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
Website: www.nerpc.gov.in

No. NERPC/OP/Committee/2023/*06-82* Date: June 05, 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: Agenda for the 24th TCC & 24th NER Power Committee Meetings scheduled on 15th & 16th June 2023 respectively at Tawang, Arunachal Pradesh– Reg.

Sir,

Please find attached herewith the agenda for the 24th TCC & 24th NER Power Committee meetings scheduled on 15th June 2023 and 16th June 2023 respectively at Kalawangpo Convention Hall, General Parade Ground, Tawang, Arunachal Pradesh under the aegis of Dept. of Power, Govt. of Arunachal Pradesh, for your kind information and necessary action.

It is further requested that name of participants and their travel plan may kindly be intimated to the following nodal officers/Coordinators at the earliest for making smooth arrangement for the meeting.

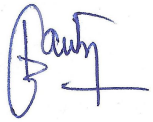
(1) **Shri Nangkong Perme,** SE(E), SO&PSC; Mob:**9436288643**; Email: **se.sopsc@gmail.com**

(2) **Shri Made Nalo**, SE (E), Dirang; Mob:**8413833825**; Email: **sepowerdirang@gmail.com**

As notified earlier, for overnight halt enroute to Tawang, hotel accommodation can be arranged at Kalaktang, Shergaon, Bhalukpong, Bomdila or Dirang, on payment basis. For booking of hotel rooms at Kalaktang, Shergaon or Bhalukpong, you may contact **Shri Tapi Tai**, EE (Rupa), Mob. **6909739838/9436040941**. For Bomdila or Dirang, you may contact **Shri Phurpa Wangyal**, EE (Bomdila), Mob. **8729888987/ 9436055340**. Members are requested to contact above officers at the earliest for booking the rooms as rooms are limited. **(Messages may please be sent on WhatsApp to above nos. in case of non-response/not reachable)**

All members are requested to make their travel plan accordingly and make it convenience to attend the meeting for fruitful deliberation.

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), TPMZ, DoP, Govt. of Arunachal Pradesh, Itanagar-791111

Copy for kind information with a request to kindly **send the travel plan at the earliest** (if not yet sent already)**.**

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

भारत सरकार **Government of India**

विद्युत मंत्रालय **Ministry of Power**

उत्तरपूर्वी क्षेत्रीय विद्युत समिति

North Eastern Regional Power Committee

AGENDA NOTES FOR DISCUSSION OF 24th TCC MEETING

(UNDER THE AEGIS OF DOP, Arunachal Pradesh)

Venue : **Kalawangpo Convention Hall, General Parade Ground, Tawang, Arunachal Pradesh**

Date (TCC) : **15th June 2023 (Thursday)**

CONTENTS

ANNEXURES

1. MEETING SCHEDULE

SN	Meeting	Date	Time	Venue
1	TCC	15.06.2023	10:00	**Kalawangpo Convention Hall, General Parade Ground, Tawang, Arunachal Pradesh**
2	NERPC	16.06.2023	10:00	**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 were received from any constituents, the TCC and NER Power Committee may confirm the minutes of above meetings.

ARRANGEMENT OF AGENDA OF 23rd TCC 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 FOR DISCUSSION

ITEM NO. A.1 : OPGW COMMUNICATION & DATA TELEMETRY UNDER NERPSIP TRIPURA - TPTL

In line with the discussions during the course of the 25th NETeST meeting held on 25.05.23, Powergrid, the Implementing Agency is requested to complete the commissioning of all OPGW links along with SAS/RTU Data integration with Tripura SLDC for reliable grid operation and to achieve data telemetry.

This is also requirement as per CERC regulations 2010.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.2 : ENHANCEMENT OF CAPABILITY OF 132 KV PANCHGRAM – LUMSHNONG, 132 KV HAILAKANDI – DULLAVCHERRA, 132 KV PANCHGRAM – HAILAKANDI LINE AND 132 KV SRIKONA-PAILAPOOL LINE – NERLDC

The following lines have crossed the useful life of 35 years of age and need upgradation.

Sl. No.	Name of the Line	Year of Commissioning
1	132 kV Panchgram – Lumshnong line	1969 (Approx)
2	132 kV Hailakandi – Dullavcherra line	1970 (Approx)
3	132 kV Panchgram – Hailakandi line	1970 (Approx)
4	132 kV Srikona - Pailapool line	1970 (Approx)

It has been observed that the above-mentioned lines are unable to carry power to the tune of the thermal rating of the ACSR Panther conductor (79 MW approx.).

The following are the line wise status:

a) **132kV Panchgram – Lumshnong**: Work has started, tentative completion by June'23 (as per Minutes of 201st OCCM of NER held on 25th April 2023).

b) 132 kV Hailakandi – Dullavcherra line: During 23rd TCC & 23rd NERPC Meetings held on 18th & 19th November 2022 in Goa, the forum recommended for upgradation of 132kV Hailakandi – Durlavcherra with HTLS and preparation of DPR by AEGCL.

Status may be furnished by AEGCL

c) **132kV Panchgram – Hailakandi & 132kV Srikona – Pailapool:** As per 189th OCC meeting of NERPC held on 19th April'22, these two lines have been included in CEA's 2030 Augmentation Scheme.

Status of Point "b" may be furnished by AEGCL. Member may please discuss

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.3 : EARLY COMMISSIONING OF BUS REACTOR AT BYRNIHAT (MEPTCL)- NERLDC

During 23rd TCC & 23rd NERPC Meetings held on 18th & 19th November 2022 in Goa, NERLDC highlighted that voltage rise issue is witnessed at Byrnihat throughout the year and gets more severe during the lean hydro period leading to difficulty in grid operation. The 63 MVAR Bus Reactor at Byrnihat is under prolonged outage. Commissioning of Bus Reactor at Byrnihat will mitigate the high voltage problem.

As per deliberations of 23rd TCC & 23rd NERPC Meetings held on 18th & 19th November 2022 in Goa, Director (Trans), MePTCL requested intervention of forum for recommending balance funding (₹2.22 Cr) from PSDF in view of cost escalation during price discovery. After detailed deliberation the forum recommends PSDF Secretariat to

reconsider the sanctioned amount in view of the higher price discovery during procurement.

However, the Bus Reactor is not charged as on date. As per minutes of 201st OCC Meeting held on 25th April, 2023, the following has been mentioned as the present status "Coordination issues with the vendor. WIP"

This is to reiterate that charging of the Bus Reactor at Byrnihat is very essential to maintain a good voltage profile in the NER Grid.

MePTCL is requested to update the latest status and expedite the installation process.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.4	**:**	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.5	**:**	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.6	**:**	**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 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

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.7	**:**	**SHIFTING OF PALATANA - SURAJMANINAGAR (TSECL) 400 KV D/C LINE (OPERATED AT 132KV) TO THE 400/132KV ISTS S/S AT SURAJMANINAGAR- NERLDC**

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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.8	**:**	**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 deteriorates the grid but needs to be taken as an extreme measures by the system operater.

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

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.9	:	**EARLY COMMISSIONING OF 2ND CKT OF 220 KV BALIPARA-SONABIL LINE - NERLDC**

On high demand season the important 220 kV corridor which are providing power support to capital area of Assam are operating at above surge impedance loading (SIL). The loading of existing 220 kV Balipara-Sonabil line is being controlled by opening of 220 kV Balipara-Sonabil. Opening of both 220 kV Sonabil – Samaguri

D/C will reduce the overloading of 220 kV Balipara – Sonabil line but will leave Sonabil Area unreliable as Sonabil Area will only be connected to the rest of the grid via 220 kV Balipara – Sonabil line. Also, this action further leads to increase in the loading of important 220 kV tie line dedicated to Assam power system, thus making the capital area of Assam system more vulenerable.

The transfer capability of NER-ER corridor also could not be utilized fully in case of exigencies due to high loading of 220 kV Balipara-Sonabil S/C.

AEGCL is requested to intimate the latest status

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.10 :	**IMPLEMENTATION OF PROTECTION SYSTEM AT LINK FEEDER AT ROKHIA-NERLDC**

Multiple disturbances affecting Rokhia & Monarchak generating station from 2020 onwards till now are due to the unprotected feeder at Rokhia Substation. Due to nonavailability of protection and switchgear, any fault in the above section leads to clearing of fault from Agartala & Monarchak which may lead to Blackout of entire Rokhia Plant. As per 55th PCC meeting held in Nov 2020, it was suggested to install

circuit breakers at both ends of link feeder along with line differential protection at Rokhia.

As per the 201st OCCM , TSECL updated that CBs for LDP of Rokhia- New Rokhia line has to be procured. Further, estimate has been prepared and tendering will take place in May'23

TSECL to share the updated status for CB procurement and installation of LDP in the link feeder

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.11	:	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.12	:	**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 held the forum recommended PGCIL to include the link under Reliable communication of ULDC as quantity variation.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.13 : 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-NTPS(non-Solar)	Yes	**260**	**250**
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 2nd 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.14	:	**COMMISSIONING OF LILO OF ONE CIRCUIT OF 132 KV BISWANATH CHARIALI (PG) – ITANAGAR AT GOHPUR SUBSTATION - NERLDC**

132 kV Biswanath Chariali – Itanagar D/C has been approved by Joint Standing Committee of ER and NER on 03.01.2014. LILO of one circuit of 132 kV Biswanath Chariali (PG) – Itanagar at Gohpur was approved in 6th Standing Committee of NER held at Imphal on 03.10.16 & 17th NERPC meeting on 04.10.16. 132 kV Biswanath Chariali - Itanagar 1 Line and 2 Line was charged on 01.04.2021 and 02.04.2021 respectively, but LILO at Gohpur has not been completed yet. Commissioning of the LILO at 132 kV Gohpur substation would enhance the drawl capability of Gohpur, North Lakhimpur and Dhemaji area of Assam power system and also improve the voltage profile of these areas.

AEGCL and NTL are requested to intimate the latest status.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.15	:	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.16	:	**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 as estimated is 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.16**.

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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.17 : 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.***

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.18 : 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.19	:	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.20	:	**COMMISSIONING OF ELEMENTS UNDER NERPSIP-NERTS**

Mizoram:

1. 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.

Nagaland:

2. 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.

Tripura:

3. 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.

Manipur:

4. 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.21	**:**	**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 NERPSIP and Comprehensive Scheme 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 additional O&M of the 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 financial resources 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, at least for the initial minimum period of 3 (three) years. Accordingly, POWERGRID was directed for the assistance. 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**.

However, vide **D.O. 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**.

It is felt that the august forum of 24th TCC and 24th NERPC Meeting may have a further wider discussion for an amicable uniformity conclusion of the matter of all states of the Region. In regard to Arunachal Pradesh, it is very hard to recruit such a huge additional manpower in view of the very large quantities of assets being created under the Comprehensive Scheme against the existing huge disproportionate meagre quantities in comparison to all other sister states of the Region. Further, sudden loading of such huge expenditures by recovery through filing of tariff petitions in SERC with expected quantum burden on the consumers may go against the spirit of welfare governance.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.22	**:**	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.23	**:**	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.24	**:**	**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 <u>by March 2023</u>:** i. **All Existing Lines**.
  ii. **23 Nos.** of **New Lines**.
  iii. **70 Nos.** of **33 kV Lines**.
- **Completion of OPGW laying <u>by March 2024</u>**: 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:										

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.25 : 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.26	**:**	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.27	**:**	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.28 : LONG OUTAGE OF 400/220 KV ICT-1 AT BYRNIHAT S/S- NERPC

400/220 kV 315 MVA ICT-1 at Byrnihat is under outage since 13:32 Hrs of 02-02-2023 due to SF6 gas leakage in Y-phase line chamber on HV side of said ICT. The Outage of said ICT has decreased reliability of Meghalaya system considerably.

MePTCL is thereby requested to furnish the timeline for restoration of the aforementioned ICT for maintaining reliability and security of Meghalaya system and expedite the same for meeting the increased power demand smoothly in the upcoming months ahead.

In 201st OCC, MePTCL stated that consultation with the OEM and PGCIL, to rectify the issues related to the ICT, is underway and the same is expected to be restored by 15th May'23.

In 202nd OCCM MEPTCL updated, regarding rectification of the said ICT, that the vendor has provided the quotation for rectification works and the same has been sent for approval of higher management.

Underlining the urgency of the situation, Sr. GM NERLDC highlighted that the outage of the said ICT has rendered the Meghalaya power system non-compliant for N-1 contingency. He further stated that in case of tripping of the other 400/220kV ICT at Byrnihat, there will be partial or total blackout of the Meghalaya grid. Hence, the 400/220kV ICT1 has to be brought into service at the earliest.
In the 202nd OCC meeting it was decided to be taken up in the upcoming TCC/RPC meeting for early resolution.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.29	:	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.30	:	**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.

lt 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.31 :	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.32	:	**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.**

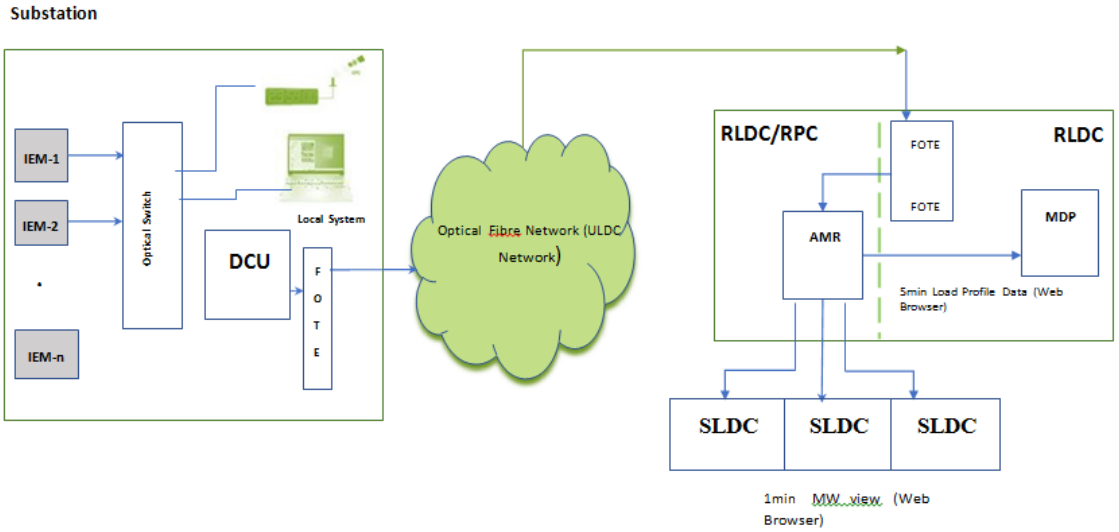
vii. In reference to the above and also as per the draft IEGC 2022 for implementation of AMR project for all the five regions; the proposal from CTUIL for implementation of same in North Eastern Region is provide below for deliberation.

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.6thJuly2022**.**
3.	Conceptual Architecture of AMR connectivity of ISTS Meters	**Provided below**
4.	Objective/J ustification	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 timeframe	Approx.30 months from gazette Notification.
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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.33	:	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.34	:	**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 properly based on the CABIL report.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.35	:	**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 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.36	:	**FINANCIAL ASSISTANCE FOR REQUIREMENT OF MANPOWER FOR NERPSIP SCHEME – DOP, NAGALAND**

Under NERPSIP, some many power infrastructures have been created in all NE States for which we are grateful to GoI. However, manning these assets have become a challenging task in the absence of adequate Manpower. Nagaland had requested for financial assistance under CBIS (NERPSIP) to cover the Manpower cost for a period of 3(Three) years. However, consequent to 22nd NERPC meeting of the NERPC, CEA has conveyed to all the NE States that the required manpower may be recruited by the States and the same may be recovered by filing petition to respective Regulatory Commission. For a State like Nagaland, tariff-based recovery will not be

suitable nor practical in this respect. I therefore request this Forum to take up the issue with appropriate authority for consideration of the financial assistance proposal.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.37	:	**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. 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.38 :	**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 allocation of Lower Subansiri project as per MOP letter is as per **Annexure A.38.**

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.39 :	**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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.40 :	**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 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 TCCC/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 minimising 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. A.41 : 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.*

TCC Deliberation :

NERPC Deliberation :

2. CATEGORY - B : ITEMS FOR APPROVAL

ITEM NO. B.1	**:**	**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.

The agenda is hereby placed before the 24th TCC meeting & 24th NERPC meeting for consideration and approval.

Placed for approval of TCC

ITEM NO. B.2	**:**	**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.

Placed for approval of TCC

ITEM NO. B.3	**:**	**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 Khlerihat (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 OCC, copy enclosed). Issue was discussed in 202nd OCC 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 OCC

Placed for Approval of TCC

ITEM NO. B.4	**:**	**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 (copy attached). Accordingly the matter was taken up with CTUIL for requirement of Bus Reactors at Bongaigaon. CTUIL vide letter dated: 04.05.2023 (Copy attached) 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.

Placed for approval of TCC

ITEM NO. B.5 : 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.

Placed for approval of TCC.

ITEM NO. B.6	:	**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.

Placed for approval 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.

TCC Deliberation :

NERPC Deliberation :

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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. C.3 : ALLOCATION OF BONGAIGAON (BGTPP) POWER, NTPC - TPTL

Tripura was allocated State share of 56 MW of power on real time basis from Bongaigaon Thermal Power Plant (BGTPP) vide Power Purchase Agreement with NTPC which was signed on 28/09/2007.

As per Ministry of Power letter vide No. 22-303/1/2022 dt 28/03/2022 and subsequent letter vide No. NERPC /CC/CSA/2016 dt 01/04/2022, suddenly the allocated power of Tripura was reallocated to Tamil Nadu from 03/04/2022. Again on 29/09/2022 Chief Financial Controller/regulatory Cell Tamil Nadu Generation and Distribution Corporation Ltd. has forwarded a letter to MOP for surrendering of reallocated share of Tripura from 03/06/2023.

The State of Tripura is facing acute shortage of power mainly in peak hours without BGTPP power. New DSM regulation has also been implemented from 05/12/2022 with subsequent revisions where the commercial implication is very high.

NERPC is hereby requested to allocate BGTPP power to Tripura as an early date.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. C.4 : 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.

TCC Deliberation :

NERPC Deliberation :

ITEM NO. C.5 : 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 is requested to clear the dues at an early date.

TCC Deliberation :

NERPC Deliberation :

4. CATEGORY - D : ITEMS FOR INFORMATION

ITEM NO. D.1 : 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.

This is only for information of Members.

ITEM NO. D.2	**:**	**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.

This is only for information of Members.

ITEM NO. D.3	**:**	**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 OCC of NERPC, the proposed item is not eligible for PSDF funding as per the PSDF guidelines.

This is only for information of Members.

ITEM NO. D.4	**:**	**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 OCC of NERPC, the proposed item is not eligible for PSDF funding as per the PSDF guidelines.

This is only for information of Members.

ITEM NO. D.5	**:**	**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 OCC of NERPC, the proposed item is not eligible for PSDF funding as per the PSDF guidelines.

This is only for information of Members.

ITEM NO. D.6	**:**	**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 OCC 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.

This is only for information of Members.

ITEM NO. D.7	**:**	**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 OCC 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.

This is only for information of Members.

ITEM NO. D.8	:	**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 has already expired. 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 has been placed by Assam SLDC with GE based on conditional LOA. 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.

This is only for information of Members.

ITEM NO. D.9	:	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.9**.

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.

This is only for information of Members.

ITEM NO. D.10	:	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.

This is only for information of Members.

ITEM NO. D.11	**:**	**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.11**) has clarified the subject matter in detail. DoP, Arunachal Pradesh may refer to the attached annexure.

This is only for information of Members.

ITEM NO. D.12	:	**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.12**). In 25th NETeST meeting the forum approved the same.

This is only for information of Members.

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

ITEM NO. E.1 : 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.

ITEM NO. E.2 : ESTABLISHMENT OF 132KV SUBSTATION AT TINKHONG - AEGCL

Associated Lines

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

ITEM NO. E.3 : 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.

ITEM NO. E.4 : 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.

ITEM NO. E.5	:	**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" is attached as **Annexure E.5**. In 25th NETeST meeting the forum approved the same.

ITEM NO. E.6	:	**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.

ITEM NO. E.7	**:**	**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.

ITEM NO. E.8	:	**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.

Annexure-II

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-38

No 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 A

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:

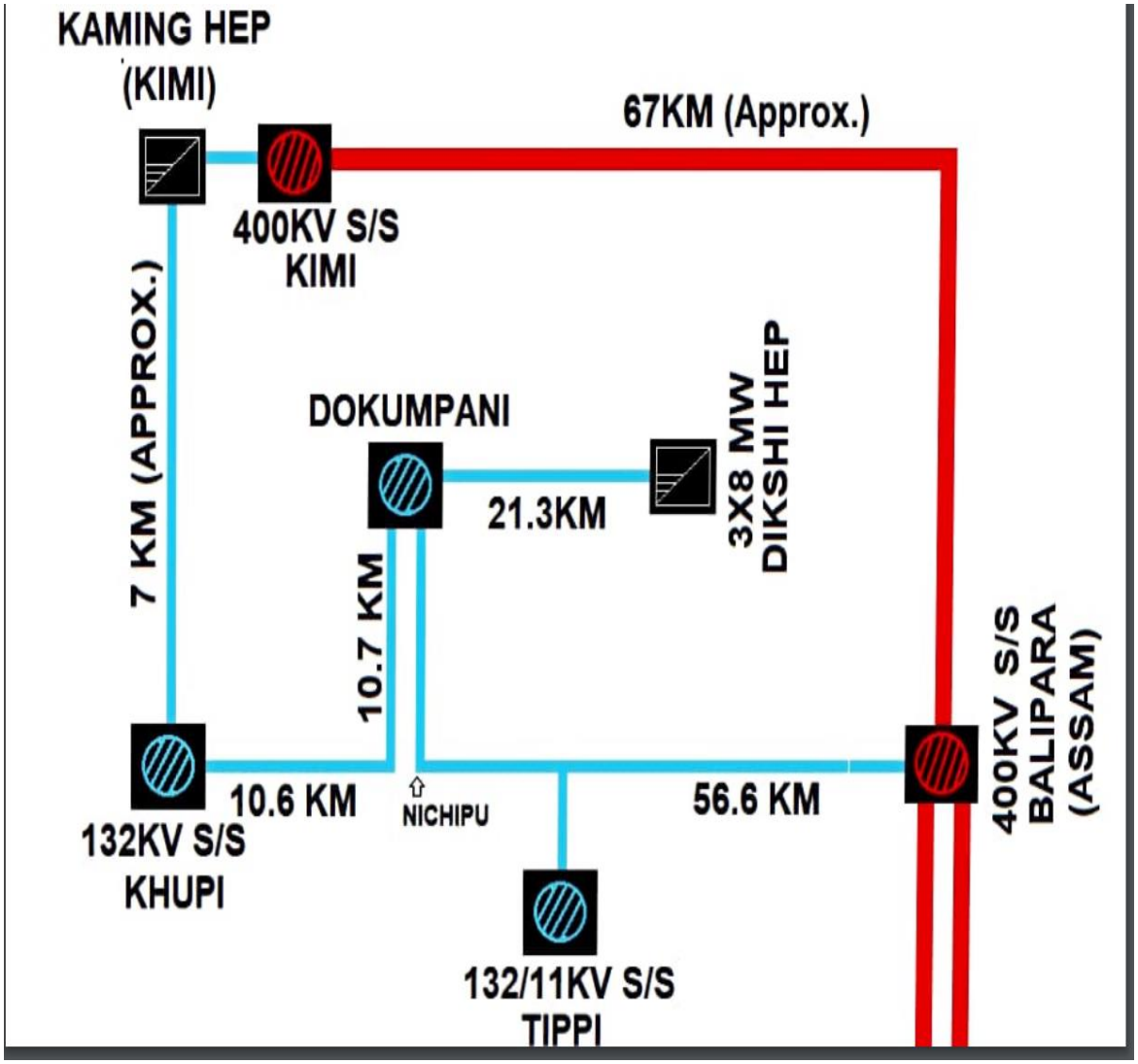
i) Update the status of connectivity of Khupi to Kameng in a week time.
ii) Review further connectivity from Khupi to backbone fiber network for completion of redundant path.
iii) Explore and share the option of VSAT connectivity also for Kameng node as suggested by POSOCO, considering long implementation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

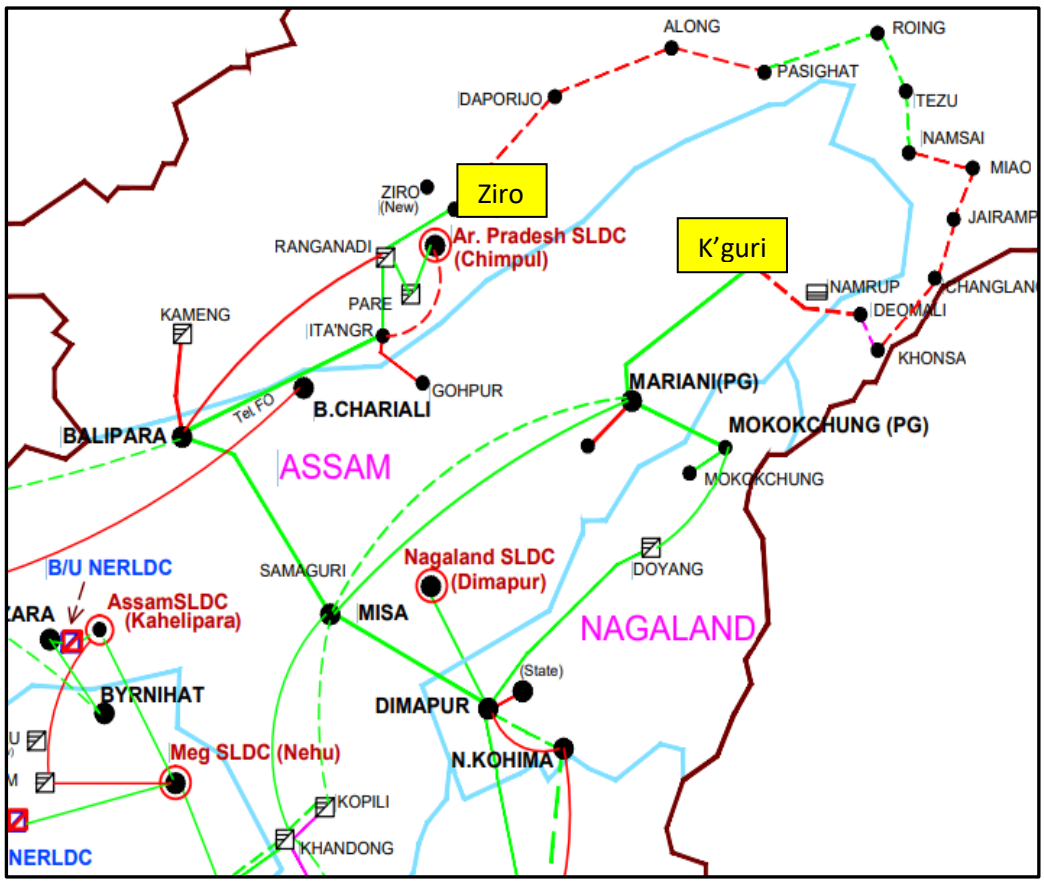
POWERGRID requested Arunachal Pradesh for allowing 6 fiber out of the total fibers being laid (in Ziro- Daporijio - Roing-Tezu-Namsai-Miao-Changlang-K'guri portion) for sharing for power system uses. SLDC Arunachal Pradesh stated to come up with a proposal so as to permit such uses.

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.9

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

ANNEXURE D.12

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**.

*****

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.