frontiers of power storage. Adequate system strengthening in the NER constituent States will also be required in order to build up congestion-free transmission corridor and robust transmission system for evacuation of this power.

14. The implementation of Government of India and World Bank funded project North East Region Power System Improvement Project (NERPSIP) is one such major infrastructure development programme which is going to benefit all the North Eastern States immensely. Under this project construction of Transmission lines and sub-stations are presently in the verge of completion and I am certain that the Implementing Agency, Power Grid Corporation of India Limited (PGCIL) shall complete the Project very soon.

15. The Asian Development Bank (ADB) is helping to tackle power sector problems by upgrading and expanding power generation, transmission and distribution systems in the NE region. Government of Tripura has signed an agreement with ADB amounting to Rs 2,275 crore to strengthen and improve power distribution efficiency in the State.

Massive renovation of two power projects - Rokhia in Sepahijala District and Gomati Hydro project in Gomati District is envisaged under the ADB project. At present, gas based Rokhia power project produces 63 MW power and its installed capacity will be doubled by modernizing the plant. Similarly the Dumbur hydro power project's capacity will be increased from 5 MW to 10 MW.

Power Distribution modernization & reliability improvement under ADB funded project includes modern technology like Covered Conductor, High Voltage Distribution System (HVDS), Fault Passage Indicator (FPI), Ring Main Unit (RMU), State of the Art Transformer Testing Lab, Smart metering etc. for

meeting future power demand growth, improved efficiency and facilitate reliable and quality power with reduction in AT & C losses.

16. Distribution Sector being the most critical segment of the entire power supply value chain received a boost from the Government of India's assistance through system improvement schemes and Rural Electrification flag-ship schemes such as Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA), Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) etc. with the aim of providing 24 X 7 Power for All.

17. Tripura has undertaken an ambitious project to lay underground power cables of 11 KV in Agartala city. In the first phase it has been envisaged to complete the project in greater municipal area to get rid of overhead distribution power lines with a view to provide reliable power supply to the end consumers. Later on overhead Low Tension (LT) system in Agartala city will also be replaced by underground cables. On successful completion of the same, underground cabling will be undertaken in urban towns of the State.

18. Revamped Distribution Sector Scheme (RDSS) approved by the Government of India has enabled to improve operational efficiencies and financial sustainability of the DISCOMs of the North Eastern Region. Through a financially sustainable and operationally efficient distribution sector, the scheme aims for reduction of AT & C Losses and improvement in the quality, reliability and affordability of power supply to consumers.

19. Similarly SAMAST Scheme sanctioned by the Government of India for the NE States which is the Scheduling, Metering, Accounting and Settlement of Transactions in Electricity is presently under implementation in the State. Achieving an efficient mechanism for the proper scheduling to settlement of electricity transactions in a transparent manner for the power transactions across intra-state boundaries is the principal aim of SAMAST.

20. This forum also provides an opportunity to propose future Power System Strengthening Projects for the entire North Eastern Region to the Ministry of Power, Government of India for funding under Power System Development Fund (PSDF) and other Central Sector funding schemes and the State Constituents should utilize the scope fully.

21. In this era of digital revolution, another vital issue is regarding Cyber Security. Cyber-security is the practice of protecting systems, networks, and programs from digital or cyber attacks. These cyber attacks are usually aimed at accessing, changing, or destroying sensitive information; interrupting normal business processes. Cyber security in Power Sector has been mandated by CEA and need to be complied by all entities to ensure a risk-free and secure environment for keeping the data, network and devices guarded against cyber threats. This forum should come out with further project recommendations to strengthen cyber security of our power system networks.

22. I am aware that NERPC has been striving relentlessly towards making power system in the NE Region more reliable, durable, efficient and economically viable. This forum today may deliberate and find out ways and means to address the common problems faced in NE Region. I am certainly hoping towards a positive outcome from today's discussions and deliberations.

23. I would like to place on record my sincere gratitude to the Government of India for the continued and constant support extended to NE Region especially in regards to the Power Sector. The NE Region is sure to emerge a major player in the power sector of India with the persistent enhancement of infrastructure and communication facilities.

24. My sincere thanks and appreciation to National Thermal Power Corporation Limited for organizing this meeting and making all the necessary arrangements. I look forward to significant and successful discussions today towards prolific productive results.

I once again convey my best wishes and warm greetings to all the participants and I hope that NERPC will continue the good work with a view

to commit to the promotion and betterment of the power system of the NE Region as a whole.

ANNEXURE-VIII

SPEECH OF
SHRI CHOWNA MEIN
CHAIRMAN, NERPC,
HON'BLE DY. CHIEF MINISTER,
GOVERNMENT OF ARUNACHAL PRADESH

ON THE OCCASION OF
THE 25th RPC MEETING
KOLKATA
9th DECEMBER 2023

Honorable Colleague Ministers from North-Eastern States, Esteemed Officers of the Central and State Governments, Representatives from Central and State Power Utilities, Distinguished Guests, Special Invitees, Ladies, and Gentlemen.

A warm welcome to each one of you on this significant occasion of the 25th North-Eastern Regional Power Committee (**NERPC**) meeting. It is truly an honor to stand before you as we gather in the vibrant city of Kolkata for this crucial event. I extend my heartfelt gratitude to **National Thermal Power Corporation Limited**, the **NTPC**, for grandiosely hosting this NERPC meeting, demonstrating their commitment to the collaborative efforts aimed at enhancing the power sector in our region.

As we convene once again, it is a moment for reflection on the progress made since our last meeting in Tawang. I would like to express my sincere appreciation to all the participating states, government agencies, and power utilities for their relentless efforts in addressing the challenges and collectively contributing to the development of the power sector in the North-Eastern Region.

KEY DISCUSSIONS TO BE HELD IN THIS MEETING:

In this meeting, several important agenda will be discussed, emphasizing the resilience and preparedness of the power sector in the region. Key topics include the institutional framework for disaster management and the implementation of Crisis Management Plans (**CMP**) and Disaster Management Plans (**DMP**) across

utilities within the power sector, proactive measures such as the installation of transmission line surge arrestors, reconductoring of existing transmission lines to High Temperature Low Sagging, the **HTLS**, etc. Initiatives like the Mock Black Start Exercises, aligned with the Indian Electricity Grid Code (IEGC) 2023 will exemplify our dedication to our preparedness for any eventuality in power sector. Additionally, issues pertaining to system strengthening i.e., proposal of construction of new grid substations in NER and system constraints would be discussed for their remedies. These agendas underscore the collective dedication to enhancing the reliability and sustainability of the power sector in the North Eastern Region. The meeting is poised to facilitate strategic dialogue and decisions for the advancement of the regional power infrastructure.

PRESENT IMPORTANT NEW SCHEMES UNDER IMPLEMENTATION IN NER

I am happy to learn that the Guwahati Islanding Scheme which has been planned by NERPC under the directive of the Ministry of Power has now been finalized. I would urge all stakeholders involved in this project i.e., NERPC, NERLDC, AEGCL, APDCL, APGCL, POWERGRID and NTPC to implement the Guwahati Islanding Scheme at the earliest. Feasibility for similar Islanding Schemes for other NER state capitals can also be looked into in future.

I am thankful to the Ministry of Power for their positive response in allowing 100% funding for SCADA/EMS upgradation for all State Load Despatch Centers, the **SLDC**s, of the NER States on our collective request made through NERPC forum. The SCADA/EMS project would be about Rs. 80 Crores for each States of NER. I urge all the NE States, NERPC and NERLDC to submit the DPR for the upgraded SCADA system and implement it in all NER States at the earliest.

EXPLOITATION OF HYDRO POTENTIAL IN NER:

The North Eastern Region, endowed with abundant natural resources, particularly hydroelectric potential, holds the key to green power generation. Despite challenges in commissioning hydro projects, I call upon project developers to embrace innovative and eco-friendly designs, ensuring lower tariffs and minimal ecological

disruption. Our region's commitment to achieving India's non-fossil energy capacity target aligns with the global goal of reducing carbon emissions. In this direction, recently, the State Government of Arunachal Pradesh has signed Memoranda of Understanding (**MoU**)s with **NHPC**, **SJVN** and **NEEPCO** for developing **12 Hydro Projects** in Arunachal Pradesh. The capacity of the projects will be about **11,517 MW**. It is hoped that these projects will not only contribute to the growth and the development of the State but will also augment the country's energy security through clean and green energy.

CHALLENGES FOR THE NORTH EASTERN REGION:

Our region has faced unique challenges, including geographical constraints, poor connectivity, and adverse weather conditions. Despite these obstacles, we recognize the immense potential for growth and development. The power sector, in particular, plays a pivotal role in driving economic progress and social transformation in our region. The NERPC forum serves as a crucial platform to address these challenges together and forge a path towards sustainable development. In NERPC forum, complex issues can be tackled collectively. And we may, with united front, urge the Government of India in pursuit of our common goals and aspirations.

REVAMPED DISTRIBUTION SECTOR SCHEMES (RDSS) FOR LOSS REDUCTIONS:

The distribution sector is one of the grey areas in power sector that requires serious and pragmatic policy intervention. The Revamped Distribution Sector Schemes, RDSS, aimed at reducing Aggregate Technical & Commercial (**AT&C**) losses and bridging the gap between Average Cost of Supply (**ACS**) and Average Revenue Realized (**ARR**), are pivotal for improving the technical and commercial performance of distribution systems. I urge all constituent member states to avail this scheme and cooperate actively in its smooth implementation.

COMMERCIAL SUSTAINABILITY OF REGIONAL POWER SECTOR:

Timely payment of dues to Central Public Sector Undertakings (**CPSUs**) is crucial for the commercial sustainability of the regional power sector. I urge Distribution Companies (DISCOMS) and State Governments to prioritize settling outstanding bills, recognizing that buying and selling, along with timely settlements, are fundamental for sustainable business operations.

GAS SUPPLY SHORTAGE FOR NER GAS PLANTS:

I have been informed that **ONGC Tripura Power Company Limited**, the **OTPC**, Palatana, which is the largest Gas Plant in the region of **726 MW**, is facing shortage of gas supply. OTPC Palatana, has been a reliable and efficient source of power supply for NER States. The tariff of OTPC Palatana is also one of the lowest among thermal plants in the country. Therefore, generation below capacity by OTPC due to shortage of gas supply is a national loss and a major concern for NER States. Therefore, I would like to urge the Ministry of Power and the Ministry of Petroleum & Natural Gas to look into the matter and address the issue of gas shortage faced by OTPC Palatana. Similarly, sufficient and stable gas supply for other gas projects in the region should be ensured. This will also help in alleviating the shortage of power availability in the country as a whole.

POWER SCENARIO IN ARUNACHAL PRADESH:

Need for Strengthening of Inter-State Transmission System:

To facilitate the evacuation of power from upcoming hydroelectric plants and ensure adequate power availability for industrial consumers, timely planning and implementation of the required Inter-State Transmission System infrastructure networks are essential. I seek the support of all constituents in pushing forward this proposal for the overall benefit of the region and the nation.

Reliability Issues in Upper Assam - Arunachal Link:

The much-anticipated **132 kV Roing-Chapakhowa Double Circuit transmission line** was **commissioned in July 2023** and it was expected to provide redundancy relief to Central Arunachal Pradesh. However, this transmission asset has not been

utilized to its optimum capacity. The constraint is reported to inadequacies in the upstream systems at Chapakhowa-Rupai-Tinsukia and Rupai-Margherita and Rupai-Tinsukia networks. I urge concerned stakeholders to discuss and find remedial measures to address the inadequacies at the earliest for benefit of all constituents.

I am happy to note that, in addition to the **Kathalguri-Namsai 220 kV transmission system** being implemented under Tariff Based Competitive Bidding (**TBCB**) route by POWERGRID, another essential redundancy need of inter-state system interconnectivity of **132 kV Double Circuit transmission line between Gogamukh (Assam) & Gerukamukh (Arunachal Pradesh)** has been approved and being taken up under TBCB route, the processes for bidding of which is understood to be at final stages for award and implementation. The acquisition of additional land requirement for one of the 132 kV bay at Gerukamukh is being urgently facilitated by Arunachal Pradesh.

I am further pleased to be informed about the successful **charging of the Khuppi-Kimi 132 kV Single Circuit transmission line** at rated voltage on **3rd Dec. 2023** after a prolonged wait, with the collective efforts of Department of Power, Arunachal Pradesh and the NEEPCO. This line is going to deliver the much-needed services of the transmission redundancy to western part of Arunachal Pradesh which would include unhindered evacuation of generation from the lone private sector hydro plant of the state as on date, Dikshi Hydro Electric Plant of M/s Devi Energy Pvt. Limited at Rupa.

I hope that the proposals of Arunachal Pradesh for stringing of the Second Circuit of the existing ISTS Namsai-Teju-Roing-Pasight 132 kV S/C on D/C line of POWERGRID is being taken up by the concerned agency for meeting up the surge of industrial power demands at Niglok Industrial Growth Centre at Pasighat. Stringing of the Second Circuit of Pasighat(Napit)-Niglok-Likabali-Gerukamukh 132 kV S/C on D/C Intra-State 132 kV transmission line being constructed under Comprehensive Scheme is being taken up by Arunachal Pradesh for its technical optimization and effective commercial usages.

CONCLUSION:

In conclusion, I express my gratitude to all participants for their dedication to the development of the North Eastern Region's power sector. I am confident that the 25th NERPC meeting will be a platform for meaningful and successful deliberations, contributing to the continued progress of our region. Once again, I extend my appreciation to NTPC for hosting this meeting in Kolkata, and NERPC Secretariat for organizing the event smoothly and I look forward to productive discussions that will shape the future of the power sector in the North Eastern Region.

ANNEXURE-IX

KEYNOTE ADDRESS OF

SHRI K.B. JAGTAP

MEMBER SECRETARY, NERPC,

ON THE OCCASION OF

THE 25th RPC MEETING

KOLKATA

9th DECEMBER 2023

Hon'ble Dy. Chief Minister, Govt. of Ar, Pradesh & Chairman, NERPC Shri Chowna Mein Ji, Hon'ble Power Minister, Govt. of Meghalaya, Shri A T Mondal Ji, Hon'ble Power Minister, Govt. of Nagaland, Shri K. G. Kenye Ji, Hon'ble Power Minister, Govt. of Tripura, Shri Ratan Lal Nath Ji, Hon'ble Power Minister , Government of Assam, Ms Nadita Gorlosa Ma"am, Hon'ble MLA & Advisor (Power), Govt. of Ar. Pradesh, Shri Balo Raja Ji, Principal secretaries/Commissioners/Secretaries of NER States Power Departments, Senior officers from NER State, Central Utilities/Organizations, Special Invitees and Member Secretaries of other region, CE, CEA , ladies and gentlemen.

On behalf of NERPC Secretariat, I extend a very warm welcome to each one of you to the 25th NER Power Committee Meeting. I would like to express my sincere gratitude to all of you for sparing your valuable time by gracing your presence in this meeting important NERPC meeting today. I hope you have a pleasant stay in Kolkata. I am pleased to inform that with the support and guidance of respected Chairman, NERPC & Hon'ble Dy. Chief Minister of Ar. Pradesh, we are able to convene NERPC meeting for the 2nd time this year. I hope that in today's meeting , approval of RPC will be taken on the agenda items deliberated in TCC meeting yesterday which will be in the interest of the nation in general and the N.E. Region in particular.

I would like to convey our heartfelt gratitude to Shri Jaikumar Shrinivasan Director (Finance), NTPC and especially his team under the leadership of Shri Majumdar, RED, NTPC, for hosting the meeting in Kolkata "the city of Joy". I am grateful to

NTPC Limited for taking good care of all our delegates and for making comfortable arrangement for this event.

You are aware that Ministry of Power, Government of India has established NERPC under the Electricity Act 2003, to ensure optimal performance of the electricity grid. NERPC has been further entrusted with the responsibilities of transmission planning, communication planning and to evolve consensus on all issues relating to economy and efficiency in the operation of power system in the region. To achieve these objectives, NERPC Secretariat persistently work through its various sub-committees (namely, operation, protection, commercial, NeTEST and put-forth the matters of highest significance to the august forum of TCC/NERPC. I therefore would like to request all our constituents to fully utilize the subcommittee forum by putting up all issues for threadbare deliberation. If the issues are not able to be resolved at Subcommittee level, constituents may escalate to the TCC/RPC forum.

Yesterday, in the TCC meeting, we had in-depth deliberations on all the agendas and I'm pleased to inform that most of the agendas have been settled. Only few agenda have been referred to the RPC for further deliberation today.

I would like to highlight to the forum some of the achievement that NERPC forum has made since 23rd NERPC meeting held in June 2023:

(1) I am pleased to inform that PSDF has agreed for 100% funding for SCADA/EMS upgradation as a special consideration for NER. This is possible because of our collective request made through the NERPC Forum for all NER States. I thank our Chairman NERPC & Hon'ble Dy CM of Ar, Pradesh for his intervention and writing a special letter to Hon'ble Union Power Minister due to which the scheme was approved by the Monitoring Committee.

(2) Guwahati Islanding Scheme which was referred back to the subcommittee in the 22nd NERPC Meeting, has been reexamined, revised and DPR has been finalized. The Guwahati Islanding Scheme will now be forwarded to PSDF for appropriate funding and it would be implemented soon.

(3) Transmission Lines and Elements added in to the Grid, since last NERPC Meeting in June 2023 are as follows:

(i) 132 kV Roing-Chapakhowa D/C Lines have been successfully commissioned in July 2023.

(ii) 220/132KV 100MVA ICT -3 at Salakati has been commissioned in September 2023.

(iii) 220kV Kopili-Misa-I, 220kV Kopili-Misa-II & 220kV Kopili-Misa-III have been charged and successfully restored in August 2023.

(4) Kopili Unit IV, III & II have been restored with combined capacity of 150 MW.

(5) The 132kV Kameng-Khupi line has finally been charged on 3rd December 2023 which is a big boost towards reliability of Arunachal Pradesh system.

I am please to inform that with persistent monitoring in NERPC forum, and coordinated effort of all NER constituents, Protection system in the region has seen considerable improvement. Few of them are as given below:

(i) Almost all relays in 132kV & above level are of numerical type now resulting in the better root cause analysis, which helps in preventing the repetition of similar type of fault and Grid Disturbance in NER.

(ii) All adjacent Relay settings are getting revised before FTC of new elements.

(iii) Better Relay coordination are being done now with coordinated efforts of all concerned.

(iv) UFR at 49.4 Hz has been implemented in all the States

(v) A no. of TLSAs have been installed in Transmission lines. The installation of TLSA particularly in the 400kV Silchar-Azara and 400kV Silchar Byrnyhat have resulted in the more reliability of 400kV network in the region.

(vi) There are presently 12 nos SPS operating in NER.

However, there remains a lot of work to be done in the NER Power System. Many operational system constraints and bottlenecks are yet to be resolved. Frequent trippings and grid disturbances are to be reduced. Proper analysis of GI/GDs and discussion within stipulated timelines needs to be ensured. Communication and

Telemetry related issues needs to be addressed with much more attention. These are some of the challenges which can be achieved with concerted efforts of all constituents.

I also would like to inform that increased demand is expected in the country in the coming months particularly during the period from March to June 2024. All generating stations particularly thermal stations are to be on high alert and keep their stations ready for generating at full capacity. Further, stern direction has been issued by MoP for not scheduling any plan maintenance during these high demand period.

Lastly, I would like to acknowledge the presence of our constituent members in large number for the meeting which shows our commitment and sincerity for resolving issues confronting us in the power sector in NER. I hope that we will be able to achieve much success in the near future with the cooperation of all.

On behalf of NERPC, I once again extend my heartiest greetings to all the participants and look forward to meaningful deliberation.