



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  
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No.: No. NERPC/SE (O)/OCC/2021/9994-10033

February 03, 2023

To

As per list attached

**Sub: Minutes of 198<sup>th</sup> OCC Meeting.**

Sir/Madam,

Please find enclosed herewith the minutes of the 198<sup>th</sup> OCC Meeting held at "NERPC Conference Hall" Shillong on 24<sup>th</sup> January, 2023 for your kind information and necessary action. The minutes is also available on the website of NERPC, www.nerpc.gov.in.

Any comments/observations may kindly be communicated to NERPC Secretariat at the earliest.

Encl: As above

(एस. एम. आइमोल / S. M. Aimol)

निदेशक / Director

## **Distribution List:**

1. Managing Director, AEGCL, Bijuli Bhawan, Guwahati – 781 001
2. Managing Director, APGCL, Bijuli Bhawan, Guwahati – 781 001
3. Managing Director, APDCL, Bijuli Bhawan, Guwahati – 781 001
4. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
5. Managing Director, MSPDCL, Secure Office Bldg. Complex, South Block, Imphal – 795 001
6. Director (Transmission), MePTCL, Lumjingshai, Short Round Road, Shillong – 793 001
7. Director (Generation), MePGCL, Lumjingshai, Short Round Road, Shillong – 793 001
8. Director (Distribution), MePDCL, Lumjingshai, Short Round Road, Shillong – 793 001
9. Director (Tech.), TSECL, Banamalipur, Agartala -799 001.
10. Director (Generation), TPGCL, Banamalipur, Agartala -799 001.
11. Chief Engineer (WE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
12. Chief Engineer (TP&MZ), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
13. Chief Engineer (Commercial) -cum- CEI, DoP, Govt. of Arunachal Pradesh, Itanagar- 791111
14. Engineer-in-Chief, P&E Department, Govt. of Mizoram, Aizawl – 796 001
15. Engineer-in-Chief, Department of Power, Govt. of Nagaland, Kohima – 797 001
16. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
17. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
18. Group GM, NTPC, Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
19. Vice President (Plant), OTPC, Badarghat Complex, Agartala, Tripura - 799014
20. ED, PGCIL/NERTS, Dongtiah-Lower Nongrah, Lapalang, Shillong -793 006
21. AGM (BD), NVVN, Core 5, 3rd floor, Scope Complex, 7 Institutional Area, Lodhi Rd., N. Delhi-3
22. Vice President, PTCIL, 2nd Floor, NBCC Tower, 15, Bhikaji Cama Place, New Delhi – 110066
23. Dy. COO, CTUIL, “Saudamini”, 1st Floor, Plot No. 2, Sector-29, Gurugram, Haryana – 122001
24. Chief Engineer, GM Division, Central Electricity Authority, New Delhi – 110066
25. Chief Engineer, NPC Division, Central Electricity Authority, New Delhi – 110066
26. Head & VP, (R&C), ENICL, IndiGrid, Windsor Building, Kalina, Santacruz (East), Mumbai- 98
27. ED, NERLDC, Dongtiah, Lower Nongrah, Lapalang, Shillong -793 006
28. CGM, AEGCL, Bijuli Bhawan, Guwahati – 781001
29. CGM, APGCL, Bijuli Bhawan, Guwahati – 781001
30. CGM, DISCOM, Bijuli Bhawan, Guwahati – 781001
31. Head of SLDC, Dept. of Power, Govt. of Arunachal Pradesh, Itanagar – 791111
32. CGM, (LDC), SLDC Complex, AEGCL, Kahilipara, Guwahati-781 019
33. Head of SLDC, MSPCL, Imphal – 795001
34. Head of SLDC, MePTCL, Lumjingshai, Short Round Road, Shillong – 793 001
35. Head of SLDC, P&E Deptt. Govt. of Mizoram, Aizawl – 796 001
36. Head of SLDC, Dept. of Power, Govt. of Nagaland, Dimapur – 797103
37. Head of SLDC, TSECL, Agartala – 799001
38. Chief Engineer (Elect), Loktak HEP, Vidyut Vihar, Kom Keirap, Manipur- 795124
39. DGM (O&M), OTPC, Badarghat Complex, Agartala, Tripura – 799014
40. Director, NETC, 2C, 3rdFloor, D21Corporate Park, DMRC Building Sector 21, Dwarka, Delhi-77.



(एस. एम. आइमोल / S. M. Aimol)

निदेशक / Director



सत्यमेव जयते

# Minutes of the 198<sup>th</sup> OCC Meeting



Govt. of India  
Ministry of Power  
North Eastern Regional Power Committee  
Shillong

**North Eastern Regional Power Committee**  
Minutes of the  
198<sup>th</sup> Operation Co-ordination Sub-Committee Meeting (OCCM)

Time of meeting : 10:00 Hrs.

Date of meeting : 24-01-2023 (Tuesday)

Venue : "NERPC Conference Hall, Shillong"

The list of participants is attached at **Annexure-I**.

At the outset, Shri S. M. Aimol, Director, NERPC welcomed all the participants and introduced the new Member Secretary, Shri K. B. Jagtap, who had joined as Member Secretary, NERPC on 23<sup>rd</sup> January 2023. He then requested Shri K. B. Jagtap, Member Secretary, NERPC to give his opening remarks.

Shri K. B. Jagtap, MS extended warm welcome to all members and expressed gratitude for participating in large numbers in his first OCC meeting of NERPC. In his brief opening remarks, he mentioned that NE region is given special attention by the central government for development of the region including power sector. He appreciated the cooperation and coordinated efforts of all the constituents towards improvement of power sector in NER. He further stated that Kopili & Khandong HEP restoration is closely monitored by the CEA & Ministry of Power and all efforts should be made for early restoration of the plants. He also requested POWERGRID to expedite for early restoration of 132 kV Jiribam- Haflong transmission line so as to provide some relief to the critical situation in Haflong areas of Assam and Meghalaya power system.

After this, the agenda items were taken up discussion.

|                            |
|----------------------------|
| A. CONFIRMATION OF MINUTES |
|----------------------------|

**CONFIRMATION OF MINUTES OF 197<sup>th</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.**

The minutes of 197<sup>th</sup> meeting of Operation Sub-committee held on 16<sup>th</sup> December 2022 in Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2021/1289-1325 dated 28<sup>th</sup> December, 2022.

No comments/observations were received from the constituents.

***The Sub-committee confirmed the minutes of 197<sup>th</sup> OCCM of NERPC.***

## **B. FOLLOW UP AGENDA ITEMS**

### **B.1. Operational Performance and Grid discipline during December,2022:**

NERLDC presented the Operational Performance and Grid Discipline for the month of November 2022 (Attached at **Annexure B.1**).

### **B.2. Generation Planning (ongoing and planned outages)**

a. Present per day MU and projected number of days of operation.

| <b>Plants</b>            | <b>Reservoir level in meter (as on 14/12/2022)</b> | <b>MU content</b>                             | <b>Present DC (in MU)</b> | <b>No of days as per current generation</b> |
|--------------------------|--|---|---------------------------|---|
| Khandong + Kopili stg II | Under outage and restoration process going on      | Under outage and restoration process going on | <b>0</b>                  | Will be "0" until further intimation.       |
| Kopili                   | Under outage and restoration process going on      | Under outage and restoration process going on | <b>0</b>                  | Will be "0" until further intimation.       |
| Doyang                   | <b>317.41</b>                                      | <b>18</b>                                     | <b>0.189</b>              | <b>95</b>                                   |
| Loktak                   | <b>766.63</b>                                      | <b>16.3</b>                                   | <b>0.6125</b>             | <b>27</b>                                   |

b. The outage of other generating stations may be approved considering the present water levels in reservoirs and long-term outage of Kopili HEP.

### **Deliberation of the sub-committee**

The shutdown/outage proposals were discussed and after detailed deliberation the forum approved the outage of generating stations for the month of February 2023 (as attached at **Annexure-B.3**).

The shutdown proposal in respect of BgTPP of NTPC was not approved due to lean hydro season. The forum agreed to consider shutdown of BgTPP after sufficient hydro power is available, likely from May/June 2023.

***The sub-committee noted as above.***

### **B.3. Outage Planning Transmission elements**

It was agreed in the 99<sup>th</sup> OCC meeting that shutdown will be availed only after approval is given by the OCC forum. It was also agreed that deferment/revision of outages elements other than already approved in OCC will be henceforth put/displayed in the website of NERPC (under Operational Activities/OCC Approved shutdown) as per CERC regulations/ CEA guidelines etc for ensuring smooth & secure grid operation.

Furnishing request of shut down of the element, which was approved by NERPC, by Indenting Agency (ISTS licensees/STUs/Generating Companies) to NERLDC: Planned shutdown approved by NERPC shall be considered for implementation by NERLDC on D-3 basis. If an outage is to be availed on say 10<sup>th</sup> of the month, the shutdown availing agency would reconfirm to NERLDC on 7<sup>th</sup> of the month by 10:00 Hr. This practice is necessary to ensure optimal capacity utilization and the time required for associated system study/coordination by/amongst RLDC/NLDC.

It was decided in the previous OCCM that shutdown would be granted from the 1<sup>st</sup> day of the following calendar month to the 30<sup>th</sup>/31<sup>st</sup> day of the same month.

**Deliberation of the sub-committee**

After detailed deliberation the forum approved the shutdown of transmission elements

for February 2023 (attached at **Annexure-B.3**).

***The sub-committee noted as above.***

**B.4. Estimated Transmission Availability Certificate (TAC) for the month of November, 2022:**

Transmission Utilities have submitted the outage data for the month of November, 2022. The attributability of outage of the said elements have been finalized by NERLDC & NERPC. The Availability percentage of the transmission elements of ISTS licensees for the month of November, 2022 is as given below:

| SN | ISTS Licensee | Availability for Nov'22 (%) |
|----|---------------|-----------------------------|
| 1  | NETC          | 100.0000                    |
| 2  | KMTL          | 99.9618                     |
| 3  | NER-II TL     | 99.8822                     |
| 4  | PGCIL         | 99.9418 (Oct)/99.7689 (Nov) |

***The sub-committee noted as above***

**B.5. Mock Black Start Exercise:**

The previous mock black start & restoration exercise has been conducted at various generating stations in NER on the dates mentioned in the following table:

As per regulation 5.8 (b) of IEGC, mock black start shall be carried out by Users/CTU/STUs at-least once in 6 months.

Minutes of Meeting of 198<sup>th</sup> OCC Meeting held on 24<sup>th</sup> January 2023  
Status as updated in the 197<sup>th</sup> OCCM:

| Plant Name   | Performed On | Due Date   | Schedule of Testing as per 197 <sup>th</sup> OCCM |
|--------------|--------------|------------|---|
| AGBPP        | .....        | .....      | after upgradation of DG under R&M                 |
| AGTTCCPP     | 09.04.2019   | 09.10.2019 | Dec'22*   |
| PareHEP      | 25.01.2020   | 25.07.2020 | To be done in lean hydro season                   |
| Kopili HEP   | 10.05.2019   | NA         | NA  |
| Kameng HEP   | .....        | .....      | In Lean Hydro season                              |
| Doyang HEP   | -            | -          | Completed on 21 <sup>st</sup> Oct'22              |
| KopiliStg-II | -            | -          | Under prolonged shutdown                          |
| RHEP         | -            | -          | Done on 28 <sup>th</sup> Nov'22                   |

\*DGM, SLDC TSECL updated that synchronization trolley is installed at 79 Tilla on 16<sup>th</sup> Nov'22. Consequently, ED NEEPCO stated that R&M activities at AGTTCCPP are over and would come up with a suitable date later for the exercise in consultation with NERLDC.

**Deliberation of the sub-committee**

Status as updated in the 198<sup>th</sup> OCCM:

| Plant Name   | Performed On | Due Date   | Schedule of Testing as per 198 <sup>th</sup> OCCM |
|--------------|--------------|------------|---|
| AGBPP        | .....        | .....      | after upgradation of DG under R&M                 |
| AGTTCCPP     | 09.04.2019   | 09.10.2019 | To be done on 27 <sup>th</sup> Jan'23             |
| PareHEP      | 25.01.2020   | 25.07.2020 | 1 <sup>st</sup> week of Feb'23*                   |
| Kopili HEP   | 10.05.2019   | NA         | NA  |
| Kameng HEP   | .....        | .....      | In Lean Hydro season**                            |
| Doyang HEP   | -            | -          | Completed on 21 <sup>st</sup> Oct'22              |
| KopiliStg-II | -            | -          | Under prolonged shutdown                          |
| RHEP         | -            | -          | Done on 28 <sup>th</sup> Nov'22                   |

\*Regarding Pare HEP, GM, NEEPCO intimated that the MBS exercise was attempted last year but was unsuccessful due to faulty auto synchronizing circuit at Ranganadi, for rectification of which M/s GE has already been consulted. As an alternative, NEEPCO suggested to synchronize Pare HEP from Chimpu end and added that it was done successfully in the past also. Arunachal Pradesh agreed to the proposal. NERLDC will study the feasibility and finalize the same. The forum

Minutes of Meeting of 198<sup>th</sup> OCC Meeting held on 24<sup>th</sup> January 2023  
requested NEEPCO to conduct the exercise before taking shutdown of one unit of Pare HEP which is from 2<sup>nd</sup> February 2023.

**\*\*Regarding Kameng HEP, NEEPCO highlighted the high requirement of MVAR for charging the 400kV Balipara-Kameng D/C. For addressing the issue, the OEM of the Generator, BHEL has been consulted but still not able to resolve.**

Member Secretary NERPC requested NEEPCO to resolve the issues at the earliest and stated that, if necessary, NERPC will write to BHEL for expediting the same.

***Sub-committee noted as above***

***Action: NEEPCO***

#### **B.6. Status of ADMS:**

Status for Automatic Demand Management Scheme in 7 states of NER. The SLDCs informed the latest status as follows:

| <b>Name of the utility</b> | <b>SAT Completion</b> | <b>DoCO</b>                                |
|----------------------------|-----------------------|--|
| DoP Ar. Pradesh            | 27-01-2021            | Enabled & in-operation                     |
| AEGCL/APDCL                | 07-12-2020            | Enabled & in-operation                     |
| MSPCL                      | 24-11-2020            | Enabled & in-operation                     |
| MePTCL/MePDCL              | 31-08-2020            | Enabled & in-operation                     |
| P&ED Mizoram               | 22-02-2021            | Enabled & in-operation                     |
| DoP Nagaland               | 17-11-2020            | To be enabled after stability of ICCP link |
| TSECL                      | 24-12-2020            | To be enabled by Oct'22                    |

As updated in the 197<sup>th</sup> OCCM:

1. **SLDC TSECL** reiterated that ADMS at Takerjhala, Bishalgarh and Badarpur can be enabled only after the completion of works by NERPSIP.
2. **Proposed New Logic as per New DSM Regulations:** The proposed changes in tripping logic, in line with new DSM regulation, is as follows-
  - a. For scheduled drawl<400MW, tripping should occur when deviation > min [40MW, 20% of schedule] OR if frequency <49.85 and drawl> schedule
  - b. For scheduled drawl>400MW, tripping should occur when deviation > min [100MW, 10% of schedule] OR if frequency <49.85 and drawl> schedule

The forum requested all the SLDCs to implement the revised logic as per new DSM regulation at the earliest.

#### **Deliberation of the sub-committee**

1. DoP Nagaland updated that the issue related to link between ICCP server and ADMS server has been resolved on 17<sup>th</sup> September 2022 and the same has been commissioned on 7<sup>th</sup> October 2022. In case of Tripura, TSECL reiterated that ADMS



at Takerjhala, Bishalgarh and Badarpur can be enabled only after the completion of works by NERPSIP.

2. Regarding revision of tripping Logic-

- Assam updated that APDCL would be asked to complete the work before the next OCCM
- Similarly, Arunachal Pradesh and Meghalaya intimated that revised logic will be incorporated before next OCCM.
- Mizoram updated that the new logic has been implemented. The forum appreciated Mizoram for the same.
- SLDC, Nagaland stated that in current scheme, tripping logic is set at 10% of schedule, and the new logic will be implemented soon.
- Manipur and Tripura stated that the new logic will be implemented shortly.

***Sub-committee noted as above***

***Action: all state SLDCs***

**B.7. Violation of state wise TTC/ATC:**

As per POSOCO KPI, NERLDC has to report the violation of import TTC/ATC of NER states in daily, weekly and monthly basis. It has been observed that most of the NER states are not N-1 secure causing violation of TTC/ATC limit although the actual drawl remains within the schedule values. Violation has been observed in case of Assam, Meghalaya, and Tripura states.

The TTC/ATC calculation of States done by NERLDC is as follows:

| State             | Time Period | N-1 considered                  | Limiting element                           | TTC  | RM | ATC  |
|-------------------|-------------|---------------------------------|--|------|----|------|
| Arunachal Pradesh | Off-Peak    | 132kV Lekhi – Pare              | 132 kV Pare – Itanagar S/C                 | 195  | 5  | 180  |
|                   | Peak        |                                 |  | 195  | 5  | 180  |
| Assam             | Off-Peak    | 220kV Misa-Samaguri I or II     | 220 kV Balipara-Sonabil                    | 1730 | 40 | 1690 |
|                   | Peak        |                                 |  | 1600 | 40 | 1690 |
| Manipur           | Off-Peak    | 132kV Imphal MA-Imphal PG Ckt I | 132 kV Imphal (MA)-Imphal (PG) II & III    | 320  | 5  | 315  |
|                   | Peak        |                                 |  | 320  | 5  | 315  |
| Meghalaya         | Off-Peak    | 132 kV Umiam3 – Umiam           | 132 kV Umiam-Umiam                         | 340  | 10 | 330  |
|                   | Peak        |                                 | Umiam 1 II                                 | 260  | 10 | 250  |
| Mizoram           | Off-Peak    | 132 kV Melriat-Silchar I        | 132 kV Aizawl-Luangmual S/C                | 160  | 5  | 155  |
|                   | Peak        | ORII                            |  | 155  | 5  | 150  |
| Nagaland          | Off-Peak    | 220/132 kV ,100 MVA Dimapur ICT | 220/132 kV ,30 MVA Mokochung ICTs          | 255  | 5  | 245  |
|                   | Peak        |                                 |  | 290  | 5  | 285  |
| Tripura           | Off-Peak    | 132 kV SM Nagar(ISTS)           | 132 kV SM-Nagar (TR) – SM Nagar (ISTS) S/C | 340  | 6  | 334  |
|                   | Peak        | Budhjungnagar S/C               |  | 315  | 6  | 304  |

In previous OCC meeting(s) it was decided that in the event of any major shutdown(approved/emergency) the state periphery ATC/TTC shall be calculated by respective SLDC and communicated to NERLDC.

As agreed in previous OCCMs, all the states are requested to provide the respective ATC/TTC to NERLDC on monthly basis.

**Deliberation of the sub-committee**

NERLDC updated that SLDCs of Meghalaya, Assam, Nagaland and Manipur are submitting the ATC/TTC report regularly. Member Secretary requested other SLDCs also to furnish the same.

***Sub-committee noted as above***

***Action: all state SLDCs***

**B.8. Issues pertaining to Kopili & Khandong.**

**A. Load restriction in Meghalaya Power System due to planned outage of Khandong HEP & Kopili Stg-II:**

The planned shutdown of Khandong HEP and Kopili Stage II has been approved from 10.01.2022 to 09.05.2022 in the 185<sup>th</sup> OCCM for the following activities:

- a. Inspection and repairing of Khandong Head Race Tunnel, Trash Rack Gate, Intake Gate, Surge Shaft Gates, Steel Liner of HRT etc.
- b. Acid Proof Coating of Stage-II Penstock
- c. Installation and commissioning of Penstock Protection BFV System of Khandong
- d. Annual Planned Maintenance of Khandong Unit# I & II.

Decisions as per previous meetings: (i) Meghalaya System shall be operated by opening of 132kV Mawngap-Nongstoin T/L right from the start of Khandong HEP shutdown. (ii) In normal circumstances no load shedding is required and Meghalaya can continue to cater full demand based on present generation scenario. (iii) In event of tripping of any one circuit of 132kV UmiamStg-I to UmiamStg-III D/C SLDC Meghalaya shall swiftly shed load till loading of 132kV UmiamStg-I to UmiamStg-III S/C is within limit and also increase generation from UmiamStg-I HEP and Leshka HEP. (iv) based on Real Time Condition Mawphlang may be shifted to be fed from Agia side after concurrence of NERLDC, (v) Early restoration of Misa-Kopili-Khandong link by NERTS/NEEPCO.

**B. Station supply at Khandong and Kopili Power Station:**

Following the discussions in the 189<sup>th</sup> OCC and in the special meeting held on 27.04.2022 in presence of representatives from NERPC, NERLDC, NEEPCO, NERTS

Minutes of Meeting of 198<sup>th</sup> OCC Meeting held on 24<sup>th</sup> January 2023  
and AEGCL, Khliehriat – Khandong – Umrangshu link was charged as an interim special arrangement.

1. As agreed in the special meeting, AEGCL was requested to extend the PLCC system from Umrangshu to Haflong by 15<sup>th</sup> May 2022.

2. Since all the CRPs at Khandong Control room are under debris now and it is doubtful for revival of the same, NEEPCO is planning to arrange following CRPs and 220V DC source to charge the Khandong bus radially from Umrangso Sub-station only.

It may kindly be noted that due to Khandong incident, the construction restoration activities of 4x50MW Kopili P.S, 2x25MW Khandong and 1x25MW Kopili Stage-II is badly hampered. Whatever activities are being carried out is based on DG Power only which is not the solution and progress of work has been severely hit.

As a stop gap arrangement following CRPs and 220V DC source shall be arranged by NEEPCO at the earliest.

- 132KV Umrangso bay – 1 No.
- 132/33KV 7.5MVA & 3MVA – 2 Nos.
- 33/0.4KV SAT 1MVA – 2 Nos.
- 33KV Umrangso line – 1 No.
- 33KV Kopili line – 1 No.

3. As discussed in 192<sup>nd</sup> OCC, NEEPCO has sent consent letter for becoming Bulk power consumer of APDCL for the consumption of construction power for restoration works of KhandongHEP. Further NEEPCO shall be sending weekly SEM reading to Assam/NERLDC. Also, NEEPCO requested for installation of 2 nos SEMs at the earliest so that restoration works can be started.

4. In 193<sup>rd</sup> OCC, GM, NEEPCO proposed space for 2 CRP in old kiosk room near Khandong stage 1 to PGCIL for Panel installation for 132kV Khliehriat-Khandong - 2 line and 132kV Khandong-Kopili line 2.

5. In 194<sup>th</sup> OCC, GM, NEEPCO informed the forum that for drawing of construction power from 132kV Bus at Khandong via the two 132/33kV Transformers CRPs are at site but 220V DC battery bank is unavailable, for which order has been placed and will be supplied by Sep'22. Thereafter, drawing of power from the Grid shall commence by 1<sup>st</sup> week of October'2022. Regarding Panel installation for 132kV Khliehriat-Khandong - 2 line and 132kV Khandong – Kopili - 2, NERTS assured the forum to complete the work before Feb'23.

**C. Recommissioning of 1X25 MW Khandong Stage-II plant**

NEEPCO is planning to re-commission and synchronize 1X25MW Khandong Stage-II unit within this current financial year. Since all the Control & relay panels are submerged and damaged beyond repair during the inundation on 26.03.2022, for successful commissioning and evacuation of the generated power, the Khandong Switch Yard has to be adequately restored within February – 2023.

**Present Status:**

1. One CRP for Khandong-Umrongsong feeder at Khandong end is procured and expected to be commissioned by NEEPCO before February 2022.
2. One Temporary KIOSK room has been identified and Cable trenches are under Construction and, cables are being re-routed.

**Status of action being taken by NERTS, POWERGRID:**

1. The matter for availability of one more 132KV line from Khandong SY to Khlehiriat (PG) Sub-Station was discussed in the last OCC meetings, the availability of towers nearby Khandong Power Stations/new arrangement may be intimated to NEEPCO.
2. For the above, NERTS, POWERGRID was requested to install 1(one) BCU based CRP February-2023. Status of the same may kindly be shared with NEEPCO.
3. NERTS, POWERGRID was requested to ensure the installation of PLCC panel for Khandong – Khlehiriat line alongwith FOTE panels for digital and analog data/voice, protection and communication to NERLDC before synchronization of the Khandong Stage-II.

**Status of action taken by AEGCL:**

1. AEGCL was requested to provide a PLCC Panel for Khandong-Umrongsong line and NEEPCO was to provide the 48V battery bank with charger for PLCC. Status of the same may please be intimated to NEEPCO.

In the 196<sup>th</sup> & 197<sup>th</sup> OCCMs, following points were discussed-

**1. Regarding power supply to Meghalaya Power system**

- Meghalaya Power system to operate in bifurcation mode (132kV Mawngap-Nongstoin T/L shall be opened and Nongstoin, Nangalbibra, Tura and Ampati to be fed from Agia) with installation of 20MVAR capacitor banks at 132/33kV NEHU SS till the reconductoring of Umiam stgI-stgIII DC reconductoring work is done. After the reconductoring, it will shift to closed loop mode wherein maximum of 380MW maximum demand can be met with 107 MW Meghalaya internal generation.
- Early restoration of 132kV Jiribam –Haflong line (out due to Line diversion work by NHIDCL – NH48 / replacement of tower due to landslides in road widening

area) which will improve the ATC/TTC of Meghalaya State. NERTS informed the forum that the PGCIL updated that National wildlife Board meeting for forest clearance is scheduled in Dec'22, line will be restored soon after obtaining the forest clearance

- Early commissioning of 220kV Mawngap-Killing line. NERPSIP updated that RoW issue is still unresolved and the matter is being discussed with the state government.

## **2. Kopili Related activities**

48V DC supply for PLCC panels is being undertaken by NEEPCO. PGCIL provided the load requirement of 20A max. Regarding 48V DC supply for PLCC panels, AEGCL stated that order is being processed.

## **3. Khandong S/y related activities**

AEGCL asked PGCIL to undertake the transportation of 2CRPs at Srikona SS to Khandong Switchyard for 132kV Kopili-Khandong#2 & 132kV Khandong-Khliehriat#2 Lines. PGCIL updated that relay replacement works in the CRPs is underway, transportation will be done thereafter.

### **Deliberation of the sub-committee**

#### **A. Load Restriction in Meghalaya Power system:**

- Regarding Jiribam-Haflong line, DGM (AM), PGCIL intimated that the meeting of National Board for Wildlife on the issue had taken place on 29<sup>th</sup> December 2022 and the minutes of the meeting is likely to be issued in the first week of February 2023, after which Level 1 clearance will be provided to PGCIL
- Regarding reconductoring of Umiam stg I- stg III D/C, status is shown in item C.12.
- Regarding commissioning of Mawngap-Killing line, Manager (NERPSIP), PGCIL stated that the status is same as in previous OCCM.

#### **B. Recommissioning of 1x25 MW Khandong stg II**

- AEGCL updated that PLCC panel for Khandong-Umrangshu line will be provided by 15<sup>th</sup> Feb 2023.
- GM, NEEPCO updated the recommissioning dates of plants as follow-

| Sr. No. | Stations                      | Expected Revival Date |
|---------|-------------------------------|-----------------------|
| a.      | Kopili 2 units (2x50)         | May'23                |
| b.      | Kopili other 2 units (2x50)   | May'25                |
| c.      | Khandong units 1 and 2 (2x25) | May'25                |
| d.      | Khandong stg II (1x25)        | March'23              |

iii GM, NEEPCO informed that for reliable evacuation of Khandong stg 2, any of the Khandong-Khleihriat ckt1 or ckt 2 along with 132kV Khandong-Umrangshu line (with full protection system) is required. And for evacuation of 2 units of Kopili, either 220kV Misa-Kopili D/C or Kopili-Khandong D/C is required.

iv PGCIL intimated the forum that restoration of Koipili-Khandong D/C will take longer period, so reliable evacuation could take place through Misa-Kopili D/C provided NEEPCO completes its Switchyard and Bay revival works at Kopili substation on time.

C. Regarding restoration works at Khandong switchyard, NEEPCO informed that the Kiosk room will be ready by Feb'23 and about placing the CRPs in the Kiosk room, PGCIL updated that the required CRPs are to be transferred from Srikona substation, which will be done after incorporating following modifications in the CRP:

- Operating voltage from 110volts to 220volts
- Main and Transfer Bus scheme (MT) to Double main and Transfer Bus Scheme.

Regarding complete restoration of Khandong-Khleihriat D/C, DGM, PGCIL updated that the line side work (which involves erection of two D/C towers) will be completed by 15<sup>th</sup> March'23 and Switchyard side work will be completed by end of March'23.

Member secretary, NERPC requested PGCIL and NEEPCO to ensure availability of evacuating lines and bays before recommissioning schedule of Khandong stg II.

***Sub-committee noted as above***

***Action: NEEPCO, NERTS***

#### **B.9. Implementation of Guwahati Islanding Scheme:**

In the 190<sup>th</sup> OCCM, DD, NERPC stated that in the Special Meeting on 13<sup>th</sup> May'22 it was decided that dedicated fiber is required in order to ensure Cyber Security. AEGCL intimated that Dedicated Fiber is available in the link SLDC – Sarusajai – Mirza – Boko – Agia – BTPS – BgTPP and offered the same for the Islanding Scheme. The forum requested NERTS to explore the availability of dedicated fiber. Member Secretary, NERPC stated that after budgetary offer is received from at least two vendors the DPR will be finalized.

In 195<sup>th</sup> OCC, Member Secretary, NERPC informed the forum that the budgetary offer from M/s GE has been received. He added that the DPR for the Guwahati Islanding Scheme shall be finalized by Oct, 2022. In 196<sup>th</sup> OCCM, Member Secretary NERPC updated that the finalized DPR was discussed in 23<sup>rd</sup> NERPC meeting and issue of high cost was flagged. So, re estimation of project cost will be done at the earliest. In the last OCCM, Member secretary NERPC urged AEGCL to re-examine the cost estimates in the DPR and after detail studies, the same will be discussed in the next meeting with the CEA.

**Deliberation of the sub-committee**

AEGCL was requested to re-examine the cost estimates in the DPR and intimate the subcommittee.

***Sub-committee noted as above***

***Action: AEGCL***

**B.10. Furnishing details of upgraded UFR settings along with list of feeders and quantum of load:**

Status as updated in the 197<sup>th</sup> OCC meeting

| Name of the state/utility | Submission of revised UFR list | Implementation of revised settings   | Status of mapping                                       |
|---------------------------|--------------------------------|--|---|
| Ar. Pradesh               | Submitted                      | Stg-1 (49.4Hz) implementation in new feeders. UFR to be procured by July'22, implementation to be done by Mar'23**       | LoA to M/s GE*  |
| Assam                     | Submitted                      | Installation Completed. UFR to be shifted to Samaguri for 132kV Khaloigaon-Samaguri line.                                | Done  |
| Manipur                   | Not submitted                  | No extra shedding required only Stage upward revision to be done. ADMS and UFR feeder segregation to be done for Stage-I | To be done  |
| Meghalaya                 | Submitted                      | 17 out of 17 feeders completed. Forum requested to share the points with RLDC SCADA                                      | One feeder of Stage IV left for mapping<br>Other stages |

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|          |                 |  |  |
|----------|-----------------|--|--|
|          |                 |  | completed.                                     |
| Mizoram  | To be submitted | Completed  | By Dec'22 subject to resolving of SCADA issues |
| Nagaland | Submitted       | Completed  | Completed**                                    |
| Tripura  | Submitted       | Stage-1(49.4Hz), Stage-2 (49.2Hz), Stage-3(49Hz) require installation of UFR. – Delivery at site by Sep22 and installation by Oct'22 | Jan'23   |

\*EE, SLDC, DoP Arunachal Pradesh intimated the forum that mapping is pending as repeated communication with M/s GE is going unanswered. The forum requested the intervention of NERTS so that work is completed by GE at the earliest. CGM(AM), NERTS assured that POWERGRID will follow up the matter with M/s GE.

\*\* Nagaland updated that mapping work is completed and as per the direction of 196<sup>th</sup> OCC forum, Stage-I of UFR has been segregated from ADMS scheme by shifting the stage-I of UFR to 66kV Ganeshnagar feeder at Dimapur (Nagaland) S/s.

**Deliberation of the sub-committee**

Status as updated in the 198<sup>th</sup> OCC meeting:

| Name of the state/utility | Submission of revised UFR list | Implementation of revised settings   | Status of mapping   |
|---------------------------|--------------------------------|--|---|
| Ar. Pradesh               | Submitted                      | Stg-1 (49.4Hz) implementation in new feeders. UFR to be procured by July'22, implementation to be done by Mar'23 | Coordination with M/S GE is ongoing, tentative completion by March'23 |
| Assam                     | Submitted                      | Installation Completed. UFR to be shifted to Samaguri for 132kV Khaloigaon-Samaguri line.                        | Done  |
| Manipur                   | Not submitted                  | No extra shedding required only  | To be done  |



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|           |                 |   |                   |
|-----------|-----------------|---|-------------------|
|           |                 | Stage upward revision to be done. ADMS and UFR feeder segregation to be done for Stage-I by next OCCM |                   |
| Meghalaya | Submitted       | 17 out of 17 feeders completed. Forum requested to share the points with RLDC SCADA                   | Done              |
| Mizoram   | To be submitted | Completed   | Done              |
| Nagaland  | Submitted       | Completed   | Completed         |
| Tripura   | Submitted       | Stage-1(49.4Hz), Stage-2 (49.2Hz), Stage-3(49Hz) require installation of UFR. Stg I UFR installed     | Mapping by Feb'23 |

***Sub-committee noted as above***

***Action: all state utilities***

**B.11. Primary Frequency Response testing plan of remaining units in NER:**

Primary Frequency Response Testing of generator units is being carried out in line with the Clause no.5.2(g) of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010.

Schedule as agreed in the 197<sup>th</sup>OCC meeting:

| Region | Station          | No.of generators   | Suggested Schedule       |                          | Duration (days)  |
|--------|------------------|--------------------|--------------------------|--------------------------|--|
|        |                  |                    | Test Start               | Test End                 |  |
| NER    | NEEPCO-Monarchak | 1                  | 26 <sup>th</sup> July'22 | 28 <sup>th</sup> July'22 | done   |
| NER    | NEEPCO-Kameng    | 1 (by M/s Solvina) | Oct'22                   | Oct'22                   | Done on 20 <sup>th</sup> & 21 <sup>st</sup> Oct' 22                      |
| NER    | OTPCl-Palatana   | 2 (by M/s Solvina) | Nov'22                   | Nov'22                   | To be done   |
| NER    | Doyang-NEEPCO    | 2 (by M/s Siemens) | Oct'22                   | Oct'22                   | 4(water level to be sufficient enough to run the units at full capacity) |

Regarding OTPC Palatana, PFR testing of unit 2 by M/s Solvina is scheduled on 21<sup>st</sup> and 22<sup>nd</sup> Dec'22 and for unit 1, which is to be done by M/s Siemens, date is scheduled on 22<sup>nd</sup>& 23<sup>rd</sup> Dec'22.

As decided in 197<sup>th</sup> OCCM, M/s Solvina and M/s Siemens visited OTPC Palatana for PFR testing. However, Palatana could not undertake the PFR testing mentioning constraints raised by their OEM on approved procedure of PFR testing. Thus, Palatana may provide a new date for performance test.

**Deliberation of the sub-committee**

OTPC Palatana informed that in a meeting between the stakeholders concerned on 22<sup>nd</sup> December'22, the OEM, M/S BHEL raised reservations on the PFR testing procedures. OTPC requested OEM to provide procedure for the testing, however no response has yet been received from BHEL.

Member Secretary NERPC stated that, if necessary, a meeting will be organized comprising all the stakeholders including NERPC, NERLDC, OTPC, and the OEM, to resolve the matter.

***Sub-committee noted as above***

***Action: OTPC***

**B.12. Regular furnishing of Patrolling report for all Important Lines to NERLDC/NERPC**

There is a requirement of regular and proper maintenance of transmission lines. It is requested to carry out the patrolling activities as per CIno.23(2), (3) &(4) of CEA Grid Standards Regulation, 2010 on regular basis and submit the report to NERPC/NERLDC.

It is requested to upload DR, EL& FIR outputs for transmission lines in the NERLDC tripping portal in line with Cl.5.2 R of IEGC 2010 Regulations.

In previous OCC meetings, Member Secretary, NERPC took strong note of the non-submission of patrolling report by the utilities in spite of repeated persuasion. He directed all the utilities to submit the patrolling report for all Important Lines to NERLDC/NERPC periodically. The forum requested NERPC to send letters to states in order to urge them to submit patrolling reports.

In 196<sup>th</sup> OCCM, NERLDC highlighted that all states except Manipur and P&ED Mizoram are submitting patrolling reports, but only few lines are covered in the reports, thus leaving out important lines. MS NERPC exhorted all the states to duly

undertake comprehensive patrolling of the lines and submit the reports covering all the important lines.

**Deliberation of the sub-committee**

NERLDC updated that Patrolling reports have been received from all states except Tripura. After brief discussion, MS, NERPC requested all the states to submit the reports in timely manner.

***Sub-committee noted as above***

***Action: all state utilities***

**B.13. Monthly Review of LGBR**

| PARTICULARS<br>(Peak Demand in MW<br>as per LGBR vs<br>Actual) | Oct-22<br>(LGBR) | Oct-22<br>(Actual) | Nov-22<br>(LGBR) | Nov-22<br>(Actual) | Dec-22<br>(LGBR) | Dec-22<br>(Actual) |
|--|------------------|--------------------|------------------|--------------------|------------------|--------------------|
| Arunachal Pradesh  | 141.00           | 121                | 161.41           | 125                | 142.19           | 144.74             |
| Assam  | 2109.98          | 2312               | 1700.00          | 1714               | 1470.00          | 1586.27            |
| Manipur  | 205.00           | 202                | 216.00           | 219                | 265.00           | 245.67             |
| Meghalaya  | 327.00           | 356                | 355.00           | 381                | 368.00           | 394.41             |
| Mizoram  | 114.66           | 127                | 127.55           | 135                | 133.35           | 143.34             |
| Nagaland   | 160.00           | 167                | 155.00           | 165                | 160.00           | 152.09             |
| Tripura<br>(exc. Bangladesh)                                   | 300.00           | 321                | 260.00           | 282                | 240.00           | 240.56             |
| NER DEMAND<br>(exc. Bangladesh)                                | 3196.00          | 3405.00            | 2962.00          | 2905               | 2774.00          | 2905               |

| PARTICULARS<br>(Energy<br>Requirement in<br>MU as per LGBR<br>vs Actual) | Oct-22<br>(LGBR) | Oct-22<br>(Actual) | Nov-22<br>(Actual) | Nov-22<br>(Actual) | Dec-22<br>(LGBR) | Dec-22<br>(Actual) |
|--|------------------|--------------------|--------------------|--------------------|------------------|--------------------|
| Arunachal Pradesh  | 69.88            | 88.53              | 66.42              | 69.1               | 67.53            | 77.81              |
| Assam  | 1071.11          | 1006.800           | 780.67             | 811.610            | 775.57           | 813.88             |
| Manipur  | 84.20            | 77.21              | 88.92              | 77.12              | 101.43           | 103.86             |
| Meghalaya  | 180.70           | 186.79             | 183.22             | 199.43             | 209.04           | 222.42             |
| Mizoram  | 76.43            | 53.17              | 77.61              | 51.76              | 57.25            | 65.43              |
| Nagaland   | 79.63            | 76.44              | 64.94              | 64.31              | 73.05            | 72.88              |
| Tripura (excl.<br>Bangladesh)  | 152.69           | 150.28             | 114.39             | 120.53             | 108.78           | 114.26             |
| NER DEMAND<br>(exc. Bangladesh)  | 1684.38          | 1639.979           | 1367.71            | 1393.86            | 1374.44          | 1470.54            |

**Deliberation of the sub-committee**

The forum noted the LGBR projections vis-a-vis the actual demands/requirements.

**B.14. Installation of AWS by IMD Guwahati**

It was informed in 158<sup>th</sup> OCCM that RMC, IMD, Guwahati would install Automatic Weather Station (AWS) in NER. As per the proposed list of stations by the constituents, IMD has surveyed the stations and has mentioned the requirement of NoC for the suitable stations.

NERLDC vide emails dated 10.01.2023 to all the states requested to facilitate for signing of MoU with IMD Guwahati for installation of AWS in NER substations.

**Deliberation of the sub-committee**

NERLDC intimated that modified MoU by IMD has been shared with all the States by e-mail. Assam informed that approval of the MoU has been obtained and the same would be signed soon.

Ar. Pradesh informed that the MoU would be signed shortly.

All other States were also requested to check the MoU and expedite for signing at the earliest.

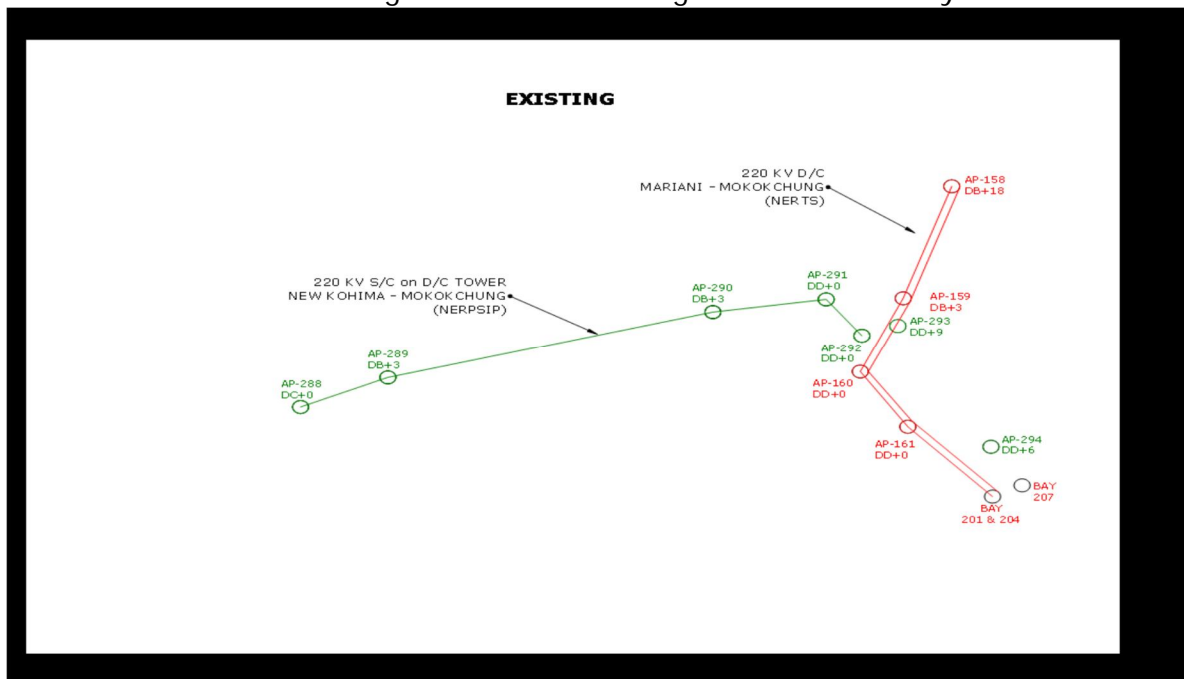
***Sub-committee noted as above***

***Action: All State utilities***

**B.15. Requirement of shutdown for executing bay exchange and line swapping for 220kV New Kohima – Mokokchung TL under NERPSIP Nagaland:**

Under the scope of NERPSIP, 220kV New Kohima GIS bay at 220/132kV Mokokchung GIS (POWERGRID) is completed and associated 220kV New Kohima – Mokokchung Transmission line on the verge of completion. However, due to non-availability of adequate corridor for crossing the existing 220kV Mariani – Mokokchung TL by the newly constructed line, swapping of the two lines near the substation and exchange of the bays at the substation is required. Matter has also been intimated to DOP.

The swapping of the transmission lines are proposed to be carried out from 07.09.2022 and since one number tower erection along with de-stringing and re-stringing of both the lines are required to be carried out only after obtaining shutdown of the existing 220kV D/C Mariani-Mokokchung TL. The minimum shutdown requirement shall be of 18 days.



As per the decision of the 195<sup>th</sup> OCCM, special meeting was convened on 20<sup>th</sup> Oct, 2022 to resolve the issues w.r.t the bay exchange and line swapping for 220kV New Kohima – Mokokchung TL with 220kV Mariani-Mokokchung line 1. The deliberation of the said meeting is as follows:

- POWERGRID informed that after bay swapping, the changes in Bays will be as follows:

| Bay No                       | 201        | 204        | 207        |
|------------------------------|------------|------------|------------|
| Before Bay Exchange/Existing | Mariani II | Mariani I  | New Kohima |
| After proposed Bay Exchange  | New Kohima | Mariani II | Mariani I  |

The owner of Bay no 207 shall remain with DoP, Nagaland only while Bay no 201 and 204 will remain with POWERGRID.

- Since transfer of assets is not possible, it was requested that NERTS and DoP, Nagaland may have a bilateral agreement for O&M of their respective bays.
- CTU connectivity agreement shall not be required.
- NERTS to confirm with the RIO w.r.t the clearances required for charging of the Bays after the proposed changes are made, since there is an addition of two towers (AP293 and AP294) for the diversion of 220 kV Mariani – Mokokchung I and II Line.
- NERTS to adhere to the PTCC clearance as per the CEA's guidelines.

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- Since the proposed configuration allows for double OPGW at tower AP-159, its collapse may make the system vulnerable. NERTS mentioned that the same shall be reviewed.
- Various undertakings/compliances (Protection, Telemetry, and Metering etc.) were requested by NERLDC to be duly filled by NERTS before FTC.
- Necessary changes to be done by NERTS in the SCADA & metering database.
- SIO clearance dated 28.02.22 submitted by DoP, Nagaland for Bay no 207 mentions New Kohima Bay and has no validity. Also, the same has not been energized till date. DoP, Nagaland prior to FTC, may obtain clarification from SIO regarding validity of SIO clearance and swapping of the inspected Bay (207) for New Mariani II Line.

In the 196<sup>th</sup> OCCM, regarding agreement on O&M of respective bays of DoP Nagaland and PGCIL, DoP Nagaland stated that it will be finalized soon, and PGCIL have already provide bay equipment details to Nagaland.

NERLDC pointed out that long outage of Mariani-Mokokchung DC is posing threat to power system of Nagaland and multiple extensions of shutdown is also affecting other shutdowns related to Nagaland power system.

PGCIL rebutted that the extensions were due to delays in obtaining RIO clearance. It was informed that RIO inspection has been completed on 24.11.2022 and the clearance is expected to be received soon.

In the 197<sup>th</sup> OCCM:

CGM(AM), NERTS intimated that POWERGRID is only suggesting for handover of bays for maintenance purpose, while original ownership shall remain in force. He assured that PGCIL will approach the higher authorities of DoP Nagaland for finalization of the agreement at the earliest.

Moreover, Sr GM NERLDC highlighted that the 220kV Mokokchung-Mariani line II can be charged as existing and new bay for Mariani II lies with PGCIL only and availability of at least one circuit of 220kV Mokokchung-Mariani D/C shall improve the security and reliability of Nagaland grid.

Member secretary, NERPC stated that a special meeting will be organized soon by NERPC to discuss the issues in a holistic way.

**Deliberation of the sub-committee**

NERLDC intimated the forum that 220kV Mariani-Mokokchung D/C line has already been charged. Regarding bilateral agreement on O&M of swapped bays, DoP Nagaland informed that in principle approval has been given and signing of agreement will take place shortly.

***Sub-committee noted as above***

**B.16. Furnishing daily data of generation, demand and shortage by State, ISGS and IPPs:**

Gross generation and ex-bus generation of all State Generators, ISGS (Inter State Generating Station) & IPP (Independent Power Producer) for each day is to be furnished to MOP/NLDC which was discussed in 193<sup>rd</sup> OCC meeting held on 12<sup>th</sup> August 2022. In addition to the above, hourly demand and shortage data of the states is also required to be furnished to NLDC/MOP.

In view of the above it is requested to furnish above data in the format specified (as sent in mail dated 07.11.2022).

In 196<sup>th</sup> OCCM, Manager NERLDC intimated that most of the states do provide gross generation data for each day but no net generation data is provided. Arunachal Pradesh is not providing any data at all. Even some ISGSs are not providing the net generation data. After detailed deliberation the forum strongly urged the states and ISGSs to provide required generation data and hourly demand and shortage data of the states on daily basis.

Assam: It has been observed that data is not being furnished for all 24 hrs. Since 1<sup>st</sup> Jan'23 till 10<sup>th</sup> Jan'23, the data for all the hours has only been furnished for 5<sup>th</sup> and 6<sup>th</sup> Jan. 2022, but on remaining days the data has only been furnished for 3 hrs, 8 hrs & 19 hrs.

Arunachal Pradesh: Not providing gross & net generation data and not providing hourly demand and shortage data. Not sending the daily PSP data sheet.

Mizoram: Not providing net generation data. Data being furnished at around 6-6:30 hrs in place of 1-1:30 hrs.

**Deliberation of the sub-committee**

Assam stated that they have been sending the required data since last week.

Arunachal Pradesh and Mizoram also assured the forum that the requisite data would be furnished soon.

***Sub-committee noted as above***

***Action: Assam, Arunachal Pradesh, Mizoram***

**B.17. 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 196<sup>th</sup> 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.

NERTS and DoP Nagaland may please update.

**Deliberation of the sub-committee**

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. After detailed deliberation the forum decided to discuss the matter in the next NeTEST meeting.

***Sub-committee noted as above***

***Action: NERPC, NERTS***



**B.18. Telemetry and Communication system issues of projects commissioned under NERPSIP & Comprehensive schemes:**

A number of new substations and transmission lines have been commissioned under NERPSIP and Comprehensive Schemes recently, however, there is no telemetry and communication system at these sites. As unavailability of telemetry data is a major concern, the concerned utilities are requested to expedite telemetry installation works of their respective substations/transmission lines as early as possible. The list of substations and transmission lines not having telemetry is mentioned as below:

| Sl. No. | Scheme  | Name of Element   | Name of Owner | First Time Charging | Remarks   |
|---------|---------|---|---------------|---------------------|---|
|         |         |   |               | Date                |   |
| 1       | NERPSIP | Mohanpur  | TSECL         | 27.08.21            | Data not in NERLDC SCADA  |
| 2       | NERPSIP | 132 kV Mokokchung-Mariani line LILO at Longnak and 132kV Bay & 33kV GIS Bay and associated equipments at Longnak Substation | DoP, Nagaland | 16.07.2022          | Data not in NERLDC SCADA (Longnak charged through 132 kV Mokokchungn-Longnak) |
| 3       | NERPSIP | 132/33kV Tangla GSS   | AEGCL         | 08.06.2022          | Data not in NERLDC SCADA  |
| 4       | NERPSIP | 132/33 kV, 31.5 MVA Power transformer at Ambassa substation   | TSECL         | 21.06.2022          | Data not in NERLDC SCADA  |
| 5       | NERPSIP | 132kV Sonabil-Tezpur line 1   | AEGCL         | 06.08.2022          | Reporting with wrong value  |
|         |         | 132kV Sonabil-Tezpur line 2   |               |                     |   |
| 6       | NERPSIP | 132/33 kV Tezpur Substation   | AEGCL         | 22.09.2022          | Data reporting partially in NERLDC SCADA                                      |

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|   |               |  |                        |            |  |
|---|---------------|--|------------------------|------------|--|
| 7 | Comprehensive | 132/33KV Bay extension and 16 MVA Transformer at Dukumpani(Tenga) Substation | DoP, Arunachal Pradesh | 21.10.2022 | Data not in NERLDC SCADA<br>NERLDC remarks: The exploration of telemetry of real time data from FRTU and VSAT devices already installed at 132 kV Dukampani (Tenga) S/s may be carried out in near future. PG reply: As advised, possibility for data communication through FRTU using existing VSAT or other broad band devices shall be explored till the OPGW link of Balipara-Khupi-Kimi is completed. |
| 8 | NERPSIP       | 132 kV Rabindranagar Rokhia line   | TSECL                  | 22.07.2022 | Line not in NERLDC SCADA (line was test charged & currently not in service)  |
| 9 | NERPSIP       | 220 kV New Kohima Bay (207) at Mokokchung                                    | DoP, Nagaland          | -          | Modelled: Bay to be swapped  |

Also, it is to be ensured that no substation/transmission line is commissioned in NER grid without telemetry and communication system for reliable operation.

Deliberation of the sub-committee in 197<sup>th</sup> OCC

1. Manager NERPSIP stated that SAS configuration at Mohanpur SS is completed but there is a break in OPGW of the Mohanpur-Dhalabil line, which is under scope of TSECL. The forum requested TSECL to rectify the issue at the earliest.
2. EE, SLDC DoP Nagaland stated that telemetry and communication is absent due to non-availability of OPGW along the 132kV Mokokchung-Longnak Line. He requested NERPSIP to undertake OPGW installation from LILO point of Longnak to Mokokchung under its scope. After detailed deliberation, the forum decided to include the link i.e. 132kV Mokokchung – Longnak(LILO) point with matching end equipments at Mokokchung under Reliable Scheme being executed by NERTS. Further the forum requested NERTS to commission the same at the earliest with post-facto approval by TCC/RPC.

3. Manger NERPSIP updated the forum that custom clearing certificate will be obtained by Dec'22, after which material will, be dispatched and work will be completed by April'23. The forum categorically noted that no FTC will be given for the SS or any element without provision of Telemetry and Communication.

**Deliberation of the sub-committee**

NERPSIP updated as follow:-

| Sl. No. | Scheme  | Name of Element   | Name of Owner | First Time Charging | Status by NERPSIP  |
|---------|---------|---|---------------|---------------------|--|
|         |         |   |               | Date                |  |
| 1       | NERPSIP | Mohanpur  | TSECL         | 27.08.21            | The fiber link break issue in the existing line was resolved by state utility on 17.01.2023 and informed to POWERGRID by 18.01.2023. POWERGRID is planned to depute engineer and establish communication on or before 31.01.2023 |
| 2       | NERPSIP | 132 kV Mokokchung-Mariani line LILO at Longnak and 132kV Bay & 33kV GIS Bay and associated equipments at Longnak Substation | DoP, Nagaland | 16.07.2022          | As informed in the previous OCC or NETeST meetings, Existing fiber link from Mokokchung to LILO point has to be made ready by State utility.   |
| 3       | NERPSIP | 132/33kV Tangla GSS   | AEGCL         | 08.06.2022          | Station Data is reporting in SLDC  |
| 4       | NERPSIP | 132/33 kV, 31.5 MVA Power transformer at Ambassa substation   | TSECL         | 21.06.2022          | Wiring between CRP to RTU will be done before 31.01.2023<br><br>RTU BI/BO cards & Augmentation is in State Scope. Termination details of BI/BO cards to be provided by state.  |
| 5       | NERPSIP | 132kV Sonabil-Tezpur line 1   | AEGCL         | 06.08.2022          | Data reporting in SLDC. 2 number status (Breaker Status) are not reporting to SLDC from the existing gateway, but all data are reporting in local SAS. The data were reporting from the gateway                                  |
|         |         | 132kV Sonabil-Tezpur line 2   |               |                     |  |

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|   |               |  |                        |            |   |
|---|---------------|--|------------------------|------------|---|
|   |               |  |                        |            | initially (MOM has made with AEGCL. However POWERGRID will help to resolve the reporting of 2 CB status in coordination with state utility. Data reporting in SLDC            |
| 6 | NERPSIP       | 132/33 kV Tezpur Substation  | AEGCL                  | 22.09.2022 | Data reporting in SLDC for the charged bays. The telemetry clearance for the bays not charged (ICT # 02 bays & Line Ckt 1) will be taken separately before charging the bays. |
| 7 | Comprehensive | 132/33KV Bay extension and 16 MVA Transformer at Dukumpani(Tenga) Substation | DoP, Arunachal Pradesh | 21.10.2022 | Matter is pertaining to Comprehensive T&D.  |
| 8 | NERPSIP       | 132 kV Rabindranagar - Rokhia line   | TSECL                  | 22.07.2022 | The telemetry data will be made ready before charging the Transmission line. The work is planned to be complete by 28-February  |
| 9 | NERPSIP       | 220 kV New Kohima Bay (207) at Mokokchung                                    | DoP, Nagaland          | -          | Bay swapping done at local SS and data reporting to NERLDC  |

Member Secretary, NERPC reiterated that no FTC will be given without ensuring telemetry and telecommunication. He further requested all the constituents to nominate nodal officer each for seamless resolution of telecommunication related issues.

During the meeting, the following officers were nominated by respective

Organizations:

NERPSIP- Shri Abhilash

NERLDC- Shri Sakaldeep

Assam- Shri Pranab Bhattacharya

Tripura- Smt. Sampa Sen

Arunachal Pradesh- Shri Purik Buchi

Other States were requested to nominate their officers at the earliest.

***Sub-committee noted as above***

***Action: NERPSIP/Comprehensive Scheme, All State Utilities***

**C. NEW AGENDA ITEMS****Agenda items from NERPC****C.1. Reviewing the Long Outages of Generating Stations in NER:**

Presently following generating stations are under prolonged outages due various reasons. As instructed by MoP/CEA, it is imperative to review the progress of the undergoing works and plan for a realistic revival of these units at regional level.

| Sr. No. | Stations  | Expected Revival Date/Status of the progress/ Remarks |
|---------|-----------|---|
| a.      | Kopili I  |   |
| b.      | Kopili II |   |
| c.      | Khandong  |   |

**Deliberation of the sub-committee**

NEEPCO updated as follow-

| Sr. No. | Stations                      | Expected Revival Date |
|---------|-------------------------------|-----------------------|
| a.      | Kopili 2 units (2x50)         | May'23                |
| b.      | Kopili other 2 units (2x50)   | May'25                |
| c.      | Khandong units 1 and 2 (2x25) | May'25                |
| d.      | Khandong stg II (1x25)        | March'23              |

***Sub-committee noted as above***

**Agenda items from NERLDC****C.2. Outage of Important 400 kV bays at Palatana:**

- GT-1 & Silchar 1 Tie Bay is under outage from 31/12/2022.
  - ST-1 & Main Bay having dia with ICT-1 is under outage from 09/12/2022.
- Palatana to furnish a timeline for restoration of the bays.

**Deliberation of the sub-committee**

- Regarding GT-1 tie bay OTPC Palatana intimated that the tie breaker had tripped on some spurious signal sent by the relay as the fault recorder did not notice any fault in the system. So far, Relay has been replaced and faults have been rectified, but the breaker is under observation and the bay would be charged by 28<sup>th</sup> Feb'23.
- Regarding ST-1 Main Bay, the OEM visited the site on 10<sup>th</sup> Jan'23 and found that three cables of the CB were faulty which were causing motoring action in the CB. The replacement of the cables is underway and the bay will be charged as soon as possible.

***Sub-committee noted as above***

***Action: OTPC***

**C.3. Publication of Black Start and Restoration Procedures of NER Grid**

In line with regulation 5.8(a), NERLDC prepares and updates the Black Start and Restoration Procedure document for North Eastern Region on annual basis. Accordingly for this year, NERLDC has updated the Black Start and Restoration Procedures of NER Grid. The draft version of the document has been circulated to all constituents of NER on 10th Jan 2023 via email. All constituents are requested to kindly provide your feedback and comments on the same by 18th Jan. 2023 so as to enable us to publish the document as per the timeline specified by Hon'ble CERC.

**Deliberation of the sub-committee**

All constituents were requested to provide feedbacks and comments at the earliest.

***Sub-committee noted as above***

**C.4. Furnishing of data as per Detailed Procedure on interim methodology for estimation of Reserves under CERC (Ancillary Services) Regulations, 2022**

Grid-India (formerly known as POSOCO) has published interim detailed procedure for estimation of reserve requirements as per the CERC (Ancillary Services) Regulations 2022. The detailed procedure has been approved by the Hon'ble Commission and is available on Grid-India website at [https://www.nerltdc.in/wp-content/uploads/Detailed-Procedure-for-Estimation-of-Reserves\\_final.pdf](https://www.nerltdc.in/wp-content/uploads/Detailed-Procedure-for-Estimation-of-Reserves_final.pdf)

In line with the procedure, data as per the formats RAS1 and RAS2 have to be submitted by all the SLDCs of India. The last date for submission of Format-RAS1 & Format-RAS2 is 15th January 2023. An email regarding the same was sent to all SLDCs of NER on 24th Dec. 2022. Thus, all SLDCs are requested to kindly furnish the said data as per the aforementioned timeline.

**Deliberation of the sub-committee**

The forum requested all the States to provide the required data on reserves as per the formats provided by NERLDC at the earliest.

NERLDC further informed that for any assistance regarding this issue, constituents may contact them.

***Sub-committee noted as above***

**C.5. Availing of Shutdown without approval:**

AGBBP availed shutdown to Unit-3 which was under outage due to low gas pressure for retrofitting of CT from 11:00 Hrs. of 28/12/2022 to 12:40 Hrs on 04/01/2023 without prior approval or intimation to NERLDC which is violation of the IEGC.

**Deliberation of the sub-committee**

The forum advised AGBPP to intimate NERPC and NERLDC before availing the shutdown of units on the basis of swapping.

***Sub-committee noted as above***

***Action: NEEPCO***

**C.6. Status of implementation of SPS in Assam Power System:**

As per the minutes of Sub-group meeting held on 27.09.22, SPS for load reduction in capital area of Assam power system on tripping of 220 kV Azara-Sarusajai D/C or 220 kV Misa-Samaguri D/C was recommended for safe and reliable operation with the following tripping conditions:

**Triggering condition 1:** Tripping of 220kV Azara – Sarusajai D/C SPS action: Tripping of 132kV Kahilipara – Kamalpur and 132 kV Sarusajai – Kamakhya lines. For tripping of 132 kV Kahilipara – Kamalpur line, OPGW connectivity between Sarusajai and Kahilipara will be used to send the tripping signal for tripping Kamalpur feeder at Kahilipara.

**Triggering condition 2:** Tripping of 220kV Misa - Samaguri D/C SPS action: Tripping of 132kV Samaguri-Sankardevnagar Line  
AEGCL may update on the latest status regarding implementation status of the proposed SPS.

**Deliberation of the sub-committee**

AEGCL raised concern on Tripping condition 1 that there is heavy loading in the Kamakhya and Sishugram area due to presence of Railways and Industries and outage of 132kV Sarusajai-Kamkhya line may lead to heavy load loss. Also, the financial implication, if any, on implementing SPS logic at Substations- was raised by Assam.

After detailed deliberation, the forum decided to revisit the scheme and a special meeting will be organized to discuss the matter holistically.

***Sub-committee noted as above***

***Action: NERPC, NERLDC, AEGCL***

**C.7. Review of NER Special Protection Schemes (SPS) Document for 2022-23.**

NER SPS Document for the financial year 2022-23 containing the details of SPS schemes in operation along with the performance of the existing SPS schemes and



new proposed SPS schemes has been prepared by NERLDC and mailed to all the constituents of NER.

Hence, all the NER utilities are requested to give their respective comments/suggestions by 27<sup>th</sup> Jan'23 as the final document will be published by NERLDC by 31<sup>st</sup> Jan'23.

**Deliberation of the sub-committee**

All constituents are requested to provide their comments and feedbacks at the earliest.

***Sub-committee noted as above***

**C.8. Procedure for charging/energization & Integration of Altered (including modified/replaced/upgraded) Power System Elements**

NLDC vide letter NLDC/FTC/75 dated 18.07.2022 issued Procedure for charging/energization & Integration of Altered (including modified/replaced/upgraded) Power System Elements which supplements the existing NLDC FTC procedure dated 03.06.2022. NERLDC vide email dated 11.08.2022 informed all the utilities regarding the updated procedure.

The revised procedure highlights some of the key aspects such as submission of statutory clearances for replacement of CT, CVT, CB, Bushing etc., restoration of line through ERS, submission of fresh FTC application for reconductoring of lines etc. The details of documents required to be submitted under different categories as per the new procedure are highlighted as per **ANNEXURE- C.8**.

All are requested to follow and abide by the latest procedure available at [https://www.nerldc.in/wp-content/uploads/FTC-Procedure\\_Altered-Elements-6.pdf](https://www.nerldc.in/wp-content/uploads/FTC-Procedure_Altered-Elements-6.pdf).

**Deliberation of the sub-committee**

Manager, NERLDC presented in detail the FTC requirements in various cases/scenarios (**Annexure C.8**). All utilities are requested to abide by the latest FTC procedure.

***Sub-committee noted as above***

**Agenda from SLDC TRIPURA (TSECL)**

**C.9. EMERGENCY SHUTDOWN OF OTPC PALATANA GT-1 ON 9TH January 2023 from 9:00 hrs:**

OTPC GT 1 has taken emergency shutdown from 09:00 hrs on 9th Jan2023 related to high inlet air filter DP. Accordingly, NERLDC unilaterally has allowed shutdown

rather to discuss the matter with the beneficiary. Tripura has requested to defer the shutdown upto 22:00 hrs as all the activities of IEX in DAM was done on 08th Jan 2023. On 9th January 23 since morning sunny weather observed throughout the state including Palatana area also. Huge financial loss as well as overdraw has occurred due to non-availability of power from Real Time Market. NERLDC has also aware the financial condition of all constituent. Hence, it is requested to Forum to look into the matter in future & also requested to consider views of beneficiaries also in co-ordination with emergency nature of repair work if technically permissible.

**Deliberation of the sub-committee**

ED, NERLDC stated that Emergency shutdowns are given on the basis of technical emergencies and it is the prerogative of RLDCs to allow the shutdown. Also, RLDC is not bound to take prior permission of SLDCs as any delay in granting shutdown might lead to untoward incident.

The forum requested OTPC & concerned generators to inform their beneficiaries when taking emergency shutdown.

***Sub-committee noted as above***

**C.10. Audit Observation**

Audit observation on 9.5MW Schedule of Barmura generation to Manipur instead of nil schedule and O(zero) schedule to Mizoram instead of 9.5 MW on 09/08/22 and rectification thereof.

On 09/08/22 unfortunately the share schedule from Generation to Manipur has given as 9.5 MW from 0:00 hrs to 04:30 hrs(0- 18 blocks) instead of 0(Zero) schedule and 0(zero) instead of 9.5MW to Mizoram from 0:00 hrs to 02:30 hrs (0-10 blocks). This was also communicated to NERLDC through mail for rectification.

Now, internal audit team has raised the issue of the energy scheduled on that day which is supposed to raised bill, though Manipur has surrendered their share of Barmura generation power from July2022 that is why bill not raised. As per audit observation the schedule has require to rectify for that blocks which is mentioned & there is the consent from Manipur and Mizoram are require as NERLDC suggested in their mail.

Hence the matter is placed to the forum for obtaining consent from both Manipur & Mizoram so that further necessary rectification may be settled.

**Deliberation of the sub-committee**

NERPC informed that as the matter has implication on DSM, it would be necessary to discuss thoroughly in the commercial committee meeting.

Therefore, after brief discussion, the matter was referred to next CCM meeting for discussion in the presence of concerned officials of the States Commercial/Discom.

***Sub-committee noted as above***

***Action: NERPC***

**Agenda from GRID - INDIA**

**C.11. Early Restoration of Y-pole Circuit Breaker at AGTCCPP for 132 kV Agartala I Line**

132 kV AGTCCPP- Agartala I line was taken under Emergency Shutdown from 10:07 Hrs of 18.12.2022 due to Circuit Breaker Lockout at AGTCCPP end due to sudden drop in SF6 Gas Pressure. Subsequently, the gas leakage point has been identified at the joint of Y phase interrupter. The line is yet to be restored till date and the shutdown is being extended progressively and is presently extended till 20th Jan'23.

As per Clause no 28 of Central Electricity Authority (Grid Standards) Regulations, 2010 Inventory control and spare part management. -

(1) The required spare parts shall be kept in stock, to ensure speedy the maintenance of the equipment. Because of this prolonged outage, outage planning of other elements in Tripura Power System is impacted considerably. As 132 kV AGTCCPP Agartala I line is crucial for ensuring the reliability and security of Tripura Power System, hence, it is requested rectify the fault and charge the line at the earliest.

**Deliberation of the sub-committee**

GM NEEPCO intimated the forum that line was taken under shutdown due to gas leakage observed in the Y Pole of the CB of the line. Further, the said Circuit breaker is ABB made and was installed in 2018. Now M/S Hitachi has taken over the manufacturing of CBs from ABB and has discontinued the model, also no AMC is being provided by Hitachi for the model. Moreover, there is no transfer scheme at R.C Nagar. To rectify the CB, gasket replacement work is being done and expected revival date is 5<sup>th</sup> Feb'23.

CGM(AM), NERTS assured to help by contacting with Hitachi dealers if required.

***Sub-committee noted as above***

***Action: NEEPCO***

**C.12. Status of Reconductoring of 132 kV Umiam III – Umiam I D/C and 132kV Lumshnong – Panchgram line with HTLS conductor.**

As per the planned scheme implementation, Umiam III-Umiam I line reconductoring was to be followed by 132 kV Panchgram-Lumshnong line. Coincidentally, due to long outage of 132 kV Haflong - Jiribam line, Misa - Kopili- Khandong link, and Khandong Generation, increased power flow is observed at 132kV Badarpur- Khliehriat and 132 kV Panchgram - Lumshnong lines, overloading both the lines, resulting in conductor snapping. Consequently, due to grid constraints, Meghalaya is constrained to operate its system in 2- 3 sections, ignoring the system security aspects and also resorting to load curtailment. Corrective action call for reconductoring of 132 kV Panchgram-Lumshnong line on high priority. In this regard, SLDC Meghalaya is requested to update the following:

- a. Work Completion Status of Reconductoring of 132 kV Umiam III – Umiam I D/C with HTLS Conductor including the max allowable loading in each circuit.
- b. Tentative Date for resuming the Reconductoring work 132kV Lumshnong – Panchgram line with HTLS Conductor (as the work was stopped due to parallel reconductoring work of 132 kV Umiam III – Umiam I D/C)

**Deliberation of the sub-committee**

- a. SLDC Meghalaya intimated the forum that the line work has been completed and the reconductoring is done with AAAC Casablanca conductor with loading limit of 75MW in each circuit. However, replacement of 400/1 CTs with 600/1 CTs is yet to be done, for which the generators at both ends have been asked to divert some CTs for the purpose.
- b. Reconductoring of 132kV Lumshnong –Panchgram will be taken up after completion of state assembly elections, tentatively by 15<sup>th</sup> March and till then Meghalaya to curtail loading in 132kV Lumshnong-Panchgram line within 50MW.

***Sub-committee noted as above***

***Action: MEPTCL***

**C.13. Agenda from OTPC**

1. OTPC Palatana Unit #2 shutdown may be approved from 27/03/2023 to 28/03/2023 for hydro-test of HRSG#2.
2. During the last shutdown of both Block (Date: 11th January 2023.), Scheduled Generation updated by NERLDC 50 % of Declared Capacity of 1<sup>st</sup> block of startup

and 35 MW ramp for the subsequent blocks till SG matched DC. This rule change was not intimated to OTPC. Further this rule change was telephonically informed during real time operation. As such any change in rule/SOP for operations may be informed prior to actual implementation so that the same can be planned in advance.

3. There are issues related to auto update frequently in ABT system. It is requested to inform OTPC about any change in NEWWBES website or subsystem prior to actual implementation so that the same can be planned in advance.

**Deliberation of the sub-committee**

1. To be discussed in the 199<sup>th</sup> OCCM.

2. The concern of OTPC was noted. NERLDC apprised that during startup, average output becomes half of the peak value so the schedule was kept at 50% of DC. Also, new SOP was agreed after discussion with generators as requested by them and is aimed at minimizing DSM losses to them.

3. OTPC intimated that their ABT system was not able to automatically download data from WBES website as a new captcha has been added. NERLDC highlighted that the new captcha has been added on instruction of NLDC due to cyber security related issues. However, NERLDC assured that any information about changes in the portal will be shared with all stakeholders as soon as they receive the same from NLDC.

***Sub-committee noted as above***

***Action: NERLDC***

**C.14. Agenda from NEEPCO**

As per the deliberation in previous OCC meetings, the Khandong Switchyard is to be restored within February 2023, for commissioning of Khandong Stage-II Power Station by March 2023. In this connection, NEEPCO has informed NERTS about the availability of the required space for bay control & other panels by January 2023. Further the bay control panels are to be installed by NERTS.

**Deliberation of the sub-committee**

Discussed in item B.8

***Agenda from APDCL***

**C.15. Construction Power Supply to Khandong/ Kopili Hydro Power Station of NEEPCO**

As per the deliberation of 197<sup>th</sup> OCC Meeting, NEEPCO agreed to become a consumer of APDCL for drawing the Construction Power for restoration works of Khandong HEP, connected load of 2.5 MW was released on 18.11.2022. As discussed in the previous meeting the meter was supplied by CTU India Ltd. and APDCL agreed to consider it as the Billing meter for APDCL's billing purpose too. But after installation, it was noticed that some billing parameters like Maximum Demand, Power Factor are not displayed in the meter. While Maximum Demand can be retrieved from the downloaded parameters, but PF is unavailable in the downloaded parameters also. Because of this, APDCL is unable to bill the consumer. As such, APDCL now proposes to install a new billing energy meter in parallel to the existing meter cost of which NEEPCO has to bear like any other consumer of APDCL. For billing of the already used units, APDCL proposes that average PF data to be recorded in the new meter will be considered for already used units too. Also, APDCL requests NEEPCO to share the SEM data from 18.11.2022 till the new meter is installed for determination of the Maximum Demand.

**Deliberation of the sub-committee**

GM NEEPCO agreed to bear the cost of new billing energy meter as suggested by APDCL. Further, regarding billing of the already used units till the new meter is installed, APDCL intimated that power factor of 0.85 will be used, which is penalty neutral and reward neutral. After the new meter is installed, a supplementary bill will be raised based on the average PF data recorded in the new meter. NEEPCO agreed.

***Sub-committee noted as above***

***Agenda from MePTCL***

**C.16. The Status of 132KV Haflong-Jiribam line:**

PGCIL is requested to update on the same.

**Deliberation of the sub-committee**

Discussed in item B.8

**C.17. Redundant OPGW link between NEHU SLDC and NERLDC:**

PGCIL had proposed vide letter No.NERTCC/Ghy/MePTCL/Co-location dt.18.01.2023 for a redundant optical link between NEHU and NERLDC through

OPGW on NEHU-Khliehriat line-II in addition to the existing ULDC OPGW link on NEHU-Khliehriat line-I. In this regard, PGCIL is requested to clarify on the matter for the benefit of the house.

**Deliberation of the sub-committee**

SLDC Meghalaya intimated that a redundant OPGW link is required between NEHU and NERLDC. Member secretary NERPC stated that a sub-group consisting of NERPC, NERLDC, PGCIL, PowerTel and MePTCL, will be formed to discuss the matter.

***Sub-committee noted as above***

***Action: NERPC, NERTS***

**C.18. Request for loading between 45 - 50 MW for 132 KV Panchgram-Lumshnong S/C line:**

AEGCL vide mail dated 17<sup>th</sup> January 2023 informed Meghalaya to restrict loading of 132 KV Panchgram-Lumshnong S/C line below 40 MW citing aging of the line conductor. The present loading of the line between 45-50 MW is a result of continued outage of Kopili and Khangdong generation, unavailability of Misa-Kopili-Khangdong link as well as that of 132 KV Haflong-Jiribam and 132 KV Srikona-Panchgram lines. Restraining by HTLS conductor was also stopped temporarily considering increase in winter demand and to maintain redundancy of 132 KV Badarpur-Khliehriat and 132 KV Badarpur-Panchgram lines throughout the day. Considering the depleted water level of Leshka and the upcoming Meghalaya Assembly elections, AEGCL is requested to kindly consider loading of the line upto a maximum of 50 MW since it has been observed on three occasions that the line had tripped only on sustained loading above 50 MW. Meghalaya will ensure that the loading will be below 50 MW and for this, Lumshnong industrial load has been curtailed accordingly.

**Deliberation of the sub-committee**

After detailed deliberation, SLDC Meghalaya assured that the loading on the line will be maintained below 50MW even by reducing Lumshnong industry load by 20MW, if need arises. Also, the reconductoring will be taken after the completion of State Assembly elections.

***Sub-committee noted as above***

***Action: SLDC Meghalaya, MEPTCL***

**D. ITEMS FOR STATUS****D.1. Implementation of projects funded from PSDF:**The status as informed in 198<sup>th</sup> OCC:

| State       | R&U scheme  | ADMS  | Capacitor Installation    | SAMAST**   | Line Differential Protection  |
|-------------|---|---|---------------------------|--|---|
| Ar. Pradesh | Package-I (Diagnostic tools) Complete in all respects.<br>P-II (for PLCC & communication) Supply completed. Erection WIP. 50% requisition submitted.<br><br>P-III (Substation equipment) Agreement signed and 10% requisition submitted. Total 90% requisition by Apr'22. Completion by Dec'22. (Approval from TSA and Account opening in 3 months) | Project completed in all respects.  | -                         | 30% requisition submitted. Amount not received in the TSA account. | -   |
| Nagaland    | Completed in all respects.  | Work completed in all respects. UC submitted.                                     | -                         | 30% requisition submitted  | Lines identified. Under DPR preparation stage.  |
| Mizoram     | Final 10% disbursed. UC to be submitted.  | Work completed in all respects. Remaining part of final 10% to be disbursed ASAP. | To reply to TESS queries. | 30% requisition submitted.   | Revised DPR including both 132kV Aizawl-Luangmual and 132kV Khamzawl-Khawiva to be submitted. |
| Manipur     | Package-II: completed<br>Package-I: all stations complete except Ningthoukhong.   | Work completed in all respects. UC submitted in Oct'21.                           | WIP.                      | 10% disbursed for IT portion, no disbursement for Meter,           | Revised DPR for LDP of 132kV Imphal-Yurembam-III to be submitted by                           |



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|           |   |                                    |  |  |   |
|-----------|---|------------------------------------|--|--|---|
|           | By May'22.  |                                    |  | AMR portion. 20% disbursement for IT portion after completion of 3 <sup>rd</sup> milestone. 30% to be disbursed for Meter, AMR portion | June'22.  |
|           | 33kV System Integration with SLDC   | In tendering stage                 |  |  |   |
|           | Reliable Communications for grid connectivity   | In tendering stage                 |  |  |   |
| Tripura   | Completed. Final UC submitted on 04 <sup>th</sup> May'22.   | Final 10% requisition submitted.   | Not relevant in present scenario with commissioning of ISTS lines. Issue dropped | 10% successfully disbursed. 20% fund reversed back from vendor account. Will be resolved soon.   | For 132kv 79Tilla-Budhjunagar line and for Rokhia link LDP at own cost. Tendering undergoing. DPR preparation for rest of the lines |
| Assam     | Work completed except CRP, SAS work in 8 stations which have been retendered and awarded to M/s SIEMENS. Completion by Dec'22 | Project completed in all respects. | -  | 30% funds yet to be fully disbursed. 60% requisition sent.   | Lines identified. Under DPR preparation stage.  |
| Meghalaya | MePTCL – completed in all respects.<br>MePGCL – Completed in all respects.  | Project completed in all respects. | -  | 90% works completed. Communication pending.  | All works except OPGW done  |

In the 194<sup>th</sup> OCC, CGM, SLDC, AEGCL requested for extension of Milestone date for SAMAST. The forum unanimously decided that in view of the pandemic restrictions throughout NER in 2021 the extension is to be granted. Member Secretary, NERPC informed that originally the Project Completion deadline as per PSDF was 12 months, however in LoA target is completion by 18 months. The forum decided to extend the milestone date(s) and completion/Go Live/DoCO date(s) by 3 months, with target completion by 10<sup>th</sup> November'2022.

***Sub-committee noted as above***

**D.2. Status update of important grid elements under prolonged outage impacting system operation:**

| Sl. No | Element   | Owner         | Status as informed in the 197 <sup>th</sup> OCCM   | Latest Status  |
|--------|---|---------------|--|--|
| 1      | 132kV Mariani – Mokokchung (out since April'2008)   | AEGCL         | Non clearance due to persisting funding issue  | Same status  |
| 3      | 132kV Roing-Pasighat (charged through ERS tower)  | NERTS         | March'23   | June-2023  |
| 4      | 220kV Misa-Kopili D/C, 220/132kV ICTs at Kopili, 132kV Khandong –Kopili D/C(out since Oct'19) | NEEPCO/ NERTS | Refer to agenda item B.8   | ICT Kopili- May 2023<br>ICT Khandong- May 2023   |
| 5      | 132kV Srikona – Panchgram   | AEGCL         | Tender floated on 21.11.2022   | Under evaluation   |
| 6      | 400kV Imphal – Thoubal-I and 315MVA 400/132kV ICT at Thoubal                                  | MSPCL         | RoW, litigation pending in court.  | Same status  |
| 7      | 63MVAR Bus Reactor at Byrnihat to be replaced with 80MVAR Reactor                             | MePTCL        | Logistics issue hampering the work. Tentatively by Dec,22.                                   | Under process.   |
| 9      | 400kV Silchar-Misack DC (permanent restoration)   | NER-II TL     | Restoration work (ERS) of both the ckt done. Work underway for permanent restoration. Mar'23 | Pile works and chimney casting completed. Tower erection under process. Estimated by March'23. |

**D.3. Status of commissioning for upcoming projects:**

| Sl. No | Name of the element  | Utility      | Status as informed in 197 <sup>th</sup> OCC meeting  | Latest Status   |
|--------|--|--------------|--|---|
| 1      | 132kV Monarchak-Surjamaninagar   | TSECL        | By March 23  | July'23   |
| 2      | PLCC for 132kV Loktak-Ningthoukong and 132kV Loktak-Rengpang(existing lines) | MSPCL        | Under R&M by NHPC  | July'23   |
| 3      | Construction of 2 <sup>nd</sup> bay at Balipara for 220kV Balipara-Sonabil-2 | AEGCL        | SAS completed. Partial Cross Jumper od Sonabil-Balipara D/C line corrected in shutdown on 3rd dec. Further, tests before charging being done as per PGCIL requirement, to be made ready in 3-4 days. | Work to continue after shut down is availed.                              |
| 4      | Upgradation of 132kV Lumshnong - Panchgram line                              | MePTCL       | Umiam reconductoring works about to be completed, s/d after that   | Shutdown not availed from SLDC. Work to proceed once shutdown is availed. |
| 5      | PLCC for 132kV Karong-Kohima. PLCC at Kohima                                 | DoP Nagaland | Awaiting sanction from PSDF  | Awaiting sanction from PSDF   |
| 6      | 132kV Loktak-Ningthoukhong-II  | MSPCL        | Same status, no definite time limit  |   |
| 7      | 132kV Roing-Chapakhowa   | NERTS        | Work is in progress with a target for completion of the line by Dec'22.  | Estimated by Feb'23 if RoW issues are resolved by Jan'23                  |
| 8      | Re-conductoring 220kV BTPS-Salakati D/C                                      | NERTS        | Shutdown of ckt 1, for reconductoring, was taken , but only ground work was done by PGCIL. Shutdown will be taken next month   | Feb'23  |
| 9      | 420kV 80MVAR Bus Reactor   | NEEPCO       | Dec'22   | Transportation and logistics issue, by Dec'23                             |
| 10     | 220kV Killing - Mawngap  | NERPSIP      | RoW at one location yet to be resolved.  | March'23 subject to resolution of   |

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|    |   |         |   |  |
|----|---|---------|---|--|
|    |   |         | Matter is regularly taken up with higher administration level.                                      | long pending RoWs in Ri-Bhoi and East Khasi Hills district.                          |
| 11 | 220kV Samaguri – Mariani-I  | AEGCL   | FC still awaited in the Samaguri-Khumtai section. While the Mariani-I to Khumtai section is charged | Same status. No forest clearance.  |
| 12 | Reconductoring of 132kV UmiamStg-III to UmiamStg-I by HTLS  | MePTCL  | To be completed before 24 <sup>th</sup> Dec   | Line work is done, CT to be replaced at both ends, process underway                  |
| 13 | PLCC/DTPC for 220kV Balipara- Sonabil   | AEGCL   | Will be commissioned along with charging of line 2  | After the completion of 2 <sup>nd</sup> bay at Balipara for 220KV Balipara-Sonabil-2 |
| 14 | 220kV AGBPP –Namsai D/C   | TBCB    | LoA awarded   | LoA awarded on Oct'22. Estimated to be completed in 36 months.                       |
| 15 | Upgradation of 132kV Surjamaninagar-Surjamaninagar(ISTS), 132kV Bodhjungnagar-SMNagar, 132kV P.K.Bari-Ambassa, 132kV P.K. Bari-P.K.Bari(ISTS) | TSECL   | Tender awarded to PGCIL. Work started   | New tender has been floated for joint venture of PGCIL and STU.                      |
| 16 | LILO of 132kV Leshka-Khliehriat-I at Mynkre and Mynkre SS and 33kV downstream at Mynkre.  | NERPSIP | WIP   | LILO ready. Substation WIP- March'23.  |
| 17 | 220kV Tinsukia-Behiating D/C  | NERPSIP | Jan23   | WIP-March'23   |
| 18 | LILO of 132kV Kamalpur-Kamakhyia& 132kV Kamalpur-Sishugram at Amingaon  | NERPSIP | Jan23   | ERS installation work under scope of AEGCL. Work under progress.                     |
| 19 | 220kV Rangia – Amingaon D/C and 220/132kV 2x160MVA Amingaon S/S   | NERPSIP | ERS installation work under the scope of AEGCL, work not started yet                                | March'23   |
| 20 | 132kV Rengpang-Tamenglong and 132/33kV 4x6.67MVA at Tamenglong at Manipur   | NERPSIP | Jan'23  | March'23   |
| 21 | 132/33kV 2x20MVA Gamphazol at Manipur   | NERPSIP | Jan'23  | Test charged in Dec'22   |
| 22 | 132/33kV West   |         |   | Ready for charging.  |

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|    |   |                           |  |   |
|----|---|---------------------------|--|---|
|    | Phaileng S/S at Mizoram   | NERPSIP                   |  | Line WIP.   |
| 23 | 132/33kV 2x12.5MVA Marpara S/S at Mizoram                       | NERPSIP                   | Ready for charging but no line                             | March'23  |
| 24 | 132/33kV 2x12.5MVA Lungsen S/S at Mizoram                       | NERPSIP                   | Jan'23   | March'23  |
| 25 | 132kV Lungsen-Chawngte S/C at Mizoram                           | NERPSIP                   | Jan23  | Feb'23  |
| 26 | 132kV Chawngte - S.Bungtlang S/S at Mizoram                     | NERPSIP                   | Jan23  | March'23  |
| 27 | 132kV W.Phaileng-Marpara S/C at Mizoram                         | NERPSIP                   | Dec'22   | March'23 subject to RoW clearance in Pukzing village in Manit district. |
| 28 | 220kV Zhadima - Mokokchung at Nagaland                          | NERPSIP                   | Feb23  | Feb'23  |
| 29 | LILO of 132kV Wokha - Kohima at 132/33kV New Kohima at Nagaland | NERPSIP                   |  | Feb'23  |
| 30 | 132kV Wokha-Zunheboto - Mokokchung at Nagaland                  | NERPSIP                   | Dec'22   | March'23  |
| 31 | 132kV Tuensang - Longleng at Nagaland                           | NERPSIP                   | Jan'23   | Tuensang substation upgradation under tendering.                        |
| 32 | 132/33kV Amarpur S/S at Tripura                                 | NERPSIP                   | Line ready but Tuensang SS projected to be ready by jan'24 | March'23  |
| 33 | 132/33kV Manu(new) S/S at Tripura                               | NERPSIP                   | Jan'23   | March'23  |
| 34 | 132kV Dharmanagar-Kailashor                                     | NERPSIP                   | Jan;23   | Feb'23  |
| 35 | 132kV Ziro-Yazali and 132/33kV Yazali S/S                       | POWERGRID-Comprehensive   | Jan'23   | March'23  |
| 36 | 132kV Yazali - Palin and 132/33kV Palin S/S                     | POWERGRID - Comprehensive |  | No forest clearance achieved. Work under process.                       |

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|    |  |                           |                                       |  |
|----|--|---------------------------|---------------------------------------|--|
|    |  |                           |                                       | Estimated to be completed in 12 months.  |
| 37 | 132kV Palin- Koloriang and 132/33kV Koloriang S/S  | POWERGRID - Comprehensive | Dec'23                                | No forest clearance achieved. Work under process. Estimated to be completed in 12 months.                                      |
| 38 | 132kV Khonsa - Deomali and 132/33kV Khonsa S/S   | POWERGRID - Comprehensive | Dec'23                                | Next year i.e 2024   |
| 39 | 132kV Miao - Namsai and 132/33kV Miao S/S  | POWERGRID - Comprehensive | Dec'23                                | Next year i.e 2024   |
| 40 | 132kV Chimpur - Holongi and 132/33kV Holongi S/S   | POWERGRID - Comprehensive | Dec'22                                | OPGW has been installed in the line, but stringing work at 6 locations are held up due to RoW issue                            |
| 41 | Lower Subansiri HEP  | NHPC                      | Unit 1 by Jan'23 and Unit 2 by Feb'23 | Unit 1 by Jan'23 and Unit 2 by Feb'23  |
| 42 | 400kV Lower Subansiri-BNC line1  | PGCIL                     | Dec'22                                | Feb'23   |
| 43 | 400kV Lower Subansiri-BNC line2  | PGCIL                     | Feb'23                                | March'23   |
| 44 | Conversion of MT to DM at (i)132kV Khliehriat, (ii)132kV Badarpur, (iii)132kV Nirjuli, (iv) 132kV Imphal | NERTS                     |                                       | 132 kV Khliehriat and 132 kv Badarpur- under approval stage.<br><br>132 kv Nirjuli- work ongoing.<br><br>132 kv Imphal- Feb'23 |

**D.4. Status of ISTS expansion scheme in NER:**

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

| Sl. | ISTS S/s | State | Voltage ratio, Trans. Cap | Down- stream Voltage level (kV) | Unutilized bays | Status of ISTS bay | STU Lines for unutilized bays | Status of Lines(as updated in 198 <sup>th</sup> OCCM) |                     |
|-----|----------|-------|---------------------------|---------------------------------|-----------------|--------------------|-------------------------------|---|---------------------|
|     |          |       |                           |                                 |                 |                    |                               | Date of Award   | Completion schedule |

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|   |                         |           |                     |     |   |               |   |  |  |
|---|-------------------------|-----------|---------------------|-----|---|---------------|---|--|--|
| 1 | New Mariani (POWERGRID) | Assam     | 400/220kV, 2x500MVA | 220 | 2 | Commissioned  | New Mariani (POWERGRID) – Diphu (Assam) 220kV D/c line                  | Transmission route survey is underway, expected to take a longer time due as the forest areas lying in the route | By Jan'25  |
| 2 | New Kohima (TBCB)       | Nagaland  | 400/220kV, 2x500MVA | 220 | 2 | Commissioned  | New Kohima (TBCB) – New Kohima (Nagaland) 220kV D/c line                | LoA Feb'2021   | Resolution of issue of high deviation angle at 1 <sup>st</sup> tower at New Kohima (TBCB) underway. Completion of the line after the said resolution |
| 3 | Nangalbibra (TBCB)      | Meghalaya | 220/132kV, 2x160MVA | 132 | 2 | Under bidding | Nangalbibra (ISTS) – Nangalbibra (MePTCL) 132kV D/c (Single Moose) line | Survey awarded   | Dec'23   |

B. Status of 400kV substations and other important elements being implemented by STUs in NER under intra-state schemes to be connected through ISTS

| Sl. No.  | Substation/Location   | Transformation Capacity/ Element | Date of Award   | Completion Schedule                   |
|----------|---|----------------------------------|---|---------------------------------------|
| <b>A</b> | <b>Assam (to be implemented by AEGCL)</b>                               |                                  |   |                                       |
| <b>I</b> | <b>Rangia</b>   | 400/220kV, 2x500MVA              | <ol style="list-style-type: none"> <li>1. EPC Contract Award is Tentatively scheduled in the early half of Dec'2022.</li> <li>2. Master Plan submitted for approval.</li> <li>3. Tender under preparation</li> <li>4. AIB points to be addressed</li> </ol> | Dec'2025                              |
| a)       | LILO of both circuits of Bongaigaon – Balipara 400kV D/c line at Rangia | 400 kV, D/C                      | <ol style="list-style-type: none"> <li>1. EPC Contract Award is expected by Dec'2022.</li> <li>2. Tender preparation is completed and is to be reviewed by AIIB</li> </ol>  | Mar'26 (36 months from date of Award) |

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|     |  |  |  |  |
|-----|--|--|--|--|
| II  | <b>Khumtai</b>   | 400/220/132kV,<br>2x500MVA +<br>2x160MVA | Survey work to be completed by June'2022. EPC tender to be floated on finalization of fund allotment. 220kV work will be constructed under ongoing AIIB scheme for which contract has already been award to M/S RS infra PVT tech Ltd. | May'2026   |
| a)  | Khumtai (AEGCL) – BiswanathChariyali (PG) 400kV D/c line   | 400kV D/c                                | Survey work completion by July'22, tender floating after finalization of fund allocation.  | 220kV LILO part 60% complete. 400kV line by May'2026 |
| III | <b>Upgradation of Gohpur S/s from AIS to GIS</b>   | -  | 1. Notice of Award has been issued on 8 <sup>th</sup> June 2022 to M/S Sumaja Electro infra Pvt Ltd.   | June'2025  |
| a)  | 2 no. 132kV GIS line bays at Gohpur for termination of LILO of one circuit of BiswanathChariyali – Itanagar 132kV D/c line(line works under ISTS through TBCB route) | 132kV                                    | 1. LoA by Jun'22   | June'2025  |
| IV  | <b>Upgradation of Sonapur S/s from AIS to GIS</b>  | -  | 1. Contract to be awarded by Jun'23. LoA by Jun'23   | June'2026  |
| a)  | LILO of 400kV Silchar-Byrnihat at Sonapur  | -  | 1. LoA by Jun'23   | June'2026  |

| Sl. No.  | Substation/Location  | Transformation Capacity/ Element | Date of Award   | Completion Schedule   |
|----------|--|----------------------------------|---|---|
| <b>B</b> | <b>Tripura (to be implemented by TSECL)</b>  |                                  |   |   |
| <b>I</b> | <b>Surajmaninagar (TSECL)</b>  | 400/132kV, 2x315MVA              | JV formation, between PGCIL and STU by March'23   | 12 months from Date of Award  |
| a)       | LILO of both circuits of Surajmaninagar (ISTS) – Palatana 400kV D/c line at Surajmaninagar (TSECL) S/s | 400kV D/c                        | All works except 400kV termination at Surajmaninagar(TSECL) by POWERGRID to be done. Balance works under separate contract. | 84% Line works complete by PGCIL, total completion subjected to Sub-station |



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|           |   |       |  |  |
|-----------|---|-------|--|--|
|           |   |       |  | readiness at Surajmaninagar  |
| <b>C</b>  | <b>NEEPCO (to be implemented by NEEPCO)</b>   |       |  |  |
| <b>I</b>  | <b>Extension works at RanganadiHEP end</b>  |       |  |  |
| <b>a)</b> | 420kV 80MVAR Bus Reactor at Ranganadi Generation Switchyard   |       | LOA on 11.01.2022  | Dec'23 (Logistics and Transportation issue)                                      |
| <b>II</b> | <b>Extension works at Pare HEP end</b>  |       |  |  |
| <b>a)</b> | Bypassing of LILO of Ranganadi - Naharlagun / Nirjuli at Pare HEP so as to form direct Ranganadi- Naharlagun / Nirjuli 132 kV S/c line  | 132kV | Regarding bypassing of LILO at (a), work has been awarded in Dec, work to be completed in 4 months from LoA,   | To be completed by NEEPCO by April 2023 i.e. prior to ISTS works i.e. July 2023. |
| <b>b)</b> | Re-conductoring of LILO portion at Pare end (of Ranganadi - Naharlagun / Nirjuli 132kV S/c line) with HTLS (HTLS equivalent to ACSR Zebra) along with modification of 132kV bay equipment at Pare HEP | 132kV | The LILO portion is about 2.2km & the cost estimates have been received by NEEPCO. Upon approval of the same, work shall be awarded. Expected to be awarded shortly. |  |

**D.5. Status Review for the Items Referred from previous OCCMs:**

| <b>S.No</b> | <b>Item for Discussion</b>  | <b>Status as per 197<sup>th</sup> OCCM</b>   | <b>Latest Status</b>            |
|-------------|---|--|---------------------------------|
| 1.          | Introduction of SPS in Leshka S/Sn of Meghalaya (Agenda No. C4 of 189 <sup>th</sup> OCCM) | OEM has visited the site and proposed certain modifications in the original scheme. The finalised scheme will be submitted to the higher management in the following week. |                                 |
| 2.          | Voltage and MVAR issues at 400kV Kameng S/Sn (Agenda No. C7 of 189 <sup>th</sup> OCCM)    | Discussion with OEM is underway  | Discussion with OEM is underway |

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|    |  |  |   |
|----|--|--|---|
| 3. | Difficulty in test synchronization at Ningthoukhong S/Sn (installation of line CVT)<br>(Agenda No. C11. of 189 <sup>th</sup> OCCM)   |  |   |
| 4. | Outage of 400kV Imphal (PG) – Thoubal-I<br>(Agenda B.15 of 184 <sup>th</sup> OCCM)   |  | Litigation pending in court   |
| 5. | Charging of 33kV Khupi-Kimi line at 132kV:<br>Recommendations of the 187 <sup>th</sup> OCCM to be implemented:<br>(a) Installation & Commissioning of PLCC and additional Wave Trap with accessories at Khupi (NEEPCO) - By Mar'22 Minutes of 188 <sup>th</sup> OCC meeting held on 16 <sup>th</sup> March, 2022 at Guwahati<br>(b) Defective Relays at Khupi end to be repaired (NEEPCO) – By Mar'22<br>(c) PID testing and replacement of defective insulators (NEEPCO) – By Mar'22<br>(d) Infringement checking and vegetation clearance (NEEPCO) – By Mar'22<br>(e) Stringing of OPGW by POWERGRID Comprehensive – By Mar'22<br>(f) Procurement and installation of Line Differential Relays (NEEPCO) – By Mar'22<br>(Agenda B.15 of 188 <sup>th</sup> OCCM) | As informed in 23 <sup>rd</sup> TCC/RPC meeting, NEEPCO to complete its work by Dec'22.<br>Also PGCIL (Comprehensive) to complete OPGW work by Dec'22. | GM, NEEPCO informed that at one location landslide has reduced ground clearance, land clearing work is being undertaken by NEEPCO, to be completed by 10 <sup>th</sup> Feb. All other works in account of NEEPCO is completed.<br><br>Regarding OPGW work, Comprehensive updated that mobilization of man and materials in progress. Work to start from 06.02.2023 and to be completed by the end of Feb'23 |
| 6. | Synchronization issue of 220kv AGBPP – Tinsukia 1 & 2 at AGBPP end.( NEEPCO to update the status of CVT procurement and other relevant details.)<br>Item B.24 of 190 <sup>th</sup> OCCM.   | Tender floated in the month of August'2022.  |   |
| 7. | Implementation of Single Phase Auto-Reclosure for 132kV Rangia-Motonga and 132kV Gelephu-Salakati Line<br>(C.14 of 191 <sup>st</sup> OCCM)   | SPAR of 132kV Rangia-Motonga line is planned for March'23. For Salakati-Gelephu, work done.  | March'23  |
| 8. | Grid Disturbance in Dhaligaon area of Assam Power System   | Estimate prepared and submitted to Disaster Risk   | Revised estimate  |

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|     |  |  |   |
|-----|--|--|---|
|     | (C.18 of 191 <sup>st</sup> OCCM)   | reduction Works, 2022-2023, Govt of Assam.   | submitted, yet to be approved   |
| 9.  | Tower schedule of 220 KV D/C Transmission line (from Zhadima 400/220 KV GIS Substation to Zhadima 220 KV Substation) (B.18 OF 194 <sup>TH</sup> OCC)       | Will be provided before OPGW installation in N Kohima - Zhadima Line.  | Will be provided before OPGW installation in N Kohima - Zhadima Line.                             |
| 10. | Restoration of 400 kV STG-1 Main Bay at OTPC Palatana (C.6 of 194 <sup>th</sup> OCCM)  | Bay currently Open.  | OEM visited the site, faulty cables to be replaced soon   |
| 11. | 400 kV Bongaigaon-Byrnihat L/R at 400 kV Bongaigaon (PG) (C.6 of 194 <sup>th</sup> OCCM)   | Bushing replaced and shutdown for testing of LR taken.   | Done on 16 <sup>th</sup> Jan'23   |
| 12. | Occurrence of Multiple grid disturbance in Gohpur and radially connected areas of Assam Power System (C.10 of 194 <sup>th</sup> OCC)                       | SEM meters provided by PGCIL, both lines bays commissioned from AEGCL end.   | AeGCL scope of work done, Sterlite scope of work remaining  |
| 13. | Status of Installation of TLISA in 400kV Silchar-Azara T/L & 400 kV Silchar-Byrnihat T/L (C.12 of 194 <sup>th</sup> OCCM)                                  | Tender opening on 30.12.2022.  | Tendering completed, LoA awarded, supply will start soon  |
| 14. | PLCC & protection related issues at 132kV Tipaimukh S/s (C.15 of 194 <sup>th</sup> OCC) & (C.8 of 197 <sup>th</sup> OCC)                                   | PLCC engineer to visit the SS in last week of December. (MSPCL)  |   |
| 15. | 48V System reliability at Pasighat end (C.16 of 194 <sup>th</sup> OCC)   | Transmission division/ circle was requested to take up the matter, likely to be completed by March 2023 if fund is approved. | March'23  |
| 16. | Construction of Anchor tower at location 433 by PGCIL and reconductoring of 220kV Mariani-Mariani SC with Moose conductors(B.16 of 196 <sup>th</sup> OCCM) | PGCIL- Construction of anchor tower by Jan'23.<br>AEGCL- reconductoring thereafter.  | Approved in OCC(1 <sup>st</sup> to 4 <sup>th</sup> Feb'23) and work has been taken up by the site |
| 17. | Railway Traction Details of NER (C.7 of 197 <sup>th</sup> OCC)   | AEGCL to provide the tentative commissioning timelines of the remaining lines (sl. No. c).                                   |   |

### **E. METERING AGENDA ITEMS**

#### **E.1. Procurement of SEM & DCD/Laptop for future requirements:**

NERTS may intimate the status of procurement of Additional 40 nos. of DCD. In 196<sup>th</sup> OCCM, NERTS updated that LoA has been placed and supply of DCDs is expected by 9<sup>th</sup> Jan'23. Status may be reviewed.

#### **Deliberation of the sub-committee**

Inspection at Factory was completed on last week of January 2023. Delivery by the OEM, M/s SANDS is expected by 3<sup>rd</sup> week of February'23.

***Sub-committee noted as above***

***Action: NERTS***

#### **E.2. Issues regarding SEM Data Processing:**

##### **a. Non-receipt of SEM data from 132 kV Pailapool Substations:**

Weekly SEM data of 132 kV Pailapool (As) Substations is important for accounting of Assam drawal. However, SEM data from the said substation is not being received. In 197<sup>th</sup> OCCM, SLDC Assam informed that new laptop is under procurement stage, meanwhile SEM data will be sent through the laptop at Karimganj SS. SEM data yet to be received. Status may be reviewed.

##### **b. Erroneous reading of Tipaimukh end of 132kV Aizwal-Tipaimukh line:**

Tipaimukh end of 132kV Aizwal-Tipaimukh line is reading close to 0 (Zero). In 197<sup>th</sup> OCCM, PGCIL updated that replacement meter is received by MSPCL and will be installed by PGCIL Status may be reviewed.

#### **Deliberation of the sub-committee**

a. Assam updated that procurement of new laptop is under process. Regarding laptop at Karimganj problem in Operating system is being rectified.

b. PGCIL had delivered the SEM to Manipur state official, who have stated that they will install the SEM in their premises by themselves.

***Sub-committee noted as above***

***Action: AEGCL, MSPCL***

#### **E.3. High Time Drifted SEMs:**

Time drift in SEMs may result in computational errors in Regional energy accounts & Weekly Loss. All constituents in whose premises the meters are installed are required to take corrective action for the same.

Time drift of more than 4 mins observed in the following meters.

| S.No | ENTITY    | FEEDER NAME                                | METER NO  |
|------|-----------|--|-----------|
| 1    | ASSAM     | 220 kV TINSUKIA END OF KTG FDR-I           | NP-9654-A |
| 2    | ASSAM     | 220 kV TINSUKIA END OF KATHALGURI FDR-II   | NP-9658-A |
| 3    | ASSAM     | 132 kV UMRANGSOO END OF KHLEIRIAT (PG)     | NP-5290-A |
| 4    | ASSAM     | 132 kV UMRANGSOO END OF HAFLONG            | NE-0019-A |
| 5    | ASSAM     | 132 kV RANGIA END OF MOTONGA               | NP-9669-A |
| 6    | MANIPUR   | 400 kV THOUBAL END OF IMPHAL(PG)-II FDR    | NP-9603-A |
| 7    | MIZORAM   | 132 kV KOLASIB END OF AIZAWL(PG) FDR       | NE-0087-A |
| 8    | POWERGRID | 400/132kV SILCHAR 200MVA ICT-1 (HV SIDE)   | NE-0050-A |
| 9    | POWERGRID | 400 kV SILCHAR END OF BYRNIHAT             | NP-9398-A |
| 10   | POWERGRID | 400 kV SILCHAR END OF PALATANA FDR-I       | NE-0030-A |
| 11   | POWERGRID | 400/132 kV SILCHAR ICT-3 (HV SIDE)         | NP-6946-A |
| 12   | POWERGRID | 400/132 SILCHAR END OF MISA FDR-I          | NP-9925-A |
| 13   | POWERGRID | 400 kV SILCHAR END OF IMPHAL-II            | NE-0040-A |
| 14   | POWERGRID | 400 kV SILCHAR END OF PK BARI (STERLITE)-I | NP-9901-A |
| 15   | POWERGRID | 400 kV SILCHAR END OF IMPHAL-I             | NE-0007-A |
| 16   | POWERGRID | 132 kV SILCHAR END OF SRIKONA-I            | NP-9895-A |
| 17   | POWERGRID | 400 kV BONGAIGAON END OF NTPC_BgTPP-2      | NP-9477-A |

Note: Out of 90 Locations, appx. 35-40 Nos. of locations send SEM Time Drift Report. In 197<sup>th</sup> OCCM, PGCIL: correction process underway. Assam: T&C will take up the work, Manipur: Thoubal personnel will take up the matter and for Mizoram: PGCIL will help.

Status may be reviewed.

#### **Deliberation of the sub-committee**

PGCIL updated that for all the said meters, the time drift corrections are being done by DCDs and are in process of compliance as per 197<sup>th</sup> OCCM, 1 minute/ week.

***Sub-committee noted as above***

***Action: NERTS***

#### **E.4. DCD issue at 132 kV Kolasib Substation:**

Enormous amount of old files remained dumped in DCD of 132 kV Kolasib station which is causing hindrance in receiving latest weekly SEM data. Even after communicating several times, the problem is still persisting. In 197<sup>th</sup> OCCM, PGCIL updated that memory cleaning go the DCD is required for which they have not yet received any call from Mizoram. NERPC requested PGCIL/P&ED Mizoram to resolve the issue bilaterally. Issue is still persisting. Status may be reviewed.

#### **Deliberation of the sub-committee**

PGCIL updated that the issue has been resolved.

***Sub-committee noted as above***

**E.5. Faulty DCD in Rangia substation:**

Personnel from Rangia Substation informed via mail dtd. 20/12/22 that their existing DCD is faulty which is causing difficulty in downloading data from SEM. Weekly SEM data of 132 kV Rangia (As) Substation is important for accounting of Inter-regional drawl.

**Deliberation of the sub-committee**

AEGCL intimated the forum that DCD and SEM are non-compatible and have requested PGCIL to look into the matter. However PGCIL updated that the matter hasn't been intimated to PGCIL, the DCD and its operation at Rangia (AS) is specific to AEGCL and PGCIL has no involvement in it.

***Sub-committee noted as above***

***Action: AEGCL***

**Annexure-I****List of Participants in the 198<sup>th</sup> OCC Meeting held on 24.01.2023**

| <b>SN</b> | <b>Name &amp; Designation</b>           | <b>Organization</b> | <b>Contact No.</b> |
|-----------|---|---------------------|--------------------|
| 1         | Sh. Purik Buchi, AE (E)                 | Ar. Pradesh         | 09366118384        |
| 2         | Sh. P. Borah, CGM, AEGCL                | Assam               | –                  |
| 3         | Sh. Indrajit Tahbildar, AGM(TRC), APDCL | Assam               | 08761049486        |
| 4         | Sh. N.Baruah, AGM (SO)                  | Assam               | 07002885719        |
| 5         | Sh. P.Saha, AGM (SCADA)                 | Assam               | 09435561777        |
| 6         | Sh. Paragjyoti Kalita, AGM              | Assam               | 09706979183        |
| 7         | Sh. R. Sarma, AGM                       | Assam               | 07002380393        |
| 8         | Sh. P.Yaiphaba, DGM, MSPCL              | Manipur             | 09774088766        |
| 9         | Sh. B.Wankhar, SE (SLDC)                | Meghalaya           | 07005673697        |
| 10        | Sh. B.Nikhla, SE (Gen-II)               | Meghalaya           | 09436314163        |
| 11        | Sh. M. Mairom, EE                       | Meghalaya           | 08259904575        |
| 12        | Sh. B.Narry, EE (SP)                    | Meghalaya           | 07005298338        |
| 13        | Sh. D.J.Lyngdoh, EE (SM), MePTCL        | Meghalaya           | -                  |
| 14        | Sh. T.Gidon, EE, SLDC, MePTCL           | Meghalaya           | 06009094044        |
| 15        | Sh. K.W.Sohlang, EE (MoD)               | Meghalaya           | 07085057822        |
| 16        | Sh. A.Shullai, AEE (G&PSD)              | Meghalaya           | 07005379616        |
| 17        | Sh. Y.lakai, AEE, SLDC                  | Meghalaya           | 09402133552        |
| 18        | Sh. D.Marsharing, AEE                   | Meghalaya           | 08014046544        |
| 19        | Sh. C.W.Chen, AEE (C&C)                 | Meghalaya           | 09863093311        |
| 20        | Sh. Zoramdina Ralte, EE                 | Mizoram             | 08415901755        |
| 21        | Sh. P.C.Lalremruata, AE                 | Mizoram             | 09106305215        |
| 22        | Sh. R. Suohu, SE (E)                    | Nagaland            | 08575000014        |
| 23        | Sh. Rokobeito Italu, SDO                | Nagaland            | 09436832020        |
| 24        | Sh. Anil Debbarma, DGM (SLDC)           | Tripura             | 09612589250        |
| 25        | Sh. Joypal Roy, GM                      | NEEPCO              | 08837200069        |
| 26        | Sh.N.Roy, ED                            | NERLDC              | 09869080265        |
| 27        | Sh. S.C. De, Sr.GM                      | NERLDC              | 09436335369        |
| 28        | Sh. B. Sahu, Sr.GM                      | NERLDC              | 09425409539        |
| 29        | Sh. Mintu Mandal, C.Mgr                 | NERLDC              | 09436335243        |
| 30        | Sh. Abhijit Bhuin, C.Mgr                | NERLDC              | 09433041807        |
| 31        | Sh. Chitra Bahadur Thapa, Manager       | NERLDC              | 08135989964        |
| 32        | Sh. Palash Jyoti Borah, Dy.Manager      | NERLDC              | 08761093397        |
| 33        | Smti. Namrata Pathak, Asst.Mgr          | NERLDC              | 09706384809        |
| 34        | Sh. P. Kanungo, CGM (AM)                | PGCIL               | 09436302823        |

|    |  |       |             |
|----|--|-------|-------------|
| 35 | Sh. R. Haribabu, DGM                   | PGCIL | 09445021006 |
| 36 | Sh. Ankit Vaish, DGM, NERTS            | PGCIL | 09409305725 |
| 37 | Sh. Amit Kr. Verma, C. Mgr (NERPSIP)   | PGCIL | 08894701248 |
| 38 | Sh. Raktim Konwar, Manager (NERPSIP)   | PGCIL | 09678682358 |
| 39 | Sh. Soham De, Shift-in-Charge          | OTPC  | 09556557648 |
| 40 | Sh. N.Ramesh Kr. Singh, Engineer (O&M) | NETC  | 09101658046 |
| 41 | Sh. Sanjeev Kumar Sharma, Manager (E)  | NHPC  | 09630950336 |
| 42 | Sh. A. Majumdar, AGM                   | NTPC  | 09650990503 |
| 43 | Sh. K. B. Jagtap, Member Secretary     | NERPC |             |
| 44 | Sh. S. M. Aimol, Director              | NERPC | 08974002106 |
| 45 | Sh. A. Agarwal, Dy.Director            | NERPC | 09871266951 |
| 46 | Sh. Shaishav Ranjan, AEE               | NERPC | 08787892650 |
| 47 | Sh. Vikash Shankar, AD-I               | NERPC | 09455331756 |
| 48 | Sh.Dinesh Kr.Singh, AD-I               | NERPC | 07042118261 |
| 49 | Sh. Rajib Das, AEE                     | NERPC | -           |
| 50 | Sh. Ashim Goswami, AD-II               | NERPC | 08638966481 |



उ.पू.क्षे ग्रिड प्रदर्शन

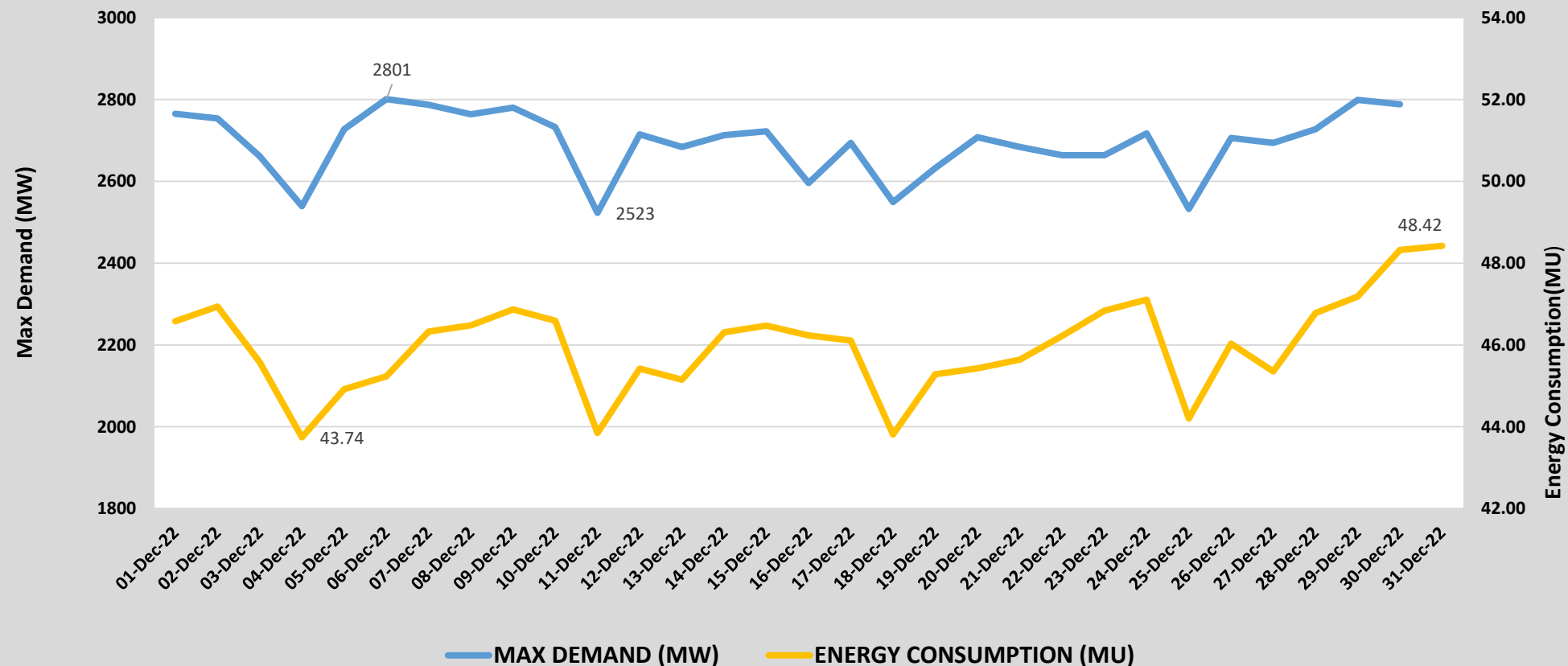
# NER GRID PERFORMANCE

*For the month December 2022*

**North-Eastern Regional Load Despatch Centre**  
***Grid-India, Shillong***

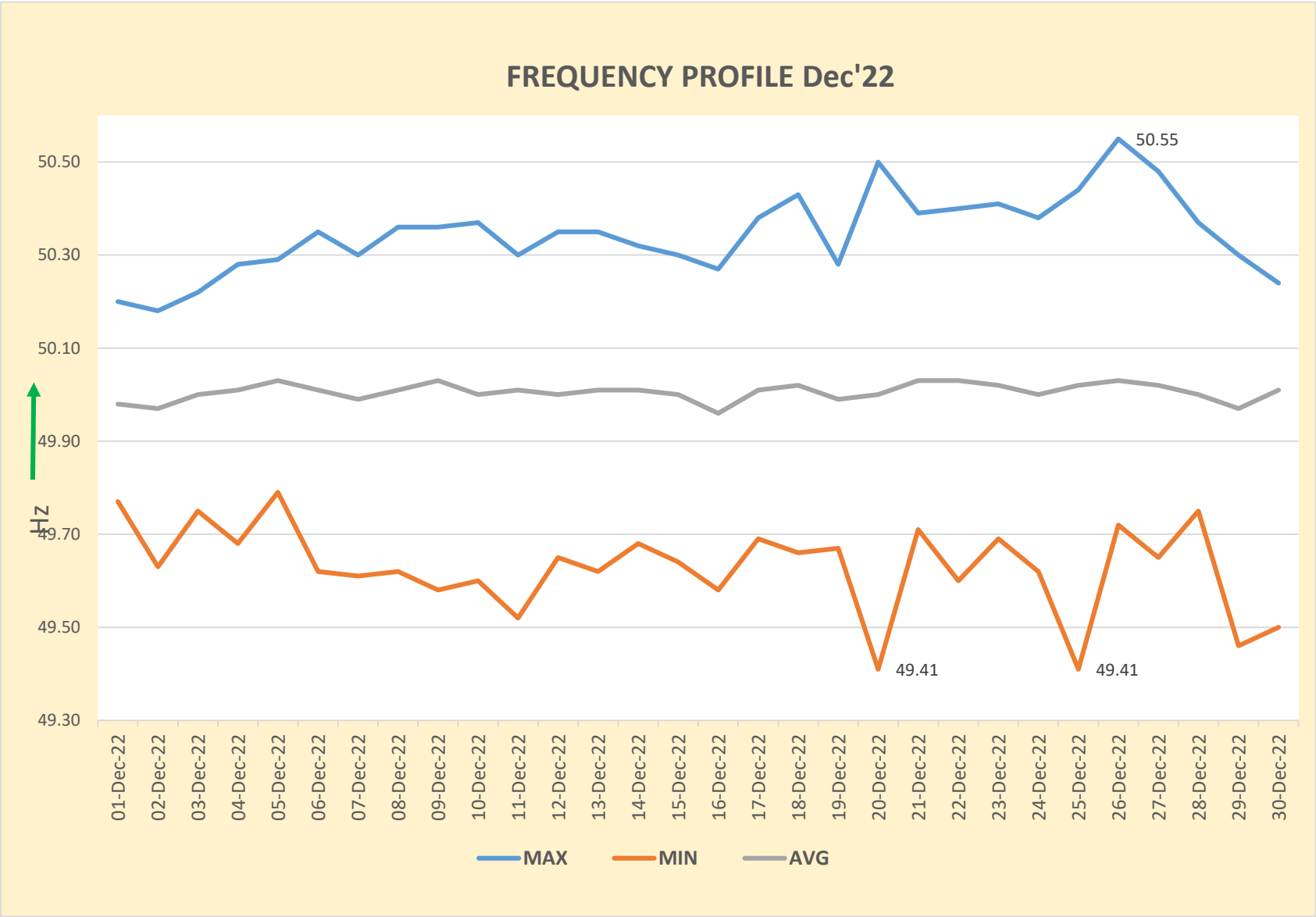
# Maximum MW and MU in NER: December 2022

## Maximum Demand (MW) and Energy Consumption (MU)

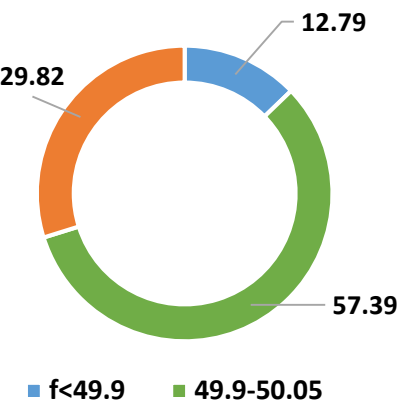


# Frequency Profile

FREQUENCY PROFILE Dec'22

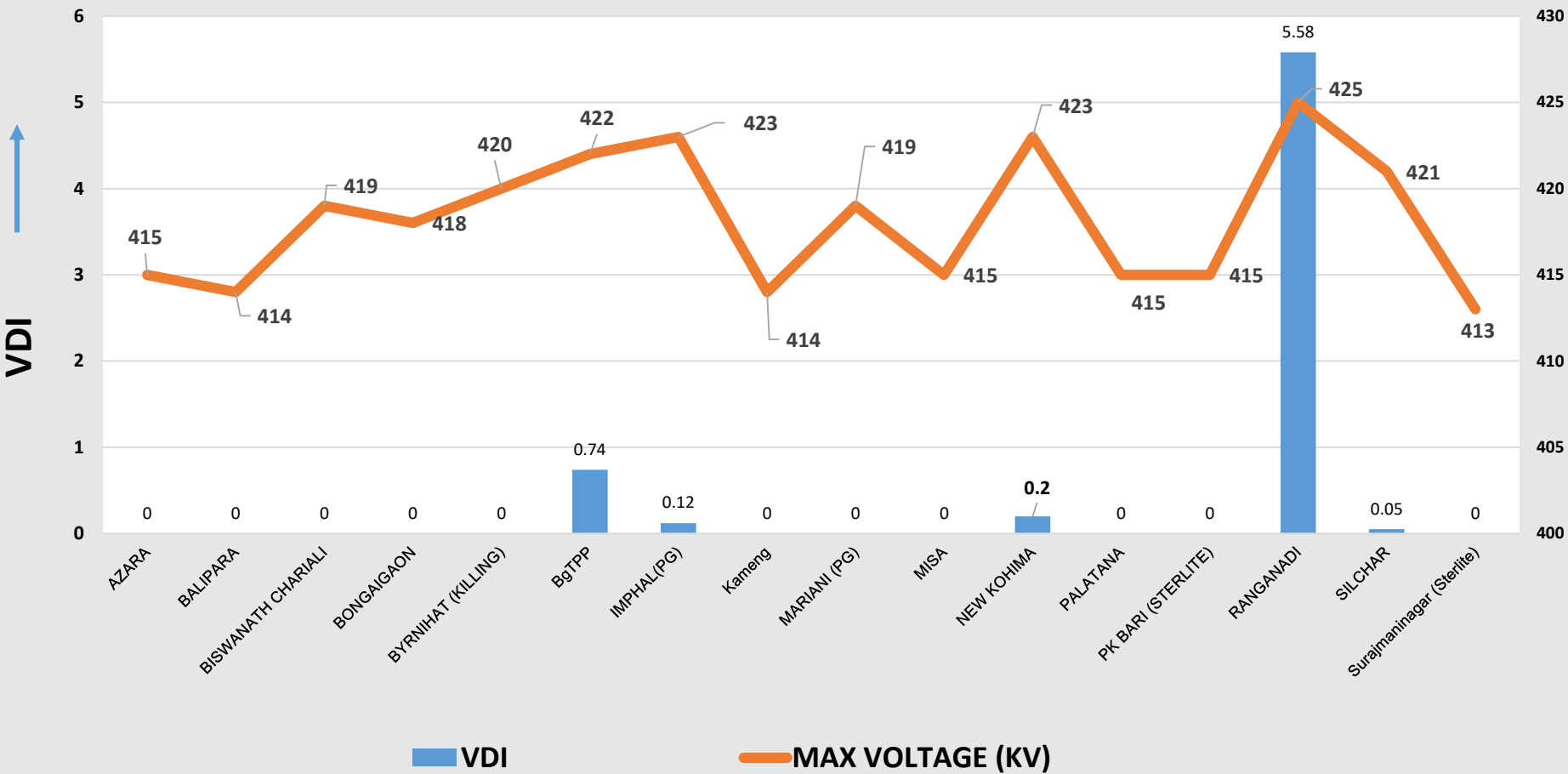


FREQ PROFILE FOR Dec'22



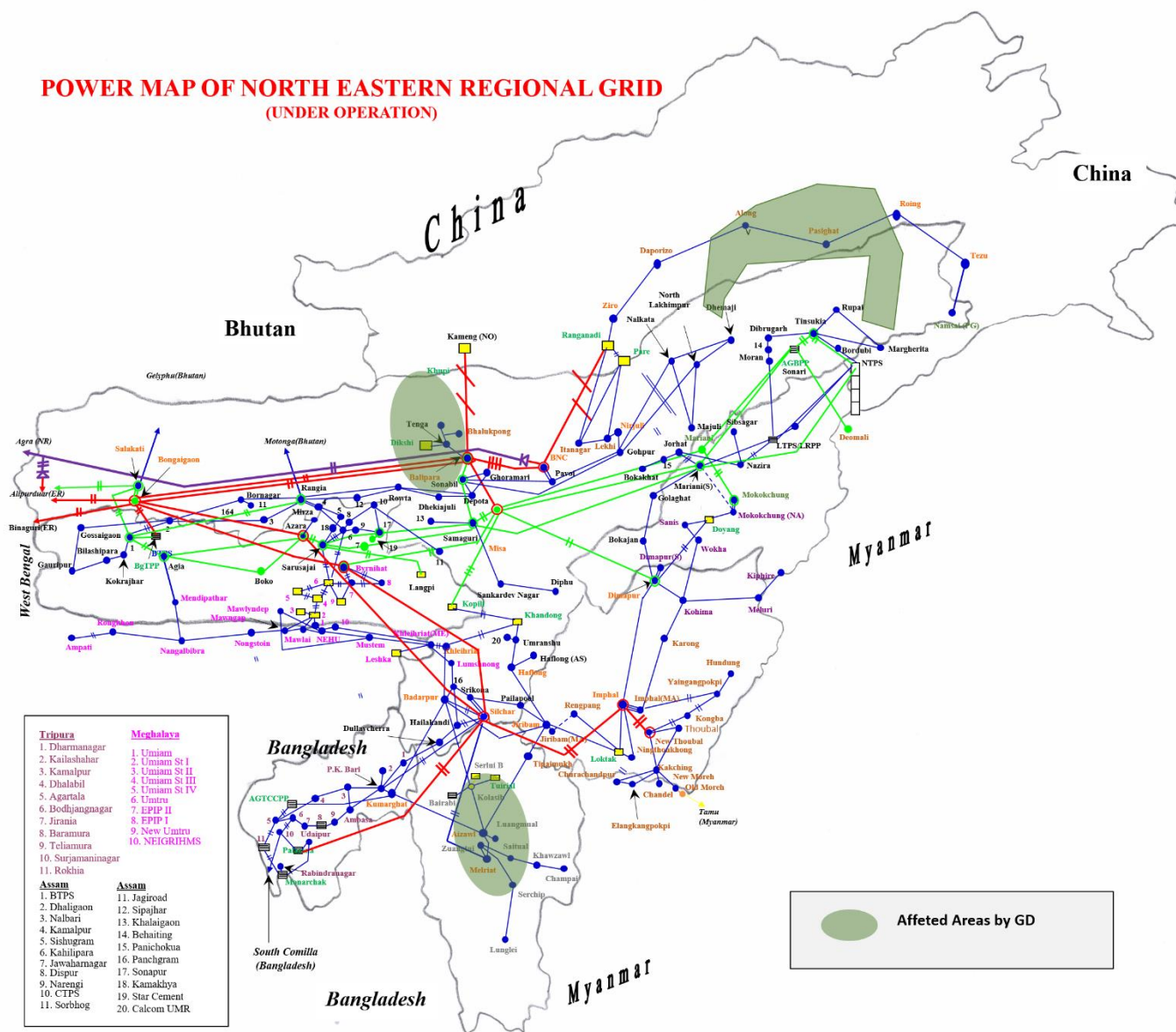
# VDI (400 KV) FOR December 2022

No. of 400 kV lines kept open for over voltage : 2



# Grid Disturbance during December 2022

## POWER MAP OF NORTH EASTERN REGIONAL GRID (UNDER OPERATION)



No. of GD

5

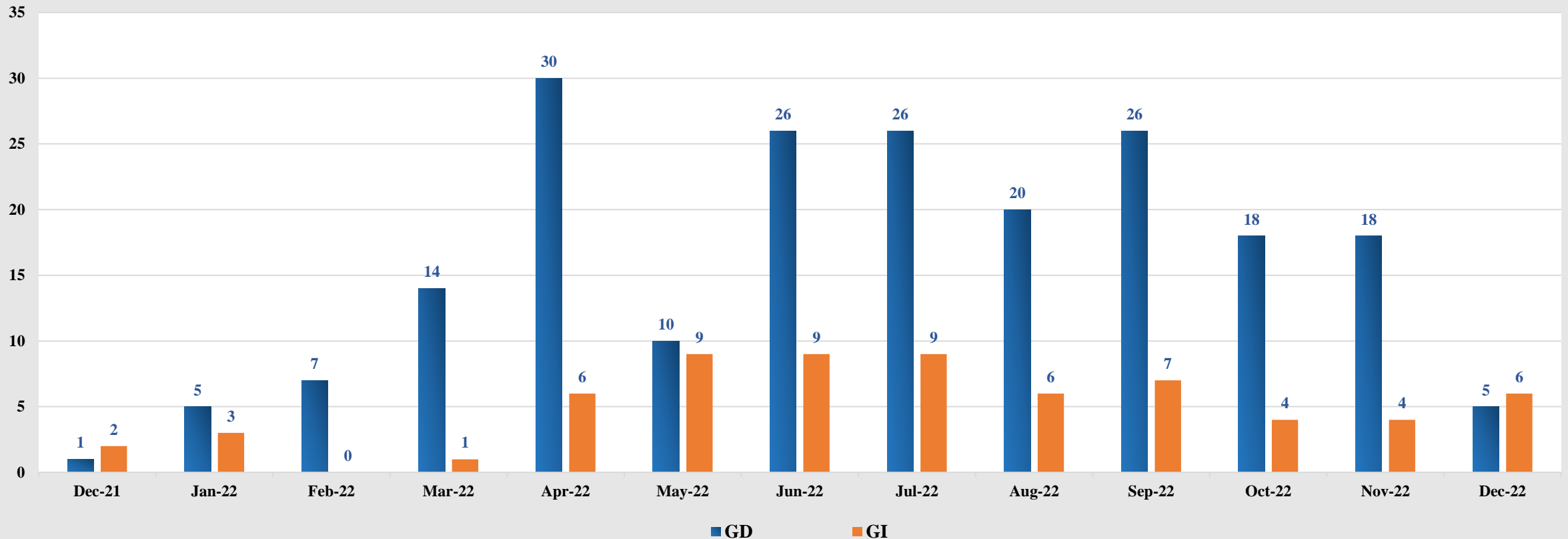
No. of GI

6

| Sl. No. | Element                        | Number of times   |
|---------|--------------------------------|-------------------|
| 1       | 132 kV Balipara-Tenga line     | caused GD 1 time  |
| 2       | 132 kV Along-Pasighat line     | caused GD 1 time  |
| 3       | 132 kV Kolasib - Tural line    | caused GD 1 time  |
| 4       | 132 kV Aizawl - Luangmual line | caused GD 2 times |

# Grid Disturbance/Incidences for last 12 Months

GD and GI : December 21 to December 22



# Projected Hydro Generation Availability

| Plants                      | Reservoir Level<br>in meters (as on<br>24/12/2022) | MU Content | Present DC (MU) | No of days as per<br>current<br>Generation |
|-----------------------------|--|------------|-----------------|--|
| Khandong +<br>Kopili STG II | -  | -          | -               | -  |
| Kopili                      | -  | -          | -               | -  |
| Doyang                      | 316.51   | 16         | 0.18            | 89   |
| Loktak                      | 766.63   | 16         | 0.61            | 26   |

# OCC approved shutdown availing status for the month of December 2022

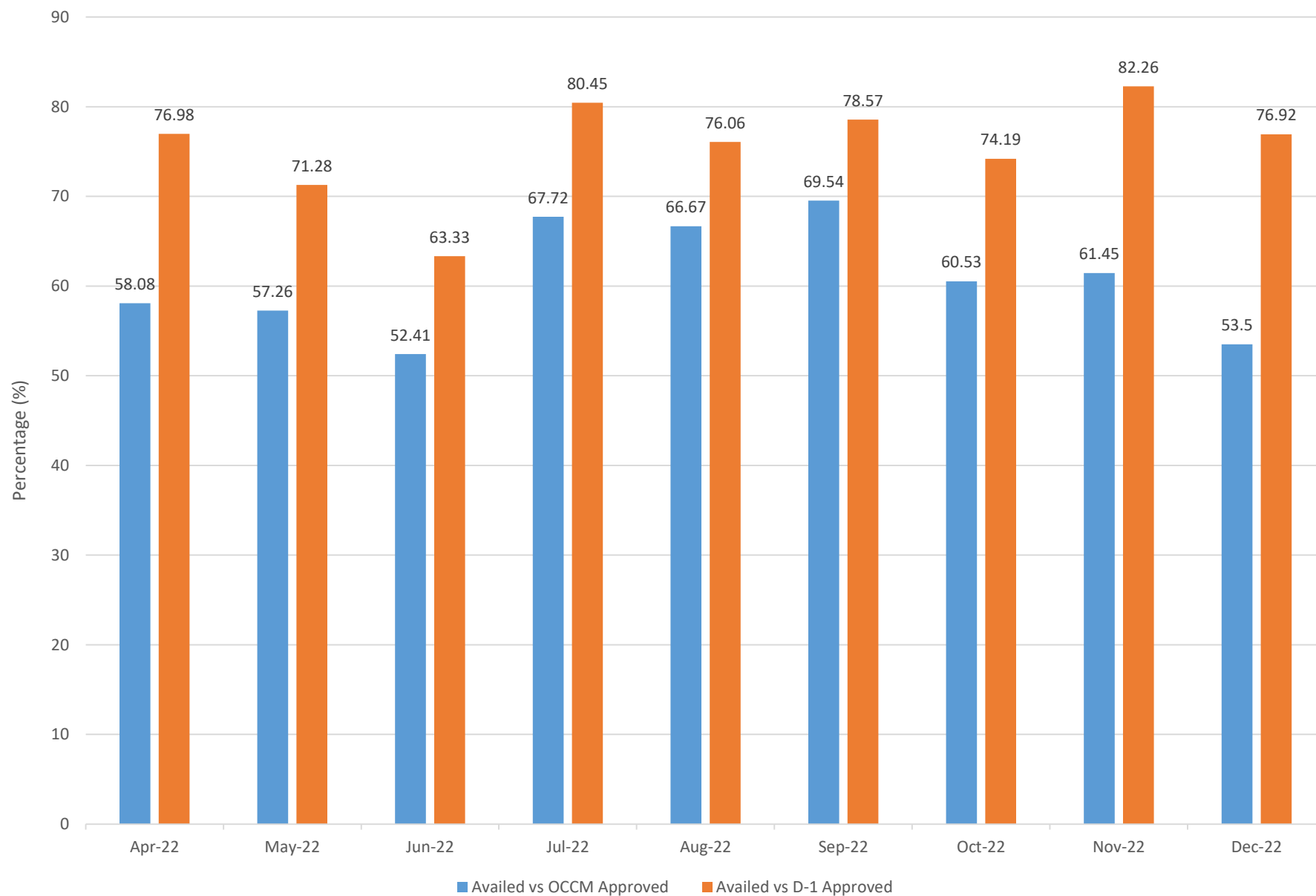
## SUMMARY OF NER OUTAGE

| MONTH       | PLANNED<br>IN<br>OCC | APPROVED<br>IN<br>D-1 | AVAILED<br>IN<br>REAL TIME | AVAILED<br>VS<br>PLANNED | AVAILED<br>VS<br>APPROVED | DEFERRED BY RLDC DUE TO SYSTEM<br>CONSTRAINT |
|-------------|----------------------|-----------------------|----------------------------|--------------------------|---------------------------|--|
| December-22 | 243                  | 169                   | 130                        | 53.50%                   | 76.92%                    | 8  |



|                          | OCC Approved | D-1 Approved | Availed | Not Availed | RLDC Deferred |
|--------------------------|--------------|--------------|---------|-------------|---------------|
| <b>NER</b>               | 243          | 169          | 130     | 39          | 8             |
|                          |              |              |         |             |               |
| <b>NERTS</b>             | 142          | 84           | 61      | 23          | 5             |
| <b>ASSAM</b>             | 58           | 53           | 48      | 5           | 2             |
| <b>MANIPUR</b>           | 0            | 0            | 0       | 0           | 0             |
| <b>MEGHALAYA</b>         | 8            | 4            | 2       | 2           | 1             |
| <b>NAGALAND</b>          | 0            | 0            | 0       | 0           | 0             |
| <b>MIZORAM</b>           | 0            | 0            | 0       | 0           | 0             |
| <b>TRIPURA</b>           | 1            | 1            | 1       | 0           | 0             |
| <b>Arunachal Pradesh</b> | 0            | 0            | 0       | 0           | 0             |
| <b>NETC</b>              | 2            | 2            | 2       | 0           | 0             |
| <b>KMTL</b>              | 13           | 10           | 8       | 2           | 0             |
| <b>NEEPCO</b>            | 7            | 6            | 4       | 2           | 0             |
| <b>NTPC</b>              | 6            | 6            | 3       | 3           | 0             |
| <b>OTPC</b>              | 6            | 3            | 1       | 2           | 0             |
| <b>INDIGRID</b>          | 0            | 0            | 0       | 0           | 0             |
| <b>NHPC</b>              | 0            | 0            | 0       | 0           | 0             |

## Approved Shutdown availing trend in percentage



# RMSE of Load forecast for Dec'22

RMSE of the forecasted Demand by SLDCs Vs Actual Demand met as per SEM by SLDCs (as per IEGC c1.5.3):

$$RMSE = \sqrt{\frac{\sum_{i=1}^N (Predicted_i - Actual_i)^2}{N}}$$

Where,

**Predicted<sub>i</sub>** = Forecasted Value

**Actual<sub>i</sub>** = Actual value

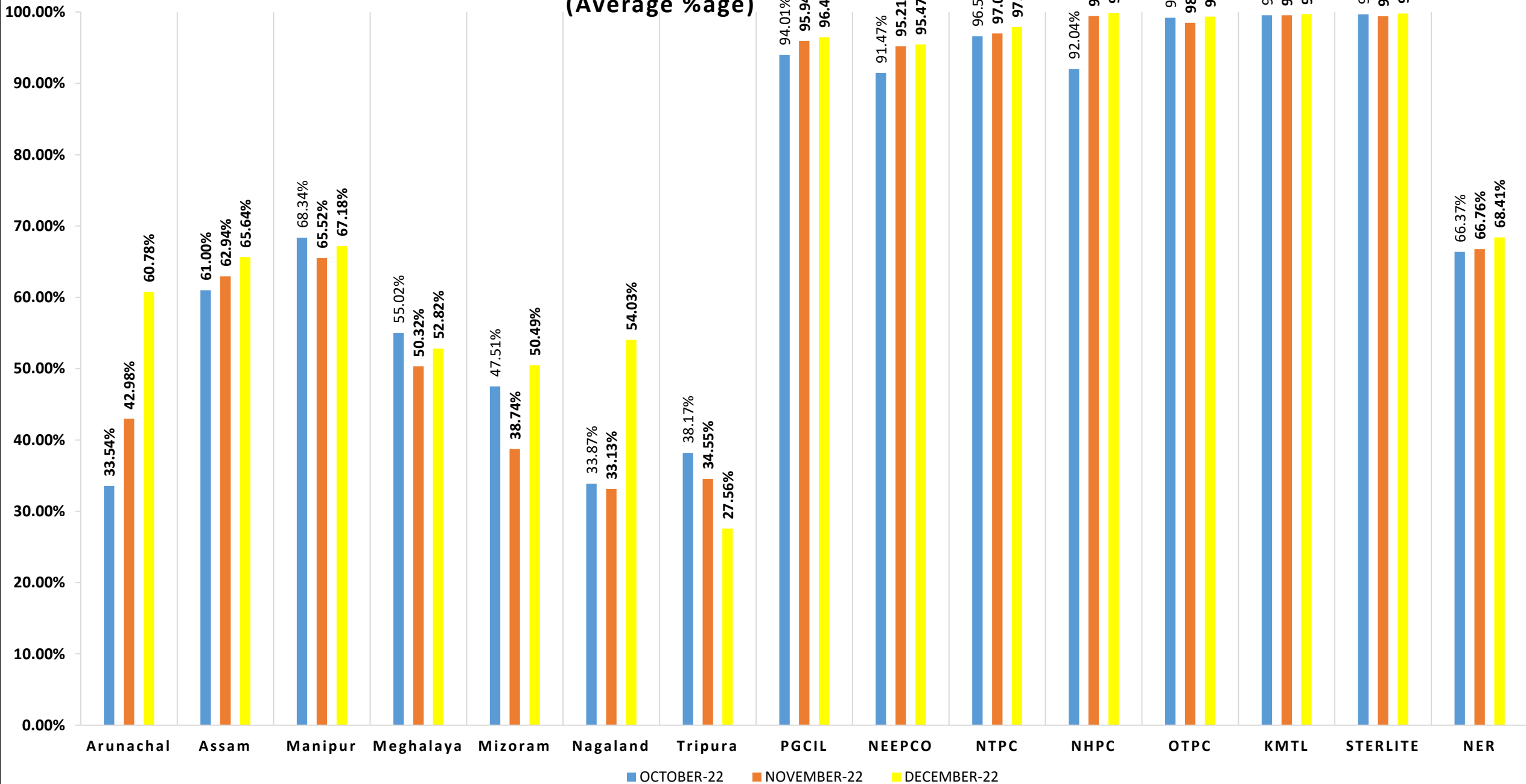
**N** = Total number of observations.

|        | Arunachal Pradesh | Assam | Manipur | Meghalaya | Mizoram | Nagaland | Tripura |
|--------|-------------------|-------|---------|-----------|---------|----------|---------|
| Median | 14                | 4     | 8       | 6         | 17      | 20       | 12      |

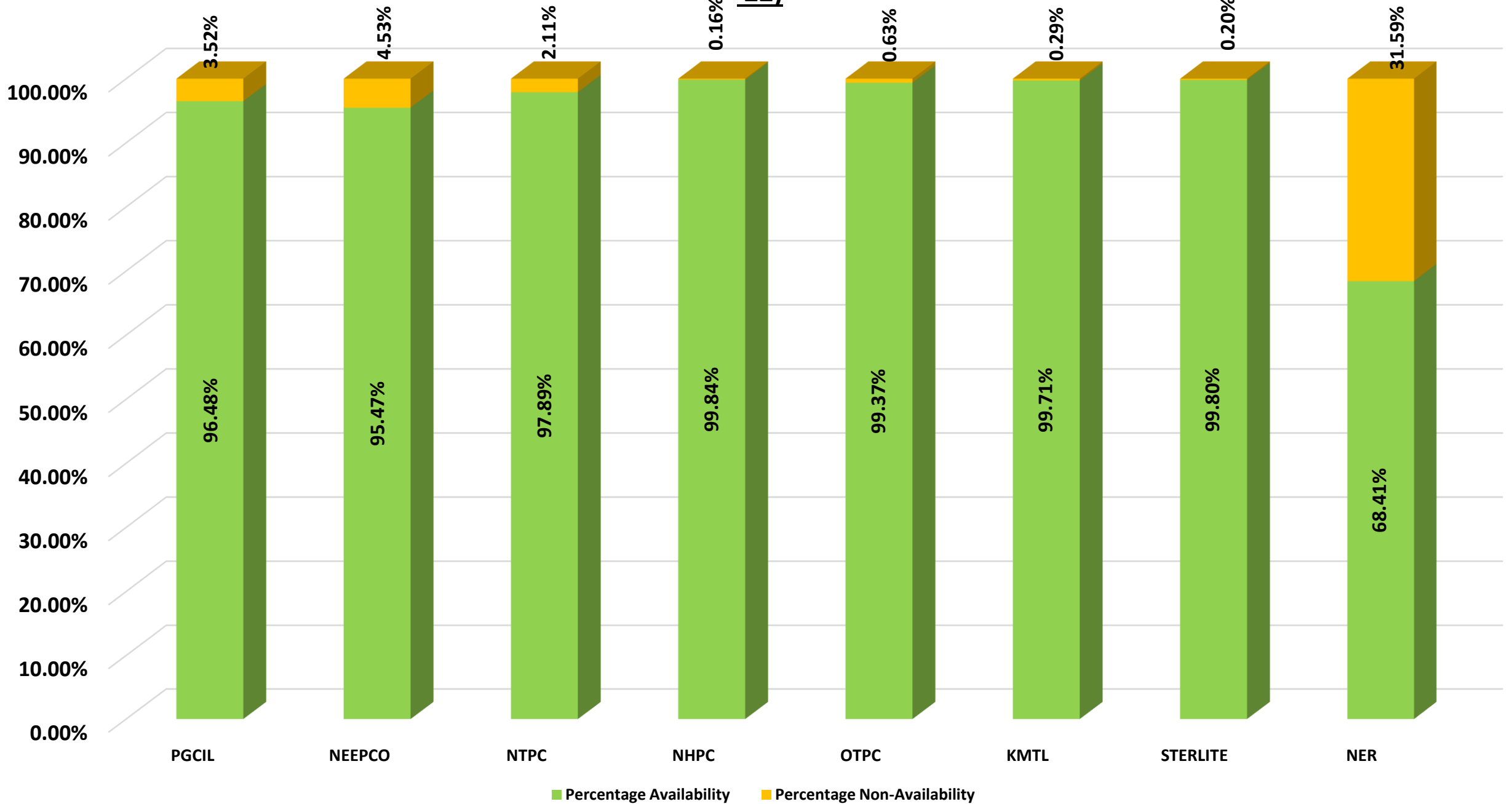


## Telemetry and Data Availability

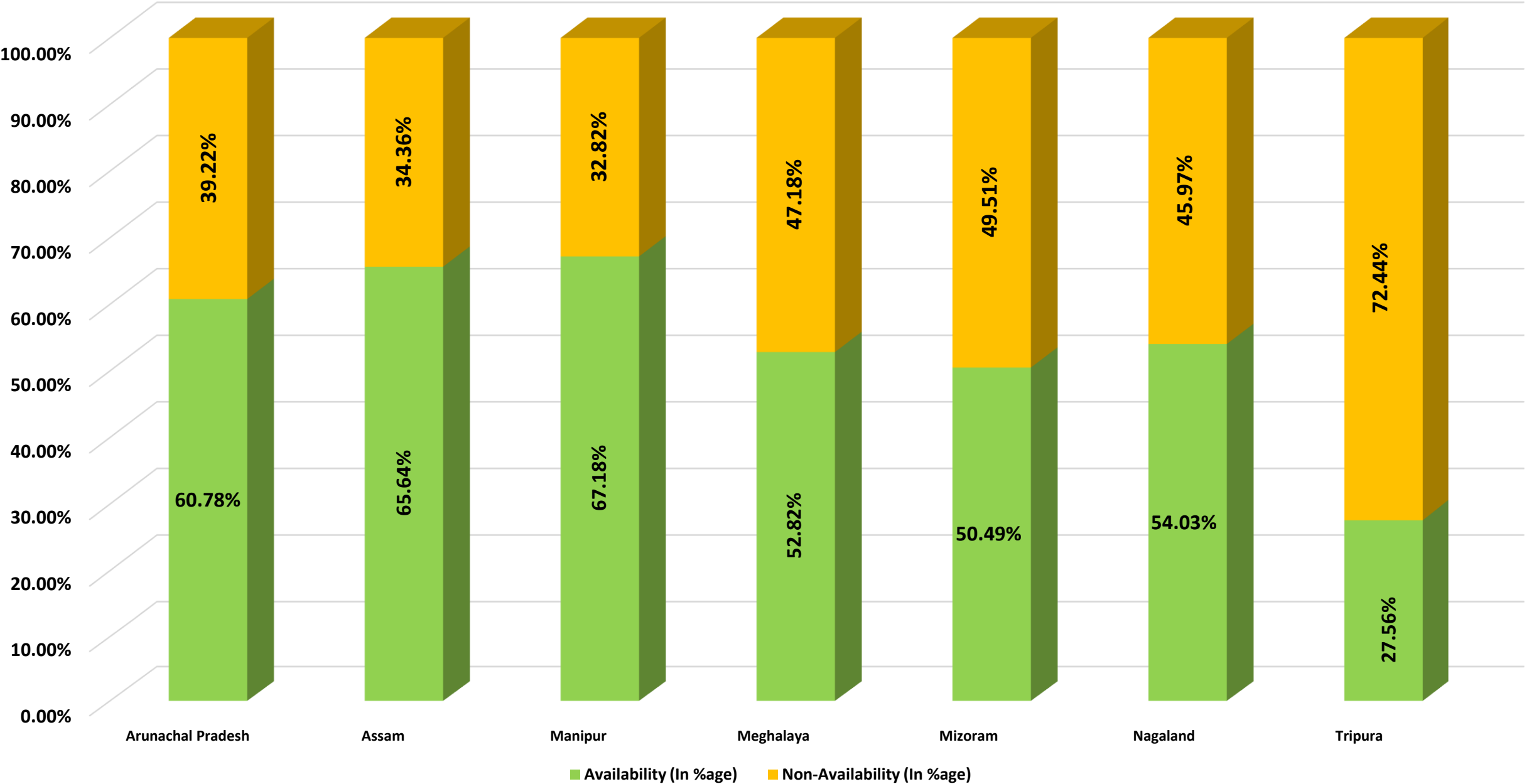
**Comparsion of Telemetry Availability Statistics  
(Average %age)**



**Telemetry Statistics for Central Sector of NER (Average availability of data for the Month of DECEMBER '22)**



Telemetry Statistics for NER States (Average availability of data for the Month of DECEMBER '22)





*Thank You*



## Annexure B.3

[illegible]

|    |  | Feb-23 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Category                                 |   |   |   |
|----|--|--------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|---|---|---|
|    |  | 1      | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |   |   |   |
|    | <b>220kV Dimapur SS</b>                            |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |   |   |   |
| 53 | 220/132kV 100MVA ICT-3 at Dimapur                  |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of ICT  | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 220/132kV ICT II and I at Dimapur.   |
|    | <b>400kV Mariani SS</b>                            |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |   |   |   |
| 54 | 220kV Bus Coupler at Mariani                       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 55 | 220kV Future Bay- 211 at Mariani                   |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 56 | 220kV Future Bay - 212 at Mariani                  |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 57 | 125MVAR Bus Reactor - 1 Tie Bay at Mariani         |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | 125 MVAR Bus Reactor -1 connected to both the 400 kV Buses at 400 kV Mariani SS. SD may be availed subject to no outage of elements.  |
| 58 | 125MVAR Bus Reactor - 1 Main Bay at Mariani        |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | 125 MVAR Bus Reactor -1 connected to both the 400 kV Buses at 400 kV Mariani SS. SD may be availed subject to no outage of elements.  |
|    | <b>400kV Misa SS</b>                               |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |   |   |   |
| 59 | 400 kV ICT#1 & Balipara #2 Tie Bay at Misa         |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 60 | 220 kV Bus Coupler Bay at Misa                     |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 61 | 400 kV ICT #2 Main #2 Bay at Misa                  |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | 315 MVA ICT II directly connected to both bus at 400 kV Misa SS. SD may be availed subject to no outage of elements.  |
| 62 | 400 kV ICT #2 Main #1 Bay at Misa                  |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0800Hrs to 1300Hrs                       | CT Oil Sampling   | Normal Maintenance related shutdown.          | 315 MVA ICT II directly connected to both bus at 400 kV Misa SS. SD may be availed subject to no outage of elements.  |
| 63 | 400kV Balipara #2 Main Bay at Misa                 |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0800Hrs to 1300Hrs                       | CT Oil Sampling   | Normal Maintenance related shutdown.          | Balipara II & 500 MVA ICT I is sharing dia at 400 kV Buses at 400 kV Misa SS. SD may be availed subject to no outage of elements.   |
| 64 | 400kV Balipara #1 Main #1 Bay at Misa              |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0800Hrs to 1300Hrs                       | CT Oil Sampling   | Normal Maintenance related shutdown.          | 50 MVAR Bus Reactor (individual switchable) & Balipara I (Now both elements directly connected to both bus(s)) at 400 kV Misa SS. SD may be availed subject to no outage of elements. |
| 65 | 400kV Balipara #1 Main #2 Bay at Misa              |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0800Hrs to 1300Hrs                       | CT Oil Sampling   | Normal Maintenance related shutdown.          | 50 MVAR Bus Reactor (individual switchable) & Balipara I (Now both elements directly connected to both bus(s)) at 400 kV Misa SS. SD may be availed subject to no outage of elements. |
| 66 | 400kV, 50 MVAr Bus Reactor #1 at Misa              |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0800Hrs to 1300Hrs                       | CT Oil Sampling   | Normal Maintenance related shutdown.          | 50 MVAR Bus Reactor (individual switchable) & Balipara I (Now both elements directly connected to both bus(s)) at 400 kV Misa SS. SD may be availed subject to no outage of elements. |
|    | <b>400kV Silchar SS</b>                            |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |   |   |   |
| 67 | 400/132kV 200MVA ICT-1 at Silchar                  |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0900Hrs to 1500Hrs                       | Modification in OTI/WTI and PRV circuit to reduce maloperation of the equipment | Existing system improvement related shutdown. | SD may be availed subject to availability of 400/132kV ICT-II & III at Silchar.   |
| 68 | 63MVAr Bus Reactor-2 at Silchar                    |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0900Hrs to 1500Hrs                       | Modification in OTI/WTI and PRV circuit to reduce maloperation of the equipment | Existing system improvement related shutdown. | SD may be availed. 2-3 kV voltage change is expected at 400 kV Silchar SS.  |
| 69 | 125MVAR Bus Reactor - 3 at Silchar                 |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0900Hrs to 1500Hrs                       | Modification in OTI/WTI and PRV circuit to reduce maloperation of the equipment | Existing system improvement related shutdown. | SD may be availed. 5-6 kV voltage change is expected at 400 kV Silchar SS.  |
| 70 | 400kV Bus - 2 at Silchar                           |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0900Hrs to 1500Hrs                       | AMP of Bus  | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements. All elements must be shifted to other 400kV Bus before taking the SD.   |
|    |  | Feb-23 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Category                                 |   |   |   |
|    |  | 1      | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |   |   |   |
|    | <b>400kV Bongaigaon SS</b>                         |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |   |   |   |
| 71 | ICT 1 & New Siliguri 1 Tie Bay at Bongaigaon       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 72 | New Siliguri 2 & BR 1 Tie Bay at Bongaigaon        |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 73 | Balipara 2 Main Bay at Bongaigaon                  |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | 50 MVAR Bus Reactor II & Balipara II is sharing dia at 400 kV Bongaigaon SS. SD may be availed subject to outage of elements at Bongaigaon.   |
| 74 | Balipara 3 & Azara Tie bay at Bongaigaon           |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 75 | Byrnihat Main bay at Bongaigaon                    |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | 400 kV Killing & 400 kV BTPS I is sharing dia at 400 kV Bongaigaon SS. SD may be availed subject to no outage of elements at Bongaigaon.  |
| 76 | Bus reactor 3 Main bay at Bongaigaon               |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | 400 kV 2x50 MVAR Bus Reactor-III & IV& 400 kV BTPS II is sharing dia at 400 kV Bongaigaon SS. SD may be availed subject to no outage of elements at Bongaigaon.                       |
| 77 | Bus reactor 4 main bay at Bongaigaon               |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | 400 kV 2x50 MVAR Bus Reactor-III & IV& 400 kV BTPS II is sharing dia at 400 kV Bongaigaon SS. SD may be availed subject to no outage of elements at Bongaigaon.                       |
| 78 | ICT#1 main bay at Bongaigaon                       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | ICT 1 & New Siliguri 1 is sharing dia at 400 kV Bongaigaon SS. SD may be availed subject to no outage of elements at Bongaigaon.  |
| 79 | Balipara 3 & Azara Tie bay at Bongaigaon           |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 80 | 80MVAR Bus Reactor # 3 at Bongaigaon               |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bus Reactor  | Normal Maintenance related shutdown.          | SD may be availed. 2-3 kV voltage change is expected at 400 kV Bongaigaon SS.   |
| 81 | 80MVAR Bus Reactor # 4 at Bongaigaon               |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bus Reactor  | Normal Maintenance related shutdown.          | SD may be availed. 2-3 kV voltage change is expected at 400 kV Bongaigaon SS.   |
|    |  | Feb-23 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Category                                 |   |   |   |
|    |  | 1      | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |   |   |   |
|    | <b>400kV Balipara SS</b>                           |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |   |   |   |
| 82 | 400kV 50MVAR Biswanath Chariali -2 L/R at Balipara |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | CSD 0900Hrs to 1700Hrs (upto April 2023) | Rectification of the Existing Reactor   | Normal Maintenance related shutdown.          | SD may be availed. 2 kV Voltage change is expected at 400kV Balipara SS.  |
| 83 | 400kV BNC-1 Main Bay at Balipara                   |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | Misa I & Biswanath Chariali 1 is sharing dia at 400 kV Balipara SS. SD may be availed subject to no outage of elements.   |
| 84 | 400kV BNC-2 Main Bay at Balipara                   |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | Misa II & Biswanath Chariali II is sharing dia at 400 kV Balipara SS. SD may be availed subject to no outage of elements.   |
| 85 | 400kV Bus Reactor - 3 Main Bay at Balipara         |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0700Hrs to 1500Hrs                       | AMP of Bay Equipments   | Normal Maintenance related shutdown.          | 125 MVA Bus Reactor-3 connected to both 400 kV Bus at 400 kV Balipara SS. SD may be availed subject to no outage of elements.   |
| 86 | 400kV Bongaigaon - 4 Main Bay at Balipara          |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 0900Hrs to 1300Hrs                       | CT Oil Sampling   | Normal Maintenance related shutdown.          | SD may be availed subject to no outage of elements.   |
| 87 | 400kV Bus Reactor - 1 Main Bay at Balipara         |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |   |   |   |

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| Feb-23                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Time  | Reason   | Category                                      |   |
|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|---|---|
| SHUTDOWNS PROPOSED BY MePTCL   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |   |
| 1                              | 400/220/33 kV ICT-3, 315MVA, Killing S/S   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | CSD 09:00 Hrs of 01/02/2023 till the gas leakage issue is resolved by the OEM | SF6 gas leakage  | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 400/220/33 kV ICT-4 at Killing.  |
| 2                              | 132 kV Nongalbhira-Agia  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 09:00 Hrs - 15:00 Hrs   | Jungle Clearance works between Loc 237-239   | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 132 kV Umiam stgl to Umiam stg III DC and 132 kV Asa-Nangalbhira line.   |
| 3                              | 220/132 kV, 160 MVA ICT-2, Killing S/S   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For changing CT Polarity Y Phase LV Side   | Normal Maintenance related shutdown.          | At present, due to low generation at Meghalaya power system and outage of 132 Khadong-Kopili link, 132 kV Hailong-Jiribam line and 132 kV Loktak-Jiribam line, the Meghalaya power system is not N-1 compliant. The SD may only be availd after restoration of Khadong-Kopili link. |
| 4                              | 132 kV Umtru Bus Bar   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 9:30 Hrs -13:00 Hrs   | Checking,tightening or replacement of terminal equipments clamps & accessories,isolator contacts,conductors of Bus side etc. | Normal Maintenance related shutdown.          |   |
| 5                              | 220 kV Bus Coupler, Killing S/S  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Preventive maintenance of CB   | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements..  |
| 6                              | 220 kV Transfer Bus Coupler, Killing S/S   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Preventive Maintenance of Isolators and CB   | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements..  |
| 7                              | 400 kV Silchar-bYRNHAT Line  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Preventive Maintenance of Terminal Equipment and Measurement of IR Value of Line Reactors                                    | Normal Maintenance related shutdown.          | The SD may be availed.  |
| 8                              | 220 kV Killing Misa Line I   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Preventive Maintenance of Terminal Equipments  | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 220 kV Killing Misa Line II line.  |
| 9                              | 220 kV Killing Misa Line II  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Preventive Maintenance of Terminal Equipments  | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 220 kV Killing Misa Line I line.   |
| Feb-23                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Time  | Reason   | Category                                      |   |
| SHUTDOWNS PROPOSED BY TSECL    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |   |
| 1                              | 132 kV Rokhia - Agartala I   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8:00 Hrs - 15:00 Hrs  | routine maintenance  | Normal Maintenance related shutdown.          | SD may be availed subject to availability of 132 kV Agartala - Rokhia II and 132 kV Monarchak-Jiribam line. Flowgate of 132 kV Agartala - Rokhia II and 132 kV Monarchak-Jiribam line.  |
| 2                              | 132 kV Ambassa - P.K Bari (ISTS)   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8:00 Hrs - 15:00 Hrs  | work under NERSHIP project   | Construction Related Shutdown                 | SD may be availed subject to availability of 132 kV Gamaitilla-Ambassa line. Flowgate of 132 kV Agartala - Rokhia II and 132 kV Monarchak-Jiribam line.   |
| 3                              | 132 kV Monarchak - Udaipur   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8:00 Hrs - 15:00 Hrs  | routine maintenance  | Normal Maintenance related shutdown.          | SD may be availed. SPS at Monarchak to be in off condition. Combined Flowgate of 132 kV Agartala - Rokhia II and 132 kV Monarchak-Jiribam line.   |
| 4                              | 132 kV Rokhia - Agartala II  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8:00 Hrs - 15:00 Hrs  | routine maintenance  | Normal Maintenance related shutdown.          | SD may be availed subject to availability of 132 kV Agartala - Rokhia I and 132 kV Monarchak-Jiribam line. Flowgate of 132 kV Agartala - Rokhia I and 132 kV Monarchak-Jiribam line.  |
| 5                              | 132 kV Ambassa - P.K Bari (ISTS)   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8:00 Hrs - 15:00 Hrs  | work under NERSHIP project   | Construction Related Shutdown                 | SD may be availed subject to availability of 132 kV Gamaitilla-Ambassa line. Flowgate of 132 kV Agartala - Rokhia II and 132 kV Monarchak-Jiribam line.   |
| 6                              | 132 kV Monarchak - Rokhia  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8:00 Hrs - 15:00 Hrs  | routine maintenance  | Normal Maintenance related shutdown.          | SD may be availed. SPS at Monarchak to be in off condition. Flowgate of 132 kV Agartala - Rokhia II and 132 kV Monarchak-Jiribam line.  |
| 7                              | 132 kV Palatana - Udaipur  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8:00 Hrs - 15:00 Hrs  | routine maintenance  | Normal Maintenance related shutdown.          | SD may be availed subject to availability of 132 kV Agartala - Rokhia II and 132 kV Monarchak-Jiribam line. SPS at Monarchak to be in off condition. Combined Flowgate of 132 kV Agartala - Rokhia II and 132 kV Monarchak-Jiribam line.  |
| 8                              | 132 kV P.K. Bari - Missiontilla (Dharmnagar)   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8:00 Hrs - 15:00 Hrs  | routine maintenance  | Normal Maintenance related shutdown.          | SD may be availed subject to availability of 132 kV Hailakandi-Dullaveherra-Dharmnagar link. RELIABILITY OF THE SYSTEM IS REDUCED.  |
| Feb-23                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Time  | Reason   | Category                                      |   |
| SHUTDOWNS PROPOSED BY NTPC     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |   |
| 1                              | BgTTP Unit # 3   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | CSD 23:00 hrs of 20.02.2023 to 23:00 hrs of 17.03.2022 (25 Days)              | Overhauling of U#3 BGTPS.  | Normal Maintenance related shutdown.          | The SD may be availed. Consent from all SLDC has to be taken.   |
| 2                              | 400KV Line 1 & Bay 402 at BgTTP<br>400 kV Bus 1 at BgTTP<br>Bus Coupler Bay 406 at BgTTP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Bus 1, Bay 402 Pantograph Isolator 89A, 89L PM/ Alignment & Bay tightness  | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 400 kV Bongaigaon-BGTPP line I and both the ICTs at NTPC.  |
| 3                              | 400KV Line 1 & Bay 402 at BgTTP<br>400 KV Bus 2 at BgTTP<br>Bus Coupler Bay 406 at BgTTP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Bus 2, Bay 402 Pantograph Isolator 89B PM/ Alignment & Bay tightness   | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 400 kV Bongaigaon-BGTPP line I and both the ICTs at NTPC.  |
| 4                              | 400KV Line 2 & Bay 401 at BgTTP<br>400 KV Bus 1 at BgTTP<br>Bus Coupler Bay 406 at BgTTP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Bus 1, Bay 401 Pantograph Isolator 89A, 89L PM/ Alignment & Bay tightness  | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 400 kV Bongaigaon-BGTPP line I and both the ICTs at NTPC.  |
| 5                              | 400KV Line 2 & Bay 401 at BgTTP<br>400 KV Bus 2 at BgTTP<br>Bus Coupler Bay 406 at BgTTP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | Bus 2, Bay 401 Pantograph Isolator 89B PM/ Alignment & Bay tightness   | Normal Maintenance related shutdown.          | The SD may be availed subject to availability of 400 kV Bongaigaon-BGTPP line II and both the ICTs at NTPC.   |
| Feb-23                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Time  | Reason   | Category                                      |   |
| SHUTDOWNS PROPOSED BY NEEPCO   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |   |
| 1                              | Kameng HPS Unit # 1  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | CSD 00:00 Hrs of 01.11.2022 till 23:59 Hrs of 15.06.2023 (7.5 months)         | for completion of E & C works.   | Normal Maintenance related shutdowns.         | SD may be availed   |
| 2                              | Doyang unit#2  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 000hrs of 9.01.2023 to 2359 hrs of 02.02.2023                                 | APM works  | Normal Maintenance related shutdown.          | SD may be availed.  |
| 3                              | 220kV Bus 2 and Bus coupler at AGBPP   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0000hrs of 26.12.2023 to 2359hrs to 12.03.2023                                | Retrofitting, testing and commissioning works of 220kV CTs   | Existing system improvement related shutdown. | SD may be availed.  |
| 4                              | GTG # 6 at AGBPP   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0000hrs of 30.01.2023 to 2359hrs of 5.02.2023                                 | Retrofitting, testing and commissioning works of 220kV CTs   | Existing system improvement related shutdown. | SD may be availed.  |
| 5                              | Doyang Unit-III  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | CSD 00:00 Hrs of 01-02-2023 to 23:59 Hrs of 20-03-2023.                       | Annual Planned Maintenance Activities (APM)  | Normal Maintenance related shutdown.          | The SD may be availed. Consent from all SLDC has to be taken.   |
| 6                              | Pare Unit # 1  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | CSD 00:00 Hrs of 21-02-2023 to 23:59 Hrs of 12-03-2023.                       | Annual Planned Maintenance Activities (APM)  | Normal Maintenance related shutdown.          | The SD may be availed. Consent from all SLDC has to be taken.   |
| 7                              | Pare Unit # 2  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | CSD 00:00 Hrs of 01-02-2023 to 23:59 Hrs of 28-02-2023.                       | Annual Planned Maintenance Activities (APM) and replacement of R-Phase Generator Transformer                                 | Normal Maintenance related shutdown.          | The SD may be availed. Consent from all SLDC has to be taken.   |
| 8                              | Kameng Unit # 3  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | CSD 00:00 Hrs of 01-02-2023 to 23:59 Hrs of 28-02-2023.                       | Annual Planned Maintenance Activities (APM) and replacement of R-Phase Generator Transformer                                 | Normal Maintenance related shutdown.          | The SD may be availed. Consent from all SLDC has to be taken.   |
| Feb-23                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Time  | Reason   | Category                                      |   |
| SHUTDOWNS PROPOSED BY INDIGRID |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |   |
| 1                              | 400 kV BUS-1 PK Bari   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For AMP of 400 kV Bus-1  | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements.   |
| 2                              | 400 kV BUS-2 PK Bari   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For AMP of 400 kV Bus-2  | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements.   |
| 3                              | 132 kV BUS-1 PK Bari   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For AMP of 132 kV Bus-1  | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements.   |
| 4                              | 132 kV BUS-2 PK Bari   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For AMP of 132 kV Bus-2  | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements.   |
| 5                              | 400 kV BUS-1 SM Nagar  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For AMP of 400 kV Bus-1  | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements.   |
| 6                              | 400 kV BUS-2 SM Nagar  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For AMP of 400 kV Bus-2  | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements.   |
| 7                              | 132 kV BUS-1 SM Nagar  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For AMP of 132 kV Bus-1  | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements.   |
| 8                              | 132 kV BUS-2 SM Nagar  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0700Hrs to 1500Hrs  | For AMP of 132 kV Bus-2  | Normal Maintenance related shutdown.          | The SD may be availed subject to no outage of elements.   |



| Requirements for Charging/Energization and Integration of Altered (including modified/replaced/upgraded) Power System Elements |   |                            |                |  |   |   |  |
|--|---|----------------------------|----------------|--|---|---|--|
| Case   | Particulars   | CEA-RIO/State EI Clearance | PTCC clearance | Undertaking (to be submitted by asset owner) | VOIP Communication, SCADA & PMU Data Availability | Protection Coordination (to be ensured by owner)  | Reference  |
| 1  | Charging of already commissioned element like 1-ph or 3-ph Phase ICT /GT/ST Reactor / Transmission line / Bay / STACOM / SVC/ FSC / HVDC after continuous outage for more than 6 months | Yes                        | Not required   | No   | Yes   | Confirmation from Licensee that no changes have been carried out which may affect protection coordination |  |
| 2  | Charging of already commissioned transmission line/bay equipment after alteration (including modification/ replacement/ upgradation) under Planned/Emergency/Forced outage              |                            |                |  |   |   |  |
| a  | Replacement and/or upgradation of substation equipment: CT, PT, CVT, Isolator, CB, LA, Bushing and Wave trap  | Yes                        | Not required   | Yes (as per Annexure-B6)                     | Yes   | Yes ( If changes in protection coordination are required as mentioned in Annexure-B6)                     | CEA clarification vide No. CEI/1/4/2022/270 dated 26.05.2022 |



| Requirements for Charging/Energization and Integration of Altered (including modified/replaced/upgraded) Power System Elements |  |  |                |  |   |   |  |
|--|--|--|----------------|--|---|---|--|
| Case   | Particulars  | CEA-RIO/State EI Clearance   | PTCC clearance | Undertaking (to be submitted by asset owner) | VOIP Communication, SCADA & PMU Data Availability | Protection Coordination (to be ensured by owner)                                      | Reference  |
| <b>b</b>   | Replacement of one phase of a failed ICT/Transformer/Reactor after replacement with spare which is yet to be commissioned (Not applicable on already commissioned and live spares) | To be processed as a fresh case for First Time Charging, PTCC clearance not required<br>Note: The details about already commissioned spares at the substation to be provided by licensee. The connection diagram of hot spares also to be shared.  |                |  |   |   | CERC order dated 22.05.2019 in Petition No. 38/TT/2017 and Office Orders dated 18.01.2018 and 15.03.2018 |
| <b>c</b>   | Replacement of failed 3-ph ICT/GT/ST/ Reactor with new ICT/GT/ST/ Reactor  | To be processed as a fresh case for First Time Charging, PTCC clearance not required   |                |  |   |   |  |
| <b>3</b>   | <b>Charging of transmission line after restoration of damaged/collapsed towers at the same location</b>  | Yes  | Not required   | Yes (as per Annexure-B6)                     | Yes   | Yes ( If changes in protection coordination are required as mentioned in Annexure-B6) | CEA clarification vide No. CEI/1/4/2022/270 dated 26.05.2022   |
| <b>4</b>   | <b>Restoration of transmission line through Emergency Restoration System towers</b>  | <ul style="list-style-type: none"> <li>• ERS plan and schedule to be shared to the concerned CEA-RIO over email with a copy to RLDC/NLDC and telephonic intimation to be conveyed beforehand.</li> <li>• All Electrical Safety measures at the ERS site must be followed strictly.</li> <li>• Time span for the ERS work should be reasonable &amp; limited and have approval from the concerned CEA-RIO.</li> <li>• Subsequent to completion of Diversion / restoration works , Electrical inspection would have to be done under Regulation-43 of CEA (Measures relating to Safety and Electric Supply) 2010 (as amended) for charging the line.</li> </ul> <i>(Approval from CEA-RIO/State EI Clearance during shifting to ERS as well as while bringing back to permanent structure shall be required)</i> |                |  |   |   | CEA clarification vide No. CEI/1/4/2022/270 dated 26.05.2022   |

| Requirements for Charging/Energization and Integration of Altered (including modified/replaced/upgraded) Power System Elements |   |   |  |  |  |   |   |
|--|---|---|--|--|--|---|---|
| Case   | Particulars   | CEA-<br>RIO/State<br>EI<br>Clearance  | PTCC clearance   | Undertaking<br>(to be<br>submitted<br>by asset<br>owner) | VOIP<br>Communication,<br>SCADA & PMU<br>Data Availability | Protection<br>Coordination<br>(to be<br>ensured by<br>owner)                          | Reference   |
| 5  | Restoration after re-conductoring, re-bundling or similar other alterations which can change the nature of power flow in the line (say from AC to DC transmission) and short circuit capacity of terminal substations | To be processed as a fresh case for First Time Charging.<br>Fresh PTCC Clearance or Suitable Advisory on requirement of fresh PTCC Clearance by CEA to be submitted by transmission licensee. |  |  |  |   | CEA clarification vide No. PTCC/Misc/200/391-393 dated 06.05.2022 |
| 6  | Restoration of transmission line after upgradation/increase in voltage level  | To be processed as a fresh case for First Time Charging.<br>Fresh PTCC Clearance or Suitable Advisory on requirement of fresh PTCC Clearance by CEA to be submitted by transmission licensee. |  |  |  |   | CEA clarification vide No. PTCC/Misc/200/391-393 dated 06.05.2022 |
| 7  | Charging of already commissioned transmission line after Alteration (including Diversion/ Modification/ Tower height modification) on account of change in river course, infrastructure projects etc.                 | Yes   | Fresh PTCC Clearance or Suitable Advisory on requirement of fresh PTCC Clearance by CEA to be submitted by transmission licensee.<br><i>(Not required for increase in tower height only)</i> | Yes<br>(as per Annexure-B7)                              | Yes  | Yes ( If changes in protection coordination are required as mentioned in Annexure-B7) | CEA clarification vide No. PTCC/Misc/200/391-393 dated 06.05.2022 |
| 8  | Anti-theft charging of already commissioned /new transmission line  |   |  |  |  |   |   |



| Requirements for Charging/Energization and Integration of Altered (including modified/replaced/upgraded) Power System Elements |   |                                      |                |  |  |   |  |
|--|---|--------------------------------------|----------------|--|--|---|--|
| Case   | Particulars   | CEA-<br>RIO/State<br>EI<br>Clearance | PTCC clearance | Undertaking<br>(to be<br>submitted<br>by asset<br>owner) | VOIP<br>Communication,<br>SCADA & PMU<br>Data Availability | Protection<br>Coordination<br>(to be<br>ensured by<br>owner)                      | Reference  |
| <b>a</b>   | Idle charging (for anti-theft) of a section of new transmission line which is not terminated at both ends | N/A                                  | Yes            | Yes<br>(as per<br><b>Annexure-<br/>B8)</b>               | Yes  | Yes<br>(Relay<br>settings<br>confirmation<br>for safe anti-<br>theft<br>charging) | CEA clarification vide letter to NLDC dated 08.09.2015 |
| <b>b</b>   | Charging a section of already commissioned transmission line which is under breakdown / long outage       |                                      | Not required   |  |  |   |  |