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
Fax No: 0364 - 2534040
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No. NERPC/OP/Committee/2022/*1332-1408* Date: July 24, 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 24th TCC & 24th NER Power Committee Meetings – Reg.

Sir/Madam,

Please find enclosed herewith the minutes of the 24th TCC meeting and 24th NER Power Committee meeting held on 27th & 28th June 2023 respectively at "Kalawangpo Convention Hall, General Parade Ground, Tawang, Arunachal Pradesh" for your kind information and necessary action.

Yours faithfully,

(K. B. Jagtap)
Member Secretary

Copy to:

1. PS to Chairman, NERPC & Hon'ble Dy. Chief Minister & In-charge (Power), Govt. of Arunachal Pradesh, Itanagar- 791111
2. PS to TCC Chairman & Chief Engineer (P), WEZ, 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. Chief Engineer (NPC), NRPC Complex, Katwaria Sarai, SJSS Marg., New Delhi – 110016
16. Engineer-in-Chief, P&E Dept., Govt. of Mizoram, Aizawl – 796 001
17. Engineer-in-Chief, Dept. of Power, Govt. of Nagaland, Kohima – 797 001.
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 Secretary, ERPC, 14 – Golf Club Road, Tollygunge, Calcutta – 700 033
38. Member Secretary, NRPC, NRPC Complex, 18-A, S.J.S. Marg, Katwaria Sarai, New Delhi – 16
39. Member Secretary, WRPC, MIDC Area, Marol, Andheri (E), Mumbai – 400 093
40. Member Secretary, SRPC, 29 – R.C. Cross Road, Bangalore – 560 009
41. MD, NETC, #2C, 3rd Floor, D-21, DMRC Building, Corporate Park, Sector-21, Dwarka, Delhi-77
42. CISO-MoP & Member (Hydro), CEA, Sewa Bhawan, R. K. Puram New Delhi-110066.

Member Secretary

Government of India

Ministry of Power

North Eastern Regional Power Committee

RECORD NOTE OF DISCUSSION

OF

24TH TCC MEETING

&

24TH NERPC MEETING

(Under the aegis of DOP, Arunachal Pradesh)

Venue	**:**	**Kalawangpo Convention Hall, General Parade Ground, Tawang, Arunachal Pradesh**
TCC	**:**	**27th June 2023 (Tuesday)**
NERPC	**:**	**28th June 2023 (Wednesday)**

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

A	Amperes
AAAC	All Alloy Aluminium Conductors
ACS	Average Cost of Supply
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
AGC	Automatic Generation Control
AIIB	Asian Infrastructure Investment Bank
AIS	Air Insulated Substation
AICTE	All India Council for Technical Education
AMC	Annual Maintenance Contract
AMR	Automatic Meter Reading
AP / Ar. P	Arunachal Pradesh
APDCL	Assam Power Distribution Company Limited
APTEL	Appellate Tribunal For Electricity
ARR	Average Revenue Realized
ATC	Available Transfer Capability
AT&C	Aggregate Technical and Commercial Losses
AWS	Automatic Weather Station
A/R	Auto-Reclosure
BEC	Bid Evaluation Committee
BHEL	Bharat Heavy Electricals Limited
BNC	Biswanath Chariali
BOQ	Bill of Quantities
BgTPP/ BTPS	Bongaigaon Thermal Power Project/ Station
CABIL	Capacity Building of Indian Load Despatch Centres
CB	Circuit Breaker
CBG	Combined Bank Guarantee
CBIS	Capacity Building & Institutional Strengthening
CCM	Commercial Sub-Committee Meeting
CCMP	Cyber Crisis Management Plan
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CERT-GO	Computer Emergency Response Team (Grid Operation)
CERT-In	Indian Computer Emergency Response Team
CII	Critical Information Infrastructure
CISO	Chief Information Security Officer
Ckt / ckt	Circuit
CMETS	Consultation Meeting For Evolving Transmission Schemes
CoD/ DoCO	Date of Commercial Operation
CPRI	Central Power Research Institute
CPWD	Central Public Works Department
CPSUs	Central Public Sector Undertaking
CRP / C&R Panel	Control & Relay Panel
CS	Central Sector
CSST&DS-AP	Comprehensive Scheme for Strengthening of Transmission & Distribution system in Arunachal Pradesh
CVT	Capacitor Voltage Transformer
CT	Current Transformer
CTU	Central Transmission Utility
CTUIL	Central Transmission Utility of India Ltd
DC	Direct Current
D/C	Double Circuit
DCU	Data Concentrator Unit
DDUGJY	Deen Dayal Upadhyaya Gram Jyoti Yojana
DGA	Dissolved Gas Analysis
DHEP	Doyang Hydro Electric Project
DICs	Designated ISTS Customers
DISCOMs	Distribution Companies
DLP	Defect Liability Period
DM	Double Main Bus Scheme
DMS	Distribution Management System
DMP	Dibang Multipurpose Project
DoNER	Development of North Eastern Region

DoP / DOP	Department of Power
DPR	Detail Project Report
DSM	Deviation Settlement Mechanism
E/F	Earth Fault
EAP	Externally Aided Project
EHV	Extra High Voltage
EMS	Energy Management System
EOL	End of Life
EPS	Electric Power Survey
ERS	Emergency Restoration System
FDS	Frequency Domain Spectroscopy
FOTE	Fibre Optic Terminal Equipment
FTC	First Time Charging
FY	Financial Year
GAIL	Gas Authority of India Limited
GENCO	Generation Company
GIS	Gas Insulated Substation
GNA	General Network Access
GOI	Government of India
GSS	Grid Sub Station
GST	Goods and Services Tax
GTG	Gas Turbine Generator
GTP	Gas Turbine Plant
GW	Giga Watt
HEP	Hydro Electric Project
HVDC	High Voltage Direct Current
HPO	Hydro Power Purchase Obligation
HPS	Hydro Power Station
HQ	Head Quarter
HTLS	High temperature Low Sag
ICCP	Inter-Control Center Communications protocol
IEGC	Indian Electricity Grid Code
IEX	Indian Energy Exchange
ICT	Inter Connecting Transformer
IMD	India Meteorological Department
IPDS	Integrated Power Development Scheme
IPPs	Independent Power Producers
IR	Insulation Resistance
ISGS	Inter State Generating Station
ISTS	Inter State Transmission System
IT	Information technology
JICA	Japan International Cooperation Agency
JV	Joint Venture

KM / Km/ km	Kilometer
KMTL	Kohima-Mariani Transmission Ltd.
KV / kV	Kilo Volt
KWH / kwh	Kilo Watt Hour
LADF	Local Area Development Fund
LC	Letter of Credit
LDCs	Load Despatch Centre
LDP	Line Differential Protection
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/MOP	Ministry of Power
MoU	Memorandum of Understanding
MPLS	Multiprotocol Label Switching
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
NCIIPC	National Critical Information Infrastructure Protection Centre
NCT	National Committee on Transmission
NDC	Nationally Determined Contribution
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
ONGC	Oil and Natural Gas Corporation
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
PM KUSUM	Pradhan Mantri Kisan Urja Suraksha Evam Utthan Mahabhiyan
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
PUShP	Portal for Utilisation of Surplus Power
RAM	Random Access Memory
RAPDRP	Restructured Accelerated Power Development and Reforms Program
RCE	Revised Cost Estimates
RDSS	Revamped Distribution Sector Scheme
RE	Renewable Energy
RECPDCL	REC Power Development and Consultancy Limited
RED	Regional Executive Director
RESCO	Renewable Energy Service Company
RHEP	Ranganadi Hydro Electric Project
RLDC	Regional Load Dispatch Centre
RMC	Regional Met Centre
RMSE	Root Mean Square Error
ROP	Record of Proceeding
RoW	Right of Way
RPC	Regional Power Committee
RPO	Renewable Purchase Obligation
RTM	Regulated Tariff Mechanism
RTU	Remote Terminal Unit
R&M	Renovation and Modernisation
R&U	Renovation and Upgradation
SAS	Substation Automation System
SAMAST	Scheduling Accounting Metering and Settlement of Transactions in Electricity

SAUBHAGYA	Pradhan Mantri Sahaj Bijli Har Ghar Yojana
S/C	Single Circuit
S/S / Ss	Sub Station
SCADA	Supervisory Control and Data Acquisition
SCM	Standing Committee Meeting
SDH	Synchronous Digital Hierarchy
SHP	Small Hydro Project
SLDC	State Load Dispatch Centre
SLSC	State level Screening Committee
SMT	Single Main and Transfer Bus Scheme
STG	Steam Turbine Generator
SOC	Security Operation Center
SOE	Sequence of Events
SPS	System Protection Scheme
SPV	Special Purpose Vehicle
Stg	Stage
STOA	Short Term Open Access
S/Y	Switchyard
TBCB	Tariff Based Competitive Bidding
TCC	Technical Coordination Committee
TESG	Techno-Economic Subgroup
TFR	Tower Footing Resistance
TL	Transmission Line
TLSA	Transmission Line Surge Arrester
TPTL	Tripura Power Transmission Limited
TSECL	Tripura State Electricity Corporation Limited
TS	Transmission System
UGFO	Underground Fibre Optic
ULDC	Unified Load Dispatch Scheme
UNMS	Unified Network Management System
URTDSM	Unified Real Time Dynamic State Measurement system
VA-PT	Vulnerability Assessment and Penetration Testing
VOIP	Voice over Internet Protocol
VSAT	Very Small Aperture Terminal
VT	Vertical Turbine
YTC	Yearly Transmission Charge

CONTENTS

ANNEXURES

A.4.1	The list of constituent members and respective contribution amount
B.7	Minutes 3rd Communication planning meeting (CPM) of CTUIL
D.19	The power allocation of Lower Subansiri Project as per MOP
D.20	The latest status on progress of NERPSIP and Comprehensive schemes
D.29	summary of the state wise status of CII, CCMP etc.
D.31	Letter no. NER-II/R&C/21-22/423 dt. 14.03.2022 by M/s Indigrid
D.32	Communication Audit plan for FY 2023-24
E.8	SOP on Procedure on Outage Planning for Communication System

SUMMARY RECORD OF DISCUSSIONS
24TH TECHNICAL COORDINATION COMMITTEE MEETING
&
24TH NORTH EASTERN REGIONAL POWER COMMITTEE MEETING

The 24th TCC Meeting and the 24th NER Power Committee meeting were held on 27th & 28th June 2023 respectively at Kalawangpo Convention Hall, General Parade Ground, Tawang, Arunachal Pradesh. The meetings were hosted under the aegis of Department of Power, Govt. of Arunachal Pradesh.

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

I : PROCEEDINGS OF THE 24TH TCC MEETING

The meeting started with felicitation of all the delegates with flower bouquet by Department of Power, Arunachal Pradesh followed by traditional lighting of lamps by Shri Ginko Lingi, Chairman, TCC & CE (P), Arunachal Pradesh, Shri K. B. Jagtap, Member Secretary, NERPC, Shri D. Sarkar, MD, TSECL, Shri B. Maharana, Director (Fin.), NEEPCO, Shri P. Majumdar, Regional ED, NTPC, Shri N. Roy, ED, NERLDC and Shri S. M. Aimol, Director, NERPC. This was followed by welcome address by the Shri Ginko Lingi, CE (P), Arunachal Pradesh & Chairman, TCC.

Shri Ginko Lingi, Chairman, TCC & CE, DOP, Arunachal Pradesh, in his address, extended a warm welcome to all esteemed members to the 24th TCC meeting in the beautiful town of Tawang. He stated that the power sector has been the catalyst that ignites progress and shapes the course of human development. He further highlighted that NER which is endowed with tremendous power generation potential, grapples with geographical and infrastructural limitations that pose significant challenges. He emphasized the need to give due attention to the aspirations of smaller constituents within the NER, which possesses distinct needs and aspirations, and it is through the collective support and collaboration fostered by the forum that these aspirations can be realized. Mentioning about the potential of Arunachal Pradesh, he apprised the members about the abundance of hydropower resources in the state which holds

immense promise. As a special mention, he thanked the forum and NERPC for facilitating the commissioning of Roing-Chapakhowa line, required for crucial interconnectivity. He wished all the delegates a pleasant stay and fruitful deliberations in the meeting.

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

Sh. K. B. Jagtap, Member Secretary, NERPC welcomed all the delegates of the 24th TCC meeting on behalf of NERPC Secretariat. He expressed immense gratitude to Department of Power, Arunachal Pradesh for hosting the 24th TCC & 24th NERPC meetings in Tawang and for making excellent arrangement and providing a comfortable stay for the delegates. He stated that some of the agenda have been discussed and resolved in the OCC meeting held recently on 15th June 2023 and NERPSIP review meeting on 16th June 2023. He expressed hope that with the support and cooperation of all constituent members, all the remaining agenda & additional agenda placed for discussion today would be resolved collectively for the benefit of entire NE Region in particular and the nation in general.

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

The meeting concluded with the vote of thanks by **Shri A. Agrawal, Dy. Director, NERPC.**

II : PROCEEDINGS OF THE 24TH NERPC MEETING

The 24th 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, 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, Shri Gingo Lingi, TCC Chairman & CE (P), DoP, Arunachal Pradesh and Shri N. S. Mondal, Member Secretary, ERPC.

Shri Balo Raja, Hon'ble MLA & Adviser Power, Govt. of Arunachal Pradesh delivered the welcome address. In his brief address, Shri Raja extended warm welcome to all the delegates in the 24th Meeting of the North East Regional Power Committee at beautiful city of Tawang, Arunachal Pradesh. He said "I am very much privileged to have this

opportunity to address and welcome the gathering of who-is-who of the great minds and personalities of the region in power sector of North East. I, therefore, consider it as a life time opportunity to address you and to be a part of the great forum of much importance. I welcome you all from the core of my heart." He expressed hoped that all the participants are having comfortable stay at the venue.

The speech of Hon'ble MLA & Power (Adviser), Govt. of Arunachal Pradesh is placed at **Annexure-IV.**

Shri Chowna Mein, Chairman, NERPC & Hon'ble Dy. Chief Minister, Govt. of Arunachal Pradesh addressed the 24th NER Power Committee Meeting. He stated that it is really a great privilege to be in this august forum where important issues concerning power sector of the region are deliberated. He stated that he is grateful for the opportunity to host the 24th Technical Coordination Committee (TCC) and 24th NERPC meetings in Tawang. He exuded confidence that like previous NERPC meetings, this 24th NERPC meeting too shall bring fruitful resolution on various issues of our region and will act as a guiding light for overall development of power sector in the North Eastern Region. He said, "On behalf of the people of Arunachal Pradesh, I bring my heartiest and warmest greetings to all the participants with great confidence that meaningful deliberations will take place for further significant quantum improvement of the power sector of our region."

Shri Chowna Mein apprised the members regarding the noteworthy projects of ISTS for strengthening of connectivity in the region, eg. Pare-North Lakhimpur 132 kV D/C line, 220/132 kV S/S at Nangalbibra, BNC-Itanagar 132 kV D/C line etc. Further, he informed about the Subansiri Lower HEP (2000 MW), two units of combined capacity of 500 MW is likely to be commissioned in January 2024, followed by other 6 units in intervals during the year 2024. He extended his heartiest greetings to all the participants for meaningful and successful deliberations

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

Shri Ratan Lal Nath, Hon'ble Power Minister, Govt. of Tripura, in his brief address, expressed gratitude to NERPC for their continuous efforts towards power sector improvement for the benefit of the people of the State and the region. He stated that NERPC is the most apposite forum to discuss and bring about some consensus on all

the pertinent issues which are being faced by the power sector in the North Eastern Region. In the interest of North Eastern States, this opportunity should also be utilized to collectively present the common views and issues to the Government of India.

He stated that with the persistent enhancement of infrastructure and communication facilities, the NE Region will surely become a major power-house of India by using its surplus power potential. He added that India would be called developed nation only when the North Eastern Region also prospers in every aspect of development including Power Sector. He wished the forum to address many of the issues pertaining to the power sector in the NE region and through analytic and significant thoughts resulting in positive outcome from the discussion and deliberations today.

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

Speech of Shri K. G. Kenye, Hon'ble Power Minister, Govt. of Nagaland were circulated to members during the meeting. The Speech of Hon'ble Power Minister, Govt. of Nagaland was considered as read. Full text of the speech of Hon'ble Power Minister, Govt. of Nagaland is placed at **Annexure – VII**.

Shri K. B. Jagtap, Member Secretary, NERPC welcomed and expressed gratitude to all delegates for their participations. During his brief speech, Shri Jagtap apprised the members that the proposal of upgradation of SCADA at each SLDCs of North Eastern States has been taken positively by the Technical Appraisal Committee of PSDF and the approval of the Monitoring Committee may be accorded soon. He informed that the 132kV Jiribam- Haflong Transmission line which was under long outage, has been restored in the month of May 2023. He further added that the revival of this transmission line along with the restoration of Khandong Stage II 25 MW power generation has given much relief to the power Supply of Haflong areas of Assam and the stability of Meghalaya Power System. He expressed his sincere gratitude to Department of Power, Arunachal Pradesh for hosting the NERPC Meeting at this holy and historical city, Tawang and wished for a fruitful discussion of the agenda items.

The address of Member Secretary, NERPC is placed at **Annexure – VIII**.

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**.

RECORD NOTES OF DISCUSSION
OF
24TH TCC & 24TH NERPC MEETINGS

1. MEETING SCHEDULE

SN	Meeting	Date	Time	Venue
1	TCC	27.06.2023	10:00	Kalawangpo Convention Hall, General Parade Ground, Tawang, Arunachal Pradesh
2	NERPC	28.06.2023	13:30	Kalawangpo Convention Hall, General Parade Ground, Tawang, Arunachal Pradesh

2. CONFIRMATION OF THE MINUTES OF 23rd TCC MEETING & 23rd NERPC MEETING

The minutes of the 23rd TCC & 23rd North Eastern Regional Power Committee (NER Power Committee) meetings held on 18th November, 2022 & 19th November, 2022 respectively in Goa were circulated vide letter no. NERPC/OP/Committee/ 2022/*9190-9258* dated 30th November 2022.

No comments or observations have been received from any constituents.

The TCC and NER Power Committee confirmed the minutes of the 24th TCC & 24th NER Power Committee meetings.

ARRANGEMENT OF AGENDA OF 24th TCC/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 TO BE REFERRED TO THE SUBCOMMITTEES	E

1. CATEGORY – A : ITEMS DISCUSSED AND APPROVED BY THE COMMITTEE

ITEM NO. A.1 : EARLY COMMISSIONING OF 400/132 KV SURAJMANINAGAR (TSECL) S/S- NERLDC

At present, the load of South Comilla of Bangladesh is fed via 400 kV Surajmaninagar (TR) – Comilla D/C (charged at 132 kV). The maximum demand of Tripura has reached 347MW on 18th April 2023 at 19:50 hrs. With this maximum load of Tripura power system, the present configuration of Tripura power system is not reliable in providing 160 MW power support to South Comilla in high demand season. Also, at this present configuration, there is no scope for increment of Bangladesh Power Flow from 160 MW. If there is a requirement of more power flow to Bangladesh, 132 kV Surajmaninagar (TSECL) S/s has to be upgraded to 400 kV Surajmaninagar (TSECL) S/s at the earliest.

Commissioning of Surajmaninagar (TSECL) S/s by Tripura has been approved in the 3rd NERPCTP Meeting held on 19th July, 2021. Also, as per the Minutes of 23rd TCC & 23rd NERPC Meetings held on 18th & 19th November 2022 in Goa, it was deliberated that a JV Company will be formed and the same will be operational from April 2023.

The status of JV formation has been monitored in various subsequent meetings such as OCC, CMETS etc. However, the issue is still pending. It is requested to expedite the commissioning of 400 kV Surajmaninagar (TSECL) S/s at the earliest.

TSECL is requested to intimate the latest status

Deliberation of the TCC **:** GM, TPTL informed that unbundling of TSECL has been done and STU has been formed. However, JV has not yet been established. The decision regarding formation of JV and upgradation work will be taken by the State Government.

The TCC referred the matter to the RPC for discussion.

Deliberation of the RPC **:** Hon'ble Power Minister, Govt. of Tripura informed the forum that the matter is under serious consideration by the State government. He added that the issue will be taken up in the cabinet and decision will be made shortly regarding formation of JV and upgradation of the Substation.

ITEM NO. A.2	**:**	**SHIFTING OF PALATANA - SURAJMANINAGAR (TSECL) 400 KV D/C LINE (OPERATED AT 132KV) TO THE 400/132KV ISTS S/S AT SURAJMANINAGAR- NERLDC**

The RPC noted as above.

As per Minutes of 23rd TCC & 23rd NERPC Meetings held on 18th & 19th November 2022 in Goa, Secretary (Power), Tripura informed that formation of STU is on verge of completion and soon after that, a Joint Venture (JV) company will be formed. He firmly stated that JV will be operational from April 2023.

TSECL is requested to intimate the latest status.

Deliberation of the TCC **:** GM, TPTL apprised the forum that shifting of Palatana - Surajmaninagar (TSECL) 400 KV D/C line (operated at 132KV) to the 400/132kV ISTS S/S at Surajmaninagar shall only take place after the upgradation of Surajmaninagar (TSECL) to 400 kV and the matter related to upgradation work was deliberated under Agenda Item A.1.

Deliberation of the RPC **:** ***The RPC noted as discussed at item A.1.***

ITEM NO. A.3	**:**	**OPGW INSTALLATION IN 220KV KOHIMA- NEW KOHIMA LINE – NETeST NERPC**

Related to commissioning of 220 kV downstream transmission line of DOP Nagaland at New Kohima (400/220kV) SS Concerns of KMTL: 1. OPGW wire for 220 KV downstream Transmission line has not been installed so it is very difficult to achieve the protection of 220 KV transmission line by using line differential relay. As line length is 10 KM (Approx.) for 220 kV Transmission line, therefore Line Differential Relay has been considered for both the end. 2. PLCC & SDH panel has not been installed at 400/220 KV GIS substation, New Kohima till date. 3. 220 KV downstream transmission line conductor parameters yet to receive from DOP, Nagaland for Relay setting at 400/220 KV GIS substation, New Kohima.

In 196th OCCM, Manager, KMTL requested the forum to ensure installation of OPGW, LDP, PLCC, SDH equipments in the 220kV downstream line. He also requested for

providing parameters to KMTL for finalization of settings. Member Secretary, NERPC requested POWERGRID to include OPGW for the 220kV New Kohima – Zhadima D/C under regional scheme – State Sector and proceed for early implementation as the line is in final stage of commissioning. NERTS agreed to the same.
In the 198th OCC meeting, DGM (AM), NERTS updated the forum that quantity margin of OPGW is available under reliable communication scheme. However, prior approval of RPC forum is required to install OPGW on intra state lines.

In the 25th NETeST Meeting, the forum recommended PGCIL to include the link under Reliable communication of ULDC as quantity variation.

Deliberation of the TCC **:** CTUIL representative stated that this line being intra-state line is not under their purview. Member Secretary, NERPC requested POWERGRID to find out a way to help them to lay OPGW for this line as a special case.

In response to this, CGM (i/c), NERTS stated that a special arrangement can be made bilaterally with Nagaland by devising a mutually agreed policy/philosophy of work including deposit work or other alternatives, AMC, O&M etc.

The TCC recommended the matter for discussion and approval of the RPC.

Deliberation of the RPC **:** In view of the constraints faced by Nagaland and urgency of the requirement of the OPGW link, the forum approved and advised PGCIL to execute the work by formulating a bilateral philosophy with Nagaland as decided by the TCC forum. Further, the work progress can be monitored in Sub-Committee of NERPC.

ITEM NO. A.4	**:**	**SELF-FINANCING OF NERPC SECRETARIAT AS PER DIRECTION OF CEA/MOP -NERPC**

MoP letter dated 23.02.2006 specified that activities of RPCs are to be fully financed by the constituent members of respective RPCs. CEA vide its order no. 17-11/16/2022-Budget/CEA/02-07 dt. 02.01.2023 constituted a committee for streamlining the process of Fund Utilization/Budgetary provision of all RPCs. The said committee has directed NERPC Secretariat to take up the matter in the next NERPC meeting for collection of contribution.

In pursuance of this, Budgetary Committed Expenditure for NERPC Secretariat for FY23-24 has been estimated as shown below:

Sub-Head/Minor Head/Unit of appropriation as in the Demand for Grants/Name of Scheme	**Proposed Budget Estimates 2023-24 (in thousands INR**	**Remarks**
Salary	30000.000	Provision for Annual Increment, Increase in DA and Sanctioned Posts. Includes central government allowances, pension contributions etc.
Medical	800.000	-
Domestic Travelling Allowances	2500.000	
Fuels and Lubricants	400.000	-
Printing Publication	60.000	
Advertising and Publicity	250.000	
Professional Services	10.000	
Office Expenditure	10000.000	
Minor Work	14556.539	NERPC Complex is not under any annual maintenance contract. NERPC collected AMC estimates from CPWD, Shillong. It is proposed to have a budget of Rs. 1,45,56,539 /- with the details provided below: 1. Annual Electrical Maintenance = Rs. 25,16,689/- 2. Annual Civil Maintenance = Rs. 21,60,700/- 3. Internal and external painting (once in 3 years as per CPWD norms) = Rs. 98,79,150/-
TOTAL	58576.539	

It is hereby proposed:

a. As per the directions of Ministry of Power and as followed in other RPCs, the funding of NERPC may be approved by the Committee.

b. As a funding philosophy, it is proposed that the central utilities & private members may share the expenses in 3:1 ratio with state utilities.

Standard Operating Procedure (SOP) for budgeting and expenditure of RPCs as approved by Chairperson, CEA in the meeting dated 06.04.2023 is attached in the **Annexure A.4**.

It may be noted that a separate account shall be opened for this purpose. Committee may nominate a nodal officer among the members as Drawing and Disbursement Officer (DDO) for the said account.

Considering above estimates, the annual contribution for FY 2023-24 from NERPC members would be as given below:

Utilities	**Annual contribution in INR**
State Utilities / Departments	Rs. 15.00 Lakhs each
Central Utilities & Private Members	Rs. 45.00 lakhs each

Note: The amount will vary every financial year depending upon proposed budget as approved by NERPC and no. of members.

Deliberation of the TCC **:** On matter of self-financing of NERPC and contribution of Rs15 Lakhs by each state constituents and 45 Lakhs by PSU members for meeting the expenses of NERPC secretariat, States opined that by considering the financial constraints of NER state, the special consideration should be given to NER States and requested that the contribution amount may be reduced.

After detail deliberation, the forum agreed that the constituent members will contribute for financing of NERPC Secretariat (Establishment Fund) in respect of all the heads except 'Salary' head. Expenditure under Salary head will continue to be provided by CEA/MoP. The estimated budget for FY 2023-24 (excluding Salary), recommended by TCC forum for approval of RPC is **Rs. 285.76 lakhs** (approx.). The forum also agreed that the above estimated budget shall be shared by State Utilities/Departments and CPSUs/Private members in the ratio of 1:3. The list of constituent members and respective contribution amount is at **Annexure A.4.1**

The TCC recommended the matter for discussion and approval of the RPC.

Deliberation of the RPC **:** The NERPC members agreed to finance all NERPC Secretariat Expenses except 'Salary'. As a special consideration for NER, the forum requested MoP/CEA for allowing partial funding of NERPC by the constituent members, i.e., expenditure under all the budget heads except Salary head shall be funded by constituent members and Salary head shall continue to be provided by CEA/MoP.

NERPC Secretariat was advised to take up the matter with CEA/MoP for partial funding as above.

The forum approved the proposed Budget Estimate (BE) of Rs. 285.76 lakhs (approx.) for FY 23-24, to be shared by State Utilities/Departments and CPSUs/Private members in the ratio of 1:3. The forum also approved contribution amount for each members/Utilities for FY 2023-24 as agreed and recommended by the TCC forum.

The NERPC Secretariat was advised to take necessary action for collection of contribution from members and establishment/operationalization of the Establishment Fund as per SoP and relevant guidelines/rules of the central government.

The RPC noted as above.

ITEM NO. A.5	**:**	**HAND-HOLDING REQUIREMENT OF MANPOWER FOR O&M OF THE ASSETS BEING CREATED UNDER NERPSIP AND COMPREHENSIVE SCHEME ON THEIR POST-COMMISSIONING HANDING OVER- DOP, ARUNACHAL PRADESH**

After series of deliberations at various Review Meetings of the NERPSIP and Comprehensive Scheme, the matter of manpower requirement for O&M of the assets being created under the projects after their commissioning and handing over was taken up in the 22nd TCC and NERPC Meeting at Guwahati on 26th and 28th March 2022 respectively. In the course of discussion, it emerged that almost all the constituent states of NER, on one side, were in huge deficit of manpower for managing the O&M of the additional upcoming assets under NERPSIP and Comprehensive Scheme, while on

the other side, it was difficult for them in abrupt creation of posts and recruitments thereof of such huge manpower due to obvious difficulties of the regional states.

Hence, after a detailed deliberation, the forum had agreed to take up with MoP for financial support in O&M of the upcoming additional assets. Accordingly, POWERGRID was directed for the assistance at least for the initial minimum period of 3 (three) years or till finalization by MoP/CEA. The proceeding finds recorded at Item No. A.05 in the Minutes (Record Notes) of the 22nd TCC and 22nd NERPC Meeting at its Page No. 33 & 34.

Consequently, vide No. CEA-PS-13-13(15)/1/2022-PSPM Divn, Dated 31.08.2022, the CEA conveyed the decision of the MoP for compliance by the NER states in taking over of the completed assets under NERPSIP and Comprehensive Scheme from POWERGRID for their O&M with the advice to recruit additional required manpower to man the new assets based on manpower norms and considering specific geographical conditions of the States by recovery of the expenditures against such manpower through filing of tariff petition with the respective Electricity Regulatory Commissions. This fact had been informed at Item No. D.04 in the Minutes (Record Notes) of the 23rd TCC and 23rd NERPC Meeting at its Page No. 60.

While Arunachal Pradesh was considering placing the matter for a further wider discussion once again at the august forum of NERPC to have a consensus and uniform view of the matter of all states of the Region, another follow up communication of the MoP vide DO No. 6/5/2017-Trans-Part(5), Dated June 05, 2023, has been conveyed in this regard for declaration of the 132 kV & above assets of the projects as Inter State Transmission Systems (ISTS) and taking over them by POWERGRID for recovery of the actual & overhead costs in maintaining of the assets by filing tariff petition.

In regard, Arunachal Pradesh, places the matter once again for a wider discussion and evolve a considered consensus views and opinions of the constituent states on the above development.

Deliberation of the TCC **:** Majority of the constituent States strongly opined that the matter regarding assistance from the central government for handholding of the NER States towards managing the assets being created under NERPSIP & Comprehensive

Scheme should be reviewed/ reopened and taken up to CEA/MoP for consideration. The forum therefore, recommended that a resolution may be made by RPC to request Ministry of Power for handholding of at least 3 years by providing financial assistance for recruitment of adequate manpower for O&M of the assets created under NERPSIP & Comprehensive scheme.

The forum also unequivocally decided that the assets created for the NER States under NERPSIP & Comprehensive Scheme will be taken over by the concerned States after commissioning of the projects.

The TCC forum referred the matter for discussion and approval of the RPC.

Deliberation of the RPC **:** After detailed discussion, the committee unanimously decided to adopt a resolution and to urge the central government for providing handholding to the States for at least 3 years for O&M of the assets created under the NERPSIP & Comprehensive Scheme in the form of financial assistance for recruitment of adequate manpower and O&M of the assets. ***The resolution is recorded at item F.1***.

The RPC also noted the decision of the TCC forum that the assets created for the NER States under NERPSIP & Comprehensive Scheme will be taken over by the concerned States after commissioning of the projects.

ITEM NO. A.6	**:**	**ESTABLISHMENT OF STATE-OF-THE-ART TRAINING CENTERS- DOP, ARUNACHAL PRADESH**

As recorded as Item No. A.06 at Page: 34-36, in the Minutes (Record Notes) of the 22nd TCC and 22nd NERPC Meeting, the NERPC forum, in its meeting at Guwahati on 28th March 2023, had directed POWERGRID for taking up with MoP for construction of building and equip the State-of-the-Art Training Center in state within the CBIS Project.

As recorded at Item No. D.05 at Page No. 60 in the Minutes (Record Notes) of the 23rd TCC and 23rd NERPC Meeting on 18th & 19th Nov. 2022, at Panaji, Goa, it was informed that POWERGRID was in the process of setting up the State-of-the-Art Classroom

Training Centers in all States, against which the approval of Civil Works was yet to be obtained.

Updated status of the matter is solicited from POWERGRID.

Deliberation of the TCC **:** POWERGRID informed that buildings/civil works are not included in the scope of the scheme under CBIS and approval of the same is not available.

After detail discussion, the forum recommended that a resolution may be made by RPC to request MoP for inclusion of building/civil works under CBIS Project. It was also decided that video conferencing facilities at important locations should be provided as a part of the state-of-the-art training centers.

Deliberation of the RPC **:** The committee adopted a resolution as recommended by the TCC forum. ***The resolution is recorded at Item F.2.***

ITEM NO. A.7 : ADEQUATE POSTING OF MANPOWER AT SLDCS - NERPC

In 199th OCCM NERLDC apprised the forum that all the states except Arunachal Pradesh are providing the ATC/TTC report regularly to NERLDC. Also, NERLDC appreciated that Meghalaya SLDC is doing extensive ATC/TTC study in case of any major shutdown. SE, SLDC, DoP Ar. Pradesh stated that there is severe shortage of skilled manpower at the SLDC to undertake the ATC/TTC calculation. He, however informed that Ar. Pradesh will undertake the ATC/TTC calculation.

ED, NERLDC stated that the CABIL Report was published to highlight the issues related to strengthening of LDCs and CERC has also recommended the state governments to strengthen their SLDCs. Director NERPC stated that the recommendations of the CABIL report with regard to strengthening of SLDC's manpower will be discussed in the RPC board meeting. He also requested NERLDC to advise the NER SLDCs on minimum manpower standards required to run a Load Dispatch Center effectively based on the CABIL report.

Deliberation of the TCC **:** NERLDC highlighted the Manpower Status of NER SLDCs (Present vs Recommended as per CABIL) as summarized below.

Manpower Status of NER LDCs: Present vs Recommended as per CABIL

Sl No	Name of SLDC	Category of LDC	No of Executives		Percentage of (Executive + Supervisors) to Non-executive	
			Present/Existing	Recommended (as per CABIL)	Present/Existing	Recommended (as per CABIL)
1	Arunachal Pradesh	Emerging/ Small LDCs	7	30-50	24%:76%	95%:5%
2	Assam	Medium LDCs	32	70-100	71%:29%	95%:5%
3	Manipur	Emerging/ Small LDCs	21	30-50	78%:22%	95%:5%
4	Meghalaya	Emerging/ Small LDCs	14	30-50	58%:42%	95%:5%
5	Mizoram	Emerging/ Small LDCs	8	30-50	26%:74%	95%:5%
6	Nagaland	Emerging/ Small LDCs	8	30-50	53%:47%	95%:5%
7	Tripura	Emerging/ Small LDCs	17	30-50	32%:68%	95%:5%

NERLDC Proposed Manpower for Arunachal, Manipur, Meghalaya, Mizoram, Nagaland, Tripura

Department	Activities	Manpower
System Operation	Real Time operation	12
	System Study	2
	Protection	2
	MIS, Compliance	2
	Operational Planning & Reliability	2
	Data Analytics, Research	1
Market Operation	Scheduling & Ancillary Dispatch	2
	Metering & Accounting	2
	STOA	1
System Logistics	SCADA/EMS	2
	IT	2
	DTS, Knowledge Management	1
HR		3
Contracts		2
F&A		2
Law		1
Rajbhasha		1
Total Manpower		**40**

NERLDC Proposed Manpower for Assam

Department	Activities	Manpower
System Operation	Real Time operation	24
	System Study	5
	Protection	5
	MIS, Compliance	5
	Operational Planning & Reliability	5
	Data Analytics, Research	3
Market Operation	Scheduling & Ancillary Dispatch	5
	Metering & Accounting	5
	STOA	3
System Logistics	SCADA/EMS	5
	IT	5
	DTS, Knowledge Management	3
HR		6
Contracts		5
F&A		4
Law		3
Rajbhasha		2
Total Manpower		**92**

The forum noted the requirement of adequate manpower in SLDCs as per the CABIL report and recommended for consideration of RPC.

Deliberation of the RPC **:** Constituent States were impressed upon the need to fulfill the requirement of adequate manpower to run the SLDCs smoothly and effectively. The forum felt the necessity of adequate manpower and stressed that all efforts should be made to strengthen SLDCs with necessary manpower as worked out by NERLDC.

The RPC noted as above.

ITEM NO. A.8	**:**	**ESTABLISHEMENT OF THE STATE-OF-THE-ART TRAINING CENTERS UNDER NERPSIP - DOP NAGALAND**

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 Executive's 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.

The DoPN 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 Strength) 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. It is a request to 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 NERPC meeting.

Deliberation of the TCC **:**

The forum recommended that a resolution may be made by RPC to request MoP for inclusion of building/civil works under CBIS Project as discussed at **Item A.6**.

Deliberation of the RPC **:**

The committee adopted a resolution as recommended by the TCC forum. The resolution is recorded at Item F.2.

2. CATEGORY - B : ITEMS FOR APPROVAL

ITEM NO. B.1 : INSTALLATION OF TRANSMISSION LINE SURGE ARRESTOR-NERTS

In North Eastern Region around 70% Tripping of Lines are mainly due to lightening. Again, more than 80% Lightning related tripping are in 132kV Lines. In order to arrest tripping of 132kV Transmission lines of NER during lightning; installation of TLSA was explored. The issue was deliberated in 127th OCC Meeting and it was mentioned that despite of counterpoise earthing and additional shield wire earthing of POWERGRID's Transmission Line in NER there are no. of Tripping of 132kV Lines during lightening. Accordingly, issue was discussed in 18th TCC/RPC meeting held in Oct'17 wherein on pilot basis installation of Transmission lines was planned in 132kV Khlerihat Khandong#1, 132kV Badarpur Khlerihat & 132kV Aizawl Kumarghat lines in affected stretches.

Based on the successful performance of the TLSAs, complete installation has been done. Detail of TLAs along with tripping history is as given below: -

Sr. No.	Name of Lines	No of TLAs	Year of installation	19-20	20-21	21-22	22-23
1.	132kV Salakati Gelephu	465	2021	9	20	0	0
2.	132kV Khlerihat Khandong#1	408	2022	0	0	13	0
3.	132kV Khlerihat Khandong#2	396	2019	1	0	0	0
4.	132kV Dimapur Doyang#1&2	318	2023	11	15	8	4

It is evident from above, that installation of TLAs have been very beneficial from the point of view of minimizing the tripping due to lightning.

Hence, to further reduce such tripping, lines which are affected by lightening have been identified and installation of TLA has been planned. Detail of lines with estimated expenditure is as given below: -

	Name of Lines	**Year wise tripping**				**Total no. of towers in the line**	**TLA Planned**	
Sr. No.	**Name of Lines**	**19-20**	**20-21**	**21-22**	**22-23**		**No. of towers**	**No. of TLA**
1.	132kV Badarpur Khlerihat	0	2	8	29	219	165	495
2	132KV Jiribam-Haflong	2	3	5	3	309	52	156
3	132KV Khleirhiat-Khlierhiat 1	1	1	2	6	30	30	90
4	132KV Khandong-Umrangso	1	1	3	0	32	12	36
5	132 Umrangso-Haflong	3	4	3	3	157	18	54
6	132KV Aizawl-Tipaimukh	9	12	15	14	213	58	174
7	132KV Aizawl-Kumarghat	3	4	9	5	379	53	159
8	132KV Aizawl-Kolasib	4	4	4	4	185	42	126
9	132KV Jiribam-Tipaimukh	1	2	2	4	249	54	162
10	132KV Jiribam-Loktak II	4	3	6	7	247	87	261
11	132KV D/C Silchar-Hailakandi I & II	3	7	7	3	109	42	252
12	132KV D/C Silchar-Badarpur I & II	2	2	1	1	69	17	102

13	132KV D/C NBC-Pavoi I&II	3	4	1	2	53	17	102

Considering the increase in lightning phenomenon in above lines in NER, it seems that existing Tower Earthing system is not sufficient and as such as a system improvement measure, it is proposed to consider the installation of Transmission line LA (TLA) as per above at an estimated cost of approx. Rs. 12 Crore, under ADDCAP 2019-2024 tariff block. On approval same shall be taken up with CERC during truing up of petition of respective projects.

Further, TLA is also being planned for installation at one location in 400 kV Silchar-Imphal line on pilot basis. Based on satisfactory performance, TLA installation shall be taken up in 400kV Silchar Imphal D/c, 400kV Balipara Bongaigaon#1,2,3&4 and 400kV Kameng Balipara D/c, 400kV Silchar P K Bari D/c line considering tripping history on lightning, tower footing impedance values etc in these lines.

Deliberation of the TCC **:** *The TCC noted and recommended for consideration and approval of installation of TLSA on the proposed lines (~Rs. 12 cr. Approx.) as well as the lines taken under pilot project (~Rs. 8.68 cr.).*

Placed for the approval of TCC/NERPC

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

ITEM NO. B.2 : INCLUSION OF WORKSTATION CONSOLE IN UNMS PROJECT SCOPE INCLUDING AMC FOR NER UNMS SYSTEMS AT FOLLOWING LOCATIONS - CTUIL

Inclusion of Workstation Console in UNMS Project Scope including AMC for NER UNMS systems at following locations- regarding

a) *At CTUIL, Headquarter Office, Gurgaon.*

b) *at NERLDC, Shillong.*

Following additional scope for inclusion in the UNMS Project cost for NER UNMS scheme can be amended in the existing contracts:

1. The BOQ of Workstation Console along and other associated software and hardware such as firewall, router, switch, furniture etc.

2. Bandwidth connectivity & Its recurring charges for CTUIL HQ Office.

In view of the above, it is requested to consider the additional scope for the above-mentioned requirement as an amendment to the approved NER UNMS project.

The tentative BOQ and the cost (Supply & Service) of the additional scope shall be as below-

Sl. No.	Description	CTUIL (Qty)	Cost (Supply & Service)	RLDC (Qty)	Cost (Supply & Service)
1	WORKSTATION CONSOLE with one monitor along with Furniture.	1 set	2.5 lac	1 set	2.5 lac

PS:

1. Associated HW/ SW; As applicable- WAN ROUTERS, Internal Firewall & L3 Lan Switch (1 Set)- 42 Lacs (approx.)

2. This cost is Excluding AMC Charges, Bandwidth Charges and Applicable Taxes.

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.3 : ENHANCEMENT OF POWER TRANSFER CAPABILITY OF DULLAVCHERRA – DHARMANAGAR AND P. K. BARI – DHARMANAGAR 132KV S/C LINES.- TPTL

The proposal of TSECL have been placed and discussed in the **15th CMETS – NER** held on **27th January, 2023** (Consultation Meeting for evolving Transmission Schemes in North Eastern Region).

The 132KV single circuit inter-state transmission line from Dharmanagar – Dullavcherra is jointly owned by AEGCL and TSECL in the respective State territory and was constructed and commissioned long back with AAAC "PANTHER" conductor.

Overtime the power flow through this line has been increased and mechanical strength of the power conductors have deteriorated due to prolong use causing frequent grid disturbance. By re-conductoring in this 132 KV line section from Dharmanagar – Dullavcherra, the inter-state power evacuation corridor can be improved and made more reliable.

In addition, Kailashahar – Dharamnagar 132kV D/c line is under implementation under NERPSIP and would take some time for completion. Also, 2nd circuit 132kV transmission line from P.K. Bari – Kailashahar is not even under planning stage. In order to strengthen the intra-state power evacuation corridor from 132 kV P.K. Bari sub-station and to avoid frequent tripping of P.K.Bari – Dharmanagar 132kV S/c line, re-conductoring of the 132 KV line section from P.K. Bari - Dharmanagar has been proposed.

Considering the ageing of conductor and to improve reliability of power and voltage profile at Dharmanagar area, NERLDC agreed to the proposal of enhancement of power transfer capability of Dullavcherra – Dharmanagar and P.K.Bari – Dharmanagar 132kV S/c lines.

It was suggested that as there is no constraint observed in the load flow studies in present as well as future timeframe and the line tripping is due to conductor ageing and snapping only, therefore reconductoring of these 132kV S/c lines may be carried out considering the requirement of reliable power supply in the areas.

AEGCL mentioned that they are agreeable to the proposal of reconductoring of Dharmanagar (TSECL) – Dullavcherra (AEGCL) 132kV S/c line. However, they requested that the re-conductoring of Assam portion of the said line may also be carried out by TSECL in similar manner as already agreed in case of reconductoring of Lumshnong (MePTCL) – Panchgram (AEGCL) 132kV S/c line by MePTCL in both the states. TSECL agreed for the same.

It was decided that the exact ampacity of the new conductor could not be identified. Therefore, AEGCL & TSECL may bilaterally decide the conductor type and ampacity for

reconductoring/restringing of Dullavcherra – Dharmanagar and P.K.Bari – Dharmanagar 132kV S/c lines.

On the reliability and operational basis to improve availability of transmission system, the following was agreed in the **15th CMETS – NER** held on **27th January, 2023** to be implemented by TSECL under intra-state scheme:

"*Re-conductoring/restringing of P.K.Bari (TSECL) – Dharmanagar (TSECL) and Dullavcherra (AEGCL) – Dharmanagar (TSECL) 132kV S/c lines along with upgradation of 132kV line bays (if any) at both ends commensurate with the rating of the line***.**

TSECL would jointly identify with AEGCL, the rating of conductor to be used for above re-conductoring/restringing works including the requirement of up-gradation of 132kV line bays (if any), and include in the scheme accordingly."

Existing Line Details:

Sl.	**132 kV single circuit line section**	**Length**	**Existing Conductor**
1	Dullavchera – Dharmanagar (Dharmanagar – Churaibari portion -11.5 KM)	37.5 KM	AAAC Panther Conductor (37/3.15 mm)
2	P. K. Bari – Dharmanagar	36.5 KM	AAAC Panther Conductor (37/3.15 mm)

Considering importance of the above 132 kV line sections, TPTL propose to re-strengthen the lines by replacing existing conductor with High Performance Conductor (HPC) equivalent to Panther with suitable insulator & hardware fittings on same tower structure. The HPC conductor though has much higher current carrying capacity compared to AAAC Panther conductor. 132kV terminal equipments being old and aged at respective ends need be up-graded commensurate with the rating of the lines.

Moreover, the 132KV single circuit inter-state transmission line section from Dharmanagar – Dullavcherra is presently not having Optical Ground Wire or OPGW, as such installation of OPGW in the said 132 kV line section is also required.

Considering all above, TPTL hereby place the proposal for **Re-conductoring/ restringing of P.K.Bari (TSECL) – Dharmanagar (TSECL) and Dullavcherra (AEGCL) – Dharmanagar (TSECL) 132kV S/c lines with HPC conductor equivalent to Panther along-with up-gradation of 132kV terminal equipments at respective ends commensurate with the rating of the lines and Laying of OPGW in the Dullavcherra (AEGCL) – Dharmanagar (TSECL) 132kV S/c line section along-with panels at both ends.**

Cost Estimate along-with Detail Project Report (DPR) of the proposal will be submitted for consideration of funding through 100 % Grant from PSDF.

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.4	**:**	**BUILDINGS FOR RESIDENTIAL AND OFFICE SET UP AT UMRANGSHO TOWNSHIP OF NEEPCO FOR POWERGRID ASSETS IN KOPILI: POWERGRID**

Agenda for providing buildings for residential and office set up at Umrangsho Township of NEEPCO for POWERGRID assets in Kopili was discussed during 197th OCC. Deliberations are as under:

1. NEEPCO agreed to provide the buildings as requested by POWERGRID.
2. POWERGRID mentioned that the buildings being provided needs repair and maintenance. NEEPCO mentioned that repairing etc. needs to be taken up by POWERGRID.
3. POWERGRID mentioned that around INR 70 lakhs shall be required approximately for repairing and furnishing of the buildings. Further, it is proposed that the expenditure on above may be booked under NERSS III.
4. OCC forum agreed for the proposal for referring the item to the 47th CCM for further approval. Deliberations of 47th CCM are as under:

POWERGRID informed that as ownership of the building belongs to NEEPCO, the budget towards repairs & furnishings could not be booked under their O&M expenditure. After briefed discussion, the subcommittee agreed to the above proposal of

POWERGRID to book under NERSS III and decided to put up to TCC/RPC for approval of the same.

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.5	**:**	**UPGRADATION OF 132KV BADARPUR & 132KV KHLERIHAT (PG) SUBSTATIONS FROM SINGLE MAIN AND TRANSFER BUS SCHEME TO DOUBLE MAIN BUS SCHEME BY CONVERTING FROM AIS TO GIS- NERTS**

Upgradation of 132kV Badarpur & 132kV Khlerihat (POWERGRID) Substations from single main and transfer bus scheme to double main bus scheme by converting from AIS to GIS was approved in 23rd NERPC meeting. Subsequently agenda was discussed in 16th CMETS of NER wherein the project was approved in NERES XXI with Badarpur & Khlerihat (POWERGRID) S/s as Double Bus GIS.

In this regard, it is to mention here that at 132kV Khliehriat (POWERGRID) Sub Station, the ownership of 132kV Khliehriat (MeECL) # 2 Bay of 132kV Khliehriat (POWERGRID) – Khliehriat (State) # 2 Line lies with MeECL.

As the complete Khlerihat (POWERGRID) Station is to be upgraded to GIS, hence, 132kV Khliehriat (MeECL) # 2 Bay also need to be converted to GIS.

In 201st OCCM, MePTCL agreed in principle for conversion of 132 KV Khliehriat 2 bay at 132 KV Khliehriat (PG) S/S to GIS under ISTS (Item no. C.9 of 201st OCCM). Issue was discussed in 202nd OCCM wherein forum has consented for the upgradation of Khlerihat#2 Bay (of MePTCL) at Khlerihat PG with GIS under ISTS (Refer Item no. B.23 of 202nd OCCM).
Further a meeting was held on 31/05/2023 between PGCIL and MePTCL, the minutes is as given below:

Minutes of Meeting held between POWERGRID, NERTS & MePTCL on 31/05/23

Members Present

POWERGRID, NERTS
Sh. Prasanta Kanungo, CGM (AM)
Sh. Ankit Vaish, DGM (AM)

MePTCL
Sh. J Hynniewta, CE (Trans.)
Sh. H F Shangpliang, ACE (T&T)
Sh. D J Lyngdoh, EE (SM), SLDC

Upgradation of 132kV Khlerihat (PG) substations from single main and transfer bus scheme to double main bus scheme by converting from AIS to GIS was approved in 23rd NERPC meeting and in 16th CMETS of NER wherein the project was approved in NERES XXI for Khlerihat (POWERGRID) S/s as Double Bus GIS.

It is to mention here that at 132KV Khlerihat (POWERGRID) Sub Station, the ownership of 132kV Khliehriat (MeECL) # 2 Bay of 132kV Khliehriat (POWERGRID) – Khliehriat (State) # 2 Line lies with MeECL.

In 202nd OCC, MePTCL has informed that Modalities in respect of operation and maintenance of the bays at both ends, associated financial implications and disposal of original bay equipment will be deliberated separately between POWERGRID and MePTCL.

Accordingly, MePTCL officials visited POWERGRID office wherein the issue was deliberated and the discussion is summarized as below: -

1. After conversion of Khelrihat#2 (State) bay from AIS to GIS as ISTS at Khlerihat (PG) end, responsibility of the O&M will lie with the executing agency. However, at Khlerihat (State) end, there will be no change.
2. So far as financial implication for dismantling is concerned, the same shall be covered under Project scope. However, shifting of the dismantled equipment will have to be owner (MePTCL).

After detailed discussion, MePTCL agreed for conversion of 132kV Khlerihat#2 (State) bay from AIS to GIS as ISTS.

POWERGRID, NERTS

P Kanungo

Ankit Vaish

MePTCL

J Hynniewta 31/05/23

Chief Engineer (T)
Meghalaya Power Transmission Corporation Ltd
Lumjingshai, Shillong

H F Shangpliang 31/5/23

D J Lyngdoh

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.6	**:**	**REQUIREMENT FOR REPLACEMENT OF 400KV 50MVAR BUS REACTOR-I&II AND 400KV 50MVAR 400KV BONGAIGAON - BALIPARA-II LINE REACTOR AT BONGAIGAON S/S UNDER O&M ADD CAP 19-24 - NERTS**

Replacement of 400kV 50MVAr Bus Reactor#I&II and 400kV 50MVAr 400kV Bongaigaon Balipara#2 Line Reactor at Bongaigaon s/s under O&M add cap 19-24 was approved in 22nd NERPC meeting.

In this regard, while hearing of petition 242/MP/2022, Hon'ble CERC has directed to approach CTUIL for requirement of Bus Reactors vide ROP dated: 13.04.2023. Accordingly, the matter was taken up with CTUIL for requirement of Bus Reactors at Bongaigaon. CTUIL vide letter dated: 04.05.2023 recommended for following:

Quote

At present, there are 2x50MVAr + 2x80MVAr (installed in parallel) + 1x125MVAr bus reactors at Bongaigaon S/s at 400kV level. From the latest voltage profile of last one year, it is observed that bus voltages are within IEGC limits. However, on annual basis, average of minimum voltage is about 402kV and average bus voltage is about 409kV. Accordingly, in order to keep the bus voltage within IEGC limits, the existing quantum of reactive compensation is required to be maintained. It is proposed that new reactors of 50MVAr may not be installed due to their reduced capability in changing bus voltage upon switching.

Thus, it is proposed that the existing 2x50MVAr bus reactors which have completed their useful life may be decommissioned, and a new 125MVAr bus reactor may be installed in one of the vacated bus reactor bays. Further, as the existing 2x80MVAr bus reactors are installed in parallel, one of these 80MVAr bus reactors may be installed in other vacated bay after decommissioning of 2x50MVAr bus reactors.

Finally, there would be 2x80MVAr + 2x125MVAr bus reactors at Bongaigaon S/s, all installed in separate bays. Thus, 2x50MVAr bus reactors are to be decommissioned and a 1x125MVAr new bus reactor is required, without any new bays.

Unquote

In view of above, it is proposed that approval may be accorded for

1. Replacement of 50MVAr Bus Reactor#1 with 125MVAr Bus Reactor
2. Shifting of 80MVAr BR#4 (Presently in parallel with other 80 MVAr Bus Reactor) in place of 50MVAr Bus Reactor#2.

Above works are proposed to be carried out under O&M Add cap 19-24. After approval, same shall be taken up with CERC in line with the direction issued in ROP.

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.7 : SCHEME FOR ADDITIONAL FOTE AT AGC LOCATIONS IN NER REGION - CTUIL

S. No.	Items	Details
1.	Name of Scheme	Additional FOTE at Loktak and Bongaigaon AGC locations in NER region
2.	Scope of the scheme	One no. of FOTE STM-16 at Loktak and One no. of FOTE STM-16 at Bongaigaon is proposed.
3.	Depiction of the scheme on FO Map	NA
4.	Objective / Justification	Additional FOTE at all AGC operated generating stations in North Eastern region is required in view of resource disjoint and criticality of AGC operation for grid operation purpose as failure of single equipment may lead to disruption in AGC operation. Further, at many locations redundant ethernet port are not available as per NLDC requirement. The NLDC requirement is as follows: 1+1 Ethernet port for main NLDC 1+1 Ethernet ports are for backup NLDC In NER region, Loktak and Bongaigaon AGC locations are identified for availability of additional FOTE and ethernet ports.
5.	Estimated Cost	Rs. 40 Lakhs (approx.)
6.	Implementation time frame	06 months from date of allocation.
7.	Implementation mode	RTM mode.

8.	Deliberations with NERPC along with their comments	The proposed scheme was deliberated in the 3rd Communication planning meeting (CPM) of CTUIL held on 22.12.2022 where in POWERGRID informed that for both locations Loktak and Bongaigaon ethernet ports as per NLDC requirement is available but additional FOTE would be required at both locations (**Annexure B.7** attached for the MoM of said meeting). The same scheme was also deliberated in 25th NETeST meeting held on 25.05.2023. This scheme after NERPC approval/review shall be put up to NCT 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.8 : ESTABLISHMENT OF REDUNDANT FIBRE PATH BETWEEN NERLDC AND NEHU FOR RELIABILITY OF POWER SYSTEM COMMUNICATION LINK – NERPC/MEPTCL

On 05-01-2023 and 06-01-2023, there were two incidents of fibre cut between NERLDC and NEHU, during the incident all communications links, such as internet, all ULDC links of ICCP, URTDSM, VOIP, RTUs and all POWERTEL links catering the functionality of NERLDC real time system were affected. Consequently, NERLDC control room was not having any data of grid station which led RLDC to operate grid blindly. Due to outage of this link SLDC and NLDC were also not able to receive data from NERLDC. This 12-core fibre currently runs partially as OPGW on 132 kV NEHU-Kheliriat line II and partially as UGFO cable.

Considering the critical functions of LDCs, it is requested to ULDC-POWERGRID to lay 24 core UG FIBRE between NERLDC Shillong and 132 kV NEHU-Kheliriat line I Tower 25. There is existing OPGW on 132 kV NEHU-Kheliriat line I till tower 25 under MW vacation project.

In the 24th and 25th NETeST Meeting held the forum recommended PGCIL to include the link under Reliable communication of ULDC as quantity variation.

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.*

3. CATEGORY - C : COMMERCIAL ISSUES

ITEM NO. C.1 : DEVIATION POOL ACCOUNT OUTSTANDING - NERLDC

Manipur is the major defaulter of Deviation charges.

Manipur – Net O/s Payable to Pool is ₹ 7.24 Crores [Breakup: Deviation Principal, ₹ 7.15 Crores + Deviation Interest, ₹ 0.09 Crores].

DSM Principal O/s greater than 90 days (13 Weeks) is ₹ 5.27 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.2 : 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 - ₹ 5.90 Lakhs.

O/s Payable to Reactive Pool by Meghalaya - ₹ 42.67 Lakhs.

O/s Payable to Reactive Pool by Mizoram - ₹ 18.00 Lakhs.

Manipur, Meghalaya & Mizoram are required to take necessary action.

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

Deliberation of the RPC **:** RPC noted as above and requested all concerned constituents to liquidate their respective dues at the earliest.

ITEM NO. C.3 : ALLOCATION OF MERCHANT POWER, OTPC -TPTL

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.

Deliberation of the TCC **:** TSECL requested OTPC for consideration of allocation of merchant power to Tripura. *The forum noted and placed the matter for deliberation of RPC.*

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

ITEM NO. C.4 : OUTSTANDING DUES OF NER BENEFICIARIES TOWARDS OTPC

The current total outstanding dues of OTPC against the NER beneficiary states (as on 04.06.2023) are as under:

(Amount in Rs Crores)

S. No.	Beneficiary	Outstanding Dues (>45 Days)	Total Outstanding
1.	Manipur	10.32	30.18
2.	Mizoram	8.57	24.55
3.	Tripura	38.55	113.57
	Total	**57.44**	**168.30**

Tripura, Manipur and Mizoram are requested to clear the dues 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 all concerned constituents to liquidate their respective dues at the earliest.

ITEM NO. C.5 : POOL POWER OF NTPC STATIONS - NTPC

As per MoP scheme on pooling of generators of 25 years plus, all beneficiaries have been requested to send their willingness for allocation of power from the common pool through NTPC single window system where 13000 MW plus is available for allocation.

Deliberation of the TCC **:** RED (ER-II), NTPC apprised the forum that States/Beneficiaries/Discoms may send their willingness to allocate power from 13000MW plus common pool power of NTPC stations through a NTPC single window system which is available at affordable rate.

Member Secretary, NERPC advised all beneficiaries to take advantage of this to manage their power demand.

TCC noted as above and placed for information of RPC.

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

4. CATEGORY - D : ITEMS FOR INFORMATION

ITEM NO. D.1	**:**	**EARLY INSTALLATION OF 420 KV, 80 MVAR BUS REACTOR AT RANGANADI HEP -NERLDC**

Voltage rise issue is witnessed at Ranganadi HEP throughout the year and it gets more severe during the lean hydro period leading to difficulty in grid operation. 400 kV lines at Ranganadi HEP are also kept open for considerable period of time to control voltage at Ranganadi during real-time operation which is affecting the reliable operation of NER Grid.

As per deliberations in 201st OCCM of NER, NEEPCO informed that the work will be completed by Dec'23 citing Logistics and Transportation issues. The LOA has been issued on 11.01.2022.

NEEPCO is requested to update the latest status and expedite Installation of 420 kV, 80 MVAr Bus Reactor at Ranganadi HEP.

Deliberation of the TCC **:** ED (O&M), NEEPCO informed that all materials have reached the site and foundation is completed. The reactor will be commissioned by December 2023.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.2	**:**	**SPS SCHEME TO DISCONNECT BANGLADESH LOAD ON OVERLOADING OF 132 KV SURAJMANINAGAR (ISTS) – SURAJMANINAGAR (TSECL) LINE- NERLDC**

During 202nd OCCM of NER held on 18th May 2023, NERLDC proposed to implement an SPS scheme in Tripura Power System to disconnect the Bangladesh load by tripping 132 kV Surajmaninagar-South Comilla D/C lines in the event of loading in 132 kV Surajmaninagar (ISTS)- Surajmaninagar (TSECL) line crosses 85 MW as a temporary measure till the re-conductoring works of these 132kV intra-state lines/section by TSECL is completed to ensure reliable grid operation in Tripura Power System.

After detailed discussion during the OCCM, the forum instructed SLDC Tripura to write a letter to Bangladesh.

TSECL may intimate the latest status.

Deliberation of the TCC **:** GM, TPTL informed that they had a joint meeting with TSECL and NERLDC on 31.05.2023, wherein TSECL had strongly disagreed to the proposal of installing SPS. However, he assured the forum that loading in 132 kV Surajmaninagar (ISTS)- Surajmaninagar (TSECL) line will strictly be maintained within the 85 MW limit as a temporary measure by reducing the State load, if situation demands. The forum advised OCC forum to regularly monitor the loading on the line and the measures taken to limit it.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.3	**:**	**RECONDUCTORING OF IMPORTANT TRANSMISSION LINES IN TRIPURA POWER SYSTEM- NERLDC**

Frequent and sustained overloading is observed in 132kV SM Nagar (ISTS)-SM Nagar line and 132kV P K Bari (ISTS)-P K Bari line which makes the Tripura Power system vulnerable. Any tripping of any of the above-mentioned lines may lead to partial or total collapse of the Tripura grid, as there would be cascading tripping of the tie lines of Tripura Power system. The situation become more vulnerable on low generation availability from Tripura Power system. The Bangladesh load is being regulated on frequent basis in order to control the loading of 132kV SM Nagar (ISTS)-SM Nagar line. If the above measure is delayed, opening of 400/132 kV 315 ICT at SMNagar (ISTS) S/s and 132 kV P K Bari – Kumarghat line is carried out to manage the loading of the above lines. Such openings further deteriorate the grid but needs to be taken as an extreme measure by the system operator.

Reconductoring of the following lines with HTLS conductor of 800 A have been proposed by TSECL and the same has been approved in the 3rd NERPCTP Meeting held on 19th July, 2021.

1. Surjamaninagar (TSECL) to LILO Point of Surjamaninagar (ISTS) – 5.493 km
2. Bodhjungnagar (TSECL) to LILO Point of Surjamaninagar (ISTS) – 12.867 km
3. Surjamaninagar (TSECL) to Bodhjungnagar (TSECL) – 18.36 km
4. Ambassa (TSECL) to LILO Point of P.K. Bari (ISTS) – 35.45 km along with LILO portion
5. at 132kV Manu S/s
6. P.K. Bari (TSECL) to LILO Point of P.K. Bari (ISTS) – 6.407 km
7. P.K. Bari (TSECL) to Kumarghat (PG) – 2.40 km

It is requested to expedite the reconductoring of the above transmission line at the earliest. TSECL is requested to intimate the latest status

Deliberation of the TCC **:** GM, TPTL informed that the DPR in respect of all the above mentioned lines/elements has been sent to PSDF and likely to be approved shortly.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.4 : UTILIZATION OF ICTS AT 400/220 KV NEW KOHIMA SUBSTAION - NERLDC

The 2x500 MVA ICTs at 400/220 kV New Kohima substation have been commissioned on 13.11.20 but still downstream at New Kohima has not been utilised.

DoP Nagaland is requested to intimate the latest status of 220 kV New Kohima (TBCB) – New Kohima (Nagaland) DC.

DoP, Nagaland is requested to intimate the latest status.

Deliberation of the TCC **:** Nagaland intimated that stringing of the 220 kV New Kohima (TBCB) – New Kohima (Nagaland) D/C line has been completed and the communication link is yet to be established. LOA has been issued for PLCC work and expected to be completed in next 5-6 months.

It was informed that the line can be charged only after OPGW link is established.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.5 : GENERATION BACKING DOWN ISSUES IN UPPER ASSAM POWER SYSTEM- NERLDC

After conversion of 220 kV Misa-Mariani(PG) and 220 kV Misa-Mariani (AS) to 400 kV Misa-Mariani D/C, the Upper Assam System has become vulnerable under N-1 contingency. Frequent generation backdown has to be carried out by the system operators to secure the system under N-1 contingency under condition of outage of any tie-line which connect the upper Assam system with the All-India Grid. Upper Assam gate-flow (comprising of the combined loading of all the tie-lines connecting the Upper Assam sub-system with rest of Indian Grid) is being monitored and necessary backdown of gas-based generation carried out to maintain the same as given in the table below:

SL. No.	**Cases considered**	**Contingency considered**	**Constraints**	**Whether Flow gate to be monitored**	**Max. Allowable Upper Assam gate-flow in MW**	
					Without Solar	**With Solar**
1	N-1	220 kV AGBPP-New Mariani (PG) line	220 kV Mariani- New Mariani (PG) - **220 MW**	Yes	**300**	**300**
2	CSD (Continuous shutdown) or Force Outage of 220 kV Samaguri-Mariani (AS) line or 220 kV AGBPP-New Mariani (PG) line	220 kV AGBPP-New Mariani (PG) line or 220 kV Samaguri-Mariani (AS) line	220 kV Mariani- New Mariani (PG)- **220 MW**	Yes	**245**	**245**
3	CSD or Force Outage of 220 kV Mariani-New Mariani (PG) line	220 kV AGBPP-New Mariani (PG) line	220 kV AGBPP-New Mariani (PG) line & 132 kV Mariani-Golaghat line	Yes	**250**	**260**
4	CSD or Force Outage of 220 kV AGBPP-New Mariani (PG) line	220 kV AGBPP-New Mariani (PG) line	220 kV Amguri-Mariani (Solar) or 220 kV Amguri-	Yes	**260**	**250**

			NTPS(non-Solar)			
6	CSD or Force Outage of 220 kV Amguri-NTPS	220 kV AGBPP-New Mariani (PG) line	220 kV AGBPP-New Mariani (AS) line	Yes	**225**	**275**
6	CSD or Force Outage of 220 kV Amguri-Mariani	220 kV AGBPP-New Mariani (PG) line	220 kV AGBPP-New Mariani (AS) line	Yes	**225**	**230**

Early commissioning of 1ST circuit of 220 kV Samaguri-Mariani (AS) and upgradation of 220kV Mariani(PG)-Mariani(AS) line is necessary to maintain N-1 reliability in Upper Assam Power System and reduce the need for frequent backing down of gas-based generation in Upper Assam System. During 196th OCCM the forum had approved upgradation of 220kV Mariani(PG)-Mariani(AS) line and further, in 201st OCCM, SLDC Assam informed that the forest clearance is awaited for Samaguri- Khumtai section in 220 kV Samaguri-Mariani (AS) line.

PGCIL & AEGCL is requested to intimate the latest status.

Deliberation of the TCC **:**

1. Early commissioning of 1st circuit of 220 kV Samaguri-Mariani (AS): 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.

2. Upgradation of 220kV Mariani (PG)-Mariani (AS): CGM (AM), NERTS intimated that for the upgradation work, 5 days shutdown of the line is required. NERLDC updated that for the s/d of the line, generation backing down in the Upper Assam region, including AGBPP, may be required. ED, NEEPCO agreed to the requirement of generation back down, however requested NERTS to avail the s/d during high hydro season.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.6	**:**	**SYSTEM STRENGTHENING PROJECTS OF ASSAM AS APPROVED BY CEA FOR 2030 TIMEFRAME- AEGCL**

1. Establishment of new 400/220 kV (2 X 500 MVA) and 220/132 kV (2 X 160 MVA) S/s at Naharkatia GIS Substation

Associated Lines

i)Naharkatia (AEGCL-New) - Gogamukh (PGCIL-New) 400kV D/c Line – (130km)

ii)Termination of New Mariani-Kathalguri 220kV D/c existing line at Naharkatia (New) with operation of New Mariani-Naharkatia section at 400kV and Naharkatia-Kathalguri section at 220kV – (10km)

iii)Naharkatia (AEGCL-New) - Behiating (AEGCL-Existing) 220kV D/c Line – (40km)

2. Establishment of new 132/33 kV (2 X 50 MVA) AIS Substation at Doulasal

Associated Lines

Barpeta (AEGCL-Existing)- Amayapur (AEGCL-New) 132kV D/c line with LILO of one circuit at Doulasal (46km)

3. Establishment of new 220/132 kV (2 X 160 MVA) and 220/33kV, 2x100MVA GIS Substation at Barnagar GIS Substation

Associated Lines

i)LILO of one circuit of Rangia (AEGCL-Existing) - Salakati (AEGCL-Existing) 220kV D/c Line at Barnagar (AEGCL- New)

ii)Barnagar(New)- Barnagar (existing) 132kV D/c Line – (0.5km)

4. Establishment of new 132/33 kV (2 X 50 MVA) AIS Substation at Jonai

Associated Lines

Jonai (AEGCL- New) – Silapathar (AEGCL-New) 132kV S/c Line on D/c Tower – (41km)

5. Establishment of new 132/33 kV (2 X 50 MVA) AIS Substation at Lala

Associated Lines

Hailakandi(AEGCL-Existing)-Lala(AEGCL-New) 132kV S/c line – (20km)

6. Establishment of new 132/33 kV (2 X 50 MVA) AIS Substation at Patharkandi

Associated Lines

i)Karimganj(AEGCL-Existing)-Patharkandi(AEGCL-New) 132kV S/c line – (35km)

ii)LILO of one circuit of Dullavchara (AEGCL-Existing)-Dharmanagar (PGCIL-Existing) 132kV D/c line at Patharkandi – (16km)

7. Establishment of new 132/33 kV (2 X 50 MVA) GIS Substation at Digboi

Associated Lines

(i)LILO of Margherita (Ledo) (AEGCL-Existing) - Tinsukia (AEGCL-Existing) 132kV S/c Line at Digboi (AEGCL-New) – (10km)

8. Establishment of new 132/33 kV (2 X 50 MVA) AIS Substation at Dumunichowki

Associated Lines

Sishugram(AEGCL-Existing)- Dumunichowki (AEGCL-New) 132kV S/c line on D/c tower – (21km)

9. Establishment of new 132/33 kV (2 X 50 MVA) AIS Substation at North Salmara

Associated Lines

North Salmara (AEGCL-New) - APM (AEGCL-Existing) 132kV S/c line – (12km)

10. New Transmission Lines

a)2nd circuit stringing of Namrup-Mariani 220kV S/c on D/c line- (168km)

b)2nd circuit stringing of Agia-Hatsingimari 132kV S/c on D/c line-(110km)

Special Note: *The agenda items mentioned above have already been approved by CEA in the INTERIM Report on Intra-State Transmission System Strengthening Requirement of North-Eastern States & Sikkim by the year 2030. Some of these proposals are urgent in nature and need to be executed as early as possible. Since the exercise in searching for*

suitable source of fund for the projects entails considerable time and also the execution time in NER is relatively much larger than usual requirement of time due to hostile terrain, forest clearance etc, and also due to limited duration of working season in a year, it is imperative that these projects are cleared in advance to enable AEGCL to proceed ahead with the needful forward action.

Deliberation of the TCC **:** AEGCL informed the forum that they will arrange the funding for the above projects. The forum noted and advised AEGCL to proceed ahead with the needful action, subject to CTUIL's consent for the elements to be connected to ISTS.

TCC noted as above and advised AEGCL to do the needful action, subject to CTUIL's consent for the elements to be connected to ISTS. TCC placed to RPC for information.

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

ITEM NO. D.7	**:**	**ASSOCIATED TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM 2000MW NHPC LOWER SUBANSIRI HEP- NERTS**

The progress of construction of Transmission system for evacuation from 2000MW NHPC Lower Subansiri HEP is under regular monitoring in the OCC subcommittee meetings of NERPC. The said transmission system, within scope of POWERGRID, comprises of 2 No. 400KV D/C twin Lapwing Transmission lines (viz. Line 1 & 2) from Biswanath Chariali to Gantry at Lower Subansiri end altogether providing 4(four) circuits for evacuation.

One of the above transmission lines (viz. Line 1 consisting of 2 circuits) has been energized & commissioned in March'2023. The second transmission line (consisting of 2 circuits) too is being made ready with a targeted schedule of July'2023.

It may be mentioned here that as on date, switchyard Gantry for termination of 2(two) circuits of Line 1 at Subansiri (NHPC) end has been provided which have already been charged in March'2023.

In order to terminate the balance 2(two) circuits which are nearing completion at NHPC switchyard, associated Gantry at Subansiri (NHPC) end is required to be made ready in

matching schedule. It is understood that the same might take some time, considering balance works at Subansiri end of NHPC. In case it takes more time for making the Gantry ready, the line (2 No. circuits) shall have to be energised/commissioned keeping the same terminated up to Dead End tower only & further termination at Switchyard Gantry shall be done upon confirmation of readiness of the same by NHPC.

NHPC may inform schedule for completion of Gantry at NHPC Subansiri end.

Deliberation of the TCC **:** NERTS informed that the line will be ready by August 2023. NHPC updated that the Gantry for Line-2 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.8	**:**	**COMMISSIONING OF ELEMENTS UNDER NERPSIP-NERTS**

1. Mizoram: 132/33kV West Phaileng Sub-station, Marapara Sub-station and West Phailang-Marapara line under NERPSIP is planned to be connected from existing Sihhmui substation via existing Zemabawk-Sihhmiu-West Phaileng line. Presently the line is charged at 33kV level supported by poles at few locations.

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

This line is required to charge 2 nos of 132/33kV substation at West Phaileng and Marapara at 132kV level. Construction works are to be expedited by P&E Department of Mizoram.

2. Nagaland: Existing 132kV Mokokchung Mariani line of DoP Nagaland is being LILO at 132/33kV Longnak substation under NERPSIP Nagaland. Telemetry / protection communication is to be established through OPGW as per the scope of the project. However, in the existing line, OPGW is yet to be laid due to which telemetry could not be established via OPGW. Accordingly, DoP Nagaland is requested to take up the works at the earliest.

3. Tripura: 132/33 kV Gokulnagar S/S under NERPSIP Tripura shall be connected by LILO of 132 kV Surajmaninagar- Rokhia line under construction by TSECL. Construction works for the LILO portion under NERPSIP has been completed. Construction of the line needs to be expedited by TSECL for energization of the system under NERPSIP.

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

MSPCL needs to make necessary arrangements for RTU augmentation at below S/s for data reporting to SLDC (Manipur) to obtain "First Time Charging Clearance of elements under NERPSIP for extension of 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.

Deliberation of the TCC **:** The deliberation of TCC is as summarized below:

1. Mizoram stated that 132kV Bairabi – Mamit – W.Phaileng line and 132/33kV Sub-station at Mamit will be ready by August 2023. Further, Mizoram informed that the charging of Zemabawk -Sihhmui – W.Phaileng line will be delayed. CGM, NERPSIP updated that 132/33kV West Phaileng Sub-station, Marapara Sub-station are almost ready for charging. West Phailang-Marapara line will be ready by August 2023.

2. Nagaland informed that the OPGW installation from Mokukchung to LILO point of Longnak s/s has been approved by TESG for PSDF funding and fund will be disbursed shortly.

3. TPTL updated that 132 kV Surajmaninagar- Rokhia line will be ready by Oct'23.

4. Manipur updated that RTU Augmentation is being carried out by the State. However, due to present law & order situation in Manipur, the progress has been hampered.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.9	**:**	**RESTORATION OF TOWER LOCATIONS AT 212P AND 214P OF ROING-PASIGHAT 132 KV TRANSMISSION LINE- DOP, ARUNACHAL PRADESH**

Sustainability of the Pasighat-Roing 132 kV Transmission Line has been under constant threat of disruption after the damages of the towers at above two locations caused due to flooding at the banks of Dottung river in Lower Dibang Valley District in April 2020. Presently, the power supply is maintained through an Emergency Restoration System (ERS) arrangement, which has its own risks for prolonged standing services.Considering that above segment of the lone radial line is vital for transmission of power from Pasighat to Roing, Tezu and Namsai Sub-Stations for catering supplies to Lower Dibang Valley, Lohit, Anjaw, Namsai and Changlang districts of Arunachal Pradesh, the urgency of normalized restoration of the above towers was felt needed. Hence, after a joint inspection of the site by a team headed by Member Secretary, NERPC, the matter was accordingly taken up in the 22nd TCC and 22nd NERPC at Guwahati on 26th & 28th March 2022, wherein POWERGRID, NERTS, had committed to complete the restorative piling works of the damaged towers by March 2023, as recorded at Item No. A.13 at Page: 43-44 in the Minutes (Record Notes) of the Meeting.

However, the piling works of the towers are reportedly yet to be completed as on date, thereby continuing with the precarious ERS arrangement which is delaying the normalized restoration of the towers for avoiding the constant concerns of risks and anxieties of all concerns. POWERGRID, NERTS, may update current status and completion timeline of the works.

Deliberation of the TCC **:** CGM (i/c), NERTS informed that the construction of pile foundation at the affected locations has been completed and the line will be restored by Nov'23.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.10	**:**	**STATUS OF OPTICAL-FIBER COMMUNICATION LINKS UNDER ON-GOING NERPSIP AND COMPREHENSIVE SCHEME IN ARUNACHAL PRADESH- DOP, ARUNACHAL PRADESH**

As deliberated in the 23rd TCC Meeting on 18th Nov. 2022, at Panaji, Goa, and as directed by the TCC forum for submission of the detailed status of Communication Schemes being executed under NERPSIP and Comprehensive Scheme to NERPC, as recorded at Item No. A.02 at Page No. 16 in the Minutes (Record Notes) of the 23rd TCC and 23rd NERPC Meeting, the parametric data of OPGW as submitted to the august forum of NERPC Meeting by POWERGRID on 19th Nov. 2022, in respect of Arunachal Pradesh under Comprehensive Scheme seem to be incorrect, vague and not in order to the extent of quantities of OPGW provisions in the scope of schemes, quantities laid and balances to yet to be laid under various schemes of the communication links as demanded by the TCC forum.

POWERGRID had submitted that they have laid 115 kMs. of OPGW out of sanctioned provision of 370 kMs. in the scheme; with the following timeline for completion of the balance quantities:

- Completion of OPGW laying by March 2023:
  - i. All Existing Lines.
  - ii. 23 Nos. of New Lines.
  - iii. 70 Nos. of 33 kV Lines.
- Completion of OPGW laying by March 2024:
  - i. 13 Nos. of New Lines.
  - ii. All Balance 33 kV Lines.

POWERGRID may confirm & authenticate the accurate facts and figures of above data by furnishing them as under along with the list of the lines indicated with their names and respective lengths voltage level-wise:

Detailed Status of OPGW Laying on various Existing and New Transmission Lines under various Schemes in Arunachal Pradesh											
Sl. No.	Particulars	Specifications		Particulars of the lines under various Schemes							
				Comp. Scheme		ULDC Project		Other		Total	
				No.	Length (kMs.)	No.	Length (kMs.)	No.	Length (kMs.)	No. (e+ g+ i)	Length (f+ h+ j) (kMs.)
a	b	c	d	e	f	g	h	i	j	k	l
1	Scope in the Scheme:	220 kV	Existing								
		132 kV	Existing								
			New								
		33 kV	New								
2	Laid as on Date:	220 kV	Existing								
		132 kV	Existing								
			New								
		33 kV	New								
3	Balance to be laid:	220 kV	Existing								
		132 kV	Existing								
			New								
		33 kV	New								
4	Final Completion Timeline:										

Deliberation of the TCC **:** Comprehensive (POWERGRID) informed that out of 8 links, stringing work of 4 links has been completed and jointing and terminal equipment works are expected to be completed by July 2023.

Other two (02) links are expected to be completed by Sept'23. In the case of remaining two (02) links, work is expected to start in Dec'23.

Out of 36 new lines, OPGW stringing has been completed in respect of 3 lines and the OPGW works in respect of other lines will be started after completion of stringing of the transmission lines.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.11 : PROLONGED PENDING HANDING OVER OF THE KHUPI-KIMI 132 KV TRANSMISSION LINE TO DEPARTMENT OF POWER, ARUNACHAL PRADESH, BY NEEPCO, DUE TO ABNORMAL DELAY IN COMPLETION OF THE RESIDUAL WORKS BY NEEPCO AND LAYING OF OPGW BY POWERGRID- DOP, ARUNACHAL PRADESH

Pursuant to the decisions taken and agreed in the 7th Meeting of the Standing Committee on Power System Planning of NER and 19th Meeting of TCC of NERPC on 17.05.2018 and 28.09.2018 respectively, the modalities for handing/taking over were decided and agreed in a meeting taken by CEA on 10.10.2018 in New Delhi.

All other elements of the systems have been taken over by Department of Power, Government of Arunachal Pradesh (DoP:GoAP), barring the Khupi-Kimi segment of the 132 kV line. The 132 kV line remained charged at 33 kV ever since its construction. It was agreed between NEEPCO and DoP:GoAP to hand/take over after the line is enabled charging at rated voltage of 132 kV, for which the required residual works were to be completed by NEEPCO and OPGW was to be laid by POWERGRID. However, the same have not been completed so far despite lapses of repeated timelines and intervention of NERPC through deliberations in OCC meetings and conduct of proactive joint site inspections. In the course of discussion on the matter in the 23rd TCC & 23rd NERPC Meeting at Panjim, Goa, on 18th and 19th Nov. 2022, NEEPCO and POWERGRID had committed completion of their respective pending works by Dec. 2022. However, the same are yet to happen so far.

Considering the urgent need of charging the above line at rated voltage of 132 kV for redundant power supply to three strategic western districts of East Kameng, West Kameng and Tawang, and taking into account the prolonged pending of the agreed handing over of the line, NEEPCO and POWERGRID may inform reasons of such unusual delays in completion of their respective works and confirm their final timeline.

Deliberation of the TCC **:** Comprehensive (POWERGRID) informed that OPGW link on the line will be established by first week of July 2023.

ED (O&M), NEEPCO updated that after completion of OPGW link, LDP relay testing will take place and the transmission line will be ready for charging by 10th of July 2023.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.12	**:**	**REQUIREMENT OF CONSTRUCTION POWER FOR DIBANG MULTIPURPOSE PROJECT (DMP), ARUNACHAL PRADESH, BY NHPC- DOP, ARUNACHAL PRADESH**

The matter was discussed in the 23rd TCC & 23rd NERPC Meeting at Panjim, Goa, on 18th and 19th Nov. 2022, as recorded at Item No. A.08 at Page No. 29 in the Minutes (Record Notes); wherein NHPC had stated that the issue would be resolved bilaterally. However, NHPC has not been responding for sorting out the matter despite initiation from DoP:GoAP. *NHPC may update the status.*

Deliberation of the TCC **:** Gr. GM, NHPC informed that they will approach Transmission wing of DoP, Arunachal Pradesh and will resolve the matter as per the relevant regulations within 15 days.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.13	**:**	**COMMISSIONING STATUS OF THE ROING-CHAPAKHOWA 132 KV D/C TRANSMISSION LINE- DOP, ARUNACHAL PRADESH**

The commissioning target of this much-awaited priority connectivity redundant project to Arunachal Pradesh has been slipping beyond schedule on several occasions. NERTS, POWERGRID may confirm the progress status and final scheduled timeline of completion and commissioning.

Deliberation of the TCC **:** It was informed that the line has been test/idle charged from Chapakowa end on 26.06.2023.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.14	**:**	**COMMISSIONING OF 132 KV MONARCHAK-SURAJMANINAGAR D/C – OCC NERPC**

Commissioning of 132 kV Monarchak-Surajmaninagar D/C will enhance the reliability of Tripura Power System by providing safe evacuation of generation from Monarchak Power Station and relieving the high loading of 132 kV Surajmaninagar(ISTS)-132 kV Surajmaninagar (TSECL) line during high demand scenario of Tripura and Bangladesh load. As per the minutes of 201st OCCM, expected date of commissioning of the line is furnished to be July'23, however, the line was initially expected to be commissioned in 2016. TSECL is requested to expedite the commissioning works for secure and reliable grid operation.

In 202nd OCCM_TSECL intimated that RoW and funding related issues are hampering the growth of the project. After detailed deliberation the forum decided to take up the matter in the upcoming TCC and RPC meeting.

Deliberation of the TCC **:** GM, TPTL informed that ROW issues is still persist. He informed that 82% of the work has been completed. He further stated that in the review meeting taken by Hon'ble Power Minister in April 2023, it was informed that the work will be completed by October 2023.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.15	**:**	**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. lt 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 the N-1 condition. There should be redundancy in power evacuation system as per the Grid code.

It may please be noted that NEEPCO has sufficient numbers of line bays in its switch yard for smooth evacuation as per requirement.

It has been observed that during rainy season, in the event of the lone line outage, load throw off of the Units takes place and the reservoir may spill over for non-availability of power evacuation, which is an avoidable national loss.

NEEPCO requests through this forum for early construction of the 2nd evacuation transmission line for Tuirial HPS by Mizoram for safe and smooth operation of the Tuirial Hydro Electric power station.

Deliberation of the TCC **:** Mizoram informed that due to fund constraint, no further physical progress has been made since last RPC meeting update.

It was stressed that Mizoram to expedite the completion of the said transmission line within the expected target as updated in last NERPC meeting ie, by end of FY 2023-24.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.16	**:**	**UPGRADATION OF SCADA/EMS OF SLDCS THROUGH PSDF- NERPC**

SCADA system at SLDCs was upgraded in 2015 with 7 years warranty, which has already expired. Hence, as per CEA regulations, existing SCADA needs upgradation. For this upgradation, MOU has already been signed with POSOCO presently known as Grid Controller of India Limited (Grid-India) for no cost consultancy with all SLDCs. In this regard, separate DPRs regarding SCADA upgradation, RTU and VSAT were sent to PSDF secretariat for PSDF funding in the month of January 2023.

Accordingly, the proposals were examined during the 74th Techno-Economic Sub-Group (TESG) meeting on 14.03.2023 by PSDF Secretariat, in which the members decided that the SCADA/EMS upgradation of all NER SLDCs is deemed returned till further direction is received from Ministry of Power, Govt. of India, in this regard.

During the 202nd OCC meeting held on 18.05.23, it was informed by Member Secretary NERPC that the Chairman, NERPC and Hon'ble Dy. Chief Minister Arunachal Pradesh had written to the Ministry of Power for upgradation of the SCADA-EMS systems of NER states through PSDF funding on 04.05.2023. The reply is awaited from MoP.

Deliberation of the TCC **:** Member Secretary, NERPC informed that the request for funding of upgradation of SCADA-EMS of NER States through PSDF is under consideration by the Appraisal Committee of the PSDF.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.17	**:**	**CONCERNED REGARDING SHIFTING OF SLDC ARUNACHAL PRADESH FROM OLD BUILDING TO NEW BUILDING- NETeST NERPC**

It is to inform the forum, SLDC Arunachal Pradesh has completed its new control center building, which is nearby to exiting SLDC building (Chimpu S/s). However, following are concerns from NERLDC:

a) Plan for Comprehensive-AP, ULDC and Powertel links connectivity of new building.

b) Plan for shifting SCADA/EMS system.

c) Plan for shifting VoIP exchange.

Deliberation of the TCC **:** SE (Head of SLDC), Arunachal Pradesh informed that administrative office has been shifted to the new building, however, Control Center is yet to be shifted. He further stated that provision for backup Control Center is under consideration and M/s GE has been approached in this regard.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.18	**:**	**RECONSTRUCTION OF RESIDENTIAL AND NON-RESIDENTIAL BUILDING AT VARIOUS STATIONS OF NERTS – DOP NAGALAND**

During 23rd TCC & NERPC meeting, reconstruction of Residential & Non-Residential buildings of POWERGRID under Additional Capitalization (ADDCAP) was discussed and agreed by the RPC forum. This infrastructure renovation works as proposed by POWERGRID would be booked under POC, which will have to be shared by all the Designated Inter State Transmission System customers (DICs) of the country, which will pose additional financial burden on the States. It is therefore a request to this forum to take up this matter with POWERGRID for consideration of renovation or construct from their own O&M or any other alternate sources without burdening the DICs.

Deliberation of the TCC **:** NERTS informed that the matter has been approved in the 23rd NERPC Meeting and the petition has already been filed in CERC.

The forum noted the views of Nagaland, however, as the matter has been settled, there is no merit for further discussions.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.19	**:**	**COMMISSIONING OF THE 2000 MW LOWER SUBANSIRI HEP OF NHPC - NERPC**

Executive Director (O&M), NHPC, during 23rd TCC (welcome address) informed that NHPC has only one operational hydro generating station in the NE region - 105 MW Loktak Hydro Power Station, which was commissioned in 1983. As the Power Station has completed its useful life, the same is being taken up for Renovation & Modernization and Life extension to continue serving the region.

He also informed that the 2000 MW Subansiri Lower Project is already under advanced stage of construction and first unit of the project is expected by middle of next year i.e by June 2023.

The power allocation of Lower Subansiri Project as per MOP is at **Annexure D.19.**

Deliberation of the TCC **:** NHPC intimated that first two units will be commissioned by February 2024 and the remaining units in the FY2024-25.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.20	**:**	**PROGRESS WORK OF COMPREHEMSIVE SCHEME/NERPSIP- NERPC**

A meeting was conducted by NERPC Secretariat on 19.05.2023 at Guwahati to review the progress of Comprehensive Scheme in Arunachal Pradesh. Powergrid is requested to update the latest status/physical progress and target date/commissioning planning in respect of both Comprehensive and NERPSIP scheme.

Deliberation of the TCC **:** The latest status updated by the Comprehensive and NERPSIP are attached at **Annexure D.20.**

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.21	**:**	**PORTAL FOR UTILIZATION OF SURPLUS POWER (PUShP)**

PUShP portal (For Flexibilization of PPA for Optimal Utilization of Resources and Reduction in cost of Power for Consumers) has been launched on 09th March, 2023 by Hon'ble Minister of Power and NRE.

The Portal would be a single window system providing services to diverse domains of all the entities involved and to reallocate and transfer the power in minimum time from one surplus entity to deficit entity. In recent past years, difficulties are observed in meeting the demand and some states do resort to power cuts, especially during April, May, September and October months the crisis is observed while other states have surplus power capacity. The States which have surplus power continue to bear the fixed charge burden without using it which leads to high cost of power to the consumers. Regional diversity makes some states surplus. Like Peak in Northern region is during summer whereas Peak in Southern region is during winter. Similarly, there is diversity in the

time at which the peak occurs in the States. Such regional diversity in the load demand was not able to address even though the generation capacity is available in the country. The reasons behind were many like one-to-one Power Purchase Agreements, some procedural constraints, non-availability of easy match making arrangements etc.

This portal will provide a platform for optimal utilization of generating capacity and will resolve the above issues. The scheme will not disturb the existing arrangements rather an additional avenue shall be provided to stakeholders for optimal use of generating capacity. The scheme envisages paperless working for temporary allocation/transfer of power from surplus (Seller) entity to deficit (buyer) entity. The benefits of the portal also include Flexibilization of Power Purchase Agreement, Availability of power to DISCOMs, reduction in power cuts, reduction in fixed charge burden on the states having surplus power, Allocation /Transfer of Power at regulated tariff in a minimum time.

Key Benefits of the scheme: -

i. Flexibilization of Power Purchase Agreement

ii. Optimal Utilization of Power due to regional diversity and their increased availability.

iii. Availability of power to DISCOMs improves and reduction in power cuts.

iv. Meet the power demand of the country especially during the crisis situation in the month of April, May, September and October.

v. Reduction in fixed charge burden on the states having surplus power.

vi. Allocation /Transfer of Power at regulated tariff.

vii. Reallocation of power in minimum time with automated process.

viii. The scheme envisages a paperless working.

ix. None of the existing arrangements shall be disturbed, rather an additional avenue has been provided.

x. The portal envisages temporary allocation/transfer of power; subjected to willingness of seller and Buyer, confirmation of transmission corridor by concerned agencies and confirmation of payment security on portal by the new Buyer/Gencos before scheduling of such power.

In 200th OCCM, Member Secretary, NERPC briefly explained the benefit of the Scheme and requested all concerned constituents to participate and fully utilize the portal. He

also informed that further training or workshop can be organized (if necessary) in the coming days.

In 201st OCCM, Member Secretary NERPC exhorted the utilities to actively participate on the PUShP portal and avail the benefits provided by it. Also, the forum decided that any utility surrendering power on this platform should inform all other utilities in NE region about the same to help ensuring early requisition of the surrendered power.

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.22	**:**	**PROVISIONAL TARIFF FOR KOPILI HYDRO POWER STATION (4X50MW= 200MW) AFTER RECONSTRUCTION, RENOVATION AND MODERNIZATION**

After completion of Reconstruction, Renovation and Modernization of the 4x50 MW Kopili Hydro Power Station, two units of the units are scheduled for commissioning in the month of March, 2023 and remaining two units in the month of May, 2023. Consent for undertaking the Reconstruction, Renovation & Modernization works of the Power Station with 1st year tariff of Rs. 2.52/unit and levelized tariff over the expected 25 years useful life of Rs. 2.62/unit has been conveyed by all the beneficiaries. However, after certain modifications in the DPR and approval from the Competent Authority a Petition has been filed before the Hon'ble CERC for approval of the DPR with 1st year tariff of Rs. 2.37/unit and levelized tariff of Rs. 2.39/unit. Application for determination of tariff shall be filed before the Hon'ble Commission on completion of the works as per the Regulation 9 of the Central Electricity Regulatory Commission (Terms and condition of Tariff) Regulations, 2019. However, till determination of tariff by CERC, it is proposed that a provisional Tariff of Rs.2.35/unit be adopted by the House for the purpose of billing for power supplied from the Power Station. The proposal for billing at the proposed provisional tariff of Rs. 2.35/kWh is subject to suitable adjustment on determination of final tariff by CERC.

In the 47th CCM sub-committee agreed to the provisional tariff of Rs. 2.35/unit as proposed by NEEPCO.

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.23	**:**	**INSTALLATION OF TWO NUMBERS GENERATOR TRANSFORMER FOR MYNTDU LESHKA STAGE-I POWER STATION – MePGCL.**

PROPOSAL: Procurement of (2) Nos of Single Phase Generator Transformers 17.5 MVA, 11/132 KV with accessories etc as spares for MLHEP Power Station.

Explanatory Note:

Myntdu Leshka Power Station has 3 (three) Units of 42 MW each, with 9 Nos of 17.5 MVA, 11/132 KV Single Phase Generator Transformers (3 Nos for each Unit). A 10th Spare Generator Transformer has been kept as a provision, in the event of failure of any of the Single Phase Generator Transformers.

Since, commissioning of the Myntdu Leshka Power Station in 2011, 2 (two) Nos of Generator Transformers had failed due to various factors. These GTs have been repaired twice. One of the repaired GTs is put in service and the other has been kept as spare. As the reliability and dependability of the repaired GTs are very unpredictable, it is proposed that 2 (two) new Single Phase Generator Transformers 17.5 MVA, 11/132 KV with accessories etc are procured to replace the repaired GT in service and the latter to be kept as spare.

Since, the Power Supply depends on the reliability and availability of the GTs, any breakdown is fatal. Considering, the importance to optimize maximum generation during high hydro monsoon season at the MLHEP area, to cater and maintaining/regulating un-interrupted power generation for grid stability throughout the year, it is very vital for procurement of 2 (two) new Single Phase Generator Transformer, 17.5 MVA, 11/132 KV with accessories etc, for the MLHEP Power Station, to meet the ever-growing System Demand.

Tentative Cost Estimate: 6.5 Crores

Due to paucity and fund constraints, MePGCL is requesting the forum to consider recommending the funding of this project from PSDF/Central Schemes.

As discussed in the agenda item B.18 of 200th OCCM of NERPC, the proposed item is not eligible for PSDF funding as per the PSDF guidelines.

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.24	**:**	**INSTALLATION OF RACCOON COVERED CONDUCTOR FOR OUTSIDE SOURCE OF 33KV POWER SUPPLY OF UMIAM STAGE IV POWERSTATION, NONGKHYLLEM COMING FROM UMIAM STAGE III POWER STATION, KYRDEMKULAI UNDER MEPGCL.**

PROPOSAL: Installation of 33KV Racoon covered conductor with accessories etc for Outside source 33KV power supply of Umiam Stage IV Power Station, coming from Umiam Stage III power station, under MePGCL .

Explanatory Note:

Stage IV power station is a generating station with two installed Units, where each unit is of capacity of 30 MW. The overall generating capacity of this station is 60MW.

The above 33KV outside source power supply line from Stage III Power station to Stage IV power station which runs through the reserved forest is prone to frequent power supply outages due to frequent falling of bamboos and small trees on the naked conductors of the line. Although triming of trees is done regularly, the growth of shrubs, trees and bamboos are very fast which caused frequent outages of the line.

Therefore in this connection it is felt necessary to replace the existing naked racoon conductor with 33KV covered racoon conductor in order to avoid frequent outages of the line.

Due to lack of fund, MePGCL is requesting the forum to consider recommending the funding of this project from PSDF/ Central Schemes.

As discussed in the agenda item B.18 of 200th OCCM of NERPC, the proposed item is not eligible for PSDF funding as per the PSDF guidelines.

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.25	**:**	**INSTALLATION OF RACCOON COVERED CONDUCTOR FOR 33kV POWER SUPPLY FROM MYNTDU LESHKA STAGE –I POWER STATION TO MLHEP DAM.**

PROPOSAL: Proposal for Installation of 33KV Racoon covered conductor with accessories etc., for 33KV power supply from Myntdu Leshka Power Station to MLHEP Dam.

Explanatory Note:

The source of power supply to the MLHEP Dam Control Room is through a 10 Km long, 16 years old overhead 33 KV line from the Myntdu Leshka Power Station. Since, this line is very unreliable and dependable, especially during the peak monsoon season, which is prone and frequently tripped/failed, due to very bad inclement weather conditions accompanied with heavy thunderstorm, lightning and strong winds in the region.

In light of the above and to mitigate outage and maintain uninterrupted 33 KV Power Supply to MLHEP Dam, which is requires for continuous operation of the sluice gates for safety purposes during the peak monsoon season, and as a vital requirement for the Run of the River Dam, it is proposed for installation of 33KV Racoon covered conductor with all accessories etc, for uninterrupted 33KV power supply from Myntdu Leshka Power Station to MLHEP Dam.

Tentative Cost Estimate: 4 Crores

Due to paucity and fund constraints, MePGCL is requesting the forum to consider recommending the funding of this project from PSDF/Central Schemes.

As discussed in the agenda item B.18 of 200th OCCM of NERPC, the proposed item is not eligible for PSDF funding as per the PSDF guidelines.

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.26	**:**	**INSTALLATION OF OPEN LOOP COOLING WATER SYSTEM AND IMPROVEMENT OF DEWATERING FOR MYNTDU LESHKA STAGE-I POWER STATION**

PROPOSAL: Proposal for Installation of Open loop cooling water system for Myntdu Leshka Stage-I Power Station.

Explanatory Note:

The Myntdu Leshka Stage-I Power Station being Run of the River scheme, has been designed witha plant load factor of 44% and is expected to generate around 484 MU by design per annum.

The existing Cooling System for the three units of 42 MWs each of the Myntdu Leshka Power Station is of a closed loop system, which include the primary and secondary cooling water pumps. The breakdown of these pumps during their continuous operation usually contributes to the outages of the units. With the proposed Cooling System in place, it will mitigate the outages due to the failure of cooling water pumps, grid disturbances and clogging of heat exchangers, reduction in maintenance cost of the primary cooling water system consisting of pipes, flanges, valves, pumps, filters and heat exchangers due to exposure to acidic nature of the water. This will be vital for the maintaining the availability of Power Generation in the region and in particular the state of Meghalaya. The Power House is also equipped with 4 Nos of Drainage Pump and 6 Nos of Dewatering Pumps. These Pumps are of VT shaft type. These Pumps are unreliable and not dependable as they are prone to fail due to deformed shaft or broken couplings. To prevent and avoid flooding of Power House, it is proposed that the existing Dewatering and Drainage Pumps be replaced with Submersible Type of Pumps in line with the guidelines of CEA.

Further, the existing system for dewatering of the tail race water in the event of any emergency/planned or forced maintenance of the underwater components of the T&G set is only through the Primary Cooling, Drainage and Dewatering System of U3,

wherein, its delivery outlet pumps nthe water to the Lynriang River. This system takes around approximately 60 hours to deliver the tail race water (approx. 50,00,000 ltrs) to the river. By modification of the system, and extending the Primary, Drainage and Dewatering Water conductor Piping system of Unit 1 & 3 to the Lynriang River, this will greatly reduce the dewatering of Tail Race water to around 24 Hrs and Outage Hours of the whole Power Station by around 36 Hours.

In line with the above, it is proposed that an open looped cooling system and Improvement of the Dewatering System for the benefit of the Myntdu Leshka Stage –I Power Station and the stability ofthe grid as a whole.

Tentative Cost Estimate: 7.6 Crores

Due to paucity and fund constraints, MePGCL is requesting the forum to consider recommending the funding of this project from PSDF/Central Schemes.

In the agenda item B.18 of 200th OCCM of NERPC, the sub-committee noted the request of MePGCL and MePGCL was advised to prepare proposal considering PSDF guidelines and send to PSDF secretariat directly.

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.27	**:**	**PROPOSAL FOR INTALLATION OF EQUIPMENTS FOR MOBILE COMMUNICATION FACILITIES FOR ALL POWER STATIONS OF MEGHALAYA**

PROPOSAL: Proposal to fund setting up of additional mobile communication towers and equipments to ensure reliable and continuous mobile network connectivity for all Power stations in Meghalaya on account of very poor network connectivity.

Explanatory Note:

In order to ensure reliable, stable and optimum power generation from each Power Station it has become necessary to also have a very reliable mobile communication network system in addition to PLCC communication. Mobile connectivity are very much required between the Operators and the controlling Engineer, SLDC And the higher authorities especially when there is a shutdown or outage of the machines. With the

mobile connection an internet facility can be avail for relaying critical information and instruction, etc. During the sudden outages of any machines, everybody was in the dark when the machine are likely tyo come and this effect the scheduling, etc. and unnecessary load shedding has to be carried out.

It may be noted that on many occasions PLCC communication system is prone to frequent interruptions and failures during bad weather and other disturbing Grid conditions for which lack of communication between Power Stations and SLDC delays the restoration of the Power system during Grid failure and Grid interruption. Most of the time during such a situation, the shift duty personnel has to come out of the Power Station to a particular location which is quite far from the Power station, where there is network availability and only then the contact with SLDC is established. This process of maintaining communication with SLDC has become a regular affair particularly during Peak generating season i.e monsoon season. This is prevalent in almost all the Power stations in Meghalaya.

MePGCL had approached the service providers for necessary action to improve the network connectivity in the areas around the Power stations but the same is not materialized till date since it is known that setting up of additional towers and equipment in those areas is not commercially viable for the Service Providers as these areas have scarce population.

MePGCL is requesting the forum to deliberate and may consider recommending the Special funding of this project from PSDF/Central scheme.

In the agenda item B.18 of 200th OCCM of NERPC, the sub-committee noted the request of MePGCL and MePGCL was advised to prepare proposal considering PSDF guidelines and send to PSDF secretariat directly.

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.28	**:**	**CYBER SECURITY AND INTERNAL FIREWALL (FORTINET) PROTECTION IN SCADA - NERPC**

The license of the internal firewall of the SCADA/EMS system of SLDC AEGCL, Meghalaya and Tripura have already expired. AMC of SCADA/EMS system is with M/s GE and as per M/S GE T&D Ind. Ltd., the OEM of the firewall does not support for any further extension in the service/license. The matter has already been discussed in several meetings. Extended AMC of SCADA/EMS has been placed by Assam SLDC with M/s GE based on conditional LOA with respect to Internal Firewall. Extended AMC for SLDCs of Meghalaya and Tripura is in process. As per the minutes of the special meeting dated 13.02.2023, SLDC AEGCL has written a letter to CERT-GO & CISO-MOP seeking clarification and guidance on this issue, however, no response has been received yet.
Once the firewall issue is resolved, specific amendment in LOA may be made as per requirement.

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.29	**:**	**CYBER SECURITY ASPECTS IN SCADA/IT SYSTEMS AT LOAD DESPATCH CENTRES IN NORTH EASTERN REGION -NERPC**

State-Utilities may update the status with respect to CII Status by NCIIPC, ISO 27001:2013 implementation, VA-PT twice a year, Cyber Crisis Management Plan (CCMP), Cyber Management Team (CMT), patching of vulnerabilities and virus alerts from CERT-In/CERT-GO, etc, participation in various trainings and workshops on Cyber Security being conducted by CEA, Ministry of Power and POSOCO, etc. A summary of the state wise status of CII, CCMP etc., is attached as **Annexure D.29**.

A CISOs meeting was conducted by Sh. M.A.K.P. Singh (CISO, Ministry of Power & Member-Hydro-CEA) in presence of NCIIPC representatives, CERT-GO and CERT-Hydro at NERLDC premises on 11th June 2022 in which wide participation from all CISOs of NER utilities was registered. It was emphasized that Cyber Security guidelines laid down

by CEA needs to be adhered with all stakeholders in power-sector and any difficulty being faced shall be reported to MoP/NCIIPC at the earliest.

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.30	**:**	**IMPLEMENTATION OF GUWAHATI ISLANDING SCHEME-NERPC**

During the 23rd TCC/RPC, The Guwahati Islanding Scheme was referred back to the Sub-Committee for review as the forum felt that the cost estimate of ₹84.88Cr (including taxes) is exorbitant. In the 24th NETeST meeting, it was decided that the empowered committee members of Guwahati Islanding scheme may discuss the issue on priority.
In this regard, a special review meeting 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 Reliable Communication Scheme and M/s GE is being consulted for simplification of the scheme & reduction of the cost. Revised offer from M/s GE is awaited.

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.31	**:**	**CLARIFICATION ON THE VERACITY OF ENTITIES IN PRIVATE TRANSMISSION SYSTEM CONSTITUENTS-DOP, ARUNACHAL PRADESH**

M/s Sterlite Power, had been the Private Transmission Service Provider (TSP) of the project, "NERSS-II (Part-B) and NERSS-V" for implementation through the Special Purpose Vehicle (SPV) "NER II Transmission Limited" (NER-II TL), through Tariff Based Competitive Bidding (TBCB) route. The project comprises of Biswanath Chariali (POWERGRID) - Itanagar 132 kV D/C (Zebra Conductor) line, one circuit with a LILO via Gohpur.

The project was completed in March 2021. M/s Sterlite Power, as proponent of NER-II TL, executed Connection Agreement with PGCIL and DoP:GoAP for interconnections of

transmission systems of the above project. Similarly, Agreement for the Operation & Maintenance of commissioned 132 kV Bays at 132/33 kV Sub-Station, Chimpu, Itanagar, was also executed by M/s Sterlite Power with DoP:GoAP.

However, of late, one unknown entity, in the name of IndiGrid, has been corresponding with DoP:GoAP on joint Letter Head with NER-II TL on the matters of operational aspects of the O&M Agreement of the Chimpu Sub-Station and other associated activities of the commissioned project.

DoP:GoAP is not aware of either from M/s Sterlite Powers, IndiGrid, Lead Member State of the Long Term Transmission Consumers (LTTC) viz. AEGCL in the Transmission Service Agreement (TSA) or from NERPC, if any authoritative official & formal transfer of ownership and responsibilities of the TSP have been effected between or among the interested parties on the affairs of NER-II TL.

NERPC may through a light and esteem members of the august forum may deliberate for clarity on the matter, as to whether communications of the IndiGrid are to be taken cognizance on the affairs of NER-II TL.

*M/s Indigrid vide letter no. NER-II/R&C/21-22/423 dt. 14.03.2022 (**Annexure D.31**) has clarified the subject matter in detail. DoP, Arunachal Pradesh & other stakeholders may refer to the attached annexure.*

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.32	**:**	**PERIODIC AUDITING OF COMMUNICATION SYSTEM - NERPC**

Regulation 10 of Communication System for inter-state transmission of electricity Regulation, 2017 states "*The RPC Secretariat shall conduct performance audit of communication system annually as per the procedure finalized in the forum of the concerned RPC. Based on the audit report. RPC Secretariat shall issue necessary instructions to all stakeholders to comply with the audit requirements within the time stipulated by the RPC Secretariat. An Annual Report on the audit carried out by respective*

RPCs shall be submitted to the Commission within one month of closing of the financial year".

Accordingly, Audit plan has been made for FY 2023-24 (List of stations to be audited is attached as **Annexure D.32**). In the 25th NETeST meeting the forum approved the same.

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.33	**:**	**FURNISHING OF DATA FOR CONDUCTING RA STUDIES FOR NER - CEA**

Ministry of Power has notified the Electricity (Amendment) Rules, 2022, which inter alia, aim to implement Resource Adequacy (RA) Framework for ensuring reliable supply of electricity to the consumers. Central Electricity Authority is entrusted to prepare the Long Term-National Resource Adequacy Plan (LT-NRAP). Further, the Distribution Utility need to carry out the long term Discom Resource Adequacy Plan (LT-DRAP) to meet the utility peak and energy requirement in a reliable and cost- effective manner.

In view of the above, Chairperson CEA has directed to include the following agenda point in the next Board Meeting:

"In order to prepare the Resource Adequacy studies State-wise information viz. Demand, Installed Capacity, Generation (both RE and conventional), financial data etc. is required as per the format already shared with the states through email. The future capacity addition plan should also be submitted so that compliance to the RPO can be ensured. It is also requested to nominate a nodal officer for each State and the same may be shared with CEA for seamless coordination."

Deliberation of the TCC **:** All concerned States/Utilities were requested to furnish the data in the format as already shared via email and also nominate a nodal officer for each State.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.34	**:**	**MOBILE BAYS FOR EMERGENCY RESTORATION OF EHV SYSTEM IN NER – NERTS/PGCIL**

Vide item no. B.15 of 23rd NERPC forum agreed for procurement of 01 No each 220kV & 132kV Mobile GIS Bays as Emergency Restoration System of NER with tentative cost of Rs 8.42 Cr. to be booked under NERSS XIII.

However, it is to inform that the financial provision will be made in RCE of NERSS XIII. Also, amount of Rs 8.42 Cr. mentioned is indicative and the actual cost will be intimated after completion of work for needful endorsement of NERPC.

Placed for information of TCC.

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.35	**:**	**TAWANG-BHUTAN 132KV CROSS BORDER CONNECTIVITY BETWEEN LUMLA, TAWANG AND 600 MW KHOLONGCHHU HEP BHUTAN – DOP, ARUNACHAL PRADESH**

ADDITIONAL SUPPLEMENTARY AGENDA ITEMS OF ARUNACHAL PRADESH FOR INCLUSION IN THE 24TH MEETING OF NORTH EASTERN REGIONAL POWER COMMITTEE BEING HELD ON 28TH JUNE, 2023 AT TAWANG, ARUNACHAL PRADESH

A. Items for Discussion and Approval:

1. **Tawang-Bhutan 132 kV cross-border connectivity between Lumla, Tawang (India) and 600 MW Kholongchhu Hydro Electric Project in Bhutan:**

The upcoming 132 kV transmission line under Comprehensive Scheme, from Khuppi in West Kameng to Lumla in Tawang district, the easternmost tip of Arunachal Pradesh bordering the neighboring country, Bhutan, would become a long radial line of about 190 kilometers passing through difficult terrain of the snow-clad Sela pass. Such a long radial line in the extreme high-altitude topography, aggravated with treacherous transmission system path would cause huge concern for stable maintenance of grid reliability and operational challenges and issues. Tawang, one of the most popular tourist destinations of the country in the North Eastern Region, would suffer due to low reliability in a radial feeder configuration.

Further, with the increasing strategic military establishments and other developmental infrastructures in the districts of Tawang and enroute West Kameng, there is rapid increase in demand of higher quantity and reliably stable power supply. Hence, for meeting up such power demand would be a herculean task if the transmission system is left to be a long radial one.

To overcome above bottleneck, it is proposed for initiating establishment of a suitable transmission line between Lumla in Tawang (India) and the **600 MW Kholongchhu Hydro Electric Power Station** in Bhutan, which would be about **40 kilometres** of bee-line length. Such a connectivity, apart from improving the reliability of both the Grids of India and that of Bhutan, also will help in furtherance of bilateral exchange of energy in times of needs.

(T.K. Tara)
Chief Engineer (Power)
Transmission, Planning & Monitoring Zone
Department of Power
Government of Arunachal Pradesh

Deliberation of the TCC **:** The forum recommended that DoP, Arunachal Pradesh will directly approach CEA/MoP for the cross-border connectivity. NERPC will follow up the matter.

TCC noted as above and placed to RPC for information.

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

ITEM NO. D.36	**:**	**PROCEDURE ON OUTAGE PLANNING FOR COMMUNICATION SYSTEM - NERPC**

Regulation 10 of Technical Standards for Communication System in Power System Operations Regulations, 2020 states, "*Monthly outage shall be planned and got approved by the owner of communication equipment in the concerned regional power committee, as per detailed procedure finalized by the respective regional power committee*".

Accordingly, draft SOP on "Procedure on Outage Planning for Communication System" was discussed in the 25th NETeST meeting and the SOP was approved by the subcommittee. SOP is attached at **Annexure D.36**.

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.37	**:**	**STRINGING OF SECOND CIRCUIT PASIGHAT-ROING-TEZU-NAMSAI 132 KV TRANSMISSION LINE OF POWERGRIG AND PASHIGHAT NEW/NAPIT-NIGLOK 32KV TL UNDER EXECUTION BY COMPREHENSIVE**

The existing Pasighat-Roing-Tezu-Namsai 132 kV line is an ISTS transmission system being owned and operated by POWERGRID. The line is presently a Single Circuit on Double Circuit towers.

Roing is being connected with Chapakhowa with Double Circuit 132 kV line, thereby enhancing capacity availability at Roing end. The 132 kV line segment of Pasighat (Dura)-Napit (Pasighat) is being laid at Double Circuit configuration under Comprehensive Scheme to meet the industrial power demand at Niglok industrial area. However, the intermediate segments of Niglok-Pasighat New (Napit), Pashighat (Dura)-Roing and the other end of Roing-Tezu-Namsai remain at Single Circuit. Therefore, considering the rapidly increasing power demands at Niglok, Namsai and Pasighat areas, and to avail & utilize the enhanced capacity of the Double 132 kV line of Roing-Chapakhowa, it is imperative that the Second Circuit of Niglok-Pasighat New (Napit),

Pashighat (Dura)-Roing-Tezu-Namsai transmission line be stringed and made operational at the earliest.

NERLDC was advised to carry out the studies and put up to sub-committee of NERPC/CMETS.

Deliberation of the TCC **:** NERLDC will carry out the detail study on requirement of the transmission line and the same will be discussed in subcommittee/referred to CMETS/CTU for approval.

TCC noted as above.

This is for information of the RPC.

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

5. CATEGORY - E : ITEMS REFERRED TO THE SUB-COMMITTEES

ITEM NO. E.1 : MEMBERSHIP OF APPCPL - NERPC

Arunachal Pradesh Power Corporation Private Limited (APPCPL) has requested CEA to include them as member of NERPC. CEA has sought comments from NERPC for the same. It may be noted that both PTC and NVVN, who are traders, are already member of NERPC as agreed by NERPC forum. The matter is hereby placed for consideration.

Deliberation of the TCC **:** The forum opined that the item is to be first discussed in Sub-Committee meeting(s) for detailed study 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.*

ITEM NO. E.2 : ESTABLISHMENT OF NEW 132/33 KV (2 X 50 MVA) AIS SUBSTATION AT MISAMARI - AEGCL

Associated Lines: 132kV Balipara-Misamari D/C Line and S/C LILO of 132kV Depota-Dhekiajuli at Misamari GSS

The Defence Department of Govt of India vide letter of Colonel Q (Chief Logistic Officer) for Missamari Station Commander dated 31.05.2022 requested AEGCL for establishment of One GSS at Misamari. It was mentioned that the Missamari Military Station located in the North Bank of the river Brahmaputra is a critical Military establishment in Indian Army's Eastern Command with numerous units of Indian Army and Air Force and has a population of approx. 20,000 defence personnel residing with their families. Numerous infrastructure accretions are under progress/planned and the station has also been nominated to be a "Model Military Station" in the Eastern Theatre.

The current scenario of Power Supply to the Station is through a dedicated 33kV feeder from Depota GSS. The demand for the Station till 2021 was 2.2 MW which has enhanced to 3.2 MW in the current year with a permission to draw upto 6 MW. The feeder from Depota GSS is approximately 34 km long and it traverses through dense bamboo plantation (for approx. 16 km) which results in frequent power disruptions. Such frequent disruptions have drastically been impacting the functioning efficiency of the units in the station. The station is a key operational and logistic hub to include an Aviation Base and has to remain combat ready to undertake and support operations, both in the border region and Brahmaputra plain. Thus, uninterrupted power supply is imperative to the Station. With the new operational infrastructure under construction at Missamari, the power requirement of the station will increase to 10 MW by end of 2022-23. Thus, a proposal has been made for establishment of a new 132/33kV GSS at Missamari to enhance the power supply scenario to the Military Station.

The system studies have already been conducted by AEGCL and NERLDC as per directives of 18th CMETS-NER Meeting dated 28.04.2023. The issue was again discussed in the 19th CMETS-NER Meeting dated 30.05.2023.

Deliberation of the TCC **:** CTUIL informed that they will take up the matter in the next consultative meeting.

The TCC noted as above and referred to CMETS/ Sub-Committee of NERPC.

This is for information of RPC

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

ITEM NO. E.3	**:**	**IMPLEMENTATION OF AUTOMATIC METER READING (AMR) IN NORTH EASTERN REGION -OCC NERPC**

i. Government of India (GoI) has set a Renewable Energy (RE) target of 500GW by 2030. The need for implementing 5-minute meters along with AMR system for regional energy accounting and settlement at the Inter State level has been recommended in FOR sub-group report ,2018 considering the variability of load due to large RE penetration in the coming years. Subsequently, need of AMR has also been discussed in RPC forums

considering the high-volume & variable meter data and processing of the same in a very efficient manner.

ii. A PAN India pilot project on 5-minute metering was implemented as per the directive from Honourable CERC. A report on the pilot project covering implementation aspects, challenges and suggested way forward has been submitted by POSOCO for perusal of the Hon'ble Commission and further directions.

iii. Moreover, in view of the new DSM regulation 2014 and its amendments, which are more stringent, there is a need expressed by States to get streaming online instantaneous MW data at a user configurable rate (minimum 1 min) at SLDCs via AMR system.

iv. In view of the above a meeting was held on 19.11.2020 chaired by Chairperson, CEA with the participation from PGCIL, CTU, POSOCO, RPCs etc. on the subject of Telemetry of real time Active Power (MW) data to SLDCs. After deliberation in the meeting, it was decided to constitute a committee for finalizing the Technical Specification (TS) of the Interface Energy Meters along with Automatic Meter Reading and Meter Data Processing system for ISTS metering points.

v. NPC Division, CEA vide letter dated 02.12.2020 had constituted a joint committee comprising the members from each RPC, CEA, CTU/PGCIL & POSOCO "to prepare the Technical Specifications (TS) of the 5/15 Minute Interface Energy Meters (IEMs) with Automatic Meter Reading (AMR) and Meter Data Processing (MDP) for interstate transmission system at PAN India basis".

vi. NPC Division, CEA vide letter dated 6th July 2022 had circulated the final copy of "Technical Specification (TS) of Interface Energy Meters, Automatic Meter Reading system and Meter Data Processing system" provisioning all the requirements mentioned above.

vii. In reference to the above and also as per the draft IEGC 2022 for implementation of AMR project for all the five regions; the proposal from CTUIL for implementation of same in North Eastern Region is provide below for deliberation.

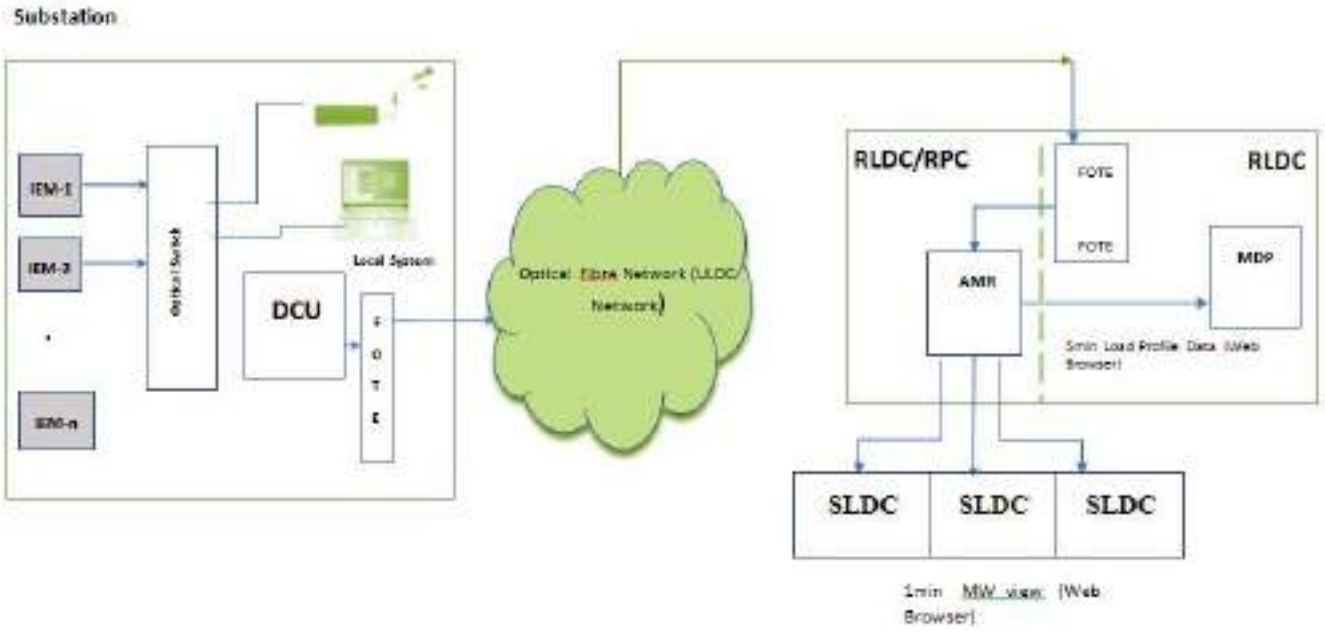
viii. MDP system which is also part of the above TS mentioned in point (v) above shall be implemented by NERLDC/POSOCO by their own and would match the timeline schedule with AMR project.

Installation of new Interface Energy meters, AMR system under the scheme "5 min Interface Energy Meter along with AMR system"

S. No.	**Items**	**Details**
1.	Name of Scheme	Supply and installation of 5min Interface Energy Meter along with AMR system-North-Eastern Region
2.	Scope of the scheme	Supply and installation of 5 min Interface Energy Meters for all ISTS metering points of North Eastern region. Supply and installation of AMR system along with DCU, Ethernet Switch and other accessories at substation end and AMR software along with servers, database, printer, firewall etc. at RLDC/RPC end to receive 5 min load profile data in auto mode. Provision of streaming online instantaneous MW data at a user configurable rate(minimum1 min) at SLDCs via AMR system. AMC for complete AMR system for 10 years The complete scope of AMR scheme shall be as per the Technical Specification (TS) circulated by NPC Division, CEA vide letter dtd. 6th July 2022**.**
3.	Conceptual Architecture of AMR connectivity of ISTS Meters	Provided below
4.	Objective/ Justification	For Indian Power system, commercial settlements of energy generation and consumption are being computed through

		Availability Based Tariff (ABT)and Deviation Settlement Mechanism (DSM) which are in vogue for energy accounting. Availability Based Tariff was implemented in India in 2002/2003 considering the settlement period as 15-min. Government of India (GoI) has set a Renewable Energy (RE)target of 500GW by 2030. The need for implementing a 5-minute scheduling, accounting and settlement at the Inter State level has been recommended by FOR Sub-Group report,2018 considering the variability of load due to large RE penetration in the coming years. A PAN India pilot project on5-minute metering was implemented as per the directive from Honorable CERC. A report on the pilot project covering Implementation aspects, challenges and suggested way forward has been submitted by POSOCO for perusal of the Hon'ble Commission and further directions. This issue was discussed in OCC/TCC/RPC meetings at regional level and it was discussed to replace the entire fleet of existing SEMs (15-min Block) with Interface Energy Meters (5-min Block) and implementation of Automated Meter Reading (AMR) and Meter Data Processing (MDP) system for efficient and faster accounting. Moreover, in view of the new DSM regulation and its amendments, which are more stringent, there is a need expressed by States to get streaming online instantaneous MW data at a user configurable rate (minimum 1 min) at SLDCs via AMR system. This instantaneous MW data is only for the purpose of taking actions/decisions in real time for grid monitoring &discipline.
5.	Estimated Cost	Rs. 75 Crore (approx.)
6.	Implementation	Approx.30 months from gazette Notification.

	timeframe	
7.	Implementation Mode	Through POWERGRID-RTM



In the 197th OCCM CGM, CTUIL intimated that upfront cost on the states for the project will be INR 28 crore and recurrent cost will be INR 3 crore per year.

After detailed discussion, the forum provided in-principle approval to the project. Member secretary, NERPC requested the States to go through the implications of the project positively and stated that if more clarification needed the same will be discussed thoroughly in next TCC meeting.

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.*

ITEM NO. E.4 : AMC OF SAMAST DATA CENTRE - TPTL

As per scope of the SAMAST implementation project, in the post warranty period, respective States may individually carry out maintenance contract between buyer and agency on mutual agreement basis.

In this regard, NERPC may finalize the following:

- Scope of the post warranty maintenance contract
- Determination of **Fixed Base Price** as the SAMAST data centres of all State are having the same hardware & software architecture
- Fixing up of Terms & Conditions.

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

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.5 : ESTABLISHMENT OF 132KV SUBSTATION AT TINKHONG - AEGCL

Associated Lines

S/C LILO from 132kV Behiating-Moran D/C Line at Tinkhong

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

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.6	**:**	**ESTABLISHMENT OF 220 KV GRID SUBSTATION INSTEAD OF 132KV GRID SUBSTATION AT MARIGAON - AEGCL**

Associated Lines: 220kV D/C LILO of 220kV Sarusajai-Samaguri 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-Samaguri 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.

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

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.7	**:**	**INTRODUCTION OF MPLS TECHNOLOGY IN ISTS COMMUNICATION - CTUIL**

a) Presently most of the ISTS networks are based on SDH technology with suitable redundancy. From the recent market trends, it is evident that Telecom Service Providers have started using MPLS based networks because of its embedded benefits like high Band Width efficiency, availability of various Quality of Service (QoS) for different applications. This has led to reduction in the chip production of SDH equipment and SDH equipment are thus getting obsolete for future projects and also for maintenance of the existing SDH system.

b) In order to evaluate latest market trends and views of various stakeholders, CTU has

organized a Seminar on MPLS Technology in Jan'23. The Seminar was attended by participants from CEA, RPCs, CERC, Grid-India, STUs, Transmission Licensees, POWERGRID, MPLS Service providers both in person and online.

c) During the seminar the MPLS service providers viz, NOKIA, HITACHI, SIEMENS, CISCO, GE & Tejas made elaborate presentations followed with a interactive Q&A session. It emerged out that introduction of MPLS technology in Power Sector has become essential and can not be carried out with the current SDH technology for more time. However, many challenges are involved in Power Sector for monitoring and operation of Grid using applications such as SCADA, PMU, VoIP, Protection, AGC, Tele-Protection etc. Power System applications for Grid Operation compared to Telecom and Internet services are more critical as these applications require real time monitoring, low latency, redundancy and high reliability. Considering the same, the MPLS technology needs to be explored suitably for Power Sector communication requirements for new projects.

d) Another major challenge would be dovetailing of the legacy ISTS SDH communication networks constituting of approximately 70000 kms of OPGW. The existing SDH system shall be rolled out in a phased manner as it lives its life.

e) The above-mentioned aspects were detailed by the MPLS service providers and both options of MPLS i.e. TP & IP were advised.

f) It is also learnt that some STUs are using MPLS networks for the their Intra-State communication and they may share the detailed usage of the same.

g) It is proposed that the matter may be deliberated in depth with the various stakeholders to introduce the appropriate technology of MPLS for the new ISTS communication system elements and integration of the same with the existing SDH network. It is also proposed that a Pilot Project may be carried out to examine the various power system applications (SCADA, PMU, VoIP, Protection, AGC, Tele-Protection etc.) on MPLS network and bridging with existing SDH network.

h) Separate special RPC meeting can also be called to deliberate the matter in depth.

This agenda was deliberated in 25th NETeST meeting held on 25.05.2023.

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

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.8	**:**	**UPDATED STATUS OF IMPORTANT ISTS PROJECT, "KATHALGURI-NAMSAI 220 KV D/C TRANSMISSION LINE WITH 2X160 MVA, 220/132 KV SUB-STATION AT NAMSAI", BEING IMPLEMENTED BY POWERGRID THROUGH TBCB MODE AS NORTH EASTERN REGIONAL STRENGTHENING SCHEME-XV (NERSS-XV)- DOP, ARUNACHAL PRADESH**

Needless to iterate the top priority importance and urgency in completion of the project in system redundancy and capacity for not only to Arunachal Pradesh but for the entire NER. The matter was deliberated in the 23rd TCC and 23rd NERPC Meeting on 18th & 19th Nov. 2022, at Panaji, Goa, as recorded at Item No. D.15 at Page No. 70 in the Minutes (Record Notes) of Meeting.

POWERGRID, NERTS, may update current status and completion timeline of the project.

Deliberation of the TCC **:** The forum referred to the Sub-Committee meeting(s) for monitoring and status update.

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.9	**:**	**SEALING OF STEEL LINED HP TUNNEL AT SURGE SHAFT OF STAGE – I POWER STATION ALONG WITH REPLACEMENT OF BYPASS VALVES, BEND PIPES, PENSTOCK BUTTERFLY VALVES SERVOMOTORS ALONG WITH ACCESSORIES ETC OF STAGE-I POWER STATION - MePGCL**

PROPOSAL: supply and work for sealing of steel lined HP tunnel at surge shaft of stage – I power station along with replacement of bypass valves, bend pipes, penstock butterfly valves servomotors along with accessories etc at stage-I power station.

Explanatory Note:

Stage-I power station was commissioned in the year 1965 and during R&M of the power station which was completed in the year 2002 the Bypass Valves and the Bypass Valves bend pipes in both the Penstock Valve house have not been replaced due to loan constraint and their condition now is rather precarious due to water leakages from the bend pipes arising out of heavy corrosion over the years. These bend pipes needs to be replaced at the earliest as they posed the risk of a major catastrophe in the power station and the people living downstream, if bursting of the bend pipes occurs. Along with replacement of the bend pipes the Bypass Valves, servomotors and OPU including pipings etc., also need to be replaced as they are very old, malfunction and any operation has to be done manually through a hand pump.

It may be noted that for carrying out the above work, sealing of the Steel Lined HP Tunnels at the Surge shaft is mandatory and unavoidable in order to facilitate the replacement of the Bypass Valves and bend pipes etc, since the Steel lined HP Tunnel cannot be dewatered for fear of collapsing.

This work is very urgent to be taken up in view of the fact that the power generation of the downstream Stage II, Stage III, Stage IV and New Umtru Power Stations (NUPS) very much depend on the power generation of Stage I power station.The effect will be specially severe for Meghalaya and the NE in general.

The expected expenditure is about Rupees Three Crores.

MePGCL is requesting the forum to consider recommending the funding of this project from PSDF/Central Scheme in view of the present financial constraint in the organization.

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

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.10	**:**	**EXPEDITE CONSTRUCTION OF RESIDENTIAL BUILDINGS AT VARIOUS EHV SUBSTAIONS CONSTRUCTED UNDER NERPSIP TRANCHE I – DOP NAGALAND**

The list of 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. However, the Department has not received any official communication from the POWERGRID till date. Since the NERPSIP Tranche–I scheme is nearing completion, Powergrid is requested to ensure that the housing requirements for the new sub-stations are constructed at the earliest which are within the scope of the NERPSIP project. However, since the land holding system is peculiar in Nagaland and can at times become very sensitive, it is suggested that DoPN may be entrusted for construction of the buildings.

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

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.11	**:**	**STRINGING OF NEW 132KV SC LINE ON DC TOWER FROM TAMENGLONG TO KARONG ALONG WITH ASSOCIATED BAYS- MSPCL**

Over the years, power consumption in and around Tamenglong and Noney district (erstwhile Tamenglong district and bifurcated in 2016) has increased considerably. Power to the area is supplied from 33/11kV substations at Tousem, Tamenglong, Khoupum, Rengpang and Oinamlong which is fed from 1x12.5 MVA, 132/33 kV sub-station at Rengpang. Considering the vastness of the area, few 33/11 kV sub- stations are also being proposed. For a steady and regular power supply and to meet the ever-increasing demand, 132/33 kV substation at Tamenglong is being constructed under NERPSIP by PowerGrid Corporation. The construction of the substation is expected to be completed by July, 2023. However, in order to enhance the reliability of the power supply system in Tamenglong district and to help in completing the vision of MSPCL to form a ring structure of its 132kV substations, an alternate source of supply from 132/33 kV Karong which is also connected to the NER Grid is proposed.

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.

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

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.12	**:**	**STRINGING OF NEW 132KV SC LINE ON DC TOWER FROM KARONG TO HUNDUNG ALONG WITH ASSOCIATED BAYS. - MSPCL**

To supply and distribute the rapid increase in demand of power with the electrification of more and more villages in the state, a number of 132kV sub- stations were installed all over the state. In the past few years, the power scenario of Manipur has developed significantly. However, to further improve the power scenario and meet the ever-increasing power demand, MSPCL plans to form a ring structure of its 132kV substations.

132/33kV substations at Karong and Hundung are two existing substations of MSPCL. Hundung is being fed from 132/33kV substations at Yaingangpokpi and Karong is connected to the NER grid via the 132kV Imphal-Kohima line. To help in completing the vision of MSPCL to form a ring structure of its 132kV substations, stringing of new 132kV SC line on DC tower from Karong to Hundung along with associated bays is proposed.

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.

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

TCC noted as above.

This is for information of the RPC.

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

ITEM NO. E.13	**:**	**REQUIREMENT OF OUTAGE OF 400KV BONGAIGAON NEW SILIGURI#1&2 FOR RE-CONDUCTORING WORKS AND 400KV BAYS AT BONGAIGAON S/S FOR BAY UPGRADATION WORKS - PGCIL**

Under NERSS XII, following works have been approved: -

1. Reconductoring of 400kV Bongaigaon New Siliguri#1&2
2. Bay upgradation of following bays related to 400kV Bongaigaon New Siliguri#1&2
   a. 400kV Main Bay of NSLG#1
   b. 400kV Main Bay of ICT#1
   c. 400kV Tie Bay of NSLG#1 – ICT#1
   d. 400kV Main Bay of NSLG#2
   e. 400kV Main Bay of BR#1
   f. 400kV Tie Bay of NSLG#2 – BR#1

Bay upgradation work involves replacement of CT/CB/Isolators/CRP along with the reconductoring of Jack Bus portion also.

Accordingly, optimum outage requirement based on site condition was discussed in detail jointly with NERLDC/NERPC/NLDC during the special meeting on 06/06/23. However, NERLDC informed that the outage is not agreed during high hydro season by NLDC and suggested to avail the same after Sep'23.

Agenda was discussed in 203rd OCC meeting also wherein NERLDC mentioned that timeline for restoration of BR#1 Main Bay needs to be provided, details has been provided. However, vide email dtd 16/06/23, NLDC has informed to restore the bay and any upgradation work shall be allowed after high hydro season only i.e. after Sep'23.

It is pertinent to mention here that the completion schedule of the project is already over in Apr'23 due to various reasons and constraints of the region.

Presently, various executing agencies have already been mobilized at site after repeated persuasion but, the job could not be taken up due to non-allowing of the shutdown. Such situation is likely to cause demobilization of man and material by the agencies which will result further delay of the project beyond control. Thus, said situation needs to be avoided to avoid cost overrun of the project which will impact constituents

financially.

It may kindly be noted that for efficient execution of upgradation work in brown field projects, optimization of outage of elements is to be ensured for which redundancy has to be compromised otherwise the execution of the project will get badly hampered.

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

TCC noted as above.

This is for information of the RPC.

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

CATEGORY – F : RESOLUTIONS ADOPTED DURING THE 24th NERPC MEETING

The North Eastern Regional Power Committee (NERPC) unanimously resolved in the 24th NERPC meeting held on 28th June 2023 at Tawang, Arunachal Pradesh to strongly urge upon the Ministry of Power, Government of India, the following:

RESOLUTION. F.1 : HAND-HOLDING FOR ATLEAST 3 (THREE) YEARS FOR O&M OF THE ASSETS BEING CREATED UNDER NERPSIP AND COMPREHENSIVE SCHEME ON THEIR POST COMMISSIONING HANDING OVER TO THE STATES

Most of the NER States power departments and Utilities are functioning with severe shortage of manpower. States have informed of non-availability of adequate manpower to manage the assets created under the Comprehensive & NERPSIP Schemes. As per decision of the 22nd NERPC meeting held on 28th March 2022, the NER States had requested the central government for handholding for 3 years for managing the assets created under the Comprehensive and NERPSIP Schemes in the form of financial assistance for engaging additional manpower through regular recruitment or outsourcing. In response to the request, CEA had informed the decision of the central government requesting the States to recruit additional manpower and recover the expenditures by filing petition through respective State Regulatory Commissions.

However, as NER States are under financial constraint to bear the expenditure for the additional manpower requirement and also difficulty for them in abrupt creation of posts and recruitments thereof of such huge manpower, the only option left is to request for financial assistance from the Government of India for appointment of the required manpower on regular appointment or through outsourcing.

In view of above, the NERPC forum hereby strongly urges the Ministry of Power, Govt. of India to extend handholding for at least 3 years for managing the assets created under Comprehensive and NERPSIP projects in the form of financial assistance for recruitment of adequate manpower on regular basis or through

outsourcing. The manpower requirement could be estimated as per standard norms of POWERGRID for effective operation and maintenance of the assets.

RESOLUTION. F.2	**:**	**PROVISION FOR BUILDING/CIVIL WORKS FOR ESTABLISHING STATE OF THE ART TRAINING CENTRES AND VIDEO CONFERENCING FACILITIES UNDER CAPACITY BUILDING AND INSTITUTIONAL STRENGTHENING (CBIS) OF COMPREHENSIVE AND NERPSIP PROJECTS**

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 States of NER, proper training institutions and infrastructure are inadequate.

In the Comprehensive Scheme Project for Arunachal Pradesh and NERPSIP for 6 States of NER, under the Capacity Building & Institutional Strengthening Scheme (CBIS), creation of State-of-the-Art Training Center in all the NER states has been envisaged. In this scheme, it was informed by POWERGRID (Implementing Agency) that equipment for the training centers would be provided but provision for construction of building and other civil works for the training centers are not included. Further, video conferencing facilities connecting training centers and important offices of the Power Utility has not been included in the Scheme.

Considering the financial constraint of NER States, the NERPC forum hereby strongly urges the Ministry of Power, Govt. of India to consider - under Capacity Building & Institutional Strengthening (CBIS) of Comprehensive Scheme and NERPSIP - inclusion of the following:

(i) Provision for construction of Building and civil works for establishing State of the Art Training Centers

(ii) Video conferencing facilities at Training Centers, Corporate/Head Office, SLDC, major EHV Substations and Important Field Offices.

DATE & VENUE OF THE NEXT MEETING

The next meeting ie., 25th TCC & 25th NERPC meeting(s) is proposed to be held in the month of December, 2023. As per roster, NTPC will be the host for the 25th TCC/RPC Meetings.

RED (ER-II), NTPC stated that NTPC would be ready to host the 25th TCC & 25th NERPC meetings.

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ANNEXURE - I

LIST OF PARTICIPANTS IN 24th TCC MEETING

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
1.	ARUNACHAL PRADESH	Sh. Gingo Lingi	Chairman TCC & CE (CEZ)
2.		Sh. T. K. Tara	CE (P), TP&MZ
3.		Sh. Nangkong Perme	SE (E), SO&PSC & Head of SLDC
4.		Sh. Z. Nasho	EE (Com.)
5.	ASSAM	Sh. Dulap Ch. Das	CGM (TRC)
6.		Sh. Dilip Kumar Das	CGM (Gen.)
7.		Sh. S. K. Saikia	GM (PO&D)
8.		Sh. Tridip Borah	AGM (T), AEGCL
9.		Sh. Nillutpal Baruah	AGM (SO), SLDC
10.	MANIPUR	Sh. N. Jasobanta Singh	GM (SLDC)
11.		Sh. H. Debeswar Singh	DGM (CSD-II)
12.	MEGHALAYA	Sh. F. E. Kharshing	CE (Dist.)
13.		Sh. J. Hynniewta	CE (T)
14.		Sh. B. Nikhla	SE (Gen-II)
15.		Sh. M. K. War	EE (SLDC)
16.	MIZORAM	Sh. H. Zonunsanga	CE (P&ED)
17.		Sh. J. H. Malsawma	SE (P&ED)
18.		Sh. Lalzorama	SE (P&ED)
19.		Sh. H. Lalruatkima	Sr.EE
20.	NAGALAND	Sh. Kasho Chishi	ACE (T&G)
21.		Sh. Er. R. Suohu	SE (SLDC)
22.		Sh. S. I. Asangba Tikhir	EE (SLDC)
23.		Sh. Mhonlumo Kikon	EE (Dist.)
24.	TRIPURA	Sh. Debasis Sarkar	MD, TSECL
25.		Sh. Ranjan Debbarma	GM, TPTL
26.		Sh. Anil Debbarma	DGM (SLDC)
27.	NHPC	Sh. S. Adhikari	Gr.GM, HoD (O&M)
28.		Sh. N. Yugandhar	GSM
29.	NERLDC	Sh. N. Roy	Executive Director
30.		Sh. S. C. De	Sr. GM
31.		Sh. Royal Sutnga	Engineer (E)

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
32.	POWERGRID (NERTS)	Sh. U. Kataki	CGM I/c NERTS
33.		Sh. P. Kanungo	CGM (AM)
34.		Sh. Ankit Vaish	DGM (AM)
35.	POWERGRID (COMPREHENSIVE)	Sh. P. V. S. Sudhakar	CGM
36.		Sh. Ashish Agrawal	Sr. DGM
37.		Sh. Pankaj Kumar	Chief Manager
38.	POWERGRID (NERPSIP)	Sh. K. K. Gupta	CGM I/c NERPSIP
39.		Sh. Balbir Singh	CGM
40.		Sh. P. K. Das	Sr.GM
41.	NEEPCO	Sh. B. Maharana	Director (Finance)
42.		Smti. Debjani Dey	Executive Director (O&M)
43.		Sh. D. Choudhury	CGM (Comml.)
44.		Sh. Mukul Sarma	GM (E/M)
45.		Sh. Susanta Deka	GM (Comml.), O/o ED (Comml.)
46.		Sh. Bivash Sen	GM (E/M), O/o ED (O&M)
47.	NTPC	Sh. P. Majumdar	RED (ER-II)
48.		Sh. S. K. Pradhan	Addl. GM (Comml.)
49.	CTUIL	Smti. Sangita Sarkar	Ch. Manager
50.		Sh. Kaushal Suwan	Manager
51.	KMTL	Sh. Harish Dhir	Head-Transmission
52.		Sh. Manoj Gupta	Sr. Manager
53.	NERPC	Sh. K. B. Jagtap	Member Secretary
54.		Sh. S. M. Aimol	Director
55.		Sh. A. Agrawal	Dy. Director
56.		Sh. S. Ranjan	Dy. Director
57.		Sh. V. Shankar	A. E. E
58.		Sh. A. Goswami	A. E

ANNEXURE – II

LIST OF PARTICIPANTS IN 22ND NERPC MEETING

1. Sh. Chowna Mein — Hon'ble Dy. Chief Minister & I/C Power, Govt. of Ar. Pradesh & Chairman, NERPC
2. Sh. Ratan Lal Nath — Hon'ble Minister (Power), Govt. of Tripura
3. Sh. Balo Raja — Hon'ble MLA & Adviser (Power), Govt. of Arunachal Pradesh

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
4.	ARUNACHAL PRADESH	Sh. A. K. Bisht	Secretary (Power) (Online)
5.		Sh. Bunu Tago	PRO to Hon'ble Advisor (Power)
6.		Sh. T. K. Tara	CE (P), TP&MZ
7.		Sh. Nangkong Perme	SE (E), SO&PSC & Head of SLDC
8.		Sh. Made Nalo	SE (E), Dirang
9.		Sh. Gyati Atto	EE
10.		Sh. Zamba Nasho	EE (Com)
11.		Sh. Sange Phuntso	EE (E), Tawang
12.		Er. Sajish Kr. K. P	EE, DHPD
13.		Er. Lama Tsering	EE, DHPD
14.		Er. Tayo	AE, PWD
15.		Er Dondup	AE, DHPD
16.		Er. Y. D. Shichaji	AE (Elect)
17.		Er. Mindu Phuntso	AE (Elect)
18.		Sh. T. Tsering	AE, DHPD
19.		Sh. Tadar Mekum	JE, PWD
20.		Sh. Tashi Wangdi	JE
21.		Sh. Takar Batak	Dy. Manager, HPDCAPL
22.	ASSAM	Sh. Dulap Ch. Das	CGM (TRC)
23.		Sh. Dilip Kumar Das	CGM (Gen.)
24.		Sh. S. K. Saikia	GM (PO&D)
25.		Sh. Tridip Borah	AGM (T), AEGCL
26.		Sh. Nillutpal Baruah	AGM (SO), SLDC
27.	MEGHALAYA	Sh. F. E. Kharshing	CE (Dist.)
28.		Sh. J. Hynniewta	CE (T)

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
29.		Sh. B. Nikhla	SE (Gen-II)
30.		Sh. M. K. War	EE (SLDC)
31.	MIZORAM	S. H. Zonunsanga	CE (P&ED)
32.		Sh. J. H. Malsawma	SE (P&ED)
33.		Sh. Lalzorama	SE (P&ED)
34.	NAGALAND	Sh. Kasho Chishi	ACE (T&G)
35.		Er. R. Suohu	SE (SLDC)
36.		Sh. S. I. Asangba Tikhir	EE (SLDC)
37.		Sh. Mhonlumo Kikon	EE (Dist.)
38.	TRIPURA	Sh. Debasis Sarkar	MD, TSECL & TPGL
39.		Sh. Ranjan Debbarma	GM, TPTL
40.		Sh. Anil Debbarma	DGM (SLDC)
41.		Sh. Debabrata Pal	Sr. Manager (Online)
42.	CTUIL	Smti. Sangita Sarkar	Ch. Manager
43.		Sh. Kaushal Suwan	Manager
44.	NLDC	Sh. S. C. Saxena	Executive Director (Online)
45.	NERLDC	Sh. N. Roy	Executive Director
46.		Sh. S. C. De	Sr. GM
47.		Sh. Royal Sutnga	Engineer (E)
48.	POWERGRID	Sh. R. K. Tyagi	Director (O) (Online)
49.		Sh. U. Kataki	CGM I/c
50.		Sh. P. Kanungo	CGM (AM)
51.		Sh. Ankit Vaish	DGM (AM)
52.	NTPC	Sh. P. Majumdar	RED (ER-II)
53.		Sh. S. K. Pradhan	Addl. GM (Comml.)
54.		Sh. G. C. Mohapatra	AGM (Online)
55.		Sh. Samir Haloi	DGM (Coml.) (Online)
56.	NHPC	Sh. S. Adhikari	Gr.GM, HoD (O&M)
57.		Sh. N. Yugandhar	Gr. SM
58.	NEEPCO	Sh. B. Maharana	Director (Finance)
59.		Smti. Debjani Dey	Executive Director (O&M)
60.		Sh. D. Choudhury	CGM (Comml.)

SN	ORGANISATION	NAME (S/SHRI)	DESIGNATION
61.		Sh. Mukul Sarma	GM (E/M)
62.		Sh. Susanta Deka	GM (Comml.), O/o ED (Comml.)
63.		Sh. Bivash Sen	GM (E/M), O/o ED(O&M)
64.		Sh. Joypal Roy	GM (E/M) (Online)
65.		Sh. Munin Choudhury	GM (Coml.) (Online)
66.	**POWERGRID (COMPREHENSIVE)**	Sh. P. V. S. Sudhakar	CGM
67.		Sh. Ashish Agrawal	Sr. DGM
68.		Sh. Sh. Pankaj Kumar	Chief Manager
69.	**POWERGRID (NERPSIP)**	Sh. K. K. Gupta	CGM I/c NERPSIP
70.		Sh. Balbir Singh	CGM
71.		Sh. P. K. Das	Sr. GM
72.		Sh. Raktim Konwar	Manager (Online)
73.	**OTPC**	Sh. Sanil C. Namboordiripad	MD (Online)
74.		Sh. Arup C. Sarmah	CCO (Online)
75.	**PTC**	Sh. Harish Saran	Executive Director (Online)
76.	**KMTL**	Sh. Harish Dhir	Head-Transmission
77.		Sh. Manoj Gupta	Sr. Manager
78.	**CEA**	Sh. B. K. Arya	Member (GO&D) (Online)
79.	**NERPC**	Sh. K. B. Jagtap	Member Secretary
80.		Sh. S. M. Aimol	Director
81.		Sh. A. Agrawal	Dy. Director
82.		Sh. S. Ranjan	Dy. Director
83.		Sh. V. Shankar	A. E. E
84.		Sh. A. Goswami	A. E

Annexure-III

SPEECH OF SHRI GINGO LINKI
TCC CHAIRMAN & CE, DOP ARUNACHAL PRADESH
ON THE OCCASION OF THE 24TH MEETING OF THE
TECHNICAL COORDINATION COMMITTEE MEETING
HELD ON 27TH JUNE, 2023 AT TAWANG ARUNCHAL PRADESH

On behalf of the Government of Arunachal Pradesh, I extend a warm welcome to all esteemed members gathered here today at the 24th TCC Meeting in the beautiful town of Tawang, in my home state - Arunachal Pradesh.

In this captivating setting, where nature's beauty seamlessly blends with human endeavours, we have come together to acknowledge the vital role we play as stewards of the power systems. We are not mere spectators, but active participants in the ongoing journey of power system evolution.

From the seminal discovery of electricity to the subsequent inventions of transformative technologies, the power sector has been the catalyst that ignites progress and shapes the course of human development. Our collective efforts have lit up cities, fuelled industries, and powered the aspirations of billions.

Today, it is needless to reiterate that **per capita power consumption** stands as a crucial indicative metric for measuring the progress and prosperity of a nation. It is important to recognize that significant disparities in power consumption persist across the globe. For instance, the world's largest economy boasts the highest per capita power consumption, reinforcing the notion that access to reliable and abundant power is a fundamental driver of progress and development.

In Asia, we witness a wide variation in the power scenario among different nations. This disparity serves as a reminder of the pressing need for collaborative efforts and knowledge sharing to bridge gaps and ensure sustainable power systems across the continent.

Annexure-III

India, being a rapidly growing and evolving nation, embraces a unique blend of challenges and opportunities in the power sector. Significant progress has been made in expanding access to electricity, yet it is important to recognize that certain regions still encounter issues with unreliable power supply. Despite these challenges, India's per capita power consumption was 1255 kWh in 2021-22 compared to 329 kWh in 1990, reflecting commendable growth and development, however, when compared to the global average, there is still huge room for improvement as India's consumption remains approximately one-third of the global average. This disparity highlights the need for continued efforts in implementing innovative solutions and robust strategies to fulfil the escalating energy demands driven by our nation's rapid progress.

Within India, the North-Eastern Region (NER) presents a distinct set of circumstances with the region ranking lowest in per capita consumption.

Endowed with tremendous power generation potential, the NER also grapples with geographical and infrastructural limitations that pose significant challenges. To harness the region's full potential, it is imperative for all constituents to come together and foster effective collaboration.

The vision for the North-Eastern region entails the establishment of platforms such as the NER Power Committee forum, where stakeholders can collaborate and support each other. Through this forum, we can align aspirations and address the unique power requirements of each constituent. It provides an opportunity for **shared learning**, **resource optimization**, and **sustainable power development** within the region.

It is essential to give due attention to the aspirations of smaller constituents within the NER. Each state possesses distinct needs and aspirations, and it is

through the collective support and collaboration fostered by the forum that these aspirations can be realized.

A shining example of this potential lies in Arunachal Pradesh, where the abundance of hydropower resources holds immense promise. The state has made significant progress in power generation, but it also faces challenges such as environmental concerns, infrastructural development, and limitations in the transmission network. By collectively addressing these challenges, we can unlock the full potential of Arunachal Pradesh, benefiting not only the state but the entire region as well. As the home state to the largest hydro power station in the region; we are still confronted by the constraints within our own network. Currently, a considerable portion of the state relies on a radial line for power supply, which we are relieved to learn that it will soon be changing, with the immediate commissioning of the Roing-Chapakhuwa line. For this I am immensely thankful to the entire NER forum, for constantly rendering support and focusing on the early completion of this crucial interconnectivity.

The challenges we face in the realm of power systems are intricate and multifaceted. In the moments ahead, let us harness the collective wisdom, expertise, and experiences present in this room. Through our joint efforts and collaboration, we can handle the challenges ahead and meet our aspirations together.

Welcome, once again, to this pivotal gathering of minds and visionaries.

Thank you.

Annexure-IV

WELCOME SPEECH BY SHRI BALO RAJA
HON'BLE MLA & ADVISOR (POWER), ARUNACHAL PRADESH
ON THE OCCASION OF THE 24TH MEETING OF THE
NER POWER COMMITTEE (NERPC) MEETING
HELD ON 28TH JUNE, 2023 AT TAWANG ARUNCHAL PRADESH

Hon'ble Chairman (NERPC) and the Deputy Chief Minister, Arunachal Pradesh Sri Chowna Mein-ji, Hon'ble Minister of Power, Government of Tripura, Sri Ratan Lal Nath-ji, Member Secretary, NERPC Sri K. B Jagtap-ji, Officials and officers from the Central as well as the State Power Utilities, Distinguished Guests, Friends from the Media Houses, Ladies and Gentlemen;

It gives me great pleasure to welcome you to the 24th Meeting of the North East Regional Power Committee here at beautiful city of Tawang.

I on behalf of the State of Arunachal Pradesh and the Department of Power sincerely welcome the Chairman of NERPC Sri Chowna Mein-ji for his kin and personal interest of holding this meeting here at Tawang. His vision for development of NER in Power Sector is clear from his unprecedented enthusiasm in hosting this event.

I also welcome the entire team of NERPC lead by its Member Secretary Sri K B Jagtap ji. I am very much privileged to have this opportunity to address and welcome the gathering of who-is-who of the great minds and personalities of the region in Power sector of North East. I, therefore, consider it as a life time opportunity to address you and to be a part of the great forum of much importance. I welcome you all from the core of my heart.

I hope your journey to Tawang has been good and enjoyable. Hospitality is a primary part of our life and we are natural believers in the principle of "Atithi-devo-bhava." We have tried our level best to provide the best of accommodation, food, and other logistic support here at Tawang to make your visit comfortable and memorable. We had also tried to make your travel to Tawang and stay on the way on transit as comfortable as possible. I hope we could fulfil our principles of hospitality.

Despite our believe and sincere efforts there might have areas and instances where we might have failed to fulfil your wishes and expectations. I request to bear with us, especially in the quality of accommodations in some Hotels. Although we have chosen the best and leading hotels of the city, I am made to understand that some of the rooms were not up-to the mark. I, on behalf the Department of Power, express our sincere regret from the core of my heart.

This meeting was earlier scheduled on 16th May 2023 but had to be postponed on circumstances beyond our control. Many of our esteemed members might have been put to unexpected difficulties on account of postponement. I on behalf of the Department and the State government apologise sincerely. It was painful for us to put you into such difficulties and inconvenience.

All of you will also agree with me that organising a meeting of this level is not an easy one. I wish to congratulate the organising team of Power Department and District Administration of both Tawang and West Kameng districts for making this event wonderful and nice.

I once again welcome all of you to this august forum. May the Almighty Lord Budha to bless all of us for a meaningful and purposeful deliberation session ahead!

Jai Hind! Jai Arunachal!

Annexure-V

SPEECH BY SHRI CHOWNA MEIN

CHAIRMAN, NERPC

&

HON'BLE DEPUTY CHIEF MINISTER, ARUNACHAL PRADESH

ON THE OCCASION OF THE 24TH MEETING OF THE

NER POWER COMMITTEE (NERPC) MEETING

HELD ON 28TH JUNE, 2023 AT TAWANG ARUNCHAL PRADESH

My Dear Colleague Ministers from North-Eastern States, Officers of the Central and State Governments, Officers from other Central and State Power Utilities, Distinguished Guests, Special invitees, Ladies & Gentlemen!

At the outset, I would like to welcome each one of you in the 24th North Eastern Regional Power Committee (NERPC) meeting here today at Tawang, a land of endless beauty and historically strategic significance. On behalf of the Department of Power, Government of Arunachal Pradesh, I am thankful for the opportunity to host the **24th Technical Coordination Committee (TCC)** and **24th NERPC meetings** here in Tawang. It is really a great privilege for me to be in this august forum, this time in its Chair, where important issues concerning power sector of the region are deliberated.

I am sure that like previous NERPC meetings, this 24th NERPC meeting too shall bring fruitful resolution on various issues of our region and will act as a guiding light for overall development of power sector in the North Eastern Region. On behalf of the people of Arunachal Pradesh, I bring my heartiest and warmest greetings to all the participants with great confidence that meaningful deliberations will take place for further significant quantum improvement of the power sector of our region.

Challenges for the North Eastern Region:

The North Eastern region of India has seen a very distinct and unique development story. Our region has for long experienced numerous challenges in the form of poor connectivity with the mainland, difficult mountainous terrains and heavy monsoons. As a result, slow infrastructural development has been possible. These challenges have been hindering in achieving the true growth potential of the region. However, These challenges

provide us with immense opportunities to work: and I believe, power sector can take a lead in the development story of this region. This makes the forums like NERPC very important as energy is one of the major driving force for economic growth and social transformation of the people of the region.

Significance of Energy in the Socio-Economic Development:

The importance of Power Sector can be seen from the fact that it is one of the eight core industries in the calculation of Index of Industrial Production (IIP). Power not only acts as one of the raw materials for any modern industry but also is basic necessity for general public. This makes power, one of the most important ingredient commodities of our times. Herein we find that NERPC is the most appropriate forum to discuss such issues of power sector in the region. There is a need to collectively try and bring about some consensus on the various complicated issues and we should also use this forum to collectively present our common aspirations, views and issues to the Government of India, in the interest of all constituents.

We are all aware that in the last (23rd) meeting of NERPC which was held in November 2022, many important issues common to regional interest on power sector were discussed and collective decisions were taken, and resolutions adopted. I hope that, on the occasion of this 24th meeting of the North Eastern Regional Power Committee too, we will be able to address and resolve many more issues in the same collective spirit.

Lead Role of NERPC in the Region:

I am also aware that, NERPC has been striving relentlessly towards making the regional power system operations of North East more reliable, resilient, efficient and economically viable; and I look with great hope and expectations towards a positive outcome from today's discussions and deliberations. I understand that the 24th Session of the TCC was held yesterday; and I am sure that many operational and technical issues were resolved and the TCC must have also discussed elaborately on how the power sector and its system in the North Eastern Region could be taken

forward in a progressive manner for approval and recommendations of the Regional Power Committee.

On behalf of the entire North Eastern States, I would like to place on record my sincere gratitude to the Government of India for the continued and constant support to the growth of North Eastern Region, especially in regard to the Power sector. Following are worth mentioning Sub-Sector projects provided to NE Region:

Augmentation & Strengthening of Intra-State Transmission & Distribution Systems:

Launched by the Government of India, the projects, namely, the "**Comprehensive Scheme for Strengthening of Transmission & Distribution System** in **Arunachal Pradesh & Sikkim"** and "**North Eastern Region Power System Improvement Project" (NERPSIP)** are among such important programmes being implemented by POWERGRID through the initiative of Ministry of Power, Government of India. On completion of these projects, all the North Eastern States are going to be immensely benefited. Through this project, the much-needed intra-state infrastructural networks of transmission and sub-transmission lines and sub-stations are presently being laid and installed across several areas and locations, which are at various stages of progress.

I take this opportunity to urge upon the POWERGRID, the implementing Agency, to speed up the work of these projectsto ensure completion within the scheduled timeline so that the fruits of envisioned benefits of the projects are reaped & delivered in time. I would also suggest and urge POWERGRID to expedite early commissioning of the infrastructures of those areas and locations where no Right of Way (RoW) issues or other administrative hurdles exist; and hand over such infrastructural assets to states for their immediate purposeful utilization. Further, for swift completion of certain works pending execution due to specific localized severe RoW issues or administrative hurdles, POWERGRID may also explore reasonable rejigs in implementation plan in close coordination with respective state utilities for certain deviations in routes & relocations which

bear no significant financial implications, wherever feasible, to avoid prolonged delays and unnecessary time & cost overruns in attempting to resolve such unyielding specific localized RoW issues.

Capacity Augmentation and Strengthening of Redundancy in Regional Inter-State Transmission Systems (ISTS):

Besides, the Cross-Border and Inter-Regional ISTS projects are being developed in North Eastern Region for catering to the national perspective and strategic power evacuations needs of the several existing and huge upcoming Hydro Electric Projects of NER, particularly of Arunachal Pradesh. The Government of India has also pushed a number of Intra-Regional ISTS projects with the scope of common explicit need of North Eastern Region through Tariff Based Competitive Bidding (**TBCB**) and Regulated Tariff Mechanism (**RTM**) routes under various packaged schemes of "**North Eastern Region Strengthening Schemes" (NERSS)**, some of which have been completed and many others are at various stages of implementations. On completion of these fast-evolving power network initiatives, our region is destined to achieve rapid development within a period of few year from now, that would bring in a paradigm change and usher huge economic and social development of this land locked region which was left unattended till some years ago.

Following are some of the noteworthy projects initiated under the North Eastern Region System Strengthening Schemes (**NERSS**) in this direction:

i. **"Pare Hydro Electric Project (NEEPCO) – North Lakhimpur Double Circuit 132 kV Line with LILO of One Circuit at Nirjuli (POWERGRID) Sub-Station"** under the **"North Eastern Region Strengthening Scheme-IX" (NERSS-IX),** being implemented by **Sterlite Power Transmission Limited**. Scope of this project shall strengthen the evacuation capacity and grid connectivity redundancy to **Panyor (405 MW)** and **Pare (110 MW**) **Hydro Electric Projects** in Arunachal Pradesh into and with NER Grid.

ii. **"Establishment of 220/132 kV Sub-Station at Nangalbibra", "North Eastern Region Strengthening Scheme-V" (NERSS-V):**

This project with major scope of 2x 160 MVA, 220/132 kV Sub-Station at Nangalbibra in Meghalaya, Bangaigaon (POWERGRID) – Nangalbibra 400 kV D/C line and Hatsinghmari (Assam) – Ampati (Meghalaya) 132 kV D/C line, besides benefitting Meghalaya shall hugely boost the capacity and & redundancy of the regional transmission system.

iii. **"Biswanath Chariali (POWERGRID) – Itanagar 132 kV D/C line", under "North Eastern Region Strengthening Scheme-IIB" (NERSS-IIB):** This project completed two years back under TBCB mode by Sterlite Powers is serving the redundancies of transmission connectivity in the region as well as evacuation of Panyor and Pare Hydro Electric plants.

iv. **"Roing (POWERGRID) – Chapakhowa (AEGCL) 132kV D/C line", under "North Eastern Region Strengthening Scheme-X" (NERSS-X)**: This project, implemented under RTM mode and being commissioned is going to change the power scenario of Central Arunachal Pradesh and Upper Assam in terms of availability and reliability due to inter connectivity redundancy and transmission capacity.

v. **"Kathalguri (NEEPCO) – Namsai (POWERGRID) 220 kV D/C line", under "North Eastern Region Strengthening Scheme-XV" (NERSS-XV),** being implemented by POWERGRID under TBCB shall further boost the transmission capacity and redundancy of Central Arunachal and Upper Assam to a large extent.

Renovation & Overhauling of Distribution Systems for Loss Reductions and System Efficiencies:

With the aim **to reduce** the prevailing huge Aggregate Technical & Commercial **(AT&C)** losses across all the distribution systems **to Pan-India** levels of **12-15%** as well as for **reduction** of the **gap** between Average Cost of Supply **(ACS)** and Average Revenue Realized **(ARR) to Zero** within the specified timeline, the Government of India has also been very generous to roll out and sanction the most relevant and much-needed innovative scheme of "**Revamped Distribution Sector Schemes" (RDSS),** for renovation and

overhauling of all the old distribution systems. This pioneering scheme when implemented in its true spirit as aimed, will revolutionize the technical & commercial performance efficacies of the distribution areas of the power sector in the region. Therefore, I seek the sincere & dedicated cooperation of all constituent member states of NER in the smooth implementation of this most important reforms-based and results-linked distribution scheme.

Commercial Sustainability of Regional Power Sector:

I would also like to add and emphasize that timely payment of dues and outstanding bills to the Central Public Sector Undertakings **(CPSUs**), like PGCIL, NEEPCO, NTPC and other Generating Companies and Utilities, also a matter to be taken seriously by the Distribution Companies (DISCOMS) and State Governments. We all should acknowledge that buying and selling as well as timely settlement of dues are the basic requirement for sustainable running of any business. We also understand that many of our DISCOMS are in a financial stress as the gap between the cost of supply and realization is increasing due to which the Distribution Utilities are overburdened with accumulated outstanding dues. I would, therefore, further urge all the states to fully utilize the **Revamped Distribution Sector Schemes**, which can potentially turnaround the financial distress of the NER DISCOMs and State Power Departments.

Exploitation of Hydro potential of NE Region:

i. We all know that North Eastern Region is endowed with bountiful natural resources. Most of the existing and upcoming power projects in North Eastern Region are also hydro based. However, due to the geological uncertainties, commissioning of hydro projects get delayed because of which the tariffs are becoming relatively higher. Nevertheless, since hydro projects are the most potential area of green power generation, I request the project developers and their executing agencies to take up these challenges with more innovative and holistic eco-friendly designs with the viable objective of energy generation at lower tariff while ensuring

undisturbed natural ecology and put up all efforts for timely commissioning of the projects.

ii. On 2nd November 2021, while addressing the **26th meeting** of the Conference of the Parties **(COP),** Hon'ble Prime Minister, Shri Narendra Modiji laid forward "**PANCHAMRITS**", which will be an unprecedented contribution of India for climate action; wherein it has been pledged that, by the year 2030, India will take its non-fossil energy capacity to 500 GW by meeting 50 percent of its energy requirements from renewable energy sources while reducing the total projected carbon emissions by one billion through reduction of the carbon intensity of its economy by less than 45 percent to achieve the target of Net Zero by the year 2070.

iii. These goals are very ambitious and bold decision of the country, which could be achieved with a proper plan and implementation in a systematic way, for which Arunachal Pradesh may and will play vital role as contributory constituent of our region with the nation towards meeting one of the major global obligation.

iv. As per the study carried out by the Central Electricity Authority (**CEA**) and other individual power developers, the **total hydro power potential of Arunachal Pradesh** is estimated at over **57,000 MW**. Besides this, the estimated **potential for** development of **micro/mini/small hydro projects** is around **1,600 MW**. Thus, Arunachal Pradesh emerges as the front runner state of the Union of India as far as hydropower potential is concerned. This roughly amounts more than **10% of the total target set in COP-26.**

v. To harness this Hydro Power Potential of state, in the past few years Arunachal Pradesh had signed about 150 Memorandum of Agreements **(MoAs)** with various CPSUs and Independent Power Producers with a combined capacity of **46,943 MW**. However, most of the developers failed to proceed with the project development. But, in recent time, thrust has been given for transferring these projects to CPSUs. With the active association of Government of India, **29** such **projects** having **combined capacity** of **32,415 MW**

have been **identified** and are in the **process of transfer to CPSUs** from the **private developers**.

vi. I am pleased to share that the **Hon'ble Union Power** and **New & Renewable Energy Minister, Shri R.K. Singh**, held a **meeting** in New Delhi to **review the progress** of **Subansiri Lower Hydroelectric Project (2,000 MW)**, which is being executed by National Hydroelectric Power Corporation Ltd**. (NHPC).** The Hon'ble Power Minister, reviewed the construction progress, safety aspects related to the project and preparedness required to be undertaken in view of upcoming monsoon season. The Chairman & Managing Director **(CMD)** of **NHPC** had assured that the company is striving to **commission two units** of combined capacity of **500 MW** in **January 2024,** followed by **other 6 units** in intervals **during** the year **2024.**

Immediate Requirements of Human and Financial Resources for Operational Maintenance of upcoming Assets under Comprehensive Scheme and System Improvement Project:

I am sure, most of the participating constituent members of North Eastern Region here will agree that, with creation of the above huge assets under the Government of India sponsored and supported **Comprehensive Scheme for Arunachal Pradesh & Sikkim** and **System Improvement Project** of the constituent states, there will be abrupt additional requirements of human and financial resources for post handing over operation and maintenances of such assets I am given to understand that earlier the matter had been deliberated at regional platforms and requested Central Government for extending handholding supports for certain initial critical years, pursuant to which Ministry of Power, Government of India, is understood to have conveyed certain decisions to all states recently on the matter. I hope, members would discuss on the matter for evolving a consensus view and resolution, if any, on this important subject.

Some Developments in Arunachal Pradesh:

Taking this opportunity, I would also like to share a few points on the Power Scenario in Arunachal Pradesh:

i. Arunachal Pradesh is a young state in the area of transmission system development. We have one of the smallest systems in terms of grid size and electrical power consumption. Despite that, we achieved significant development in the infra-structure field in other areas and have gained development momentum significantly to catch up at par with the sister states of North East and with rest of the country as well.

ii. Talking about the immediate transmission inter connectivity needs of Arunachal Pradesh, we are grateful to the dedicated team of POWERGRID for having successfully completed the most vital redundant inter-connectivity link of Roing-Chapakhowa 132 kV Double Circuit Transmission Line despite many hurdles.

iii. Further, I take this opportunity to appeal to the POWERGRID to find ways and means in the same spirit for early restoration of normalized system of the Pasighat-Roing 132 kV transmission line which has long remained precarious at certain locations at bank of Dottung river in Lower Dibang Valley district through Emergency Restoration System (ERS) since 2020 reportedly hindering continuity of OPGW in the line. This line is unequivocally critical in reliability of power in the state.

iv. Similarly, it is expected that the Kathalguri-Namsai 220 kV Double Circuit Transmission System being executed by POWERGRID under Tariff Based Competitive Bidding **(TBCB)** route shall be completed within the scheduled timeline. Our government shall extend all support to achieve the target in time.

Need for Strengthening of Inter-State Transmission System:

Further, for caring evacuation facilities to various upcoming hydroelectric plants being developed by various agencies in the state and to pool and transmit such power through and beyond the North Eastern Region, as well to enable availability of adequate power for the upcoming industrial consumers at various industrial and economic zones in the state, timely

planning and implementation of the required Inter-State Transmission System infrastructure networks at higher voltage levels are to be carried out for system capacity addition for overall benefit of the region and the nation. I hope that all constituents shall agree with this proposal and support the same to enable NERPC to push forward the proposal.

Utilization of the Power Generation in Bhutan:

In addition to growing needs of general public, civil administrative and allied services establishments, and further considering the constant defence related demands for a reliable and stable grid supply to the huge military establishments in the strategic Tawang and enroute West Kameng border districts of Arunachal Pradesh, I once again remind about the proposal for establishment of a suitable transmission line between Lumla in Tawang (India) and 600 MW Kholongchu Hydro Electric Power Station in Bhutan, which I had raised in the earlier 22nd NERPC meeting on 28th March 2022 at Guwahati as recorded at item A. 12 of the Minutes. The bee-line length of the proposed line is about 40 kilometres. This proposal is for ensuring system redundancy and to avoid the unreliability of upcoming long radial line from Khuppi to Tawang via Bomdila under Comprehensive Scheme due to the hostile climate and geo-topographical conditions. Besides need of meeting the national security aspect, such connectivity, apart from improving the reliability of both the Grids of India and that of Bhutan, will help in furtherance of heart-to heart connectivity among the people of both the countries by way of bilateral exchange of energy in times of needs, which would enhance the age-old bilateral relationship with Bhutan while making our region more visible in the international electricity market. Hence, I propose to the planners and the stake holders present here, specially the participants from Ministry of Power and NERPC, to facilitate a feasibility study on the matter and come out with a tangible policy decision as per norms associated with international exchange of power. I believe the members of this Regional Committee will support this idea.

Once again, on behalf of NERPC, I once again extend my heartiest greetings to all the participants and look forward to very meaningful and successful deliberations.

As witnessed by the delegates present here, I am proud to say that my State is a beautiful one and would like to extend my invitation to visit us again. We will be happy to host you any number of times.

JAI HIND!

SPEECH BY SHRI RATAN LAL NATH
HON'BLE MINISTER (POWER), TRIPURA
ON THE OCCASION OF THE 24TH MEETING OF THE
NER POWER COMMITTEE (NERPC) MEETING
HELD ON 28TH JUNE, 2023 AT TAWANG ARUNCHAL PRADESH

Hon'ble Dy. Chief Minister, Arunachal Pradesh and Chairman of NER Power Committee (NERPC) Shri Chowna Mein ji, my 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. I am privileged to attend the 24th North Eastern Regional Power Committee Meeting today here in Tawang, Arunachal Pradesh. It is my first opportunity to be in this August gathering and I thank the North Eastern Regional Power Committee for organizing this meeting under the aegis of the Department of Power, Government of Arunachal Pradesh. I understand NERPC is the most apposite forum to discuss and bring about some consensus on all the pertinent issues which are being faced by the power sector in the North Eastern Region. In the interest of North Eastern States, this opportunity should also be utilized to collectively present the common views and issues to the Government of India.

3. As we all know, while addressing on the recent occasion of India Energy Week 2023 at Bengaluru, Sh. Narendra Modiji, the Hon'ble Prime Minister gave a clear insight on how the entire world is witnessing India's commitment and efforts regarding green energy growth and transition since 2014. The renewable energy capacity in India has increased from about 70 Giga Watt (GW) to about 170 Giga Watt (GW) in the last nine years. The solar power capacity has also increased more than 20 times. Today India ranks fourth in the world in terms of wind power capacity. The mantra of Reduce, Reuse and Recycle has been ingrained in our values. This mission will also strength LiFE i.e. Lifestyle for

Environment, which is very much the need of the hour in the world today. Following these values, India has set a target of Net Carbon Zero by 2070.

4. Following the footsteps of our dynamic leader of the Nation, Tripura is also exploring installation of 130 MW Floating Solar Power Plant on Dumbur Lake that falls in Gomati District of Tripura. In this regard, Tripura Renewable Energy Development Agency (TREDA) has inked an MoU with NTPC Renewable Energy Limited (NTPC REL) for the feasibility study. The proposed 130 MegaWatt (MW) floating power plant is important for State's aim of producing 200 Mega Watt (MW) solar energy by 2030. Installation of storage battery is also being explored to store the solar renewable energy for utilization during peak period. OTPC has already submitted a proposal for 50:50 JV Company to develop storage battery.

5. Besides, Tripura's average solar power energy's potentiality stands at 2080 MW. The installation of the solar microgrid has been completed by TREDA in 17 tribal habitations while work is in progress for 50 more habitations.

In addition, TREDA, being the State Nodal Agency for Promotion & Implementation of New and Renewable Energy and the Nodal Agency for monitoring of RPO Obligation by Discom, is also looking after the Implementation of PM Kusum Scheme in the State 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.

6. North Eastern States are also blessed with vast hydro potential. I sincerely thank the efforts of the Government of India for passing several policies such as The National Resettlement and Rehabilitation Policy to ensure transparent and fair compensation and rehabilitation for those displaced due to development of hydro-power projects.

7. As we all know, in the NE Region, Tripura, Arunachal Pradesh, Mizoram, and Assam are power surplus states. Our effort should be to tap this power potential, export power through the state of art evacuation infrastructure and venture into the new frontiers of power storage to make NER as the Power Hub of India. Adequate system strengthening would be required in the NER constituent States in order to build up congestion-free transmission corridor and robust transmission system for evacuation of this power. As such, continual effort should be put in the development of transmission system in the NER States simultaneously for adequate power evacuation through intra and inter-state grid.

8. This is an opportunity to propose future Power System Strengthening Pojects for the entire North Eastern Region to the Ministry of Power, Government of India for funding under Power System Development Fund (PSDF).

9. Govt. of Tripura has signed an agreement with Asian Development Bank (ADB) amounting to Rs.2,275 crore to strengthen and improve power distribution and generation efficiency in the State.

The project is envisaged for massive renovation of two power projects – Rokhia in Sepahijala District and Gumati Hydro project in Gomati District. 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 Hydropower project's capacity will be increased from 5 MW to 10 MW.

Distribution modernization & reliability improvement under this project includes modern technology like Covered Conductor, High Voltage Distribution System (HVDS), Fault Passage Indicator (FPI), Auto-reclosures and Sectionalisers, Ring Main Unit (RMU), State of the Art Transformer Testing Lab, Smart metering etc. for meeting future demand growth, improved efficiency and facilitate supply of 24 X 7 reliable and quality power with reduction in AT & C losses.

10. North East Region Power System Improvement Project (NERPSIP) being funded by Government of India and World Bank is one major infrastructure development programme which is being implemented and now is on the verge of completion and is sure to benefit North Eastern Region as a whole. I am certain that the Implementing Agency, Power Grid Corporation of India Limited (PGCIL) shall expedite the remaining works and complete the Project very soon.

11. Distribution Sector Schemes such as Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA), Deen Dayal Upadhaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) etc. have largely succeeded in building infrastructure to provide 24 X 7 Power to All.

12. The Revamped Distribution Sector Scheme (RDSS) to improve operational efficiencies and financial sustainability by providing result-linked financial assistance to DISCOMs will strengthen supply infrastructure based on meeting pre-qualifying criteria and achieving basic minimum benchmarks. It aims for improvement in the quality, reliability and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector.

13. Scheduling, Metering, Accounting and Settlement of Transactions in Electricity (SAMAST) Scheme sanctioned by the Government of India for the NE States is presently under implementation in the State and was introduced with the aim of 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.

14. Today another vital issue is regarding Cyber Security which is critical because it helps to protect organizations and individuals from cyber attacks. 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. I am sure this forum will highlight the critical issue of Cyber Security and come out

with further project recommendations to strength cyber security of our power system networks.

15. I would also like to mention here that development of skilled manpower in the region along-with capacity building is the need of the hour and the process should be effectively continued as skills determine ability to execute plans with success.

16. I understand that many operational and technical issues were mitigated in the 24th Technical Co-ordination Committee (TCC) Meeting held yesterday. TCC must have also addressed in detail on the way forward for power sector in the North Eastern Region. I hope that this particular meeting will address many of the issues pertaining to the power sector in the NE region and will result in analytic and significant thoughts resulting in positive outcome from the discussion and deliberations today.

17. I appreciate the continuous support extended by Government of India to NE Region especially in regards to the Power Sector and I hope that the same spirit will continue till NER has reached at par with the rest of the country. With the persistent enhancement of infrastructure and communication facilities, the NE Region will surely become a major power-house of India by using its surplus power potential. I feel India as a nation can truly be called a developed nation only when the North Eastern Region also prospers in every aspect of development including Power Sector.

We should all work together to materialize the vision of our Hon'ble Prime Minister, Sh. Narendra Modiji of making India a developed Nation by 2047.

With these words, I once again extend my heartiest greetings to all the participants and look forward to meaningful and successful deliberations towards a fruitful outcome with one common goal and objective in developing the North Eastern Region generously.

Thank you all

Jai Hind

Annexure-VII

SPEECH BY SHRI K. G. KENYE
HON'BLE MINISTER POWER & PARLIAMETNARY AFFAIRS, NAGALAND
ON THE OCCASION OF THE 24TH MEETING OF THE
NER POWER COMMITTEE (NERPC) MEETING
HELD ON 28TH JUNE, 2023 AT TAWANG ARUNCHAL PRADESH

Mr. Chairman – NERPC, 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 24th 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.

Majority of our NER States are predominantly rural with tribal populace and share similar problems such as:

1. Poor Logistics and hostility risk.
2. Non-availability of local skilled manpower.
3. Remoteness and inaccessible terrain.
4. Short working season because of climatic condition.

These are some of the major concerning factors, contributing to higher projects cost and also causing undue delay in execution, which the Central Government at times overlooks while sanctioning the proposed 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)

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. Whereas 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 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 may fall short of meeting 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/Energy Management System (SCADA/EMS) - Up gradation of SLDC.

I am informed that the proposal for Up-gradation of SCADA-EMS of NER States submitted by Chairman – NERPC has been re-directed to MoP, GOI by Techno Economic Sub-Group (TECSG) level of 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 GoI in consultation with Grid – India (POSOCO) for consideration of this project under PSDF funding for up keep of State Load Dispatch Centres (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 Executive's 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.

The DoPN 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 Strength) 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 NERPC meeting.**

D. Construction of Residential Buildings at various EHV sub-stations developed under NERPSIP Tranche-I.

The list of 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. However, the Department has not received any official communication from the POWERGRID till date. Since the NERPSIP Tranche-I scheme is nearing completion, POWERGRID is requested to ensure that the housing requirements for the new sub-stations are constructed at the earliest which are within the scope of the NERPSIP project. However, since the land holding system is peculiar in Nagaland and can at times become very sensitive, it is suggested that DoPN may be entrusted for construction of the Buildings.

E. Reconstruction of Residential and Non-Residential Building at various Stations of NERTS.

During 23rd TCC & NERPC meeting, reconstruction of Residential & Non-Residential buildings of POWERGRID under Additional Capitalization (ADDCAP) was discussed and agreed by the RPC forum. This infrastructure renovation works as proposed by POWERGRID would be booked under POC, which will have to be shared by all the Designated Inter State Transmission System customers (DICs) of the country, which will pose additional financial burden on the States. I therefore request this forum to take up this matter with POWERGRID for consideration of renovation or construct from their own O&M or any other alternate sources without burdening the DICs.

I would also like to state that many developmental activities such as implementation of Hydro Projects, Transmission Lines etc. In NER States are being taken up by different agencies like, the CPSUs, PGCIL, PRIVATE COMPANIES, etc. While executing the projects, they also face problems, which adversely affect the progress of the projects. I feel 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 some mechanism to address these problems from time to time. The competent authorities of this Forum may

deliberate and find out ways and means to address the common problems faced in the NE region.

I am sure 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.

Thank you

Keynote Address of Sh. K. B. Jagtap, IES (CPES)
Member Secretary, NERPC
On the occasion of the 24th NERPC Meeting
Tawang

Chairman, NERPC & Hon'ble Deputy Chief Minister, Govt. of Arunachal Pradesh Shri Chowna Mein ji, Hon'ble Power Minister, Govt. of Tripura Shri Ratan Lal Nath ji, Hon'ble MLA & Advisor (Power), Govt. of Arunachal Pradesh Shri Balo Raja Ji, TCC Chairman & Chief Engineer, Dept. of Power, Govt. of Arunachal Pradesh Shri Ginko Lingi Ji, Member Secretary, ERPC N.S. Mondal ji,

All the Principal Secretaries, Commissioners/Secretariesof Power of NER States, All head of States & Central Utilities, all the Senior officers from NE States, Central Utilities, Special Invitees, friends from the media, ladies and gentlemen.

On behalf of NERPC Secretariat, I would like to welcome you all to the 24thNERPC meeting. I am glad to inform that in spite of unforeseen challenges in the run up to the holding of this meeting, we are able to finally convene this meeting here at this holy and historical City Tawang because of your support and participation. I would therefore like to express my sincere gratitude to all of you for sparing your valuable time to attend this very important meeting of NERPC today.

I would like to convey my deepest gratitude to DoP, Arunachal Pradesh for hosting this 24th NERPC meeting at Tawang and for extending warm hospitality to all the delegates.

You are aware that Ministry of Power, Government of India had established the North Eastern Regional Power Committee to ensure the stability and smooth operation of the integrated grid and for optimal performance of the grid. NERPC have been entrusted with the responsibilities of facilitating all functions of planning related to inter-state/intra-state transmission system, communication planning and to evolve consensus on all issues relating to economy and efficiency in the operation of power system in the region. In order to achieve these objectives, NERPC Secretariat persistently work through its various sub-committees ie., OCC, PCC, Commercial,

NETeST etc and put-forth the matters of highest importance to the august forum of TCC/NERPC for resolution.

I am please to inform that our proposal of upgradation of SCADA at each SLDCs of North eastern State has been taken positively by Technical appraisal committee of PSDF funding and now the monitoring committee's approval may come soon. The proposal was written to MoP by our present Chairman NERPC and Hon'ble deputy CM, Arunachal Pradesh Shri Chowna Main ji.

Further the Ministry of Power, Govt of India has also allowed grant for funding of Reliable Communications on intra state transmission line of North Eastern States in the ration of 90:10 from Power System Development Fund as special case for NER. I would urge and request all the States Power Department and Utilities to take maximum benefit out of this scheme and resolve all OPGW missing links and communication related issues.

I am also glad to inform that the 132kV Jiribam- Haflong Transmission line which was under long outage, has been restored in the month of May 2023. The revival of this transmission line along with the restoration of Khandong Stage II 25 MW power generation has given much relief to the power Supply of Haflong areas of Assam and the stability of Meghalaya Power System.

Key Highlights of NER Power Sector:

It is my pleasure to appraise the forum about the developments in Power Sector in NER since the last TCC/NERPC Meetings.

1. (**Transmission**)

a) As you are aware, the Government of India sponsored schemes, namely Comprehensive Scheme for strengthening of Transmission & Distribution System in Arunachal Pradesh andNorth Eastern Region Power System Improvement Project (NERPSIP) in 6 NER States for improving intra-state connectivity are being implemented in the region. These schemes will connect many small hydro generators, improve the downstream network and also provide DISCOMs to connect the last mile consumer. The implementation and status of progress of schemes are being discussed in various forum of NERPC. NERPC Secretariat has taken a special review

meeting on 19.05.2023 at Guwahati with implementing agency (POWERGRID) and other stakeholders on status and progress of Comprehensive Scheme for strengthening of Transmission & Distribution System in Arunachal Pradesh. Another review meeting on status and progress work of NERPSIP was also held on 16.06.2023 at Guwahati by NERPC Secretariat with POWERGRID and representatives of the States and other stakeholders with a view to facilitate smoothcommissioning and handing over of important transmission elements to the state.

b) The following Transmission Lines/Elements have been commissioned and restored:

1) 400 KV D/C Lower Subansiri-Biswanath Chariali Transmission Line I has been commissioned on 30.03.2023.

2) Reconductoring of 220 KV Alipurduar-Salakati TL has been completed on 30.03.2023.

3) Reconductoring of 132 KV S/C TL with HTLS for Loktak-Jiribam with Panther Conductor completed on 30.03.2023.

4) Installation of 420 kV, 2x63 MVAr line reactors at Imphal SS on 30.03.2023.

2. (Generation)

You are aware that North East Region is blessed with vast hydro potential.This vast hydro reserve can supplement Government of India's ambitious push for 500 GW of Renewable Energy. Further, the hydro and gas-based plants in NER can participate in ancillary services thus providing the necessary support to the grid, especially in the context of increased Renewable Penetration.

Big hydel projects such as Dibang of capacity 2880 MW and Siang of 1600 MW will harness the hydro potential of the region and also bring prosperity to the region.

Following are recent development which may be noted:

1) Khandong Stg-II unit of 25 MW has started generation in May 2023 after a long outage.

2) Two units of Kopili (4x50 MW) are expected to recommissioning from July 2023 onwards.

3. Subansiri HEP of capacity 2000MW is already lined up for commissioning this year and promised generation from next financial year.

4. (DISTRIBUTION)

Considering the current state of operational and financial losses of Discoms in the country and in order to provide a much-needed fillip to the power sector as well as the overall economy in the pandemic affected year, Central Government has launched the "Revamped Distribution Sector Scheme" (RDSS). The scheme has an outlay of Rs.3,03,758 crore with an estimated budgetary support from Central Government of Rs. 97,631 crores, which would be available till Financial Year 2025-26.

In order to avail maximum benefit of the Scheme, State/Utilities will have to make concerted effort to achieve certain targets including reduction of AT&C losses, rationalisation of tariff etc to become a financially sustainable and operationally efficient distribution sector.

Rationalization of the tariff to improve financial viability of DISCOMS needs to be looked into. Over the years it has been observed that Assam has drastically reduced their outstanding energy dues and transmission dues despite having high-power purchase cost and transmission cost. This can be largely attributed to its rationalized tariff policy.

5. (SYSTEM OPERATION)

System operators are responsible for carrying out the real time operations for grid control and dispatch of electricity within the region through secure and economic operation of the regional grid, in accordance with the Grid Standards and the Indian Electricity Grid Code (IEGC).

NERLDC, Grid India at regional level and SLDCs at state levels are functioning to provide load forecasting, active and reactive power management, cross border and inter-regional exchanges, congestion management, optimum scheduling and dispatchof power, open access, metering and market operations etc.

I would like to take this opportunity to appraise the importance of SLDCs. The stable, reliable, resilient and effective operation of the grid in the State is possible with the effective functioning of the SLDCs. It is therefore very important to implement the

CABIL Report which also specifies adequate manpower in SLDCs.Further, each SLDCs should have Market Operation Wing and Communication/IT wings for effective operation of the grid vis- a- vis commercial consideration and cyber security aspects. Further, It is good to learn that Assam & Meghalaya has such officials looking after these issues. Other State SLDCs may also make provision for the same.

I would a like to suggest that the state should come forward for signingMoU with IIT Guwahati or NIIT in respective state to devise a software for accurate forecasting of day-to-day demand so that huge DSM penalties in Crores can be avoided. Further to improve weather forecasting in North Eastern Region, it is important to expedite the installation of Automatic Weather Station through Indian Metrological Department.This will help in better accuracy in the forecast.

We are very thankful to GoI for the (SAMAST) project, funded through PSDF, which is now likely to go live in July 2023 in Assam and Meghalaya. This scheme will benefit the states commercially with better forecasting, proper scheduling and energy accounting.

Yesterday, we have deliberated all major technical issue and only those issue which remain unresolved will be deliberated today and will get approval of NERPC forum.

I sincerely hope that this meeting will result in meaningful deliberations and decisions that will be taken today will translate into the development of the power sector of our region at par with the rest of the country.

Jai Hind!

Jai Bharat!

ANNEXURE A.4

Standard Operating Procedure (SOP)
For budgeting and expenditure of RPCs

1. Budget of RPCs:

1.1 RPCs shall decide and collect contribution amount from their member organizations after approval in committee meeting.

1.2 RPCs shall finalize its annual internal Budget (except Salary head) and get its approval in committee meeting. Quarterly expenditure from 'RPCs internal budget' shall be put up for intimation/approval in concerned RPCs meeting.

1.3 CEA shall provide budget to RPCs for 'Salary' head only.

2. Expenditure of RPCs:

2.1 All expenditure of 'Salary' head shall be met by budget provided by CEA. The same shall be reimbursed by RPCs to CEA quarterly in line with MoP letter no. 6/10/90-Trans dtd. 03.04.2006 (**Annexure-1**).

2.2 All expenditure of heads other than 'Salary', shall be met by concerned RPCs Fund.

3. Delegation of Financial Power:

3.1 Member Secretary, RPC shall have following financial powers for expenditure:

Recurring Expenditure	Upto 10 Lakh (per case)
Non-Recurring Expenditure	Upto 25 Lakh (per case)

3.2 For amount more than mentioned above, Member Secretary may incur after prior discussion and approval in respective RPCs meeting.

3.3 All type of new construction/project, intended for long duration (such as construction of new building) shall be done after approval of CEA/MoP. For all kind of maintenance work, it shall be done with the approval of MS of respective RPC.

4. **IFD for expenditure:**

4.1 CEA shall be IFD for only those budget heads (Salary) which has been allocated by CEA. For all other expenditure, approvals shall be taken in RPC meeting only.

5. **Compliance of government rules:**

5.1 Any expenditure from RPCs fund shall be done as per GFR and other applicable rules, guidelines and manuals of Central Government.

6. **Mode and payment of procurement:**

6.1 Procurement from RPC Fund shall be done from GeM portal only. Any relaxation of GeM portal may be permissible in accordance with government order/rules only.

7. **Creation of Other Specific Funds:**

7.1 The RPCs may create any other Fund for any specific purpose with approval of RPC committee.

8. **Procedure for audit:**

8.1 Internal audit shall be done by Director level official(s) (not dealing administration matters) of same RPC.

8.2 External audit shall be done from a CA Firm.

9. **Amendment in SOP:**

9.1 Amendment in SOP may be proposed after joint discussion by all Member Secretaries of RPCs for approval of Chairperson, CEA.

*****

Annexure-A.4.1

List of Constituents/Members and Respective Contribution amount for NERPC Establishment Fund

SL No.	Constituents/Members	Amount (Rs in Lakh)
	States Department/Utilities	
1	DoP, Arunchal Pradesh	7.52
2	AEGCL	7.52
3	APDCL	7.52
4	APGCL	7.52
5	MSPCL	7.52
6	MSPDCL	7.52
7	MePDCL	7.52
8	MePGCL	7.52
9	MePTCL	7.52
10	E&PD, Mizoram	7.52
11	DoP, Nagaland	7.52
12	TPGL	7.52
13	TPTL	7.52
14	TSECL	7.52
	CPSUs/Pvt. Licensses/Others	
15	NEEPCO	22.56
16	NHPC	22.56
17	NTPC	22.56
18	OTPC	22.56
19	POWERGRID	22.56
20	PTC	22.56
21	NVVN	22.56
22	KMTL	22.56
	Total	**285.76**

ANNEXURE B.7

सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड
CENTRAL TRANSMISSION UTILITY OF INDIA LIMITED
(Wholly Owned Subsidiary of Power Grid Corporation of India Limited)
(A Government of India Enterprise)

Ref: CTU/Comm-Plg/NER/04 **Date:** 06-01-2023

To,

Nodal Officers

Subject: Minutes for 3rd meeting for Planning of Communication system for Inter-State Transmission system (ISTS) in North Eastern Region.

Dear Sir/Madam,

Please find enclosed Minutes of the 3rd meeting for Planning of Communication system for Inter-State Transmission system (ISTS) in North Eastern Region - Meeting held on 22 nd Dec, 2022 through virtual mode. The minutes is also available at CTU website (www.ctuil.in).

Thanking you,

Yours faithfully,

कौशल 6/1/23

(H S Kaushal)
Sr. General Manager

Minutes of 3rd Meeting of CTUIL for Planning of Communication system for Inter-State Transmission system (ISTS) in North Eastern Region held in Virtual Mode on 22.12.2022

Meeting started with opening remarks from Sr. GM (CTUIL). He welcomed all the participants on the 3rd communication planning meeting. He further informed that CEA has already issued Manual of Communication Planning in Power System Operation. CTUIL is carrying out ISTS communication system planning as per various CEA guidelines and CERC 2017 regulations.

List of participants is attached at **Annexure-I.**

A. Follow up agenda items:

1)Providing redundant path to radial nodes in North Eastern Region

As per the CEA communication planning manual clause 4.1.2, the radial ISTS nodes are required to be connected on redundant paths. In this regard, CTUIL has prepared the list of nodes/ stations/generating stations, which are on radial fibre connectivity or on single communication path (PLCC/Leased line etc) as under:

S. No.	Station Name	Paths
i)	Kameng(NEEPCO)	PLCC link
ii)	Ziro(PG)	Single fiber path

i) Kameng (400kV NEEPCO)

Fiber path connecting Kameng to Balipara is under implementation. Presently, Kameng is communicating with Balipara through PLCC.

For second path connectivity of Kameng, agenda was deliberated in 2nd meeting of NER ISTS communication system planning. CTUIL requested PGCIL to:

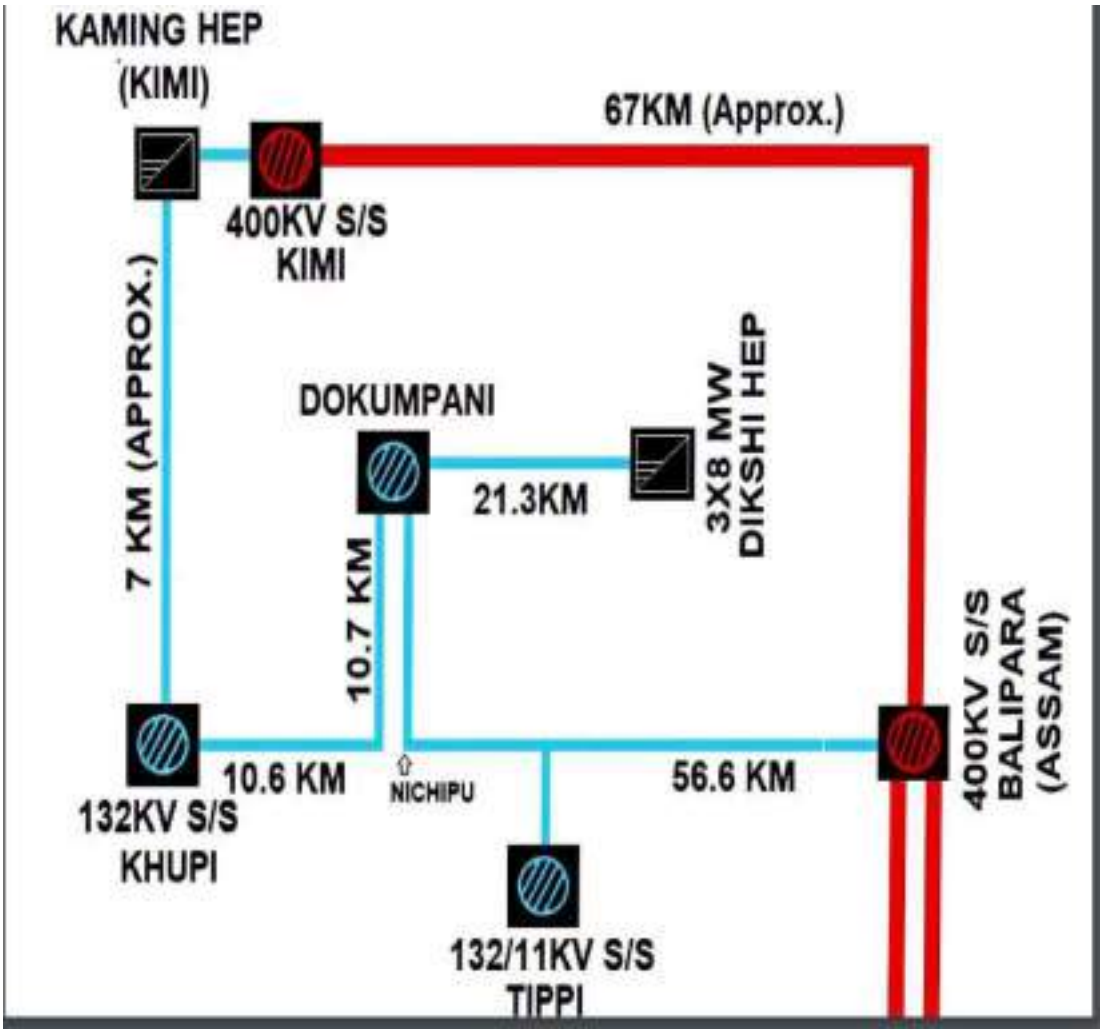
i) Update the status of connectivity of Khupi to Kameng in a week time.
ii) Review further connectivity from Khupi to backbone fiber network for completion of redundant path.
iii) Explore and share the option of VSAT connectivity also for Kameng node as suggested by POSOCO, considering long implementation time for OPGW in NER.

The agenda was further discussed in 23rd TCC and 23rd NERPC meeting held on 18th and 19th November 2022.After detailed deliberations, TCC forum recommended POWERGRID to install fiber for 132kV Balipara-Nechipu-Dokumpani-Dikshi- Khupi-Kameng (under implementation in comprehensive scheme by POWERGRID) at the earliest. The RPC approved the recommendation of TCC.

Thus after implementation of Balipara-Nechipu-Dokumpani-Dikshi- Khupi and Khupi to Kameng the redundant path for Kameng(400kV Neepco) shall be available.

PGCIL may share the status of implementation of above links.

Members may note.



Connectivity of Kameng

Deliberation: PGCIL updated as below:

1) For the direct link between Kameng and Balipara , OPGW stringing work is complete and the link shall be commissioned within one to two months.
2) For the second path Balipara-Nechipu-Dokumpani-Dikshi- Khupi – Kameng under comprehensive scheme,work is under progress and expected commissioning schedule is by June 2023.

ii) Ziro S/s

Ziro Sub station is presently connected radially with Ranganadi hydro generation plant.

For second path connectivity link connecting Ziro, Roing, Tezu, Namsai in a ring are under execution in Arunachal Pradesh comprehensive scheme and once the work is completed, all these S/s shall have both main and redundant path.

It is understood that the link connecting Ziro, Roing, Tezu, Namsai in a ring is in ongoing Arunachal Pradesh comprehensive scheme.

Deliberation in 2nd ISTS Communication Planning Meeting: POSOCO stated that as the under-implementation link connecting Ziro -Along-Roing-Namsai-Changlang-Kathalguri may take long time for commissioning, so VSAT connectivity may be also planned for Ziro S/s as an immediate and cost-effective solution till the time OPGW is commissioned.Roing,Tezu,Namsai are already having VSAT connectivity.

POWERGRID may update the expected commissioning date of Ziro, Roing, Tezu, Namsai link under Arunachal Pradesh comprehensive scheme.

Members may further deliberate.

Deliberation:

POWERGRID informed that the work is under progress for the second path connectivity through connecting Ziro-Daporijio-Along-Pasighat-Roing-Tezu-Namsai-Miao-Changlang-K'guri. However, the work completion timeline with the communication scheme under which various part of link is covered shall be shared by POWERGRID by e-mail.

Arunachal Pradesh SLDC also requested POWERGRID to share the timeline of projects with them so that they are also well updated with the status of ongoing work. POWERGRID agreed to share the requisite information after discussion with their higher ups and CMG department.

POWERGRID has provided by email the link commissioning timeline along with the scheme in which the link is covered as follows:

a) Ziro to Pasighat: NER Comrehensive scheme, work is under progress with multiple site constraints. Expected commissioning schedule is yet to be shared by POWERGRID.

b) Pasighat to Namsai: NER FO expansion scheme, work is under progress and expected commissioning schedule is by June 2023.

c) Namsai to Kathalguri: NER Comprehensive scheme, work is under progress with multiple site constraints. Expected commissioning schedule is yet to be shared by POWERGRID.

It was also stated that 220kV Kathalguri to Namsai Tx line with scope of OPGW has been awarded to POWERGRID in Oct 2022 with a completion schedule of 36 months. This OPGW path may also be considered as an alternative connectivity for Namsai-Miao-Changlang-K'guri section.

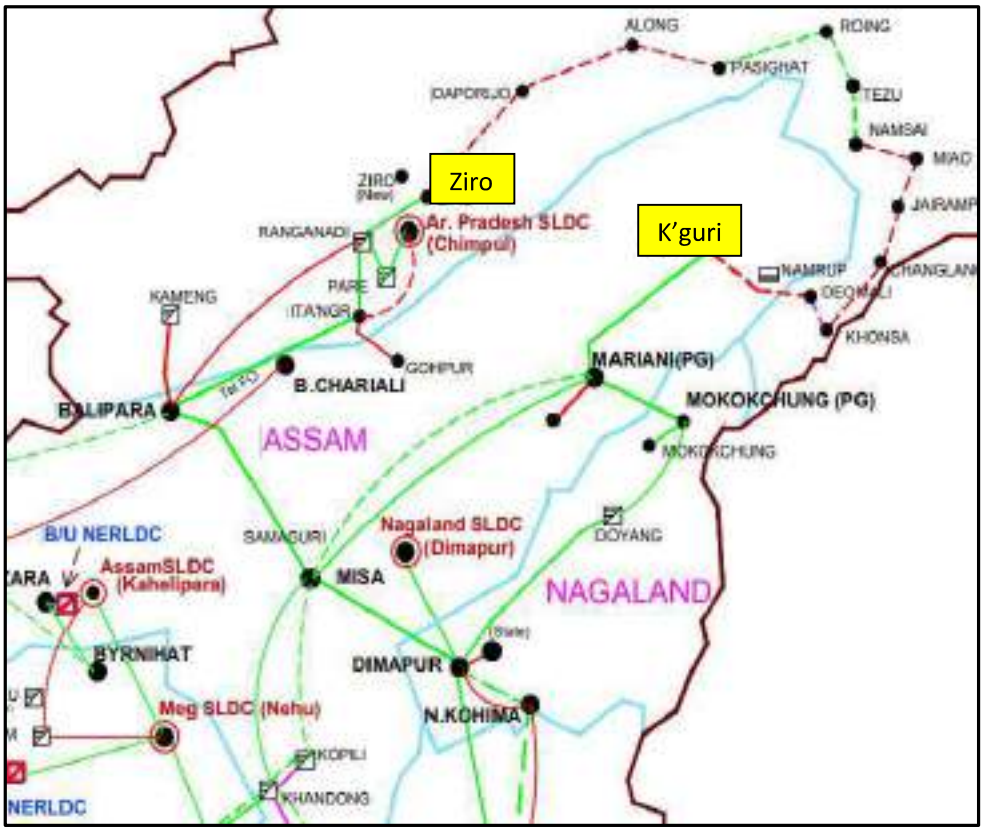
POWERGRID requested Arunachal Pradesh for allowing 6 fiber out of the total fibers being laid (in Ziro- Daporijio - Roing-Tezu-Namsai-Miao-Changlang-K'guri portion) for sharing for power system uses. SLDC Arunachal Pradesh stated to come up with a proposal so as to permit such uses.

CTUIL stated that planning for fiber sharing policy is under process.

POSOCO stated that as discussed in previous meeting, VSAT connectivity for Ziro S/s may be explored as the redundant path may take long time for commissioning. CTUIL requested POWERGRID to provide cost estimate and implementation time frame for installation of spare VSAT connectivity for Ziro S/s as an immediate alternative.

POWERGRID has provided by email previous LOA copy for VSAT cost estimation and time period of implementation shall be one to two months from date of intimation to vendor.

NER FO MAP



2) Additional FOTE at AGC locations

Additional FOTE at all AGC operated generating stations in North Eastern region is required in view of resource disjoint and criticality of AGC operation for grid operation purpose as failure of single equipment may lead to disruption in AGC operation. Further, at many locations redundant ethernet port are not available as per NLDC requirement. The NLDC requirement is as follows :

- 1+1 Ethernet port for main NLDC
- 1+1 Ethernet ports are for backup NLDC

This is to be deliberated for additional FOTE and ports/cards at AGC locations.

The list of AGC locations are as follows:

a) Loktak
b) Bongaigaon

POWERGRID may provide details of existing FOTE and requirement of additional ports/cards/FOTE at these AGC locations in view of above.

Deliberation in 2nd ISTS Communication Planning Meeting: CTUIL requested POWERGRID to provide details of existing FOTE and requirement of additional ports/cards/FOTE at these AGC locations in view of above. POWERGRID agreed to provide the same.

POWERGRID may update the detail for further deliberation.

Members may deliberate.

Deliberation: Powergrid informed as follows:

a) At Loktak : Redundant port as per NLDC requirement is available but additional FOTE would be required.

b) **At Bongaigaon**: There are two FOTE one of FIBCOM make and another of ECI make. All the ports in ECI FOTE are exhausted but in FIBCOM FOTE spare ports are available. As ECI equipment can't be procured and shifting of links from ECI FOTE to FIBCOM FOTE will have to be checked. POWERGRID intimated by e-mail that as per NLDC requirement, spare ports are available but additional FOTE is required.

New Agenda items:

1) **Connectivity of STU node on fibre in view of AMR**.

The meter readings from several locations (mostly STU nodes) (list of location shall be provided by POSOCO) in each region are intermittent and having communication issues as the meters at the state nodes are not having secure & reliable communication links and are operational on public domain communication links like GPRS.

POSOCO has identified a list of such nodes (list attached as **Annexure I**) for each region. It is proposed to provide the connectivity of such nodes on captive OPGW network for receiving the data successfully.

After the deliberation, the scheme shall be put up for approval in NCT.

All constituents may check and update the status of OPGW in list. Whether it is considered in any scheme or it has to be included in scheme for AMR.

Members may deliberate.

Deliberation:

POSOCO shall provide the updated status of Annexure I in consultation with POWERGRID and state constituents so that the scheme may be proceeded further.

2) **Congestion in ISTS communication network:**

The communication networks have STM16 link capacity at most of the places, however few links having STM4 or lesser capacity. There may be few links /nodes the capacity of whom may have been utilised more than 75 percent. The detail of such nodes/links may be intimated by

ANNEXURE D.19

16/11/1/2002-DO (NHPC)
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg
New Delhi- 110 001, dated 14.7.2009

1. Chairperson,
Central Electricity Authority
Sewa Bhawan
R.K. Puram, New Delhi.

2. Chairman & Managing Director
NHPC Limited,Sector-33,
Faridabad, Haryana.

3. Chairman & Managing Director,
NEEPCO,
Brookland Compound,
Lower New Colony,
SHILLONG (Meghalya)-793003

4. Member Secretary
Northern Regional Power Committee,
18-A, Shaheed Jeet Singh Marg,
Katwaria Sarai,
New Delhi-110016

5. Member Secretary
Western Regional Power Committee,
F-3, MIDC Central Road
Andheri (East),
Mumbai-400093

6. Member Secretary
North-Eastern Regional Power Committee,
Meghalaya State Housing Finance
Cooperative Society Ltd. Building
Nongrim Hills Shillong-7930003

Sub: Allocation of power from Subansiri Hydro Electric Project (2000 MW) of NHPC and Kameng Hydro Electric Project (600 MW) in Arunachal Pradesh.

Sir,

I am directed to state that the issue of allocation of power from Subansiri HE Project and Kameng HE Project has been examined and it has been decided that power from the projects would be allocated as under:

II. **Subansiri HE Project (2000 MW)**

Sl.No.	Regions	%age allocation	Equivalent Power in MW
a.	Power allocation to North Eastern Region including free power to Home States (13%) and unallocated Share at the disposal of Centre to be allocated to NE States (15%)	50	1000
b.	Northern Region	25	500
c.	Western Region	25	500

Statewise allocation to North-Eastern States (Total Capacity allocated to NER : 1000 MW)

Free to Home States and unallocated share 28% of 2000 MW i.e. 560 MW

Balance power to be shared among NE States 22 % of 2000 MW i.e. 440 MW as under:

Sl.No.	States	%age allocation	Equivalent Power in MW (rounded off to unity)
1.	Assam	47.27	208.0
2.	Manipur	9.86	43
3.	Meghalaya	11.23	49
4.	Nagaland	6.62	29
5.	Tripura	11.03	49
6.	Ar. Pradesh	7.65	*34
7.	Mizoram	6.34	28
	Total	100.00	440

* *The entitled share of Arunachal Pradesh from Subansiri HEP would be allowed as soon as the State Regulatory Commission is set up in the State.*

Statewise allocation to Northern States (Total Capacity allocated to NR : 500 MW)

Sl.No.	States	%age allocation	Equivalent Power in MW (rounded off to unity)
1.	Haryana	8.64	43
2.	Punjab	12.76	64
3.	Rajasthan	18.71	93
4	U.P.	36.42	182
5.	Chandigarh	0.92	5
6	Delhi	22.55	113
	Total	100.00	500.00

Statewise allocation to Western States (Total Capacity allocated to WR : 500 MW)

Sl.No.	States	%age allocation	Equivalent Power in MW (rounded off to unity)
1.	Gujarat	32.39	162
2.	M.P.	21.10	105
3.	Chattisgarh	8.44	42
4.	Maharashtra	36.55	183
5.	Goa	1.52	8
	Total	100.00	500

Annexure-D.20

Tentative Completion Plan for Balance elements under Comprehensive T&D Scheme-Arunachal Pradesh:

Phase-I Elements:

Sl. No.	Type of Element	Name of Element	Tentative Completion Target
1	132 kV EHV Substation (New)	Likabali	Dec'23
2	132 kV EHV Substation (New)	Bameng (PMFS 101)	Mar'24
3	33 kV DMS Substation (New)	Changlang (PMFS 101)	Aug'23
4	33 kV DMS Substation (New)	Thrizino (PMFS 101)	Dec'23
5	33 kV DMS Substation (New)	Mukto (PMFS 101)	Sep'23
6	33 kV DMS Substation (New)	Thimbu (PMFS 101)	Sep'23
7	33 kV DMS Substation (New)	Y-Junction (PMFS 101)	Nov'23
8	33 kV DMS Substation (New)	Khonsa (PMFS 101)	Dec'23
9	33 kV DMS Substation (New)	Lumla (PMFS 101)	Mar'24
10	33 kV DMS Substation (New)	Bana (PMFS 101)	Dec'23

11	**33 kV DMS Substation (New)**	Khimiyong (PMFS 101)	Feb’24
12	**33 kV DMS Substation (New)**	Pipu (PMFS 101)	Mar’24
13	**33 kV DMS Substation (New)**	Diyun	Mar’24
14	**33 kV DMS Substation (New)**	Gohpur Tinali	Jun’24
15	**132 kV EHV Transmission Line**	Pasighat (old)-Pasighat (New)	Jun’23
16	**132 kV EHV Transmission Line**	Ziro (Old)-Ziro (New) (PMFS 101)	Dec’23
17	**132 kV EHV Transmission Line**	Deomali-Khonsa	Jan’24
18	**132 kV EHV Transmission Line**	Khupi-Seppa	Mar’24
19	**132 kV EHV Transmission Line**	Naharlagun-Banderdewa (PMFS 101)	Jun’24
20	**132 kV EHV Transmission Line**	Pasighat-Mariyang	Jun’24
21	**132 kV EHV Transmission Line**	Seppa-Bameng (PMFS 101)	Jun’24
22	**132 kV EHV Transmission Line**	Naharlagun-Sagali (PMFS 101)	Sep’24
23	**132 kV EHV Transmission Line**	Tawang-Lumla	Sep’24
24	**132 kV EHV Transmission Line**	Khonsa-Changlang	Sep’24
25	**132 kV EHV Transmission Line**	Khonsa-Longding	Sep’24
26	**132 kV EHV Transmission Line**	Rilo-Seijosa	-
27	**132 kV EHV Transmission Line**	Jairampur-Miao	-
28	**132 kV EHV Transmission Line**	Seppa-Rilo	-
29	**132 kV EHV Transmission Line**	Namsai-Miao	-

30	**132 kV EHV Transmission Line**	Likabali-Niglok	-
31	**132 kV EHV Transmission Line**	Gerukamukh-Likabali (PMFS 101)	-
32	**132 kV EHV Transmission Line**	Naharlagun-Gerukamukh (PMFS 101)	-
33	**132 kV EHV Transmission Line**	Rilo-Sagali	-
34	**132 kV EHV Transmission Line**	Changlang-Jairampur	-
35	**33 kV DMS Transmission Line**	Pasighat-Oyan	Dec’23
36	**33 kV DMS Transmission Line**	Napit-Koyu	Dec’23
37	**33 kV DMS Transmission Line**	Yachuli-Yazali	Jan’24
38	**33 kV DMS Transmission Line**	Koyu-Igo	Feb’24
39	**33 kV DMS Transmission Line**	Tamin-Raga	Dec’23
40	**33 kV DMS Transmission Line**	Yachuli-Hapoli	Mar’24
41	**33 kV DMS Transmission Line**	Changlang-Khimiyong	Jun’24
42	**33 kV DMS Transmission Line**	Liromba HEP -Tirbin	Mar’24
43	**33 kV DMS Transmission Line**	Basar-Tirbin	Jun’24
44	**33 kV DMS Transmission Line**	Naharlagun-Pappunalah	Feb’24
45	**33 kV DMS Transmission Line**	Seppa-Pipu	Mar’24
46	**33 kV DMS Transmission Line**	Tenzingaon-Balemu	Jun’24
47	**33 kV DMS Transmission Line**	Khupi-Thrizino	Jun’24
48	**33 kV DMS Transmission Line**	Jang-Thimbu	Mar’24

49	**33 kV DMS Transmission Line**	Deomali-Kanubari	Jun’24
50	**33 kV DMS Transmission Line**	Bameng-Khenewa	Mar’24
51	**33 kV DMS Transmission Line**	Tawang-Klimtao/Y-Junction	Mar’24
52	**33 kV DMS Transmission Line**	Miao-Diyun	Sep’24
53	**33 kV DMS Transmission Line**	Namsai-Namsai	-
54	**33 kV DMS Transmission Line**	Namsai-Chowkham	-
55	**33 kV DMS Transmission Line**	Longding-Kanubari (Instead of Khonsa-Longding)	-
56	**33 kV DMS Transmission Line**	Namsai-Diyun	Deleted from Scope

Additional Elements:

Sl. No.	Type of Element	Name of Element	Tentative Completion Target	Remarks
1	**33 kV DMS Transmission Line**	33 kV Halaipani-Halaipani line	Sep’24	Forest clearance is under process.

Phase-II Elements:

Sl. No.	Type of Element	Total no. of Elements	Tentative Completion Target	Remarks
1	132 kV EHV Substation (New) and Substation (Extension)	08	**06 elements:** Progressively by Mar'24 **02 elements:** Progressively by Jun'24	Work is in Progress
2	33 kV DMS Substation (New) and Substation (Extension)	13	**08 elements:** Progressively by Mar'24 **05 elements:** Progressively by Jun'24	Work is in Progress
		20	**20 elements:** Progressively by Sep'24	Elements under Re-award
3	33 kV DMS Transmission Line	07	**03 elements:** Progressively by Mar'24 **04 elements:** Progressively by Sep'24	Forest clearance is under process for 04 elements
		17	**17 elements:** Progressively by Sep'24	Elements under Re-award
4	132 kV EHV Transmission Line	13		**11 elements:** Working Permission received for 01 line in April'23. Balance is awaited. **02 elements:** Involves Reserve Forest area

NER Power System Improvement Project (NERPSIP)

Status Report




Brief about the Project

- North Eastern Region Power System Improvement Project for Six States (Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura) for strengthening of Intra State Transmission and Distribution System was sanctioned on 1st December 2014 by Ministry of Power at a total estimated cost of Rs.5111.33 Cr.
- The scheme is being funded by Government of India through Budget of Ministry of Power and World Bank on 50:50 basis.
- The scheme is being implemented as Central Sector Scheme through Power Grid Corporation of India Limited.
- The beneficiary states will be responsible for Operation & Maintenance of the transmission and distribution system, which is being handed over to them upon successful commissioning.
- The project scope also includes Capacity Building expenditure of Rs.89 Cr. to impart training to beneficiary utilities.

Brief about the Project

- The revised cost estimate based on Oct'18 price level was submitted to Ministry due to cost overrun.
- The RCE was approved 24th December 2020 for an estimated cost of Rs.6700 Cr. with overall completion upto Dec'21.
- Summarized snippet of the RCE is given below:

Sl. No.	Description	DPR			RCE		
		Transmission	Distribution	Total	Transmission	Distribution	Total
A	Project Cost	2806.96	1282.05	4089.01	3989.95	1628.13	5618.09
B	Contingencies	84.20	38.46	122.67	103.43	42.21	145.64
C	POWERGRID Consultancy Fee incl. taxes	364.00	172.32	536.31	406.89	166.04	572.93
D	Interest During Construction (IDC)	188.90	85.44	274.34	188.90	85.44	274.34
E	Capacity Building	44.50	44.50	89.00	44.50	44.50	89.00
F	Total Sanctioned Cost	3488.57	1622.77	5111.33	4733.68	1966.32	6700.00

Project cost includes Preliminary Survey, Land acquisition, compensation, civil and supply cum erection works

Brief about the Project

- Project scope includes the following works:
  - Construction of new 220/132kV, 132/33kV and 33/11kV New substations
  - Extension / Augmentation of existing 220/132kV, 132/33kV and 33/11kV New substations
  - Construction of new 220kV, 132kV and 33kV transmission lines with OPGW
  - Laying of underground cable at 132kV and 33kV level.
  - Second circuit stringing and renovation of existing lines.
  - Live line OPGW stringing in existing transmission lines along with terminal equipment.
  - ADSS stringing in existing DMS lines.
  - Construction of transit camps and township.

- Capacity Building and Institutional Strengthening for the beneficiary Utilizes.

Scope of works

Particulars	TRIPURA	ASSAM	MANIPUR	NAGALAND	MEGHALAYA	MIZORAM	Total
EHV SS New	9	11	2	5	4	3	34
EHV SS Ext./Aug.	7	8	8	5	2	1	31
DMS New SS	34	16	13	10	11	1	85
DMS SS Ext./Aug.	25	25	29	18	4	1	102
EHV TL	14	14	6	7	3	4	48
DMS TL	62	42	13	11	17	1	146
Total Elements	151	116	71	56	41	11	446

MVA Capacity	1877	1908	407	445	1090	106	5833

Additional works

Township	TRIPURA	ASSAM	MANIPUR	NAGALAND	MEGHALAYA	MIZORAM	Total
No of locations	9	11	2	5	5	4	36

Summary

- **Sanctioned Project Cost** : Rs. 5111.33 Cr. (Feb'14 price level)
- **Revised Cost Estimate** : Rs. 6700 Cr. (Oct'18 price level)
- **Funding of the Project** : 50:50 (Govt. of India : World Bank)
- **Anticipated completion** : Progressively till October 2023 (1 element by Mar'24)
- **Award status** : All 55 packages have been awarded (except for Tuensang GIS S/s).
- **No. of New Sub-stations** : 119 (EHV- 34, DMS– 85)
- **No. of Aug Sub-Station** : 133 (EHV-31, DMS-102)
- **No. of Trans. Lines & UG (Km)** : EHV - 48 nos., 33 kV-146 nos.
- **Township Packages** : Award placed for Assam, Manipur & Tripura. Tendering u/p for other states.

PHYSICAL IMPLEMENTATION OVERVIEW

ASSAM

- **Beneficiary Utility :**

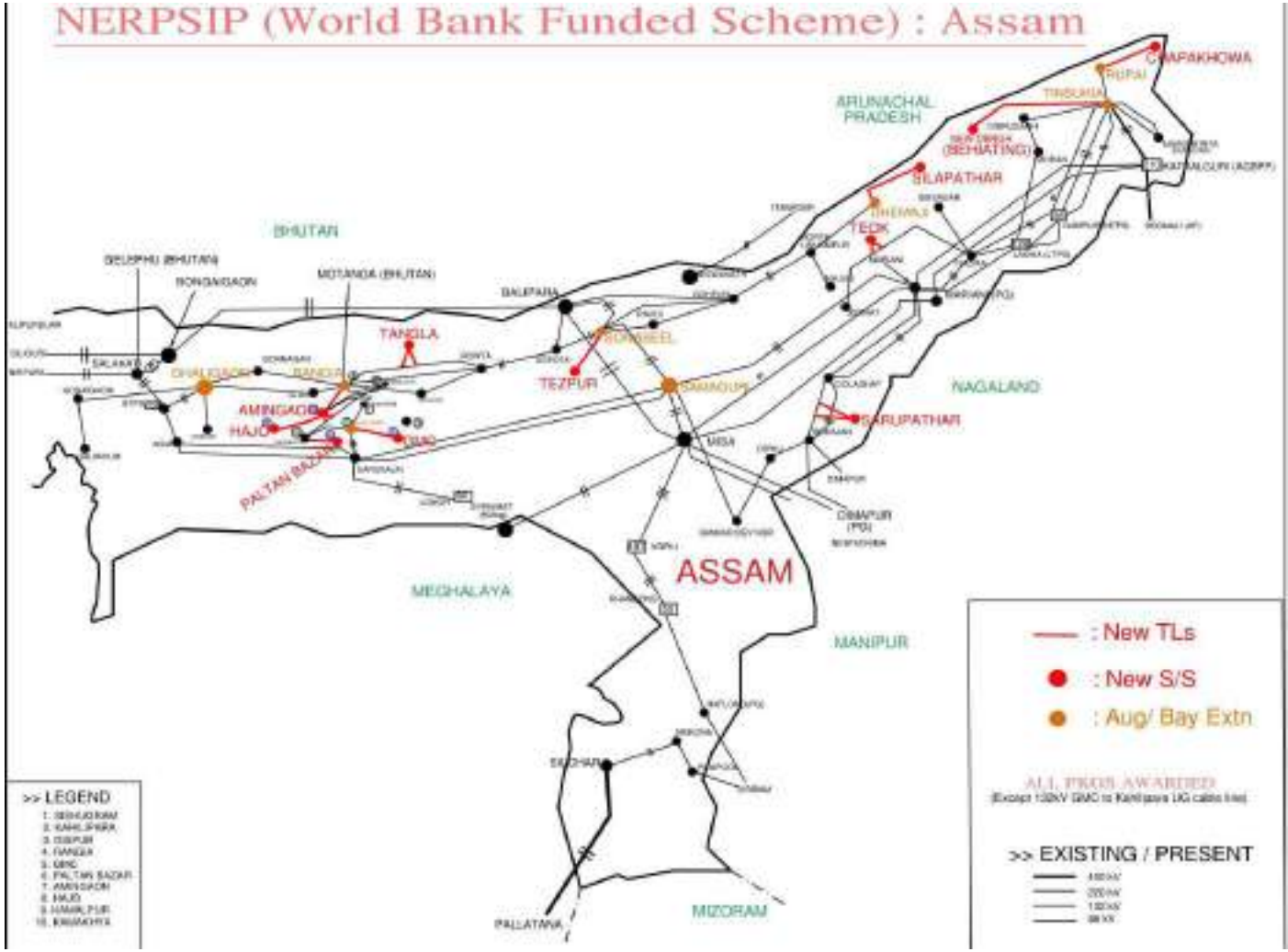
  Assam Electricity Grid Corporation Limited

  &

  Assam Power Distribution Company Limited

- **Sanctioned Cost : Rs. 1473.80 Cr.**

- **Revised Cost : Rs. 1914.58 Cr.**



NERPSIP Assam: Status

Particulars	Total Scope (Nos.)	Charged / ready for charging (Nos.)	Handed over (Nos.)	Balance to be commissioned (Nos.)	Target
New 220/132/33kV Substation	11	9	2	2	By Sep'23
220/132/33kV Extension / Augmentation Substation	8	8	4	-	-
New 33/11kV Substation	16	15	14	1	Aug'23
33/11kV Extension / Augmentation Substation	25	25	18	-	-
132kV & 220kV Transmission Line	14	8	7	6	By Sep'23
33kV Transmission Line	42	25	12	17	By Sep'23
Total	**116**	**89**	**57**	**27**	

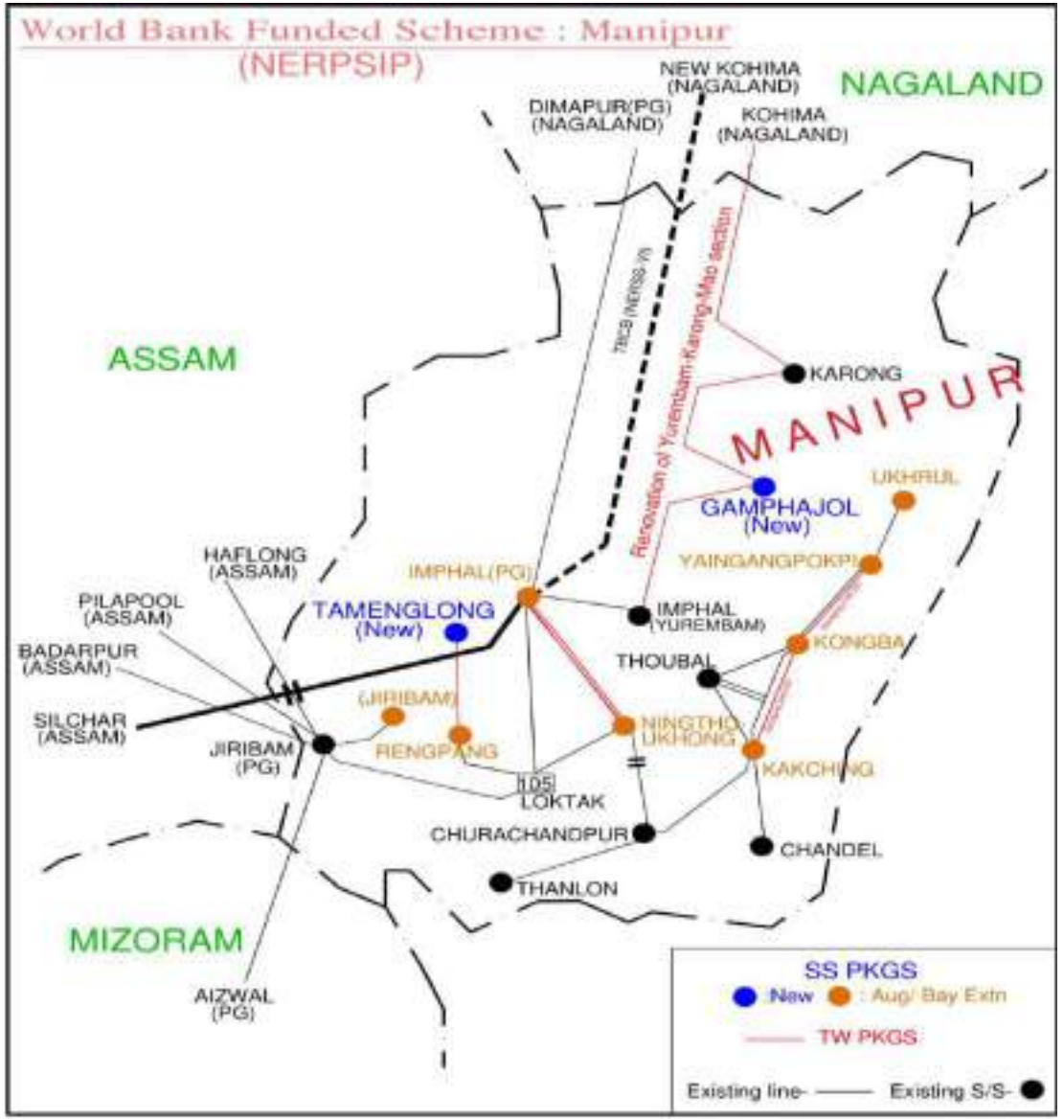
Pending issues in ASSAM

- **220 kV Rangia Amingaon TL:** Foundation works could not be taken up in 2 locations (40/2 & 41/1) of Kamalpur circle in Kamrup District. Owner have demanded diversion of the line which is not feasible at this juncture. Matter has been consistently being taken up with District / State Administration and several rounds of meetings have been held. Assistance from administration is required for early resolution to complete the works.
  Balance work: (Fnd:2/107 nos.), (TE:4/107 nos.), Str:09/28 Km)

- **Frequent theft of conductors in Amingaon Area:** Incident of theft of conductor has repeatedly occurred for 33kV Hazo Mukalmuwa, 132kV Amingaon Hazo and 220kV Rangia Amingaon TL. Repeated theft has resulted in delay in commissioning of 132kV Amingaon Hazo line. AEGCL may permit anti-theft charging of the EHV lines to prevent any likely theft.
- Allocation of suitable land for construction of Township in Hazo substation. The identified land is not suitable to accommodate the township scope against Hazo substation.

MANIPUR

- **Beneficiary Utility : Manipur State Power Company Ltd.**
- **Sanctioned Cost : Rs. 442.22 Cr.**
- **Revised Cost : Rs. 638.72 Cr.**



NERPSIP Manipur: Status

Particulars	Total Scope (Nos.)	Charged / ready for charging (Nos.)	Handed Over (Nos)	Balance to be commissioned (Nos.)	Target
New 132/33kV Substation	2	1	-	1	Sep'23
132/33kV Extension / Augmentation Substation	8	8	4	-	
New 33/11kV Substation	13	11	10	2	By Oct'23
33/11kV Extension / Augmentation Substation	29	29	28	-	
132kV Transmission Line	6	5	2	1	Sep'23
33kV Transmission Line	13	11	10	2	By Sep'23
Total	**71**	**65**	**54**	**6**	

Pending issues in MANIPUR

- The diversion portion of 132 kV Yurembam-Karong-Mao line was not included in the original scope of NERPSIP Manipur and on request of MSPCL the additional scope was included in 7th PSC Meeting. 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. Resolution of same needs to be expedited for timely completion of the works. DO letter given to Chief Secretary (Manipur) on 4th Mar'22 and recently on 4th May'23 wherein resolution of RoW was requested to be expedited.

  As the matter is long pending and no further development has been intimated by MSPCL it is proposed to drop the additional scope. Further original scope has already been completed and the supplied materials shall be handed over to MSPCL.

- **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. Contd…

Pending issues in MANIPUR

- FTC from NERLDC will not be granted unless telemetry is established. Works are already completed under the scope of NERPSIP and charging is awaited due to non-receipt of FTC. MSPCL is yet to give a concrete planning regarding the augmentation of RTU due to which completed elements which can be utilized is laying idle. NERPC and NERLDC may consider granting of FTC for these types of cases where there is some missing link due to non upgradation from State's end.

  Further assistance from MSPCL is also requested for obtaining FTC for 132kV Imphal Ningthoukhong line with regards to relay coordination (including zone 3 coordination for remote end substation).
- **Taking over of 33kV Langdum Bay extension**: Works for the bay has been completed long back in 2019 but the substation is yet to be taken over by MSPCL. Associated line has also been commissioned.
- Expediting forest clearance for 132kV Rengpang Tamenglong line: POWERGRID has already deposited the necessary compensation to MSPCL for obtaining working permission of the subject line. MSPCL may expedite from their end.
- Recent unrest in Manipur has hampered the all ongoing construction works in Manipur. Works have been hampered all over across Manipur due to the agitations. Moreover 132/33kV Gamphajol substation has been vandalized by miscreants.

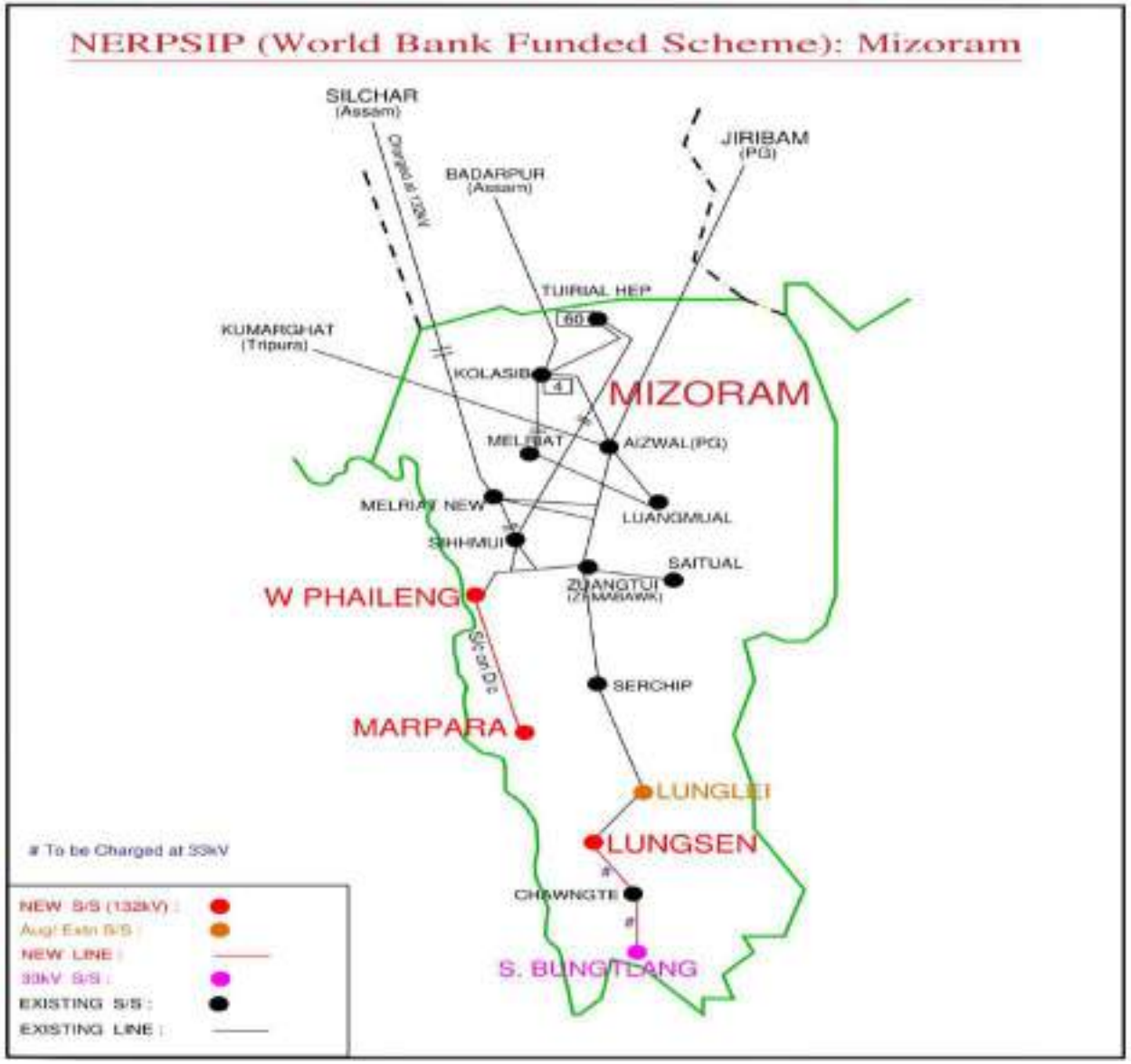
MIZORAM

- **Beneficiary Utility : Power & Electricity**

  Department Mizoram

- **Sanctioned Cost : Rs. 316.76 Cr.**

- **Revised Cost : Rs. 411.19 Cr.**



NERPSIP Mizoram: Status

Particulars	Total Scope (Nos.)	Charged / ready for charging (Nos.)	Handed Over (Nos)	Balance to be commissioned (Nos.)	Target
New 132/33kV Substation	3	1	-	2	By Sep'23
132/33kV Extension / Augmentation Substation	1	1	-	-	
New 33/11kV Substation	1	1	-	-	
33/11kV Extension / Augmentation Substation	1	1	1	-	
132kV Transmission Line	4	1	1	3	By Sep'23
33kV Transmission Line	1	1	-	-	-
Total	**11**	**6**	**2**	**5**	

Pending issues in MIZORAM

- **Tree cutting in 132 kV West Phaileng - Marpara Line (M/s S&W):** 38.8 km approx. out of 50.265 km line falls under Dampa Tiger Reserve (Buffer zone) and Stringing activities is hindered. Total payment (16.81 Cr) made in Nov'21 to Forests Dept. Tree Cutting in the forest area (from Loc. No. AP 114 - AP 128) has been hampered due to demand of additional compensation by forest dwellers in Pukzing village of Mamit District. Tree cutting is being expedited by State Forest Department and same is likely to be completed by June'23 end.
  Balance work: (Fnd:09/172Nos), (TE:15/172Nos.), Str:30/50.265Km)

- 132/33kV West Phaileng Sub-station under NERPSIP is planned to be connected from existing Sihhmui substation via existing Zemabawk-Sihhmiu-West Phaileng line. Presently the line is charged at 33kV level supported by poles at few locations. Meanwhile, 132kV Bairabi – Mamit – W.Phaileng line and 132/33kV Sub-station at Mamit is under construction by P&E Department which is expected to be ready prior to Zemabawk -Sihhmui – W.Phaileng line restoration.
  This line is required to charge 2 nos of 132/33kV substation at West Phaileng and Marapara at 132kV level. Construction works are to be expedited by P&E Department.

- 33kV Lungsen – Lungsen line was already completed under NERPSIP but due to highway widening, a section of the line (~1.5Km, 20 poles) is affected. The line is being diverted as per request of NHIDCL.

MEGHALAYA

- **Beneficiary Utility :**

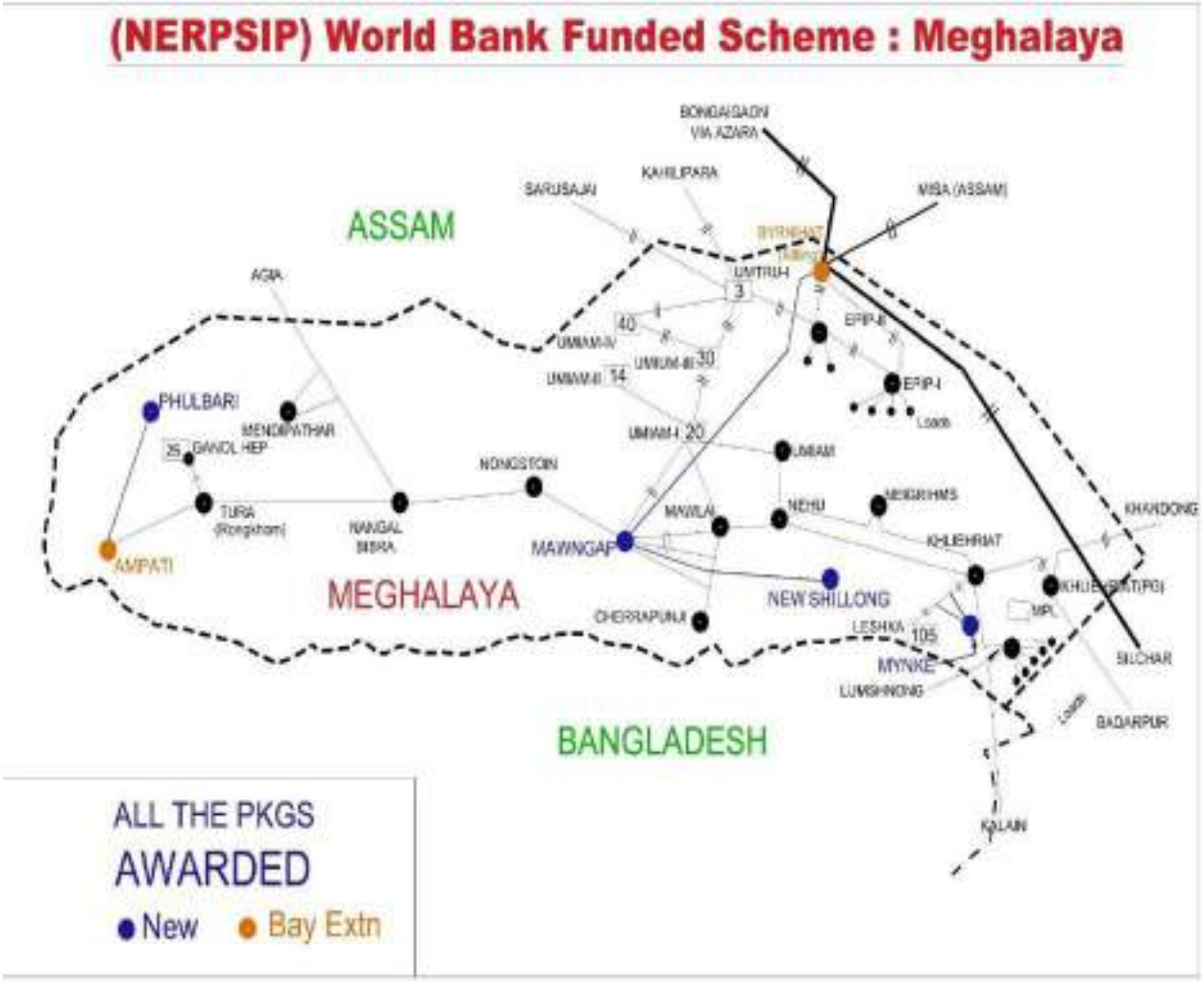
  Meghalaya Power Distribution Corporation Limited

  &

  Meghalaya Power Transmission Corporation Limited

- **Sanctioned Cost : Rs. 776.93 Cr.**

- **Revised Cost : Rs. 933.38 Cr.**



NERPSIP Meghalaya: Status

Particulars	Total Scope (Nos.)	Charged / ready for charging (Nos.)	Handed Over (Nos)	Balance to be commissioned (Nos.)	Target
New 220/132/33kV Substation	4	3	-	1	Aug'23
220/132/33kV Extension / Augmentation Substation	2	2	-	-	
New 33/11kV Substation	11	7	-	4	By Sep'23
33/11kV Extension / Augmentation Substation	4	4	2	-	-
220kV & 132kV Transmission Line	3	2	2	1	Aug'23
33kV Transmission Line	17	7	-	10	By Sep'23
Total	**41**	**25**	**4**	**16**	

Pending issues in MEGHALAYA

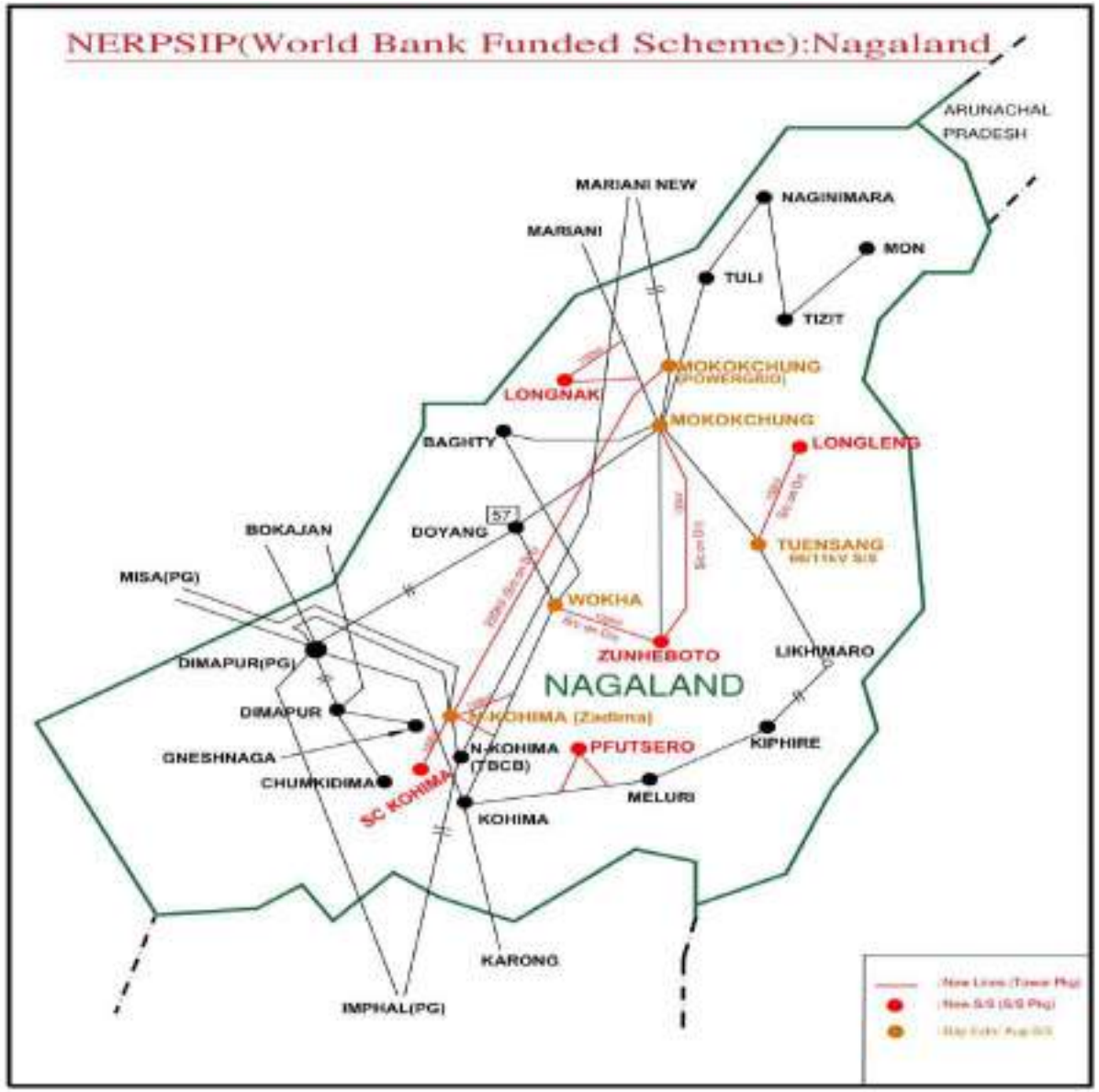
- **RoW in 220 kV Killing (Byrnihat) Mawngap - New Shillong line (M/s Unique structures)**: RoW issues persist in 01 foundation location & 4 tower erection locations of the line in **Ri-bhoi District** due to demand for abnormally high rates of compensation. Issue needs to be resolved urgently to facilitate timely completion of the transmission line.
  Balance work: (Fnd:1/398Nos),(TE:6/398Nos.), Str:9.711/129Km)

- Balance work of Rymbai 33/11 kV Substation is in halt as the land owner has stopped the ongoing work claiming that MePDCL promised to offer him job during sale of his land.

- ROW issue at 17nos of pole of 33kV Mynkre Mynkre line to be resolved. ROW problem encountered during construction of 33 kV line emanating from 132/33 kV Mynkre s/s to 33/11 kV Mynkre s/s at Mynkre village under NERPSIP. MOU has to be signed with Mynkre village & state utilities as per the direction from DC East Jaintia Hills. Matter is pending for resolution.
- ROW issues in stringing works of 33kV Mynkre – Byndihati line at various locations in Nongshning village, Umtyra Village. Most of the landowners are insisting POWERGRID to dismantle the erected poles from their land.
- The progress of 33kV Phulbari - Rajaballa line is hampered due to ROW issues for 23 nos of poles at Balachanda villages
- **Land dispute at Mawkynrew SS**: Injunction has been issued at District Council court by claimant. Matter pending with MePDCL
- **Forest clearance for 33kV Phulbari Tikrikilla:** Scope changed from reconductoring of existing line to new line. Forest diversion is required due to realignment of new line through forest land owing to severe RoW issues some portion passing through habituated areas. Two forest proposals submitted by MEPDCL.

NAGALAND

- **Beneficiary Utility : Department of Power, Nagaland**
- **Sanctioned Cost : Rs. 729.42 Cr.**
- **Revised Cost : Rs. 1001.85 Cr.**



NERPSIP Nagaland: Status

Particulars	Total Scope (Nos.)	Charged / ready for charging (Nos.)	Handed Over (Nos.)	Balance to be commissioned (Nos.)	Target
New 132/33kV Substation	5	2	-	3	By Oct'23
220/132/33kV Extension / Augmentation Substation	5	4	1	1	Tuensang-Mar'24
New 33/11kV Substation	10	10	1	-	
33/11kV Extension / Augmentation Substation	18	18	12	-	-
220kV & 132kV Transmission Line	7	3	-	4	By Aug'23
33kV Transmission Line	11	8	1	3	By Sep'23
Total	**56**	**45**	**15**	**11**	

Pending issues in NAGALAND

- ROW at balance 19 nos. locations at 33 kV Mokokchung(Aolichen)- Mokokchung TB Hospital Line in Nagaland for want of clearance from Assam Rifles. The associated works at Aolichen end and new sub-station at TB Hospital is already completed and only the portion through Assam Rifles is pending in want of clearance (NOC) from Assam Rifles.

  Current status: NOC received from MHA, Govt. of India, New Delhi on 29.03.23 and as per NOC MoU is required to be signed between DoP Nagaland and Assam Rifles. Annual lease payment is required to be paid by DoP Nagaland to Assam Rifles, MoU is yet to be signed.

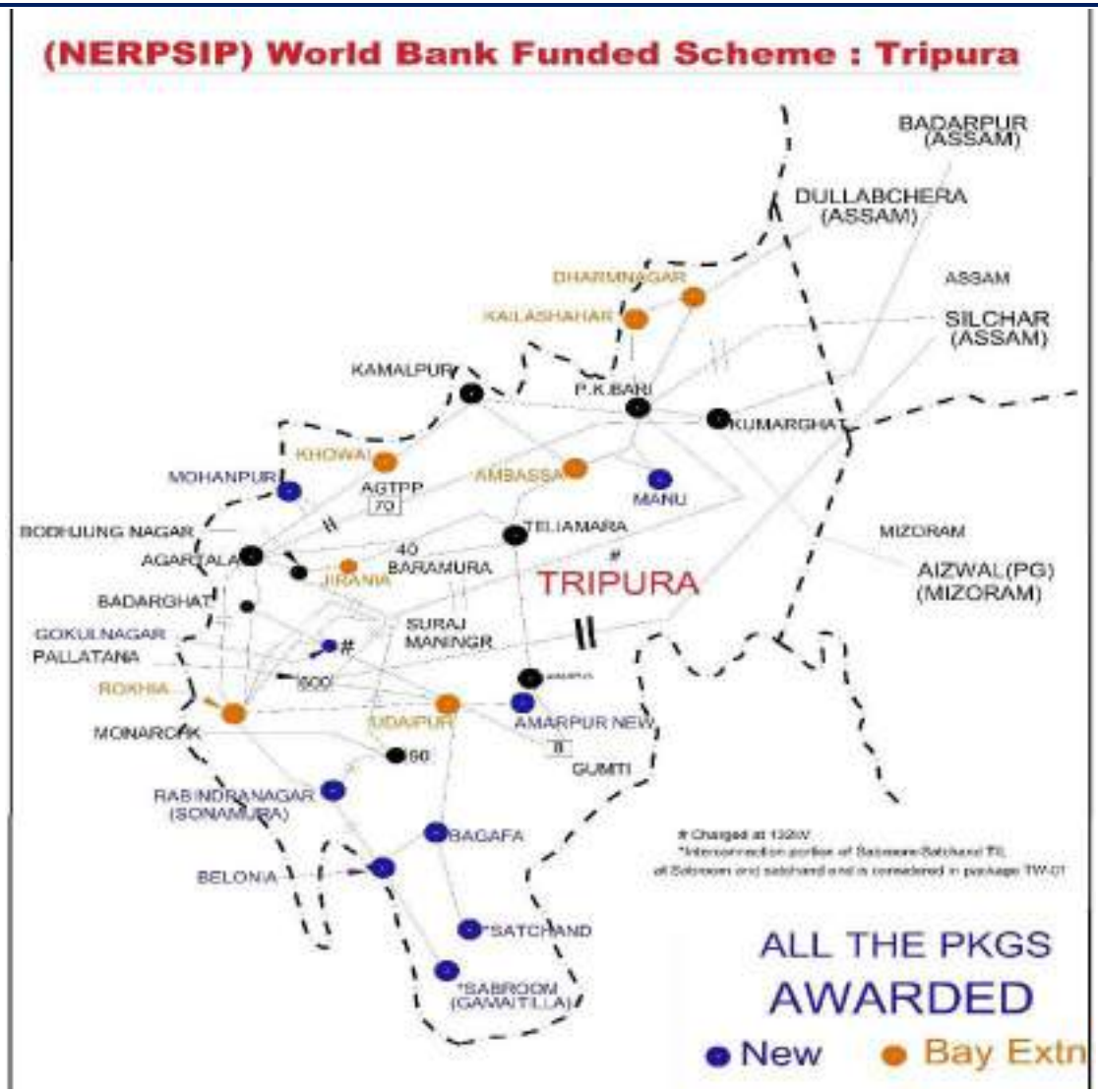
- Existing 132kV Mokokchung Mariani line of DoP Nagaland is being LILO at 132/33kV Longnak substation under NERPSIP Nagaland. Telemetry / protection communication is to be established through OPGW as per the scope of the project. However, in the existing line, OPGW is yet to be laid due to which telemetry could not be established via OPGW. Accordingly, DoP Nagaland is requested to take up the works at the earliest.

Pending issues in NAGALAND

- 33 kV Zunheboto - Zunheboto Line: Under NERPSIP a 33 kV D/C line has been constructed along with 48F OPGW from the tapping point of the existing 66kV Mokokchung - Zunheboto to the new 132/33 kV Zunheboto s/s as per the MoM held under CEA dated 30/05/2019 Item 5.4. In order to utilize the newly constructed 33 kV D/C line, DOPN has to downgrade the existing 66 kV line. Also, the telemetry link / OPGW is not available in the existing 66 kV Line.
- RoW at Tapping point of 132 kV Kohima – Wokha: Under NERPSIP, a 132 kV LILO of 132 kV Kohima - Wokha to New Kohiima (Zadima) is being constructed. Upon charging of the above link, the following elements constructed under NERPSIP can be charged:
- i) LILO of 132 kV Kohima - Wokha to New Kohiima (Zadima)
- ii) 132 kV New Kohima (Zadima) to 132/33 kV New Secretariat
- iii) 132 kV bays at Zadima
- iv) 132/33 kV New Secretariat substation
- However, during the final stage of commissioning, the landowner has objected to stringing of the span in the LILO point of 132 kV Kohima - Wokha (Appox 50 meters) and has demanded unreasonable compensation. The matter has been referred to the district administration and resolution is awaited.

TRIPURA

- **Beneficiary Utility : Tripura State Electricity Corporation Ltd.**
- **Sanctioned Cost : Rs. 1372.20 Cr.**
- **Revised Cost : Rs. 1800.28 Cr.**



NERPSIP Tripura: Status

Particulars	Total Scope (Nos.)	Charged / ready for charging (Nos.)	Handed Over (Nos.)	Balance to be commissioned (Nos.)	Target
New 132/33kV Substation	09	04	03	05	Oct'23
132/33kV Extension / Augmentation Substation	07	05	04	02	Sep'23
New 33/11kV Substation	34	09	05	25	Oct'23
33/11kV Extension / Augmentation Substation	25	14	08	11	Sep'23
132kV Transmission Line	14	10	02	4	Sep'23
33kV Transmission Line	62	19	05	43	Oct'23
Total	**151**	**61**	**27**	**90**	

Pending issues in TRIPURA

- 132 kV Gokulnagar S/S being constructed under NERPSIP Tripura shall be connected by LILO of the under construction 132 kV Surajmaningar – Rokhia line by TSECL. Construction works for the LILO portion under NERPSIP has been completed. TSECL to expedite the stringing works of 132 kV Surajmaningar – Rokhia line.
- Requirement of infringement free land to commence colony construction works:
  - 132/33kV Belonia SS
  - 132/33kV Satchand SS
  - 132/33kV Rabindranagar SS
  - 132/33kV Sabroom
- Assistance is required from TSECL regarding transit camp construction works:
  - Land for construction of transit camp is yet to be provided for the following 2 substations:

1. Jirania
2. Sabroom

- Shifting of existing structures / lines for infringement free land:

1. Udaipur
2. Belonia

Major challenges with beneficiary utilities

- Due to lack of manpower, utilities are reluctant to take over the completed elements. Many of these assets are in operation without formal handing over.
- Due to limited infrastructure and missing links of state utilities, few elements which are completed but could not be charged.
- As per the MoU with states, all utilities are required to reimburse the state level taxes under the project. Status is as given below:

Name of State	Name of Utility	GST Claim submitted till date	Reimbursment received till date	Outstanding as on 31.03.2023
Assam	AEGCL	59.92	47.14	12.79
Assam	APDCL	23.51	22.03	1.48
MANIPUR	MANIPUR	29.91	4.60	25.31
Meghalaya	MEPDCL	8.50	1.58	6.92
Meghalaya	MEPTCL	34.14	1.36	32.78
MIZORAM	MIZORAM	13.39	9.26	4.13
NAGALAND	NAGALAND	45.96	12.50	33.45
TRIPURA	TRIPURA	73.61	56.33	17.28
Grand Total		**288.94**	**154.80**	**134.14**

Township Status

Awarded Packages:

M/s. Engineering Projects(India) Limited		M/s. Ahuja Construction Engineers (AHUJA)
Assam	**Tripura**	**Manipur**
❑ 220kV Amingaon(GIS) S/s	❑ 132kV Belonia S/s	❑ Gamphajol
❑ 220kV Behiating S/s	❑ 132kV Bagafa S/s	❑ Tamenglong
❑ 132kV Paltanbazar(GIS), GMC(GIS) S/s	❑ 132kV Sabroom S/s	
❑ 132kV Hazo S/s	❑ 132kV Satchand S/s	
❑ 132kV Tangla S/s	❑ 132kV Rabindranagar S/s	
❑ 132kV Tezpur S/s	❑ 132kV Gokulnagar S/s	
❑ 132kV Silapathar S/s	❑ 132kV Manu S/s	
❑ 132kV Sarupathar S/s	❑ 132kV Amarpur S/s	
❑ 132kV Teok S/s	❑ 132kV Mohanpur S/s	
❑ 132kV Chapakhowa S/s		

Township Status

Under tendering Packages:

Meghalaya	Mizoram	Nagaland
❑ 220/132kV Mawngap	❑ 132/33kV Lungsen S/s	❑ 132/33kV Longnak
❑ 220/132kV New Shillong	❑ 132/33 West Phaileng	❑ 132/33kV Longleng
❑ 132/33kV Mynkre	❑ 33/11kV South Bugtlang	❑ 132/33kV New Secretariat
❑ 132/33kV Phulbari	❑ 132/33kV Marpara	❑ 132/33kV Pfutsero
❑ 220/132kV Killing (Byrnihat)		❑ 132/33kV Zunheboto

CYBER SECURITY MEASURES IMPLEMENTATION STATUS FOR NER SLDCs (AS ON 19.05.2023)

SN	Cyber Security Measures	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
1	Preparation and approval of Cyber Crisis Management Plan (CCMP) for SLDCs	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.
2	Implementation status of Information Security Management System (ISMS) i.e., ISO 27001 and certification audit for ISO-27001	Contract awarded to a Certifying Agency. Visit planned in June.	Implemented. Assam SLDC has received certification for **ISMS (ISO 27001: 2013)** on 09.07.22. **1st Surveillance Audit** scheduled in **July'23.**	**LOA issued** to CDAC, Hyderabad on 3rd Nov'21 for Implementation of ISMS (ISO-27001). Work is going on for implementation of ISMS	Implemented. Meghalaya SLDC has received certification for **ISMS (ISO 27001: 2013)** on 09.07.22**. 1st Surveillance Audit** scheduled in **June'23.**	Budgetary offers had been collected from various CERT-IN empanelled vendors and were processed for approval of Management. They have asked for resubmission of the proposal. Now, DPR has been prepared and proposal has been submitted to Management for approving C-DAC on nomination basis. Approval awaited.	In the process of implementing Security policies as recommended by Certifying agency.	Contract has been awarded to Certifying Agency and implementation is in progress.
3	Status of VA-PT on OT systems	Done for FY 22-23.	Done for FY 22-23.	Done for FY 23-24.	Done for FY 22-23.	Done for FY 23-24.	Done for FY 22-23.	Done for FY 23-24.
	i) Date of Last VA-PT (OT):	24/03/2023- 28/03/2023	17/02/2023 - 21/02/2023	03/04/2023-05/04/2023	09/03/2023- 13/03/2023	04/04/2023- 11/04/2023	20/03/2023- 22/03/2023	19/04/2023- 20/04/2023.
	Submission of latest VA-PT report carried out on OT systems of SLDC for onward submission to MoP							
	ii) Due date for Next Audit / Plan for next audit (OT) :	24-03-2024	17-02-2024	03-04-2024	09-03-2024	04-04-2024	20-03-2024	19-04-2024
4	Status of VA-PT on IT systems (**to be done once in every six months**)	Contract awarded to a Certifying Agency. Visit planned in **June'23**.	Last VAPT completed on **22.02.2023**; reports received.	**Phase -1** of VAPT for IT systems has been completed. **Phase-2** is scheduled in June'23.	Last VAPT completed in **March-2023**; reports awaited.	Budgetary offers had been collected from various CERT-IN empanelled vendors and were processed for approval of Management. They have asked for resubmission of the proposal. Now, DPR has been prepared and proposal has been submitted to Management for approving C-DAC on nomination basis. Approval awaited.	**Phase -1** of VAPT for IT systems has been completed. **Phase-2** is scheduled in the last week of May'23.	Last VAPT completed in **2023**; reports awaited.
5	Notification of IT & OT systems at SLDCs as Critical Information Infrastructure (CII)	Final revised CII document has been submitted to NCIIPC after incorporation of comments on 19.05.2023.	**Identified Systems of SLDC, Assam have been declared as CII by NCIIPC.** Notification of CII as Protected Systems shall be issued by State Govt.	Final revised CII document has been submitted to NCIIPC after incorporation of comments on **20.02.2023.**	**Identified Systems of SLDC, Meghalaya have been declared as CII by NCIIPC.** Notification of CII as **Protected Systems** has been issued by State Govt. **on 18.04.2022**.	Final revised CII document had been submitted to NCIIPC after incorporation of comments on **06.06.2022.**	**Identified Systems of SLDC, Nagaland have been declared as CII by NCIIPC.** Notification of CII as **Protected Systems** still pending with the State Govt.	Resubmission of CII documents after incorporation of comments received from NCIIPC vide email dtd. 23.06.22 is pending.
	Updated Completion Timeline by SLDC**:							
6	Compliance of advisories from CERT-In, NCIIPC & other statutory agencies.	Being complied for OT	Being complied	Being complied	Being complied	Being complied	Being complied	Being complied
i	To be updated in Portal for monthly complaince by 10th of every month.	Not updated in the portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal
ii	For CERT-In weekly advisories to be complied within 5 days: To be uploaded in the portal after completion.	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal

CYBER SECURITY MEASURES IMPLEMENTATION STATUS FOR NER SLDCs (AS ON 19.05.2023)

SN	Cyber Security Measures	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
ii	Compliance of advisories from Cyber Swachhta Kendra (CSK)	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Being Resolved. No new alerts.
7	Status of Nomination of CISO:	Done	Done	Done	Done	Done	Done	Done
	Alternate CISO (if any):	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	Cyber Security Certification: (Training attended)	No	Yes. Basic level training and certification on Cyber Security for Power Sector Professionals completed by officials (**2 Officials**) of IT/SCADA department.	Yes. (**2 Officials**)	Yes. (**10 officials** undergone Basic level certification course from NPTI)	Yes (**1 Official** trained in Two Weeks Basic Level Training and Certification Program on Cyber Security)	No	No
9	IT - OT Integration:	Not present	Not present	Not present	Not present	Not present	Not present	Not present

NER II Transmission Limited
Corporate Office: Unit No.101, First Floor, Windsor, Village Kole Kalyan Off CST Road,
Vidyanagari Marg, Santacruz (East), Mumbai, Maharashtra-400098, India Ph: +91 70284 93885

Ref. No: NER-II/R&C/21-22/423 **Date: 14.03.2022**

To,
The Executive Engineer (E) -TD-II,
132/33 kV Substation, Chimpu,
Department of Power,
Itanagar – 791113.

Sub: Intimation regrading change in Ownership and Authorized Signatories for NER-II Transmission Limited.

Ref: NER-IITL letter to POSOCO Ref. No: NER-II/R&C/21-22/179 Date: 30.09.2021.

Dear Sir/Madam,

At the outset, we would like to sincerely thank you for all the support extended to us.

We, India Grid Trust (IndiGrid), is India's first Power Sector Infrastructure Investment Trust focusing on owning power transmission and renewable energy assets. IndiGrid was established in 2016 and is registered with SEBI pursuant to SEBI (Infrastructure Investment Trust) Regulations, 2014.

NER-II Transmission Limited (NER-IITL) was awarded through Tariff Based Competitive Bidding (TBCB) to Sterlite Power (Sterlite Grid Limited). Further, Sterlite Power developed the Project and successfully commissioned the project NER-IITL in 2021.

Further, pursuant to signing of Share Purchase Agreement (SPA) dated 26th Mar 2021, 49% shares of NER-IITL were transferred to IndiGrid from Sterlite Power. Accordingly, the Board of Directors of NER-IITL have also been changed.

Accordingly, pursuant to decision of Management of IndiGrid, we are submitting this letter as an intimation for change in Ownership, Authorized Signatories and contact details. We here by request your good self, to kindly acknowledge this letter and address all future correspondence for the above-mentioned project to the undersigned.

The following are the details of authorized designated person:

Name of Designated person	Contact Details
Venkatraman I R	E-mail: venkatraman.inumula@indigrid.com, commercial@indigrid.com Mobile: +91 77520 20404

The copy of resolutions passed by Board of Directors in respect of above said authorized signatories is enclosed here with for your information and record please.

Further, please also note following contact details of person for routine follow-up, any clarification/details regarding to the above-mentioned Project and for all communication purpose:

Name: Mr. Vivek Karthikeyan
Contact – Mobile – +91 89669 03034, Email - vivek.karthikeyan1@indigrid.com

We look forward to work with you, we thank you for continued support and cooperation.

Thanking you,

Yours Sincerely,

For, NER-II Transmission Limited

(I R Venkatraman)
(VP – Regulatory and Contracts)
(Mobile-7752020404)
(E-mail: venkatraman.inumula@indigrid.com)

CC To:

1. The, Superintending Engineer (E), Electrical Transmission Circle, 132/33kV Sub-station, Chimpu, DOP, Govt of Arunachal Pradesh – 791113.
2. The Superintending Engineer (E), SLDC, Raj Bhawan Powerhouse complex, P-Sector, Dop, Govt of Arunachal Pradesh – 791113.
3. The Executive Engineer (E), SLDC, Raj Bhawan Powerhouse complex, P-Sector, Dop, Govt of Arunachal Pradesh – 791113.

Communication Audit Plan-NER

SN	Station Name	Location
1	SLDC Arunachal Pradesh	Arunachal Pradesh
2	Pare (NEEPCO)	
3	Ranganadi (NEEPCO)	
4	SLDC Assam	Assam
5	Bongaigaon (State)	
6	Bongaigaon (PGCIL)	
7	Salakati (PGCIL)	
8	Rangia (State)	
9	Kathalguri (NEEPCO)	
10	Tinsukia (State)	
11	Mariani (PGCIL)	
12	Silchar (PGCIL)	
13	Badarpur (PGCIL)	
14	SLDC Manipur	Manipur
15	Loktak (NHPC)	
16	Imphal (PGCIL)	
17	SLDC Meghalaya	Meghalaya
18	NERLDC	
19	Kheliriat (PGCIL)	
20	SLDC Mizoram	Mizoram
21	Aizawl (PGCIL)	
22	Melriat (PGCIL)	
23	Lungmual (State)	
24	Zuangtui (State)	
25	SLDC Nagaland	Nagaland
26	Doyang (NEEPCO)	
27	Dimapur (PGCIL)	
28	Dimapur (State)	
29	Kohima (State)	
30	New Kohima (KMTL)	
31	SLDC Tripura	Tripura
32	Agartala (State)	
33	Kumarghat (PGCIL)	
34	SM Nagar (State)	
35	SM Nagar (Indigrid)	
36	Palatana (OTPC)	

North Eastern Regional Power Committee, Shillong

Procedure on Outage Planning for Communication System -NER

1. Introduction:

The communication needs of the power sector have amplified significantly with the increase in the size and complexity of the grid. Communication is also a key pre-requisite for the efficient monitoring, operation and control of power system. Communication systems are vital to facilitate secure, reliable and economic operation of the grid. For integrated operation of the Grid, uninterrupted availability of the real time data of various Power System elements assumes utmost importance.

2. Regulatory Provisions with respect to Outage Planning for Communication System :

2.1 Communication System for inter-State transmission of electricity Regulations, 2017

2.2 Technical Standards for Communication System in Power System Operations Regulations, 2020

3. Objective :

3.1 Regulation 7.3 of Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017 states

7.3 Role of National Power Committee (NPC) and Regional Power Committee (RPC) :

.....

(iv) The RPC Secretariat shall be responsible for outage planning for communication system in its region. RPC Secretariat shall process outage planning such that uninterrupted communication system is ensured.

.....

3.2 Regulation 10 Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020 notified on 27.02.2020 states

10. Outage planning : Monthly outage shall be planned and got approved by the owner of communication equipment in the concerned regional power committee, as per detailed procedure finalised by the respective regional power committee.

3.3 The objective of this Procedure on Outage Planning of communication System is to carry out outage planning for communication system in NER such that uninterrupted communication system is ensured.

4. Scope and applicability :

4.1 The scope and applicability as per Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017 is given below **:**

.....

5. *Scope and Applicability :*

(i) These regulations shall apply to the communication infrastructure to be used for data communication and tele-protection for the power system at National, Regional and inter-State level and shall also include the power system at the State level till appropriate regulation on Communication is framed by the respective State Electricity Regulatory Commissions.

(ii) All Users, SLDCs, RLDCs, NLDC, CEA, CTU, STUs, RPCs, REMC, FSP and Power Exchanges shall abide by the principles and procedure as applicable to them in accordance with these regulations.

.....

4.2 The applicability as given in Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020 notified on 27.02.2020 is given below **:**

.....

3. Application - These regulations shall apply to all the users, National Load Despatch Centre, Regional Load Despatch Centres, State Load Despatch Centres, Load Despatch Centres of distribution licensee, Central Transmission Utility, State Transmission Utilities, Regional Power Committees, Renewable Energy Management Centres, forecasting service provider and power exchanges.

.....

4.3 All concerned entities stated above would coordinate with NERPC for outage planning of communication System.

4.4 Communication Outage Coordination will be limited to the following system **:**

(i) ISTS Communication System including ISGS
(ii) Intra-state Communication System being utilised for ISTS Communication
(iii) Any other system agreed by the forum

4.5 Communication Equipment/link within the scope of the Procedure would include **:**

(i) Optic Fibre links
(ii) Any other link being used for ISTS communication
(iii) ICCP links between Main & Backup RLDCs, Main & Backup SLDCs & Main & Backup NLDC
(iv) VC links between LDCs
(v) Inter regional AGC links
(vi) SPS Links

(vii) Tele-Protection
(viii) AMR
(ix) SDH & PDH
(x) DCPC
(xi) RTU
(xii) DTPCs
(viii) Battery Banks and Charging Equipment
(ix) EPABX
(x) Any other equipment/link agreed by the forum

Note : PLCC would not be included, if the link is not used for SCADA Data.

5. Procedure on Monthly Outage Planning of Communication System – NER :

(i) **Each concerned Entity would nominate Nodal Officer/ Alternate Nodal Officer** along-with details to the Outage Planning of Communication System group along-with designation, Mobile number, email ID, Phone number etc. Nodal Officer / Alternate Nodal Officer would interact internally and would be single point contact for outage planning with NERPC / NERLDC.

(ii) The outage proposal of the communication equipment shall be **submitted in the prescribed format** by mail only (attached as **Annexure – I**). The type of services (viz. data, voice, protection etc.) being affected / not affected may also be mentioned under col No.8 in the format. If there is no interruption to any service, the precautions and actions (like redundant path) being taken to ensure data, voice etc availability would also be mentioned in col No.8, which facilitates to avoid simultaneous outage for the same service(s).

(iii) Users / Owners of the communication equipment will furnish their monthly outage proposal in respect of their equipment through the software for Outage Planning of Communication System, which will be considered to be developed by NERLDC for the usage by NERLDC, NERPC & Users / Owners of the communication equipments.

(iv) Till the software application is developed by NERLDC, the Users / Owners of the communication equipments will furnish their monthly outage proposal in respect of their equipments in the prescribed (in excel format only). Modification of this format is not allowed. However, suggestion for improving the format is solicited. Outage proposals not in the format or through Fax/PDF etc will be rejected.

(v) **RPC will consolidate the list of outage proposals** received from various Users / Owners of the communication equipments and release the list by 15th of every month.

(vi) Communication outages affecting other regions would be coordinated by NERLDC through NLDC.

(vii) **A meeting will be conducted every month during the middle of month** normally through VC to discuss and approve / dispose the proposed list of outages pertaining to communication links / equipments. **The date of VC will be informed by mail during the 1st week of the month.**

(viii) In the VC, the system constraints pertaining to the outage of communication equipments, if any, will be discussed and the outage proposals will be approved / revised / disposed in the VC. Therefore, all the Users / Owners of the communication equipments shall attend the VC without fail. It is requested that the Nodal Officers who do not have VC facility may join in the nearby VC available with State SLDC / PGCIL.

(ix) **The final approved list of communication equipments will be released by NERPC after the VC is completed.**

(x) **In case of any emergency outage requirement of communication equipments, Users / Owners may directly apply to NERLDC on D-1 basis.**

(xi) Even though outages of communication equipments are approved in the VC, Concerned **entities will also confirm availing of approved outages or dropping of the approved outages of communication equipments / links on D-3 day** to NERLDC.

(xii) After the communication outage application is put in place, the **Constituents will take code from NERLDC** before availing the planned outage and before restoration. In the interim period, NERLDC may take appropriate call.

(xiii) All Users / Owners of the communication equipments **will submit their deviation report by 10th of the month** to NERPC / NERLDC in respect of the outages of communication links / equipments availed during the previous month as per the format attached as **Annexure – I**.

(xiv) All Users / Owners of the communication equipments **will submit their report on planned / forced / other outage of communication links / equipments along with the above said deviation report to** NERPC / NERLDC as per the format attached as **Annexure – I**.

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