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Agenda for 206th OCCM



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

North Eastern Regional Power Committee

Agenda for the

206th Operation Coordination Sub-Committee Meeting

Time of meeting : 10:30 Hrs.

Date of meeting : 26.09.2023 (Tuesday)

Venue : “Conference Hall, NERPC, Shillong”

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 205th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 205th meeting of Operation Sub-Committee held on 23rd August 2023 at Hotel Royale de’ Casa, Guwahati was circulated vide letter No. NERPC/SE (O)/OCC/2021/1799-1841 dated 14th September 2023.

Following comment(s)/observation(s) were received from the constituents-

| Agenda item | Utility | Originally recorded in the Minutes | Comments/Modification requested by DoP Arunachal pradesh |
|--|-----------------------|--|---|
| B.9 (Furnishing details of upgraded UFR settings along with list of feeders and quantum of load: | DoP Arunachal Pradesh | DoP Arunachal Pradesh informed that report on operation of UFR on low frequency incident on 15.05.2023 will be provided within 2 weeks | “Shall submit the report on physical verification of changes in frequency set up for various stages at sub-stations within 2 weeks” |

The Sub-committee may confirm the minutes of 205thOCCM of NERPC, with above modification(s)/addition.

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|----------------------------------|
| B. FOLLOW UP AGENDA ITEMS |
|----------------------------------|

B.1. Operational Performance and Grid discipline during August, 2023:

NERLDC to present the Operational Performance and Grid Discipline report for the month of August, 2023.

B.2. Outage planning**I. Generation Outage Planning (ongoing and planned outages)**

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

| Plants | Reservoir level in meter (as on 21/08/2023) | MU content | Present DC (In MU) | No of days as per current generation |
|----------|---|------------|-----------------------|---|
| Khandong | 719.25 | 24.67 | 0.600 | 41 |
| Kopili | 604.40 | 60.1 | 1.200 | 50 |
| Doyang | 322.25 | 30 | 1.718 | 17 |
| Loktak | 767.47 | 58 | 1.024 | 57 |

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

II. Outage Planning of Transmission elements

It was agreed in the 99th 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 10th of the month, the shutdown availing agency would reconfirm to NERLDC on 7th 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 1st day of the following calendar month to the 30th/31st day of the same month.

Sub-committee may deliberate

B.3. Estimated Transmission Availability Certificate (TAC) for the month of July, 2023:

Transmission Utilities have submitted the outage data for the month of July, 2023. The attributability of outage of the said elements is being finalized by NERLDC and NERPC. The certificate will be issued shortly.

B.4. Mock Black Start Exercise:

As per regulation 5.8 (b) of IEGC 2010, mock black start (MBS) shall be carried out by Users/CTU/STUs at-least once in 6 months.

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

Status as updated in 205thOCCM

| Plant Name | Last testing date | Due date | Schedule of Testing as per 205 th OCCM |
|--------------|-------------------|--------------------------|---|
| AGBPP | | | after upgradation of DG under R&M* |
| AGTTCCPP | 04.02.2023 | 04.08.2023 | Done on 19.08.2023 |
| RHEP | 28.11.2022 | 28.05.2023 | Completed on 30.05.2023 |
| PareHEP | 15.02.2023 | 15.08.2023 | To be scheduled in Nov, 2023** |
| Kopili HEP | 10.05.2019 | Under prolonged shutdown | Under prolonged shutdown |
| Khandong HEP | 09.12.2021 | Under prolonged shutdown | Under prolonged shutdown |
| DHEP | 21.10.2022 | 21.04.2023 | Done on 12 th May 2023 |
| Kameng HEP | | | *** |
| Loktak HEP | 16.12.2021 | 20.06.2022 | Done on 31 th July 2023 |

*Petition has been filed in CERC for tariff approval of the R&M project. Approval awaited.

****NEEPCO** stated that the reservoir is facing spillage issue, MBS possible in lean hydro season, i.e, November'23

*****GM NEEPCO** stated that for the reactive power issue, NEEPCO is undertaking resolution with the OEM, M/s BHEL, bilaterally. Progress will be intimated to the forum accordingly. Forum suggested NEEPCO to organize a special meeting with OEM in the presence of NERPC, NERLDC and NEEPCO team.

Sub-committee may deliberate

B.5. Status of ADMS:

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

| Name of the utility | SAT Completion | DoCO |
|----------------------------|-----------------------|---|
| DoPar.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 | Enabled & in-operation |
| TSECL | 24-12-2020 | Enabled for two substations while yet to be enabled for other three substations |

As updated in previous OCC meetings:

DGM, TSECL updated that the vendor has provided offer for ADMS installation at Takerjhala and Bishalgarh. The work is scheduled to be completed tentatively by September'23 at the two substations. Regarding Madhupur, he intimated that ADMS installation is not possible due to lack of connectivity. So, an alternate substation is being explored for ADMS installation.

NERLDC stated that a report has to be generated at every SLDC when ADMS tripping condition is satisfied, irrespective of tripping of the feeders.

Member secretary NERPC exhorted all the states to provide event wise as well as monthly ADMS report to NERPC and NERLDC.

Sub-committee may deliberate

B.6. Computation of State wise TTC/ATC:

At present NERLDC is reporting 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.

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 | 190 |
| | Peak | | | 195 | 5 | 190 |
| Assam | Off-Peak | 220kV Misa-Samaguri I or II | 220 kV Balipara-Sonabil | 1730 | 40 | 1690 |
| | Peak | | | 1600 | 40 | 1560 |
| 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 ORII | 132 kV Aizawl-Luangmual S/C | 160 | 5 | 155 |
| | Peak | | | 155 | 5 | 150 |
| Nagaland | Off-Peak | 220/132 kV ,100 MVA Dimapur ICT | 220/132 kV ,30 MVA Mokokchung ICTs | 255 | 5 | 250 |
| | 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 | 309 |

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.

Also, all the states were to provide the respective ATC/TTC report to NERLDC on monthly basis.

Member secretary NERPC exhorted all the states to provide the TTC/ATC reports regularly to NERLDC.

In 204th OCCM, NERLDC highlighted that frequent and sustained violation of TTC/ATC by some States of NER is being observed. Sr. GM NERLDC requested all the States to undertake regular study of TTC/ATC and undertake intra state system strengthening works to address the problem.

SE, SLDC, DoP Ar. Pradesh requested NERLDC to conduct a one-to-one meeting with SLDC Ar. Pradesh to impart training regarding calculation of ATC/TTC of the state.

NERLDC agreed to conduct a special online training sessions for the Engineers of DoP, Ar. Pradesh.

The forum decided that SLDCs must submit the TTC/ATC calculation reports by 10th of every month.

In 205th OCCM, NERLDC updated that all the States, except Manipur are sending regular TTC/ATC reports to NERLDC. Manager, NERLDC reported that training on utilization of PSS/E software for computation of TTC/ATC has been imparted to SLDC, Arunachal Pradesh on 2nd to 4th August 2023. MS, NERPC requested NERLDC to conduct similar training programs for other States also.

Sub-committee may deliberate

B.7. Issues pertaining to Kopili, Khandong and Meghalaya power system.

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

Khandong & Kopili Power Stations have been under forced outage due to which there have been vulnerabilities in the Meghalaya Power system. The following lines are critical for removing the vulnerabilities-

- Restoration of Misa-Kopili-Khandong link
- Reconductoring of 132kV Lumshnong-Panchgram line
- Commissioning of 220kV Mawngap-Killing line

B. Restoration works at Khandong and Kopili substations

Efforts are being taken to restore the following lines on permanent basis-

- 132kV Kopili-Khandong D/C
- 220/132kV ICTs at Kopili SS
- 132kV Khandong Bus A
- 132kV Khandong-Khleihriat Ckt 1 bay at Khandong

It is to be noted that 132kV Khandong-KhliehriatCkt1has been charged through Kopili 2 bay at Khandong till permanent restoration of 132kV Kopili-Khandong D/C line is done.

C. Recommissioning of 4X50 MW Kopili Stage-I plant

NEEPCO has recommissioned Kopili stg I unit 4 on 20th August'23. NEEPCo may update on recommissioning status of other units.

In previous OCC meetings following points were discussed

i)Regarding restoration of 132kV Khandong-Khliehriatckt 1 bay at khandong, GM, NEEPCO updated that the vendor has been selected and LoA to be placed within 15-20 days. Further he stated that work is scheduled to be completed within 8-10 months after placement of the LoA.

ii) Regarding restoration status of 132kV Kopili-Khandong D/C, DGM, NERTS updated that GIS works are underway at Kopili and SAS based panels for the lines are under procurement. He stated that the line will tentatively be charged by September 2023. He further proposed that after restoration of the Kopili-Khandong D/C, the Khliehriat-Khandongckt 1, which would have been charged through Kopili 2 bay at Khandong till then, may be connected directly to Kopili-Khandong ckt 2 through a bypass arrangement at Khandong S/Y using Bus A, thus making a direct Kopili- Kliehriat link. The arrangement will work till the bay restoration work at Khandong is completed by NEEPCO. NERTS opined that this arrangement will not only avoid keeping the Khliehriat-Khandongckt 1 idle, but also provide necessary redundancy to the Meghalaya Grid.

iii)Regarding restoration of Khandong Bus A, GM, NEEPCO apprised that the restoration will take a longer time frame (more than one year) as tender has not yet been finalized. He also highlighted that till the restoration of Bus A, the whole Khandong substation will be working with single bus only, thus redundancy at khandong station will remain compromised.

iv)NERLDC and SLDC Meghalaya reiterated that Misa-Kopili-Khandong link must necessarily be revived before the onset of next winter season in Meghalaya to cater safely to the peak demand of Meghalaya.

Status as updated in the 205thOCC Meeting-

| Sl. No | Element | Update provided by respective utilities in 205 th OCCM |
|--------|---|--|
| 1 | Reconductoring of 132kV Lumshnong line (MePTCL) | Work In Progress. Reconductoring at 35 locations pending. Completion target is 15 th October'23 |
| 2 | Commissioning of 220kV Killing-Mawngap-New Shillong lineline (NERPSIP) | Rubber plantation issue resolved. Foundation and erection completed. However, stringing in three locations still pending due to local administrative issue. Mawngap-New Shillong ready for charging. Tentative completion by October'23 |
| 3 | 132kV Kopili-Khandong D/C (NERTS) | GIS work (132kV bays) at Kopili underway, SAS panels reached at site. Erection, Cabling under progress. During testing of SF6 gas quality in GIS compartments, SF6 gas dew point is found beyond permissible limits. Recycling work is under progress. All work to be completed by Oct'23. |
| 4 | 220kV Misa-Kopili line (NEEPCO) | Charged. |
| 5 | 220/132kV ICTs at Kopili SS (NERTS) | WIP. Target Oct'23 |
| 6 | 132kV Khandong Bus A (NEEPCO) | Vendor selected. LoA to be placed within 15-20 days. Work scheduled to be completed within 8-10 months after placement of the LoA. |
| 7 | 132kV Khleihriat Ckt 1 bay and Kopili 1 bay at Khandong (NEEPCO) | |
| 8. | 4X50 MW Kopili Stage-I plant (NEEPCO) | expected recommissioning date - unit 4- Commissioned on 20 th August'23 unit 3- by the end of August, 2023 |

| | | |
|--|--|--------------------------|
| | | unit 2- by end of Oct'23 |
| | | unit 1- by end of Jan'24 |

Sub-committee may deliberate

B.8. Implementation/Review of Islanding Schemes of NER:

A. Implementation of Guwahati Islanding Scheme

As per Clause 10 of the Central Electricity Authority (Grid Standards), Regulations, 2010: “Islanding Schemes- (1) The Regional Power Committees shall prepare Islanding schemes for separation of systems with a view to save healthy system from total collapse in case of grid disturbance. (2) The Entities shall ensure proper implementation of the Islanding Schemes”

In the 200th OCCM, Director, NERPC stated that in the 24thNETeST meeting, Assam has informed that there are no OPGW links on existing lines covered under the proposed Guwahati Islanding Scheme. It was suggested in the meeting that AEGCL may apply for PSDF funding under Reliable communication scheme state sector for installing OPGW and include these lines which are covered in the proposed Islanding scheme.

In 203rd OCCM, AEGCL updated that consultation with different vendors is going on for revising cost estimates.

In 205th OCCM, MS, NERPC stated that a special meeting was held on 31st July'23, in which Assam was requested to identify the load feeders and send the data, as per the format provided by NERLDC. AEGCL updated that the required data will be sent shortly and further added that BoQ will be finalized in 3-4 days. It was decided that NERLDC/Assam will prepare revised DPR within 30 days

B. Review of Tripura Islanding Scheme-

ISLAND AT 48.80 Hz: Island comprising of generating units of AGTPP (Gas), generating units at Baramura (Gas), Rokhia (Gas) &Gumati (Hydro) and loads of Tripura system & Dullavcherra area (Assam).

[Total Generation: 300MW and load: 163MW (off-peak)-240MW (peak)]

In 204th OCCM, DGM, SLDC, TSECL, stated that the scheme is under review as peak load has increased to more than 300MW and off-peak load has increased to more than 200MW. He further stated that some additional UFRs are to be installed and the process is underway.

In 205th OCCM, DGM TSECL stated that the scheme is under review and consultation with NERPC and NERLDC is required for finalization of the same. NERLDC requested TSECL to provide data related to load centers, participating lines, lines for tripping etc. positively by 10th September'23.

MS, NERPC requested TSECL to finalize the DPR, in consultation with NERLDC, within one month.

C. Upper Assam Island scheme

ISLAND AT 48.70 Hz: Island comprising of generating units of AGBPP (Gas), NTPS (Gas) & LTPS (Gas) and loads of Upper Assam system & Deomali area (Ar. Pradesh)
[Total Generation: 380-420MW and load: 280MW (off peak)-357MW (peak)]

In 204th and 205th OCCM, NERLDC stated that the scheme needs revision. After brief discussion, MS NERPC stated that a special meeting will be held in the last week of September'23 to discuss and review the Tripura and Upper Assam Islanding schemes.

Sub-committee may deliberate

B.9. Furnishing details of upgraded UFR settings along with list of feeders and quantum of load:

Status as updated in 205thOCCM

| Name of the state/utility | Submission of revised UFR list | Installation of UFRs and Implementation of revised settings | Status of mapping |
|----------------------------------|---------------------------------------|--|--|
| Ar. Pradesh | Submitted | Stg-1 (49.4Hz) implementation in new feeders. stg I feeders are being changed to industry feeders. NERPC requested DoP Arunachal Pradesh to furnish a report on its operation on low | DoP Arunachal Pradesh stated that coordination with GE is underway. Mapping of stg I Feeders will be done after changing the feeders to Industry |

| | | | |
|-----------|---------------|---|--|
| | | frequency incident on 15.05.2023. | loads. |
| Assam | Submitted | Installation Completed. in light of the charging of 132kV Roing-Chapakhwa D/C, UFRs will be removed from 132kV Rupai and 132kV Margharita feeders at Tinsukia substations. UFRs will be installed at LV side of 132/33kV feeders at Rupai and Margharita substations | Done. AEGCL updated that mapping of 33kV Mirza feeder at Azara has been done |
| Manipur | Not submitted | No extra shedding required only Stage upward revision to be done. ADMS and UFR feeder segregation to be done at Mongshangei substation for Stage-I by next OCCM | To be done. Mapping is pending from substations end, which is being hampered due to law & Order situation in the state. |
| Meghalaya | Submitted | Meghalaya submitted the revised list of UFR feeders with 25MW load shedding in each stage. Stg I completed and the whole process of installation of UFR on new feeders and mapping will be completed by next OCCM. | Done. |
| Mizoram | submitted | Mizoram stated that 132kV substations and feeders have been identified for shifting the UFRs from 33 kV S/Ss. The proposal has been submitted to higher management for approval | Shifting of feeders to 132kV SSs for ensuring visibility under consideration |
| 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 and operational, time delay removed. | Mapping of Dhalabil, Kumarghat, Udaipur and Ambassa is hampered due to RTU integration issues, for which resolution work is underway. All work to be completed by August'23 end. Mapping of no feeder has yet been done by Tripura |
|---------|-----------|--|---|

In previous OCC meetings, SLDCs were requested to calculate the expected vs actual UFR load shedding data during the low frequency event and same comparison data should be provided to NERPC and NERLDC after each event.

In 205th OCCM, NERPC highlighted the obligations and responsibilities of Distribution licensees, STUs, Bulk consumers, SLDCs, NERLDC and NERPC as per the IEGC 2023. The regulations were discussed in detail by the forum and the forum requested all the stakeholders to comply with the regulation diligently.

Roles and responsibilities of stakeholders are summarized as below-

| Sl. No. | Stakeholder | Roles and responsibility |
|---------|-------------|---|
| 1. | NERPC | The load shedding for each stage of UFR operation |
| | | To carry out monthly review of UFR and publish monthly report on website |
| | | To carry out random inspection of UFR |
| 2. | SLDCs | To ensure that telemetered data is present at its control Centre |
| | | To share data on combined loading of these feeders with NERLDC in real time |
| | | To submit a monthly exception report to NERPC |
| | | To take corrective measures within reasonable time, in case of large |

| | | |
|----|--------|--|
| | | gap between combined loading of the UFR feeders and desires load shedding |
| | | To report the actual operation of UFR and df/dt schemes and load relief to the concerned RLDCs and RPCs and publish the monthly report on its website. |
| 3. | NERLDC | To inform SLDCs and RPC on a quarterly basis , durations during the quarter when the combined load in MW of these feeders was below the level considered while designing the UFR scheme by the RPC |

Sub-committee may deliberate

B.10. 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 205thOCC meeting:

| Region | Station | No. of Generators | Suggested Schedule | | Duration (days) |
|--------|---------------|--------------------|--------------------|----------|--|
| | | | Test Start | Test End | |
| NER | Doyang-NEEPCO | 2 (by M/s Siemens) | Oct'22 | Oct'22 | 4(water level (315.7 - 321) to be sufficient enough to run the units at full capacity). Tentative in 1 st week of August'23 |

Regarding PFR testing at Doyang HEP, Sr. GM NERLDC intimated that current reservoir level is around 322.2 mts which is sufficient to conduct the PFR test in the three units. GM NEEPCO stated that although the water level is suitable for conducting the PFR test, but to maintain the water level of Doyang river in the downstream Golaghat area within safe limits, conducting the PFR test should be deferred for now. He suggested that PFR testing may be conducted after 15th September'23 and assured the forum that NEEPCO will take suitable measures to maintain water level sufficient to conduct the test. The forum agreed.

Sub-committee may deliberate

B.11. Regular Furnishing of Patrolling Report for all Important lines

There is a requirement of regular and proper maintenance of transmission lines. It is requested to carry out the patrolling activities as per ClNo.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 203rd OCCM, Member Secretary exhorted all state utilities to undertake regular patrolling of the lines as per existing guidelines and furnish the report to NERPC/NERLDC on monthly basis.

In 204th OCCM, the forum decided that all SLDCs must submit the reports by 10th of every month.

In 205th OCCM NERLDC stated that all the states are submitting the patrolling report, however patrolling are being done for few locations only by the state utilities. MS, NERPC exhorted the state utilities to undertake patrolling in a comprehensive manner covering all the critical spans.

The forum requested NERLDC to prepare state wise list of tripping caused due to vegetation faults. The report will be discussed in the OCC forum.

CGM, NERTS suggested that signature analysis of the lines should also be conducted by states apart from patrolling, in order to maintain the healthiness of the lines. The forum agreed to the suggestion and exhorted the state utilities to undertake signature analysis and submit corresponding reports to the NERPC/NERLDC.

Sub-committee may deliberate

B.12. Monthly Review of LGBR

| PARTICULARS (Peak Demand in MW as per LGBR vs Actual) | June-23 (LGBR) | June-23 (Actual) | July-23 (LGBR) | July-23 (Actual) | Aug-23 (LGBR) | Aug-23 (Actual) |
|---|-------------------|---------------------|-------------------|---------------------|------------------|--------------------|
| Arunachal Pradesh | 164.32 | 155.000 | 154.44 | 151.3 | 168.35 | 155.0 |
| Assam | 2204.20 | 2307.000 | 2297.93 | 2385.83 | 2423.52 | 2353.0 |
| Manipur | 209.04 | 185.000 | 214.24 | 201.9 | 215.28 | 209.0 |
| Meghalaya | 352.26 | 333.000 | 349.44 | 329.08 | 359.47 | 322.0 |
| Mizoram | 121.54 | 125.000 | 124.95 | 121.7 | 124.95 | 126.0 |
| Nagaland | 157.50 | 167.000 | 163.77 | 166.5 | 170.10 | 174.0 |
| Tripura (exc. Bangladesh) | 318.24 | 362.000 | 331.76 | 342.28 | 333.72 | 330.0 |
| NER DEMAND (exc. Bangladesh) | 3292.76 | 3560 | 3487.58 | 3524.42 | 3672.00 | 3501 |

| PARTICULARS (Energy Requirement in MU as per LGBR vs Actual) | June-23 (LGBR) | June-23 (Actual) | July-23 (LGBR) | July-23 (Actual) | Aug-23 (LGBR) | Aug-23 (Actual) |
|--|-------------------|---------------------|-------------------|---------------------|------------------|--------------------|
| Arunachal Pradesh | 82.40 | 82.68 | 86.30 | 151 | 86.89 | 89.74 |
| Assam | 1021.72 | 1140.970 | 1348.92 | 2390 | 1413.47 | 1347.75 |
| Manipur | 79.56 | 66.38 | 85.37 | 202 | 86.38 | 78.21 |
| Meghalaya | 169.95 | 177.68 | 193.98 | 330 | 195.23 | 175.16 |
| Mizoram | 53.87 | 44.4 | 56.96 | 122 | 56.65 | 46.7 |
| Nagaland | 83.43 | 81.52 | 89.34 | 167 | 90.48 | 91.85 |
| Tripura (excl. Bangladesh) | 139.36 | 150.13 | 175.00 | 343 | 176.49 | 167.98 |
| NER DEMAND (exc. Bangladesh) | 1630.29 | 1744.375 | 2035.87 | 3516 | 2105.59 | 1998.25 |

Sub-committee may deliberate**B.13. RPCs are requested to consider following agenda in the OCC/RPC meeting(s) to popularize and explain the PUSHP portal to the constituents/stakeholders.**

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

The Portal would be a single window system providing services to diverse domains of all the entities involved and to reallocate and transfer the power in minimum time from one surplus entity to deficit entity. In recent past years, difficulties are observed in meeting the demand and some states do resort to power cuts, especially during April, May, September and October months the crisis is observed while other states

have surplus power capacity. The States which have surplus power continue to bear the fixed charge burden without using it which leads to high cost of power to the consumers. Regional diversity makes some states surplus. Like Peak in Northern region is during summer whereas Peak in Southern region is during winter. Similarly, there is diversity in the time at which the peak occurs in the States. Such regional diversity in the load demand was not able to address even though the generation capacity is available in the country. The reasons behind were many like one-to-one Power Purchase Agreements, some procedural constraints, non-availability of easy match making arrangements etc.

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

Key Benefits of the scheme: -

- i. Flexibilization of Power Purchase Agreement
- ii. Optimal Utilization of Power due to regional diversity and their increased availability.
- iii. Availability of power to DISCOMs improves and reduction in power cuts.
- iv. Meet the power demand of the country especially during the crisis situation in the month of April, May, September and October.
- v. Reduction in fixed charge burden on the states having surplus power.
- vi. Allocation /Transfer of Power at regulated tariff.
- vii. Reallocation of power in minimum time with automated process.
- viii. The scheme envisages a paperless working.
- ix. None of the existing arrangements shall be disturbed, rather an additional avenue has been provided.

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

In 200th OCCM, Member Secretary, NERPC briefly explained the benefit of the Scheme and requested all concerned constituents to participate and fully utilize the portal. He also informed that further training or workshop can be organized (if necessary) in the coming days.

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

In 204th OCCM, MS NERPC exhorted the state Discoms to participate in the OCC meetings so that their awareness regarding the portal may be enhanced. He further requested all the concerned constituents to participate and make the best use of the portal.

In 205th OCCM, the forum noted the active participation of Mizoram, Assam on the PUSHHP portal. MS, NERPC requested to other states to utilize the Push Portal for managing their power portfolio.

Sub-committee may deliberate

B.14. Annual Maintenance Contract for ADMS:

The “Go Live” dates in ADMS implementation for NER states is as below:

| Sl.No. | Name of SLDC | System "Go Live" |
|--------|------------------------|------------------|
| 1 | Meghalaya SLDC | 04.09.2020 |
| 2 | Manipur SLDC | 24.11.2020 |
| 3 | Nagaland SLDC | 01.12.2020 |
| 4 | Arunachal Pradesh SLDC | 01.02.2021 |
| 5 | Mizoram SLDC | 01.03.2021 |
| 6 | Assam SLDC | 10.03.2021 |
| 7 | Tripura SLDC | 16.03.2021 |

It may be mentioned that ADMS scheme is having a three (3) year Warranty Period following which, there is a provision for an Annual Maintenance Contract after the Warranty Period. Given the regulatory mandate for compliance of ADMS and the benefits of its continued operation, it becomes imperative for a collective Annual Maintenance Contract which among other things would bring about a reduction in the financial involvement vis-à-vis higher rates with separate / individual AMCs. Since the timelines mentioned are spread over a few months only, the SLDCs may deliberate on a collective Annual Maintenance Contract which can be approved (with same terms and conditions immediately on expiry of individual Warranty Periods) given the collective reduced charges and lack of expertise in maintaining the system.

In 200th OCCM, Director, NERPC informed that considering the regulatory mandate for compliance of ADMS and the benefits of its continued operation, all the State Utilities have agreed to have a combined AMC for ADMS during the 24thNETeST meeting for cost effectiveness vis-à-vis individual AMC. Member Secretary NERPC stated that AMC of the ADMS, after the warranty period, may not be covered under PSDF funding and States have to pay for the same. The State Utilities requested NERPC to take up with original vendor M/s Orbit Techsol India Private Limited regarding the matter.

In 201st OCCM, all the States requested NERPC to initiate process for procurement of collective AMC of ADMS for all the States. Director, NERPC suggested that a tendering committee may be formed that will look into tendering and related work of the AMC.

In 204th OCCM, Director, NERPC stated that an online meeting will be organized soon comprising of all the nodal officers to proceed on the matter of Procurement of AMC of ADMS.

In 205th OCCM, NERPC informed that two meetings of the subgroup/committee for procurement of AMC for ADMS have been conducted and the said committee unanimously decided to consider awarding AMC to Original vendor subject to reduced and competitive/reasonable rate. However, States will take approval of the

revised offer [by M/S Orbit (Original vendor)] from their respective management and intimate NERPC so that collective AMC for all the State can be facilitated.

Sub-committee may deliberate

B.15. Stringing of new 132kV SC line on DC tower from Tamenglong to Karong along with associated bays

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

Considering the above facts and circumstances, the committee may kindly approve the stringing of new 132kV line from Tamenglong to Karong. The forum may kindly deliberate the request of MSPCL and approve the proposal for execution with possible funding from PSDF or other funding agencies, in the interest of NER Grid security and smooth supply management of Manipur. The matter was put up for discussion in 24th TCC/RPC meeting, in which it was referred to NERPC sub-committee.

In 204th OCCM, the forum requested NERLDC to conduct system studies on the requirement of the 132kV Karong-Tamenglong line as requested by Manipur. Manipur will furnish to NERLDC all related data including future load growth projection etc.

In 205th OCCM, NERPC intimated the forum that 132kV Karong-Tamenglong line is already included in the CEA 2030 Augmentation scheme. NERLDC asked Manipur to

provide generation and load data for last five years at the earliest based on which preliminary system study will be conducted.

Sub-committee may deliberate

B.16. Stringing of new 132kVSC line on DC tower from Karong to Hundung along with associated bays.

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

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

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

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

The matter was put up for discussion in 24th TCC/RPC meeting, in which it was referred to NERPC sub-committee.

In 204th OCCM, the forum requested NERLDC to conduct system studies on the requirement of the 132kV Karong-Hundung line as requested by Manipur and put up in next OCCM. Manipur will furnish to NERLDC all related data including future load growth projection etc.

In 205th OCCM, NERLDC asked Manipur to provide generation and load data for last five years at the earliest based on which preliminary system study will be conducted.

Sub-committee may deliberate

B.17. Non-compliance of N-1 criteria in 220 kV Balipara-Sonabil D/C

During peak hours, the combined loading of 220 kV Balipara-Sonabil D/C exceeds 250 MW. The maximum flow recorded in 220kV Balipara-Sonabil D/C after commissioning of 2nd circuit of 220 kV Balipara-Sonabil line is 268 MW (combined). Study indicates that outage of one circuit of 220 kV Balipara-Sonabil D/C can result in a 90% load shift to the other circuit of 220 kV Balipara-Sonabil D/C. Low generation availability in Assam power system may further increase the loading of 220 kV Balipara-Sonabil D/C.

In 205th OCCM, NERLDC apprised that an SPS entailing load curtailment of around 130MW in Sonabil area is required to maintain N-1 reliability of Balipara-Sonabil D/C line. Assam agreed to the proposal and stated that the matter will be discussed with higher authorities. Member Secretary, NERPC requested NERLDC and AEGCL to discuss bilaterally and devise the SPS logic and present in the next OCC meeting.

Regarding reconductoring of 220kV Balipara- Sonabil DC the forum referred the matter to CMETS

Sub-committee may deliberate

B.18. Upgradation of end bay equipments of HTLS re-conducted lines in NER Grid

Following lines (table below) have been reconducted with HTLS conductor in the NER Grid with enhanced ampacity as per HTLS Conductor.

However, the re-conductoring feature of the lines could not be utilized fully in present condition as it is being limited by the CT Ratio of the end equipments. Hence, the concerned utilities are requested to upgrade the end bay equipments to facilitate the maximum utilization of HTLS re-conductoring.

Deliberation of the 205th OCCM

| LINE | Owner | Upgraded Ampacity of line | Present CT Ratio | | As discussed in the 205 th OCCM |
|----------------------------------|-----------|---------------------------|------------------|--------|--|
| | | | End I | End II | |
| 220 kV Alipurduar-Salakati 1 & 2 | POWERGRID | 1100 A | 800/1 | 800/1 | NERTS stated that the outage of the line has been deferred by NLDC to lean hydro season. |
| 132 kV Jiribam-Loktak line | POWERGRID | 800 A | 800/1 | 366/1 | NHPC not present in the meeting |
| 220 kV BTPS-Salakati 1 & 2 | POWERGRID | 1100 A | 800/1 | 800/1 | NERTS stated that outage was applied for the month of Sep'23, however it was not approved as AEGCL did not agree. AEGCL stated that the consent of APDCL is required and the proposal will be reviewed after 15 th Sep'23, depending on the load condition. |
| 220 kV Sarusajai-Mirza 1 & 2 | AEGCL | 1200 A | 800/1 | 800/1 | Upgraded equipments (1200A) available at Mirza end. Work is underway at Sarusajai end. All works to be completed by Nov'23 |
| 132 kV Rokhia-Agartala I & II | TSECL | 800 A | 600/1 | 600/1 | TSECL informed that procurement of required equipments is pending, however work will tentatively be completed by Oct'23 |
| 132 kV Umiam | MePGCL | 875 A | 600/1 | 600/1 | MePGCL informed that |

| | | | | | |
|-----------------------------|-----------------|-----|-------|-------|---|
| III-Umiam I D/C | | | | | 15% tolerance limit of the CTs over 600 A has been set so that each line can carry 150 MW at 0.95 power factor in the event of tripping of one-line. Regarding CT of 800/1 rating MePGCL stated that same have been requested under PSDF. |
| 132kV Aizawl-Luangmual line | P&ED Mizoram | 800 | 600/1 | 600/1 | Aizawl end-PGCIL updated that equipment are already upgraded. However, connectors, droppers etc. are to be replaced under re-conductoring project. At Luangmual end, Mizoram updated that end bay equipments will be replaced soon. |

Sub-committee may deliberate

B.19. Requirement of SPS for 132 KV Khliehriat (PG)-Khliehriat D/C line

With expected availability of at least two machines of Kopili and one machine of Khandong during peak hours of the coming winter months and considering the anticipated increase in demand, it is expected that power flow along both the circuits would be between 90-110 MW under different conditions. Load flow studies had been carried out by SLDC and shared with NERLDC. The matter had also been discussed with DGM, NERTS since 132 KV Khliehriat (PG)-Khliehriat line 1 is under POWERGRID. The scheme envisages shedding of 20-25 MW load at 132 KV Mustem substation in the event of tripping of any circuit of 132 KV Khliehriat (PG)-Khliehriat D/C line. Additional SPS triggered load shedding would be required in the event of

further delay in commissioning of 220 KV Killing-Mawphlang D/C line even till that time.

The forum is, therefore, requested to approve the scheme following which necessary coordination works will be carried out between POWERGRID and MePTCL.

In 205th OCCM the forum agreed in-principle approval to the SPS scheme. Further the forum requested NERLDC and MePTCL to develop the tripping logic and present in the next sub-committee meeting for final approval

Sub-committee may deliberate

B.20. Ensuring Synchronization facility at substations in Arunachal Pradesh

In the past couple of months, it was observed that in the event of tripping of lines emanating from Along Bus of Arunachal Pradesh, buses at Pasighat and Daporijo were required to be blacked out for charging the aforementioned lines. This has been an issue since the charging of 132 kV Roing – Chapakhowa D/C.

On inquiry, it was noted that Synchronizing facility is unavailable at a number of substations in Arunachal Pradesh. Therefore, DoP, Arunachal Pradesh is requested to look into the same at the earliest and arrange for the same.

In 205th OCCM, DoP Ar. Pradesh intimated that synch check facility will be arranged in the substations by October'23. NERLDC stated that for effective synchronization, synchronization trolley is essential at the substations. After detailed deliberation, the forum requested DoP Ar. Pradesh to arrange synchronization trolleys at the intra state sub-stations.

DoP Arunachal Pradesh, later intimated NERPC vide email dated 18.09.2023 that they request the item to be re-deliberated. The Department proposes to implement "Check Sync" closing of line breakers through the Numerical Relays already available at the substations.

A write-up is attached herewith (**Annexure B.20**) on how the proposed scheme shall be implemented at these substations which is requested to be annexed in the Agenda for deliberation of the forum.

Sub-committee may deliberate

B.21. Inclusion of elements in Assam and Arunachal corridor in Important Grid Elements list

After the integration of ISTS's between 132 kV Roing and 132 kV Chapakhowa via 132 kV Roing –Chapakhowa D/C, Arunachal Pradesh's 132 kV Ziro, Daporijo, Basar, Along, Pasighat, Roing, Tezu and Namsai along with Assam's Chapakhowa, Rupai, Margherita and Tinsukia are now connected in a ring leading to better reliability of both Systems (Arunachal Pradesh & Assam).

However, presently elements mentioned below are not included in Important Grid Elements list.

- 132 kV Ziro – Daporijo
- 132 kV Daporijo – Basar – Along
- 132 kV Along – Pasighat
- 132 kV Tinsukia – Rupai
- 132 kV Tinsukia – Margherita
- 132 kV Rupai – Margherita
- 132 kV Rupai – Chapakhowa
- 132 kV Roing - Chapakhowa

Outage of aforementioned elements may affect system security of both control areas as mentioned earlier. Hence, it is felt necessary that the aforementioned elements are to be considered as Important Grid elements and switching of such elements are to be carried out in coordination with NERLDC.

In 205th OCCM, AEGCL stated that the lines, viz: 132 kV Tinsukia – Rupai, 132 kV Tinsukia – Margherita, 132 kV Rupai – Margherita are critical for providing power to the Ledo and Rupai areas of Assam and switching of such elements should continue to be under ambit of SLDC only.

Sr.GM, NERLDC reiterated that outage of aforementioned elements may affect system security of control areas of Assam as well as Arunachal Pradesh. Hence, these should be categorized as Important Grid element, in line with the IEGC 2010, and the switching of the same should be done in coordination with NERLDC.

After detailed discussion, Member Secretary NERPC requested NERLDC and SLDC Assam to conduct a separate meeting to discuss the matter and outcome of the meeting to be shared in next OCC meeting.

Sub-committee may deliberate

B.22. Proposal of Islanding Scheme for Itanagar area of Arunachal Pradesh Power System

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

DoP Arunachal Pradesh is requested to suggest the possibility of designing and implementing Islanding/SPS schemes in Itanagar area of Arunachal Pradesh.

In 205th OCCM NERLDC intimated that an islanding scheme may be devised for Itanagar area with generation at Pare HEP. After detailed deliberation, MS NERPC stated that NERLDC shall devise a scheme along with Arunachal Pradesh and a separate meeting will be organized by NERPC to discuss and prepare the scheme for Itanagar Islanding.

Sub-committee may deliberate

B.23. Establishment of 220 kV Grid Substation instead of 132kVGrid Substation at Marigaon - AEGCL

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

The proposed Grid Substation at Marigaon approved vide 1st NERSCT Meeting dated 29.11.2018 is now required to be constructed at 220kV level instead of 132kv level. The +, and on the other hand, the requisite land has already been made available for the substation, and 220kV connectivity is easily accessible (220kV Sarusajai-Langpi

line passes through the immediate vicinity of the site for the substation). Also, the load flow study has shown favorable results for establishment of 220kV Marigaon Substation instead of 132kV level. The matter was placed before 24th TCC & 24th NERPC Meetings held on 27th & 28th June, 2023, for approval. However, in the meeting it was referred to subcommittee of NERPC.

In 205th OCCM, it was decided that a joint load flow study will be conducted by NERLDC and SLDC Assam, and a special meeting will be held among SLDC Assam, NERLDC and NERPC to examine the study results.

Sub-committee may deliberate

B.24. Draft Outage Planning Procedure as per IEGC 2023:

As per regulation 32(4) of IEGC 2023, RPCs are requested to formulate a common outage planning procedure. As per present practice, a common outage planning procedure is in place and being diligently adhered to by all the constituents. To streamline the outage planning procedure among all the five regions, a draft outage planning procedure has been prepared by NLDC in consultation with all the RLDCs where it is proposed to align the provisions and timelines envisaged in the IEGC 2023.

In 205th OCCM MS, NERPC requested all the stakeholders to study the draft procedure and provide comments at the earliest.

Sub-committee may deliberate

C. NEW AGENDA ITEMS

Agenda from NEEPCO

C.1 The compliance of ancillary service regulation vis a vis availability of Gas and generating units

The compliance of ancillary service regulation vis a vis availability of Gas and generating units is acting as deterrent factor in operating the plant at base load as gas is diverted when schedule is made less by triggering Ancillary Service Regulation. Can this Ancillary Service Regulation be reviewed for AGBPS at RPC forum so that at least such diversion of gas from the agreed drawl quantity with gas supplier is not affected and generation can be increased or maintained at constant level throughout the day at higher generation level either through beneficiary or through RTM/DAM etc. It is worth mentioning here that by running the Gas Turbines below base load, life is adversely affected. If agreed in the forum, relaxation can be obtained by NEEPCO from CERC for exemption Ancillary service regulation of AGBPS and AgGBPS.

In view of the above, the matter is proposed for inclusion in the 206th OCC meeting for discussion. (**Annexures C.1.1, C.1.2, C.1.3**)

Sub-committee may deliberate

C.2 Generation loss of Pare HPS due to congestion

During continuous shutdown of 132 kV Pare-Nirjuli and 132 kV Pare-RHEP-1 line for reconductoring works undertaken by M/s STERLITE Power, there was substantial loss of generation and revenue at Pare end, due to the frequent tripping of 132kV Pare-Itanagar Line1 & 2 (DOP Lines) which tripped on 04(Four) occasions i.e. on 25/07/2023, 26/07/2023, 27/07/2023 and 30/07/2023. Due to continuous shutdown of 132 kV Pare-Nirjuli and 132 kV Pare-RHEP-1 line during this period, there was power evacuation constraint during tripping of the DOP lines and as such backing down of our generation was resorted to as per the instruction of NERLDC. During the line tripping period, both of our generating units either tripped or our generation was completely backed down by NERLDC due to power evacuation

problem and safety of the workers engaged in line restoration works. Due to this there was both generation and revenue loss which is indicated in the table below:

| Date | DC (MU) A | Schedule (MU) | Loss of Gen (A-B) =C (MU) | Revenue Los D= (C*10 ⁶ *INR5.00) |
|-----------------------|--------------|------------------|------------------------------|--|
| 25.07.2023 | 2.0258 | 1.2203 | 0.8082 | 40,41,000 |
| 26.07.2023 | 2.2203 | 1.9607 | 0.8702 | 43,51,250 |
| 27.07.2023 | 2.6740 | 2.2360 | 0.4380 | 21,90,000 |
| 30.07.2023 | 2.8280 | 2.5470 | 0.2809 | 14,04,550 |
| Total loss of revenue | | | | INR 1,19,86,800 |

The above matter is placed in the 206th OCC meeting and NEEPCO shall be compensated through Congestion Charges Regulation of CERC if any.

Sub-committee may deliberate

C.3 Tripping of units of Kameng HEP due to tripping of 400kV Kameng-Balipara line

With reference to 400kV Kameng - Balipara D/C transmission line, we would like to inform you that within a span of 2 days our kameng units tripped twice due to tripping of 400kV Kameng - Balipara line which is not at all desired. On 18-09-2023, Unit-3 tripped due to phase-to-phase fault in 400kV line and on 20-09-2023 at around 02:55 hrs all units got tripped due to tripping of 400kV Kameng - Balipara line causing blackout at this end. In view of frequent tripping of 400kV Kameng-Balipara D/C line, it is to mention that this line has become very vulnerable and requires frequent patrolling / inspection and clearances of jungles etc. and also to carry out other additional works in order to avoid fault due to lightning. Considering importance of this line, it is requested to take necessary action for proper maintenance of 400kV Kameng - Balipara D/C line for smooth flow of power without causing any tripping at this end.

Sub-committee may deliberate

Agenda referred from TCC/RPC meeting

C.4 Implementation of Automatic Meter Reading (AMR) in north eastern region

- i. Government of India (GoI) has set a Renewable Energy (RE) target of 500GW by 2030. The need for implementing 5-minute meters along with AMR system for regional energy accounting and settlement at the Inter State level has been recommended in FOR sub-group report ,2018 considering the variability of load due to large RE penetration in the coming years. Subsequently, need of AMR has also been discussed in RPC forums considering the high-volume & variable meter data and processing of the same in a very efficient manner.
- ii. A PAN India pilot project on 5-minute metering was implemented as per the directive from Honourable CERC. A report on the pilot project covering implementation aspects, challenges and suggested way forward has been submitted by POSOCO for perusal of the Hon'ble Commission and further directions.
- iii. Moreover, in view of the new DSM regulation 2014 and its amendments, which are more stringent, there is a need expressed by States to get streaming online instantaneous MW data at a user configurable rate (minimum 1 min) at SLDCs via AMR system.
- iv. In view of the above a meeting was held on 19.11.2020 chaired by Chairperson, CEA with the participation from PGCIL, CTU, POSOCO, RPCs etc. on the subject of Telemetry of real time Active Power (MW) data to SLDCs. After deliberation in the meeting, it was decided to constitute a committee for finalizing the Technical Specification (TS) of the Interface Energy Meters along with Automatic Meter Reading and Meter Data Processing system for ISTS metering points.
- v. NPC Division, CEA vide letter dated 02.12.2020 had constituted a joint committee comprising the members from each RPC, CEA, CTU/PGCIL & POSOCO "to prepare the Technical Specifications (TS) of the 5/15 Minute Interface Energy Meters (IEMs) with Automatic Meter Reading (AMR) and Meter Data Processing (MDP) for interstate transmission system at PAN India basis".

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

vii. In reference to the above and also as per the IEGC 2023 for implementation of AMR project for all the five regions; the proposal from CTUIL for implementation of same in North Eastern Region is provide below for deliberation.

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

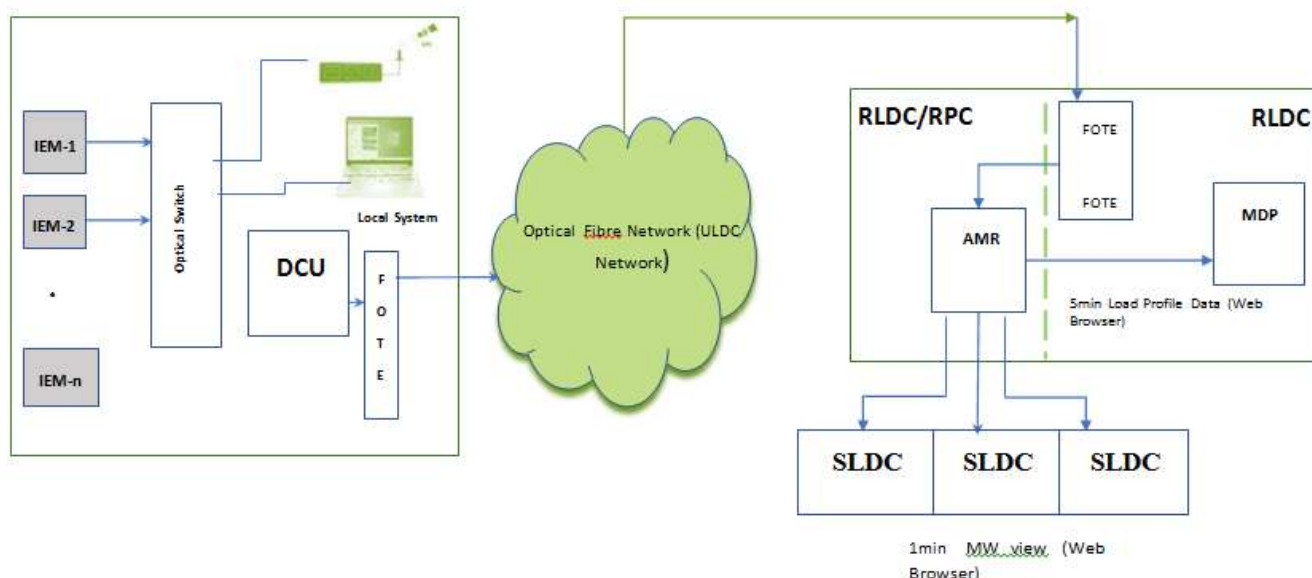
Installation of new Interface Energy meters, AMR system under the scheme “5 min Interface Energy Meter along with AMR system”

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

| | | |
|----|---|---|
| | Architecture of AMR connectivity of ISTS Meters | |
| 4. | Objective/ Justification | <p>For Indian Power system, commercial settlements of energy generation and consumption are being computed through Availability Based Tariff (ABT) and Deviation Settlement Mechanism (DSM) which are in vogue for energy accounting. Availability Based Tariff was implemented in India in 2002/2003 considering the settlement period as 15-min.</p> <p>Government of India (GoI) has set a Renewable Energy (RE) target of 500GW by 2030. The need for implementing a 5-minute scheduling, accounting and settlement at the Inter State level has been recommended by FOR Sub-Group report, 2018 considering the variability of load due to large RE penetration in the coming years. A PAN India pilot project on 5-minute metering was implemented as per the directive from Honorable CERC. A report on the pilot project covering Implementation aspects, challenges and suggested way forward has been submitted by POSOCO for perusal of the Hon'ble Commission and further directions. This issue was discussed in OCC/TCC/RPC meetings at regional level and it was discussed to replace the entire fleet of existing SEMs (15-min Block) with Interface Energy Meters (5-min Block) and implementation of Automated Meter Reading (AMR) and Meter Data Processing (MDP) system for efficient and faster accounting.</p> <p>Moreover, in view of the new DSM regulation and its amendments, which are more stringent, there is a need expressed by States to get streaming online instantaneous MW data at a user configurable rate (minimum 1 min) at SLDCs via AMR system. This instantaneous MW data is only for the purpose of taking actions/decisions in real time for grid monitoring & discipline.</p> |

| | | |
|----|--------------------------|---|
| 5. | Estimated Cost | Rs. 75 Crore (approx.) |
| 6. | Implementation timeframe | Approx.30 months from gazette Notification. |
| 7. | Implementation Mode | Through POWERGRID-RTM |

Substation



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

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

In 24th TCC/RPC meeting the forum opined that the item is to be further discussed in Sub-Committee meeting(s) for detailed study and clarification and was therefore referred to the Sub-Committee(s) of NERPC.

Sub-committee may deliberate

Agenda from NERLDC

C.5 Declaration of High and Low Demand Season in compliance with CERC (Terms and Conditions of tariff) Regulations, 2019

As per the Tariff Regulations 2019-24, NERLDC has been mandated to declare the high demand season (i.e, three months in a year) and low demand season (remaining nine months in a year) for Financial Year 2024-25 at least 6 months in advance i.e. by 30th September 2023. NERLDC has already sent a mail regarding the High and Low Demand season declaration to all the constituents on 19th Sep'23. All the NER Stakeholders are requested to give their comments/observations, if any within a period of 7 days, i.e. ,26th Sep'23.

Sub-committee may deliberate

C.6 Early Restoration of Permanent structure of 132 kV Pare-Itanagar D/C to 132 kV Ranganadi-Itanagar and Pare-Ranganadi II lines

132 kV Ranganadi-Itanagar and Pare-Ranganadi II lines were re-configured to 132 kV Pare-Itanagar D/C to prevent the collapse of endangered Tower no. 04 of 132 kV Ranganadi-Itanagar line till permanent restoration work is completed, so that redundancy is maintained for evacuation of Pare HPS as well as supply to Itanagar area.

As per the minutes of Special Meeting on the endangerment of Tower Loc. # 04 of 132 kV Rangandi -Itanagar (Chimpu) D/C Transmission Line dated 21st Mar'23, it was mentioned that the tentative duration required for permanent restoration of Tower at Location No. 04 at Ranganadi(PLHPS) would require about three months and should have been restored by July 2023 but it has not yet been restored.

DoP, Arunachal Pradesh, to take the work of permanent restoration of the endangered tower on priority basis to maintain the reliability and security of the grid.

Sub-committee may deliberate

C.7 Frequent tripping of Kopili Unit III & IV

As you are aware that NEEPCO had recently re-commissioned and synchronized Kopili Unit on 3rd Sep'23 and 20th Aug'23 respectively. However, Kopili Unit 3 has

tripped 7 times and Kopili Unit 4 had tripped 12 times till 20th Sep'23 from re-commissioning due to machine related issues. Such frequent outages of generating units of high capacity of 100 MW largely impacts the beneficiaries and the reliability of the grid.

NEEPCO is requested to resolve the issue at the earliest and ensure the availability of the generators

Sub-committee may deliberate

C.8 Upgradation of 220 kV Balipara-Sonabil D/C

The combined loading of 220 kV Balipara-Sonabil D/C exceeds 250 MW during peak hours. The maximum flow recorded in 220kV Balipara-Sonabil D/C after commissioning of 2nd circuit of 220 kV Balipara-Sonabil line is 268 MW (combined). Study indicates that outage of one circuit of 220 kV Balipara-Sonabil D/C can result in a 90% load shift to the other circuit of 220 kV Balipara-Sonabil D/C. Low generation availability in Assam power system may further increase the loading of 220 kV Balipara-Sonabil D/C. It is therefore proposed for the implementation of SPS scheme for tripping of one ICT of 400/220 kV 2x315 MVA ICTs at Balipara. As per NERLDC study, load curtailment of around 130 MW in Sonabil area is required to maintain N-1 reliability of Balipara- Sonabil D/C line. AEGCL is requested to discuss bilaterally with NERLDC and devise the SPS scheme till the HTLS re-conductoring of the same is carried out.

Sub-committee may deliberate

C.9 Frequent outage of 132 kV Dimapur(PG)-Dimapur (NL) lines

As you are aware, Dimapur area of Nagaland Power system is connected with rest of the NER Grid through 132 kV Dimapur(PG)-Dimapur (NL). At 18:30 hrs of 15.09.23 and 17:38 hrs of 16.09.23, 132 kV Dimapur(PG)-132 kV Dimapur (NL) D/C lines tripped leading to blackout of Dimapur area of Nagaland Power System with a load loss of 110 MW and 96 MW respectively. Similarly, Grid-Disturbance of category GD 1 had occurred (Load loss: 85 MW) in Dimapur (NL) S/S due to tripping of 132 kV Dimapur(PG) - Dimapur(NL) D/C lines on overcurrent at 16:35 Hrs on 02.08.2023 which is a matter of serious concern.

As per the minutes of 205th OCCM, DoP Nagaland stated that over current setting for Dimapur-Dimapur line is kept at 360 Ampere as the line is very old and the conductor is damaged at many places but agreed to increase the settings to 70 percent. The forum requested PGCIL to provide old conductors, spared from reconductoring of other lines, to DoP Nagaland to replace the damaged spans of the line.

DoP Nagaland and PGCIL is requested to share the latest update regarding replacement of the damaged conductors of the line along with backup setting revision.

Sub-committee may deliberate

C.10 Synchronization Issue at Pare HEP

There was a synchronization issue during the process of synchronizing of Pare Unit 1 at 09:30 Hrs on 13.09.2023. It is worth noting that the grid voltage at Pare HEP was recorded at 126 kV at the time of this incident. NERLDC vide mail dated 13th Sep'23 to Pare HEP asked for grid data to carry out proper analysis of the event. As per NERLDC analysis, to address the persistent issue caused by low grid voltage, it is requested to adjust the GT tap setting from its Nominal tap position (3) to position 4. This adjustment will result in a GT HV side voltage of 128.70 kV, enabling the unit to synchronize seamlessly with a flexible grid voltage range of 123.7 to 133.7 kV.

Similar event had also occurred on 5th Sep'23 at 18:30 hrs with grid voltage at Pare HEP being 125 kV.

Pare HEP, NEEPCO is requested to carry out the above-mentioned changes for seamless synchronization of the unit in the future.

Sub-committee may deliberate

C.11 Major ICT constraints in Assam Power System

1) N-1 criterion not fulfilled in 160 MVA 220/132 kV ICT-I & 160 MVA 220/132 kV ICT-II at BTPS:

Tripping of one of these ICTs results in reduction in reliability in BTPS(AS) Area of Assam Power System as the combined loading of the ICTs remain more than 152 MW for considerable period of time, thus not satisfying the N-1 contingency criterion.

Grid Disturbance of Category GD 1 occurred with a load loss of 275 MW on 5th Sep'23 at 18:28 hrs due to tripping of BTPS ICT I & II leading to blackout of Dhaligaon, Barpeta, Kokrajhar, Gosaigaon, Bilasipara, Gauripur and part load of Bornagar areas of Assam. 132kV Nalbari-Barpeta & 132kV Gossaigaon-Gauripur were under outage due to system requirement.

2) N-1 criterion not fulfilled in 100 MVA 220/132 kV ICT-I & 100 MVA 220/132 kV ICT-II at Rangia:

Tripping of one of these ICTs results in reduction in reliability in Rangia (AS) Area of Assam Power System as the combined loading of the ICTs remain more than 95 MW for considerable period of time, thus not satisfying the N-1 contingency criteria.

Hence, upgradation/addition of the capacity of 220/132 kV ICTs at these locations is required to maintain the N-1 contingency criteria at all times.

Sub-committee may deliberate

C.12 Closed loop operation of 132 kV Kamalpur-Ambasa line.

It has been observed that 132 kV Kamalpur-Ambasa line is kept in open condition on a regular basis. Opening of the 132 kV Kamalpur-Ambasa line reduces the reliability of 132 kV Kamalpur and Ambasa area of Tripura system. Study suggest that the availability of 132 kV Kamalpur-Ambasa line reduces the loading of 132 kV SM Nagar (ISTS) -SM Nagar line on tripping of 132 kV PK bari(ISTS)-PK Bari line.

Thus, SLDC Tripura is requested to operate the 132 kV Kamalpur-Ambasa line in closed loop operation condition.

Sub-committee may deliberate

C.13 Switching of important grid elements without availing NERLDC code

a) Switching of 100 MVA 220/132 kV ICT-2 at Tinsukia without taking necessary code:

It is observed that Assam had taken emergency shutdown of 220/132 kV ICT-2 at Tinsukia at 06:19 Hrs of 19-09-2023 for hotspot rectification at LV isolator clamp(Y-phase) and returned/charged at 07:48 Hrs of 19-09-2023 without taking necessary

code from NERLDC. It is to be noted that 220/132kV ICTs are included in “**List of Important Grid Elements in NER**”

b) Switching of 160 MVA 220/132 kV ICT-1 at BTPS without taking necessary code:

It is observed that Assam had taken out 220/132 kV ICT-1 at BTPS from the grid at 06:26 Hrs of 20-09-2023 without taking necessary real time code from NERLDC. It is to be noted that 220/132 kV ICT 1 at BTPS is already included in “List of Important Grid Elements in NER”

As per IEGC 2010 clause 5.2.C quote

“No important element of the National/Regional grid shall be deliberately opened or removed from service at any time, except when specifically instructed by RLDC or with specific and prior clearance of RLDC. The list of such important grid elements on which the above stipulations apply shall be prepared by the RLDC in consultation with the concerned Users, CTU and STUs, and be available at the websites of NLDC/RLDC/SLDCs”

As per NER Operating Procedure clause 11.2

“The regional entities, users, STU, CTU, licensee shall obtain ‘operating code’ from NERLDC before carrying out any switching operation on any of the important Elements of the NER power system.”

Therefore, Assam is requested to take necessary code while switching of any elements that are included in “List of Important Grid Elements in NER”.

Sub-committee may deliberate

C.14 Operation of Circuit Breaker at Kohima for downstream fault at Karong

It is observed that 132kV Karong – Kohima tripped from Kohima for downstream fault at Karong.

The said element tripped at following instances:

| Sl No. | Element | Date of tripping | Time of tripping |
|--------|-----------------------|------------------|------------------|
| 1 | 132 kV Kohima- Karong | 17-09-2023 | 23:05 |
| 2 | 132 kV Kohima- Karong | 11-09-2023 | 12:48 |

It is to be noted that the downstream fault at 132kV Karong S/S should be isolated at Karong only, which did not happen that is a matter of concern for reliability in Kohima area of Nagaland.

Manipur may kindly look the protection setting at ICTs at Karong and rectify if any discrepancies to avoid any unwanted tripping at Remote Substation

Sub-committee may deliberate

C.15 Continuous TTC Violation observed for Assam and Tripura

| S. No. | Name of the State | Daily Average Percentage of time violation observed for August Month | N-1 Contingency element | Limiting Element |
|---------------|--------------------------|---|---|---|
| 1 | Assam | 22.7 | Balipara-Sonabil I or II | Balipara-Sonabil II or I |
| 2 | Tripura | 2.9 | 132 kV SM Nagar(ISTS) - Budhjungnagar S/C | 132 kV SM Nagar(ISTS) - SM Nagar(TSECL) S/C |

As can be seen from the table shown above, daily average TTC violation was observed for Assam and Tripura for 23% and 3% of the time in the month of August'23.

In case of Assam, the limiting element is 220 kV Balipara-Sonabil one circuit, other circuit being taken as N-1. Hence, the probable solution would be the re-conductoring of 220 kV Balipara-Sonabil D/C

In case of Tripura, the limiting element is 132 kV SM Nagar (ISTS)-SM Nagar(TSECL) S/C, 132 kV SM Nagar(ISTS) - Budhjungnagar S/C being the N-1 contingency. Hence, the probable solution would be the re-conductoring of 132 kV SM Nagar (ISTS)-SM Nagar(TSECL) S/C.

Sub-committee may deliberate

C.16 Blackout in Kameng area due to tripping of 400 kV Balipara-Kameng D/C

At around 02:55 Hrs on 20.09.2023, 400 kV Balipara - Kameng D/C lines tripped on lightning fault resulting in blackout of 400 kV Kameng S/S due to loss of evacuation path. Due to the disturbance, generation loss of around 450 MW was observed at Kameng Power Station. As Kameng Power Station is connected with rest of the grid only through 400 kV Balipara-Kameng D/C, the outage of the same severely impacts the reliability and security of Kameng Power Station. Hence, exploring alternate connectivity of Kameng Power Station from Biswanath Chariali or Ranganadi Substations to main the redundancy of Kameng Power Station is utmost important. As per NERLDC system study, any one of the proposals below can be implemented

- A) 400 kV Kameng – Ranganadi D/C (250 km approx.)
- B) 400 kV Kameng – Biswanath Chariali D/C (130 km approx.)

The above proposal would improve the reliability of evacuation of Kameng HEP.

NEEPCO is requested to explore the proposals suggested by NERLDC on priority basis.

Sub-committee may deliberate

C.17 Nomination of officials from SLDCs for inclusion in IMD's Weather Information WhatsApp Group

During NERLDC official's recent visit to IMD Guwahati on 08.09.2023, it was known that they have created dedicated WhatsApp Group for each state of North Eastern Region aimed at sharing vital weather-related warnings, district-level weather forecasts, earthquake details and other pertinent information. Each SLDC is kindly requested to nominate two officials and provide their WhatsApp numbers for seamless information exchange with IMD and their state, with a focus on enhancing regional weather monitoring and preparedness.

C.18 Request to expedite MoU signing Process with IMD Guwahati for installation of Automatic Weather Stations (AWS) in the NER substations

The points of agreement collected from the states were presented by NERLDC in the 197th OCC forum which was deliberated by all the members. IMD Guwahati also

agreed to the points presented in the forum. The forum had requested all the states to sign the MoU, with modifications if any, by December'2022.

Accordingly, APGCL has already signed MoU with IMD Guwahati and AWS/ARGs were installed in some of their selected locations. AEGCL and MSPCL have also submitted their approved MoU from their respective Head Office to IMD Guwahati for signing it.

Other SLDCs are also requested to expedite their MoU signing process with IMD Guwahati for early installation of Automatic Weather Stations (AWS) in their substations.

Sub-committee may deliberate

D. M E T E R I N G I T E M S**D.1. Issues regarding SEM Data Processing:****a. Non-receipt of SEM data from 132 kV Rengpang (Man) Substation:**

Weekly SEM data of 132 kV Rengpang (Man) Substation is important for accounting of Manipur drawal. However, SEM data from the said substation is not being received. Issue with CMRI has been reported by the concerned substation.

In 204th OCCM, Manipur and PGCIL intimated that some issue related to cable is there and the same will be provided to the site as soon as possible.

In 205th OCCM, PGCIL intimated that the cable has been provided to Jiribam (MA) substation. However, SEM data from the said substation is still not being received.

Status may be reviewed.

b. Non-receipt of SEM data from 132 kV Lungmual (Mizoram) Substation:

Weekly SEM data of 132 kV Lungmual (Mizoram) Substation is important for accounting of Mizoram drawl. However, SEM data from the said substation is not being received.

c. Non-receipt of SEM data from 132 kV Gohpur (Assam) Substation:

Weekly SEM data of 132 kV Gohpur-Itanagar (AP) and 132 kV Gohpur-BNC (PG) feeders is important for accounting of Assam drawl. However, SEM data from the said feeders is not being received.

D.2. 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 | TIME DRIFT |
|------|--------|---------------------------------------|-----------|------------|
| 1 | AP | 132 kV TENGA END OF BALIPARA | NP-9696-A | 5:00 mins |
| 2 | ASSAM | 132 kV PAVOI END OF BNC-II FDR | NP-8801-A | 4:07 mins |
| 3 | ASSAM | 132 kV KAHHELIPARA END OF UMTRU-1 FDR | NE-0088-A | 4:27 mins |
| 4 | ASSAM | 220 kV MARIANI(AS) END OF | NP-6888- | 4:00 mins |

| | | | | |
|---|----------|---|---------------|-----------|
| | | KATHALGURI FDR | A | |
| 5 | NAGALAND | 132 kV KOHIMA END OF DIMAPUR(PG) FDR | NP-9699- A | 5:56 mins |

D.3. Procurement of SEMs for future requirements:

In 202nd OCCM, forum approved the proposal of procurement of 60 SEMs to fulfil the requirement for the upcoming transmission elements.

In 203rd OCCM, CTU informed the forum that procurement of 60 SEMs is in process. The procurement shall be as POWERGRID's standard practice. Required arrangement for meter data downloading shall be taken care during installation of IEMs. As suggested by forum, CTU agreed to make necessary arrangement at site for downloading the meter data with existing DCD during installation period.

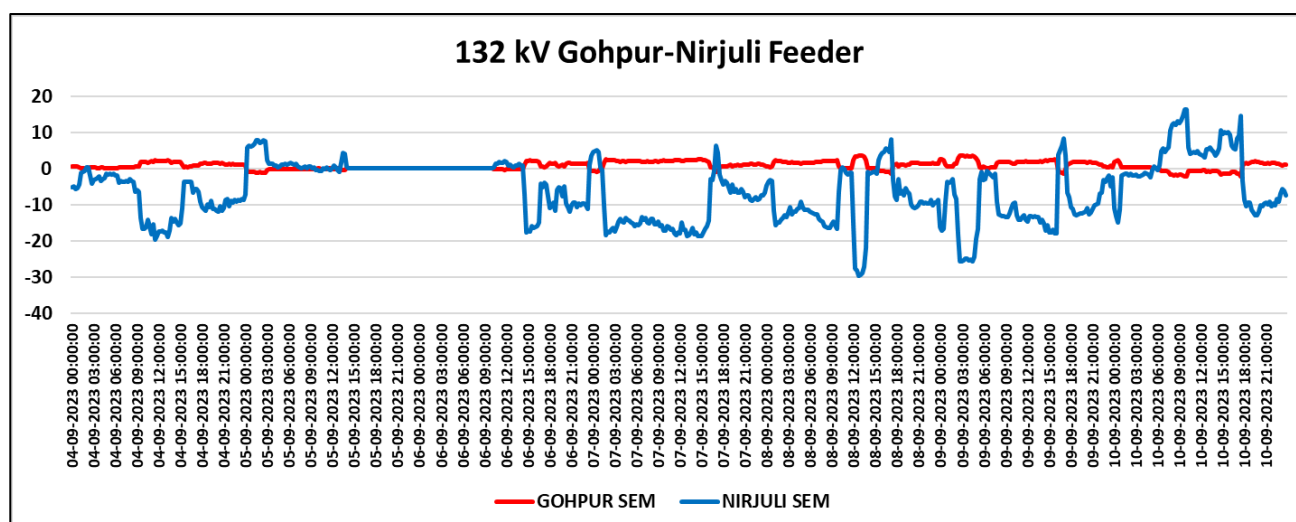
In 204th OCCM it was updated that procurement activities have been processed by POWERGRID. Further POWERGRID informed that the supply of 60 IEMs is expected by end of Sep'23

In 205th OCCM, PowerGrid updated that the procurement status remains the same and the supply of 60 IEMs is expected by end of Sep'23.

Status may be updated

D.4. Erroneous reading of Gohpur end of 132 kV Gohpur-Nirjuli line:

Gohpur end of 132kV Gohpur-Nirjuli line is reading erroneous value. SCADA VS SEM plot comparison for the period 04.09.23 - 10.09.23 is given below.



D.5. Receipt of SEM data from 132 kV Loktak station in Whatsapp:

With the change of Loktak email address from loktakphop@gmail.com to phem-loktak@nhpc.nic.in, NERLDC is facing issue in receiving the data files through mail and hence to complete the accounting, the data file is being collected via WhatsApp (Personal No) since then. It was a temporary solution given. Data file on personal number and public platform is vulnerable. Also, all executives of NERLDC working on meter data are not able to trace/locate the data files of Loktak. Even after several communication with NHPC representative, Loktak data is yet to be received through mail. NHPC may update the status.

It is imperative that we discontinue this practice and resume receiving the data in official mail Ids of NERLDC i.e., in nerldc1@gmail.com and nerldcmo@grid-india.in.

Sub-committee may deliberate

E. I T E M S F O R S T A T U S

E.1. Implementation of projects funded from PSDF:

The status as informed in 205thOCCM:

| State | R&U scheme | ADMS | Capacitor Installation | SAMAST** | Line Differential Protection |
|-------------|---|---|---------------------------|--|---|
| Ar. Pradesh | Package-I (Diagnostic tools) Complete in all respects. P-II (for PLCC & communication) Supply completed. Erection WIP. 50% requisition submitted. 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-Luangmualan d 132kV Khamzawl-Khawiva to be submitted. |

| | | | | | |
|---------|--|---|--|---|---|
| Manipur | Package-II: completed Package-I: all stations complete except Ningthoukhong. By May'22. | Work completed in all respects. UC submitted in Oct'21. | WIP. | 10% disbursed for IT portion, no disbursement for Meter, AMR portion. 20% disbursement for IT portion after completion of 3 rd milestone. 30% to be disbursed for Meter, AMR portion | Revised DPR for LDP of 132kV Imphal-Yurembam-III to be submitted by 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 th 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-Budhjungnagar 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 8stations 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. MePGCL – Completed in all respects. | Project completed in all respects. | - | 90% works completed. Communication pending. | All works except OPGW done |
|-----------|--|------------------------------------|---|---|----------------------------|

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

| Sl. No | Element | Owner | Status up to the 205 th OCCM | Latest Status (206 th OCCM) |
|--------|--|---------------|--|--|
| 1 | 132kV Mariani – Mokokchung (out since April'2008) | AEGCL | Non clearance due to persisting funding issue | |
| 2 | 132kV Roing-Pasighat (charged through ERS tower) | NERTS | Completion by Nov'23 | |
| 3 | 220/132kV ICTs at Kopili, 132kV Khandong –Kopili D/C(out since Oct'19) | NEEPCO/ NERTS | ICTs at Kopili and Koipili-Khnadong DC by Sept'23 | |
| 4 | 132kV Srikona – Panchgram | AEGCL | 12% work completed. Drawing approval under progress | |
| 5 | 400kV Imphal – Thoubal-I and 315MVA 400/132kV ICT at Thoubal | MSPCL | RoW, litigation pending in court. | |
| 6 | 63MVAR Bus Reactor at Byrnihat to be replaced with 80MVAR Reactor | MePTCL | Work order placed, tentative commissioning by Aug'23 | |

E.3. Status of commissioning for upcoming projects:

| Sl. No | Name of the element | Utility | Status up to the 205 th OCCM | Latest Status (206 th OCCM) |
|--------|--------------------------------|---------|---|--|
| 1 | 132kV Monarchak-Surjamaninagar | TSECL | 20 km stringing left, 2 tower foundation pending and pending 8 nos. tower erection. Tentative completion by 31.10.2023. | |
| 2 | PLCC for 132kV | MSPCL | August'23 | |

| | | | | |
|----|---|--------------|---|--|
| | Loktak-Ningthoukong and 132kV Loktak-Rengpang(existing lines) | | | |
| 4 | Upgradation of 132kV Lumshnong – Panchgram line | MePTCL | By September'23 | |
| 5 | PLCC for 132kV Karong-Kohima. PLCC at Kohima | DoP Nagaland | Work order Placed, to be commissioned by Nov'23 | |
| 6 | 132kV Loktak-Ningthoukhong-II | MSPCL | | |
| 9 | 420kV 80MVAR Bus Reactor | NEEPCO | Dec'23 | |
| 10 | 220kV Killing – Mawngap | NERPSIP | Rubber issue has been resolved. However, ROW still persist in 3 locations against job demand in Ri-Bhoi District. Completion in Sep'23 subject to ROW resolution. Line is ready for charging in Mawngap Shillong section. | |
| 11 | 220kV Samaguri – Mariani-I | AEGCL | AEGCL update that rerouting of the second circuit along the first circuit is being considered and the survey work will start soon. | |
| 12 | PLCC/DTPC for 220kV Balipara- Sonabil | AEGCL | DTPC will be installed by Sept'23 | |
| 13 | 220kV AGBPP –Namsai D/C | TBCB | Oct'25 | |
| 14 | Upgradation of 132kV Surjamaninagar-Surjamaninagar(ISTS), 132kV Bodhjungnagar-SMNagar, 132kV P.K.Bari-Ambassa, 132kV P.K. Bari-P.K.Bari(ISTS) | TSECL | DPR has been approved. Fund disbursal soon | |
| 15 | LILO of 132kV Leshka-Khliehriat-I at Mynkre and Mynkre SS and 33kV downstream at | NERPSIP | LILO line charged. SS by Sep'23 | |

| | | | | |
|----|---|---------|---|--|
| | Mynkre. | | | |
| 16 | 220kV Tinsukia-Behiating D/C | NERPSIP | Ready for charging. | |
| 17 | LILO of 132kV Kamalpur-Kamakhya& 132kV Kamalpur-Sishugram at Amingaon | NERPSIP | Charged and handed over | |
| 18 | 220kV Rangia – Amingaon D/C and 220/132kV 2x160MVA Amingaon S/S | NERPSIP | SS charged, Line by Sep'23 | |
| 19 | 132kV Rengpang-Tamenglong and 132/33kV 4x6.67MVA at Tamenglong at Manipur | NERPSIP | Works hampered due to present law and order condition. | |
| 20 | 132/33kV 2x20MVA Gamphazol at Manipur | NERPSIP | Test charged in Dec'22 | |
| 21 | 132/33kV West Phaileng S/S at Mizoram | NERPSIP | Ready for charging. | |
| 22 | 132/33kV 2x12.5MVA Marpara S/S at Mizoram | NERPSIP | Ready for charging. | |
| 23 | 132/33kV 2x12.5MVA Lungen S/S at Mizoram | NERPSIP | Sep'23 | |
| 24 | 132kV Lungsen-Chawngte S/C at Mizoram | NERPSIP | Charged and handed over | |
| 25 | 132kV Chawngte – S.Bungtlang S/S at Mizoram | NERPSIP | Ready for charging. | |
| 26 | 132kV W.Phaileng-Marpara S/C at Mizoram | NERPSIP | Oct'23, works hampered due to delay in tree cutting in forest area. | |
| 27 | 220kV Zhadima – Mokokchung at Nagaland | NERPSIP | Ckt 1 charged in Mar'23. Other ckt waiting for finalization of MoU | |
| 28 | LILO of 132kV Wokha – Kohima at 132/33kV New Kohima (Zhadima) at Nagaland | NERPSIP | Ready for charging. ROW in jumpering location. | |

| | | | | |
|----|---|---------------------------|---|--|
| 29 | 132kV Wokha-Zunheboto - Mokokchung at Nagaland | NERPSIP | WokhaZunheboto section has been completed. Balance section by Sep'23 | |
| 30 | 132kV Tuensang - Longleng at Nagaland | NERPSIP | Tuensang SS upgradation package has been awarded | |
| 31 | 132/33kV Amarpur S/S at Tripura | NERPSIP | Sep'23 | |
| 32 | 132/33kV Manu(new) S/S at Tripura | NERPSIP | Sep'23 | |
| 33 | 132kV Dharmanagar-Kailashor | NERPSIP | Aug'23 | |
| 34 | 132kV Ziro-Yazali and 132/33kV Yazali S/S | POWERGRID-Comprehensive | | |
| 35 | 132kV Yazali - Palin and 132/33kV Palin S/S | POWERGRID - Comprehensive | 132kV Yachuli - Palin Line - Stage I Forest Clearance Obtained. NPV & CA Payment done. Stage II awaited a) 8 foundation work completed. 132/33kV Palin S/s- a) 75% work complete b) CRB Finishing work in Progress | |
| 36 | 132kV Palin- Koloriang and 132/33kV Koloriang S/S | POWERGRID - Comprehensive | 132 kV Palin - Koloriang Line - Stage I Forest Clearance Obtained. 132/33kV Koloriang S/s- a) Both Slabs complete, Brick work in Progress Target for completion: DEC 2023 | |
| 37 | 132kV Khonsa - Deomali and 132/33kV Khonsa S/S | POWERGRID - Comprehensive | 132 kV Khonsa - Deomali Line - a) Foundation, Erection and Earthing WIP. b)76/87 Foundation Complete c)57/87 Erection Complete | |

| | | | | |
|----|--|---------------------------|---|--|
| | | | d)3.103/41.045km Stringing Complete Target for completion: DEC 2023 132/33kVKhonsa S/s- a) CRB Finishing Work b) Cabling work in progress, Foundation Complete, Retaining Wall WIP | |
| 38 | 132kV Miao – Namsai and 132/33kV Miao S/S | POWERGRID - Comprehensive | 132kV Miao - Namsai - b)39/138 Foundation Complete c)24/138 Erection Complete d)4km Stringing Complete 132/33kV Miao S/s- a) Gravel Spreading approx 70% complete b)Eartmat 85% complete c)Plumbing work in Progress d)T&C 80% complete e) Site Levelling WIP. | |
| 39 | 132kV Chimpu – Holongi and 132/33kV Holongi S/S | POWERGRID - Comprehensive | Electrical Inspection Clearance received for both Line and Substation. Applied for FTC | |
| 40 | Lower Subansiri HEP | NHPC | Feb'23 | |
| 41 | 400kV Lower Subansiri-BNC line2 | PGCIL | Oct'23 | |
| 42 | Conversion of MT to DM at (i)132kV Khliehriat, (ii)132kV Badarpur, (iv) 132kV Imphal | NERTS | Imphal-depends upon the law and order in Manipur. No contracts coming up. Badarpur and Khliehriat-order yet to receive | |
| 45 | 220kV New Shillong- | MEPTCL | As updated by | |

| | | | | |
|----|---|----------|---|--|
| | NangalBibra(ISTS 220/132kV) TL | | PGCIL, survey completed and report also completed | |
| 46 | 400kV Bongaigaon- Nangalbibra (ISTS) DC (to be charged at 220kV initially) | Sterlite | Dec'23 | |
| 47 | HTLS reconductoring of 132kV Hailakandi- Dullavcherra | AEGCL | During 23 rd TCC RPC meeting, the forum recommended for the upgradation and preparation of DPR by AEGCL. AEGCL is already planning for reconductoring of the lines. However, Funding source is not finalized yet. | |
| 48 | HTLS reconductoring of 132kV Panchgram- Hailakandi | AEGCL | Included in CEA 2030 Augmentation Scheme. AEGCL is already planning for reconductoring of the lines. However, Funding source is not finalized yet. | |
| 49 | HTLS reconductoring of 132kV Srikona- Pailapool | AEGCL | Included in CEA 2030 Augmentation Scheme. AEGCL is already planning for reconductoring of the lines. However, Funding source is not finalized yet. | |

E.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 205 th OCCM) | |
|-----|-------------------------|----------|---------------------------|---------------------------------|-----------------|--------------------|--|---|---|
| | | | | | | | | Date of Award | Completion schedule |
| 1 | New Mariani (POWERGRID) | Assam | 400/220kV, 2x500MVA | 220 | 2 | Commissioned | New Mariani (POWERGRID) – Diphu (Assam) 220kV D/c line | Plan for route survey from Diphu to New Mariani is underway. The transmission route traverses designated forest area. Survey work is completed only funding is pending. Three years from date of LoA. Completion is expected by 2028. | Plan for route survey from Diphu to New Mariani is underway. The transmission route traverses designated forest area. Survey work is completed only funding is pending. Three years from date of LoA. Completion is expected by 2028. |
| 2 | New Kohima (TBCB) | Nagaland | 400/220kV, 2x500MVA | 220 | 2 | Commissioned | New Kohima (TBCB) – New Kohima (Nagaland) 220kV D/c line | LoA Feb'2021 | OPGW and PLCC work will be completed by Sep 2023 and Oct 2023 respectively. All works are being implemented by Nagaland only. Line would be charged after completion of communication |

| | | | | | | | | | |
|---|--------------------|-----------|---------------------|-----|---|-----------------------------|--|--|------------------------------|
| | | | | | | | | | link. |
| 3 | Nangalbibra (TBCB) | Meghalaya | 220/132kV, 2x160MVA | 132 | 2 | Under construction (Dec'23) | Nangalbibra (ISTS) – Nangalbibra (MePTCL) 132kV D/c (HTLS,800A) Line:about 5km | LoA under process. Fund is yet to be released from the Govt. of Meghalaya. | within 6 months after award. |

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 |
|-----------|---|------------------------------------|--|---------------------------------------|
| A | Assam (to be implemented by AEGCL) | | | |
| I | Rangia | 400/220kV, 2x500MVA | 1. EPC Contract Award is Tentatively scheduled in the early half of Dec'2022. 2. Master Plan submitted for approval. 3. Tender under preparation 4. AIB points to be addressed | Dec'2025 |
| a) | LILO of both circuits of Bongaigaon – Balipara 400kV D/c line at Rangia | 400 kV, D/C | 1. EPC Contract Award is expected by Dec'2022. 2. Tender preparation is completed and is to be reviewed by AIIB | Mar'26 (36 months form date of Award) |
| II | Khumtai | 400/220/132kV, 2x500MVA + 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 | Upgradation of Gohpur S/s from AIS to GIS | - | 1. Notice of Award has been issued on 8 th June 2022 to M/S Sumaja Electro infra-Pvt Ltd. | June'2025 |
| IV | Upgradation of Sonapur S/s from AIS to GIS | - | 1. Tender to be floated soon (tentatively by August'23) | June'2026 |
| a) | LILO of 400kV Silchar-Byrnihat at Sonapur | - | 1. Tender to be floated soon (tentatively by August'23) | 3 years from grant of LoA(August '2026) |

| Sl. No. | Substation/Location | Transformation Capacity/Element | Date of Award | Completion Schedule |
|---------|--|---------------------------------|---|---|
| B | Tripura (to be implemented by TSECL) | | | |
| I | Surajmaninagar (TSECL) | 400/132kV, 2x315MVA | JV formation, between PGCIL and STU by Mar'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. | LILO completed for 400kV ckt 2 (by PGCIL) without bay readiness, LILO has been charged. Total completion subjected to Sub-station readiness at Surajmaninagar |

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

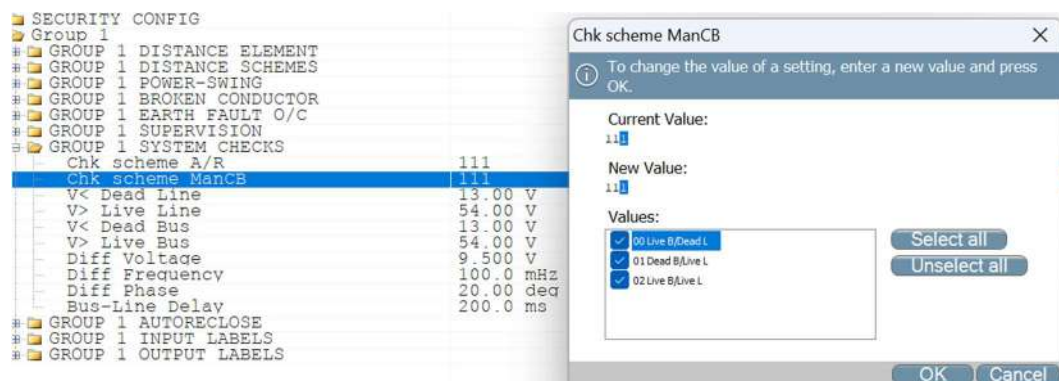
| SL. No. | Item for Discussion | Status as per 205thOCCM | Latest Status |
|----------------|--|--|----------------------|
| 1. | Introduction of SPS in Leshka S/Sn of Meghalaya (Agenda No. C4 of 189 th OCCM) | Communication with M/s Hitachi underway. Scheme and logic are being finalized. Hitachi to provide cost estimate after that. | |
| 2. | Voltage and MVAR issues at 400kV Kameng S/Sn (Agenda No. C7 of 189 th OCCM) | Discussion with OEM M/s BHEL is underway. Member Secretary NERPC has written a letter to BHEL in this regard. A meeting is to be arranged with BHEL to discuss the matter | |
| 3. | Outage of 400kV Imphal (PG) – Thoubal-I (Agenda B.15 of 184 th OCCM) | RoW, litigation pending in court | |
| 4. | Charging of 33kV Khupi-Kimi line at 132kV: | To be charged in September'23 | |
| 5. | Synchronization issue of 220kv AGBPP – Tinsukia 1 & 2 at AGBPP end. (NEEPCO to update the status of CVT procurement and other relevant details.) Item B.24 of 190 th OCCM. | Tender floated in the month of August'2022. | |
| 6. | Grid Disturbance in Dhaligaon area of Assam Power System (C.18 of 191 st OCCM) | Work started for replacement and repairing of damaged earthing will start from 2 nd week of May. WIP | |
| 7. | Status of Installation of TLSA in 400kV Silchar-Azara T/L & 400 kV Silchar-Byrnihat T/L (C.12 of 194 th OCCM) | i)Supply of 100% of TLSA is completed, ii) finalization of the implementing agency is also completed iii)detailed shutdown/work plan will be submitted to OCC forum in September'23. Currently there is continuous rainfall at the site iv)Thereafter once the rainy days gets over, i.e., from the month of October'23 onwards installation of TLSA shall be started at site | |

| | | | |
|-----|---|--|--|
| 8. | PLCC & protection related issues at 132kV Tipaimukh S/s (C.15 of 194 th OCC) & (C.8 of 197 th OCC) | PLCC engineer to visit the SS. (MSPCL). MSPCL yet to provide update | |
| 9. | 48V System reliability at Pasighat end (C.16 of 194 th OCC) | June'23 | |
| 10. | Construction of Anchor tower at location 433 by PGCIL and reconductoring of 220kV Mariani-Mariani SC with Moose conductors (B.16 of 196 th OCCM) | Construction of Anchor tower completed. Reconductoring to be done soon | |
| 11. | Implementation of Bus Bar Protection at 132 kV Kahilipara (AEGCL) Substation (C.8 of 196 th OCCM) | Estimate submitted for procurement of CT available with core for Bus bar protection. Approval awaited | |
| 12. | TLSA installation on 132kV Leshka-Khleihriat DC | DPR submitted to PSDF secretariat | |
| 13. | 400 kV GT-1 & Silchar 1 Tie Bay at OTPC is under outage from 31/12/2022. 400 kV GT-2 & 400/132 kV ICT 2 Tie Bay at OTPC is under outage from 10/02/2023 | Rectified relay arrived at site. Silchar 1 tie bay will be restored in 2 nd week of September'23. Newly procured relays will arrive in 2 nd week of September, charging of other bays will be done by end of September'23 | |
| 14. | Installation of Line differential protection in Rokhia-N.Rokhia line | CBs for LDP of Rokhia- N. Rokhia line has to be procured. Further, DPR prepared, Tendering process underway. | |
| 15. | Upgradation of 132kV Jiribam-Loktak line. Upgradation of jumper conductor to suitable ampacity and installation of CT of ratio 800/1 at Loktak HEP | NHPC to upgrade bay equipments soon | |
| 16. | Reconductoring of Umiam stg I stg III, upgradation of CT ratio to 800/1 | Approaching PSDF for funding | |
| 17. | Restoration of tower no. 3 and 12 of LILO of Nirjuli-Dikrong Transmission line to Lekhi Substation | In 193 rd OCCM, AE, SLDC Arunachal Pradesh reiterated that restoration work may go up to March'24 subject to | |

| | | | |
|-----|---|--|--|
| | (B.23. of 193rd OCCM) | receding of water of Dikrong river. Tower locations in spate of floods. Works stalled. Expected completion by March 2024 | |
| 18. | Long Outage of 400/220 kV ICT-3 at Byrnihat S/S (B.22. of 202 nd OCCM) | Work order placed, to be completed by 1 st week of August | |
| 19. | Proposal of SPS Scheme to disconnect Bangladesh load on overloading of 132 kV Surajmaninagar (ISTS) - Surajmaninagar(TSECL) line. (C.3 of 202 nd OCCM) | loading on SMNagar-SMNagar will always be maintained below 85 MW | |
| 20. | Upgradation of Tuensang substation to 132kV level, under NERPSIP. (item B.15 of 203 rd OCCM) | NERPSIP updated that tender will be awarded by the end of June'23 and the work will be completed in the next one year. | |
| 21. | Installation of OPGW on 220kV New Kohima (ISTS)-Zhadima line (item C.10 of 203 rd OCCM) | OPGW work will be completed by Sep 2023. All works are being implemented by Nagaland only. | |
| 22. | Readiness of end bay equipment for re-conductored 220 kV BTPS-Salakati D/C (item C.13 of 203 rd OCCM) | NERTS stated that outage of each circuit required for 20 days. Will apply accordingly | |
| 23. | restoration of tower no. 4 of 132kV Ranganadi-Itanagar D/C Transmission line | work will start in September'23 and will be completed by November'23 | |
| 24. | Increasing overcurrent setting for 132kV Dimapur-Dimapur (NL) line from 360 A to 420 Ampere (70%) at Dimapur (NL) | | |

CHECK SYNCHRONIZING LOGIC AND SETTINGS PROPOSED TO BE IMPLEMENTED FOR DAPORIJO, AALO AND PASIGHAT SUBSTATION FOR CLOSING OF LINE BREAKERS

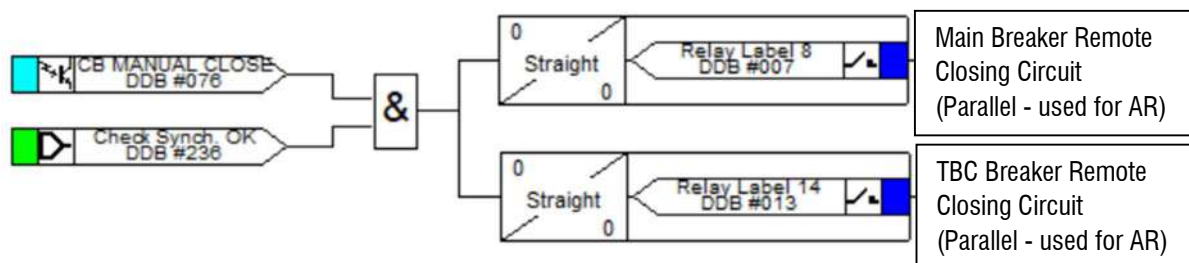
1. Numerical Distance Protection Relays with Check Sync provision are available (shall be available by October 2023) at the following substations of DoP Arunachal Pradesh:
 - 1.1. **Daporijo Substation:** Ziro Line (ABB REL650) and Aalo Line (Micom P442)
 - 1.2. **Aalo Substation:** Daporijo Line (Micom P442) and Pasighat Line (Micom P442)
 - 1.3. **Pasighat Substation:** Aalo Line (Micom P442)
2. **Check Sync for Manual Closing through the relay shall be implemented for the following conditions:**
 - 2.1. Live Bus + Dead Line
 - 2.2. Dead Bus + Live Line
 - 2.3. Live Bus + Live Line



3. The parameters for Manual Check sync shall be as under:

| | | | |
|-----------------------|-----------|--|-------|
| GROUP 1 SYSTEM CHECKS | | | |
| Chk scheme A/R | 111 | | 48.01 |
| Chk scheme ManCB | 111 | | 48.02 |
| V< Dead Line | 13.00 V | | 48.03 |
| V> Live Line | 54.00 V | | 48.04 |
| V< Dead Bus | 13.00 V | | 48.05 |
| V> Live Bus | 54.00 V | | 48.06 |
| Diff Voltage | 9.500 V | | 48.07 |
| Diff Frequency | 100.0 mHz | | 48.08 |
| Diff Phase | 20.00 deg | | 48.09 |
| Bus-Line Delay | 200.0 ms | | 48.0A |

4. The Closing Circuit of the breaker after the TNC Switch in these substations are wired through the Sync Socket (for Sync Trolley) and presently being bypassed through wiring in the CRP.
5. The Sync Selector switch shall be kept in 'On' mode and Bypass removed for prevent closing without Sync check.
6. The CB Manual Close Command (SOTF initiation) to the numerical relays shall be used with Manual Check Sync logic as under for closing of the breaker:



7. The CB Manual Close Command is wired through the Protection Transfer Switch including the Closing Circuits for AR operation of Main/Transfer Breaker and therefore the above scheme shall be in operation for both the Main and TBC Breakers.
8. Similar scheme is in operation at Lekhi and Itanagar Substation of DoPAP including BNC & Gohpur Lines of Indi Grid at Itanagar and RHEP Substation of NEEPCO as per verbal confirmation.



ग्रिड-इंडिया
GRID-INDIA

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)



(formerly Power System Operation Corporation Limited (PSOCO))

उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre

कार्यालय : लोवर, लापालांग, शिलांग -793006

Office : Lower Nongrah, Lapalang, Shillong- 793006

CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

संदर्भ: उपक्षेत्राधिकारी/एस. ओ-II/14/5172
Ref : NERLDC/SOII/14/5172

दिनांक/Date: 04/09/2023

सेवा में/To:

1. Plant- Incharge, AGBPP, NEEPCO, Bokuloni No.2, Dibrugarh, Assam, 786191

प्रतिलिपि/Copy to:

1. Member Secretary, NERPC, Shillong- 793006
2. CMD, Grid-India, New Delhi-110019
3. Director(SO), Grid-India, New Delhi-110019
4. Executive Director, NLDC, Grid-India, New Delhi-110016

विषय/Sub: Request to ensure maximum generation availability in view of prevailing high demand conditions in the All India Grid

Dear Sir,

As you are aware that high demand season is ongoing in the country with the all India Demand met crossing 239.9 GW met during solar hours on 01-09-2023. It is also pertinent to mention that on 31st August 2023 during non-solar hours 212 GW demand was met with a load shedding of the order of 8GW. The frequency also remains low during non-solar hours touching a minimum 49.5 Hz at 22:21 hrs on 31st August 2023. Hence, it is of utmost importance to ensure maximum generation from all generating plants especially during the non-solar hours i.e, from 18:00 hours to 24:00 hours to meet the unprecedented growing power demand. Due to the unavailability of renewable generation during the non-solar hours, the role of conventional generating units becomes all the more significant to maintain the load-generation balance.

It has been observed that AGBPP, NEEPCO is generating power in the range of 170-190 MW while its installed capacity is 291 MW, keeping a large margin unutilized. In this high demand scenario in the country and scarcity of resources, it is highly recommended to generate to the full capacity of the plant atleast during the non-solar hours (1800 hrs to 2400 hrs).

AGBPP, NEEPCO is requested to maximize its generation to support the grid in such crucial situation and initiate appropriate actions to ensure safe, secure and reliable operation of the regional and the integrated national grid.

Thanking You

भवदीय / Yours sincerely,

(एस सी डे / S.C/De)

वरिष्ठ महाप्रबंधक (एस.ओ) Sr. G.M. (SO)
उपक्षेत्राधिकारी, शिलांग / NERLDC, Shillong

Annexure C.1.2

| Date | DC (MWhr) | Schedule (MWhr) | %age reduction | Actual Generation (MWhr) | Excess Gen (MWhr) |
|--------------|------------------|------------------|----------------|--------------------------|-------------------|
| 01-Aug-23 | 5920.00 | 4004.60726 | 32.35 | 4578.00 | 573.39 |
| 02-Aug-23 | 6095.00 | 3892.16716 | 36.14 | 4438.00 | 545.83 |
| 03-Aug-23 | 6060.00 | 4024.32407 | 33.59 | 4566.10 | 541.78 |
| 04-Aug-23 | 5925.00 | 4332.08497 | 26.88 | 4772.80 | 440.72 |
| 05-Aug-23 | 5976.50 | 4446.21994 | 25.60 | 4923.50 | 477.28 |
| 06-Aug-23 | 6020.00 | 3902.16083 | 35.18 | 4403.10 | 500.94 |
| 07-Aug-23 | 6117.50 | 4025.02799 | 34.20 | 4447.00 | 421.97 |
| 08-Aug-23 | 5322.50 | 4288.49075 | 19.43 | 4665.90 | 377.41 |
| 09-Aug-23 | 4971.00 | 4399.35901 | 11.50 | 4793.00 | 393.64 |
| 10-Aug-23 | 4572.00 | 4401.07791 | 3.74 | 4641.00 | 239.92 |
| 11-Aug-23 | 4918.50 | 4836.28058 | 1.67 | 5084.20 | 247.92 |
| 12-Aug-23 | 5005.50 | 4359.49644 | 12.91 | 4769.80 | 410.30 |
| 13-Aug-23 | 5049.00 | 3862.64363 | 23.50 | 4473.80 | 611.16 |
| 14-Aug-23 | 4927.00 | 4039.47873 | 18.01 | 4442.20 | 402.72 |
| 15-Aug-23 | 4520.50 | 4143.77682 | 8.33 | 4458.30 | 314.52 |
| 16-Aug-23 | 4945.00 | 4609.10726 | 6.79 | 4867.70 | 258.59 |
| 17-Aug-23 | 4756.00 | 4316.16233 | 9.25 | 4660.60 | 344.44 |
| 18-Aug-23 | 4335.50 | 4135.42834 | 4.61 | 4432.90 | 297.47 |
| 19-Aug-23 | 4192.00 | 3988.23048 | 4.86 | 4253.50 | 265.27 |
| 20-Aug-23 | 4077.00 | 3889.22959 | 4.61 | 4155.60 | 266.37 |
| 21-Aug-23 | 4850.50 | 4850.48991 | 0.00 | 4972.60 | 122.11 |
| 22-Aug-23 | 3749.00 | 3693.44025 | 1.48 | 3920.70 | 227.26 |
| 23-Aug-23 | 3926.00 | 3577.76198 | 8.87 | 3996.10 | 418.34 |
| 24-Aug-23 | 4265.00 | 3878.45005 | 9.06 | 4266.00 | 387.55 |
| 25-Aug-23 | 4265.00 | 3878.45005 | 9.06 | 4491.50 | 613.05 |
| 26-Aug-23 | 4602.50 | 3997.29183 | 13.15 | 4398.20 | 400.91 |
| 27-Aug-23 | 4754.50 | 3813.99134 | 19.78 | 4321.60 | 507.61 |
| 28-Aug-23 | 4940.00 | 4040.46559 | 18.21 | 4487.70 | 447.23 |
| 29-Aug-23 | 4953.50 | 4401.25717 | 11.15 | 4754.30 | 353.04 |
| 30-Aug-23 | 4950.00 | 4867.04245 | 1.68 | 5056.80 | 189.76 |
| 31-Aug-23 | 4924.00 | 4921.15691 | 0.06 | 5081.10 | 159.94 |
| Total | 153885.50 | 129815.15 | 15.64 | 141573.60 | 11758.45 |
| | | | | | |
| 01-Sep-23 | 4913.50 | 4913.36461 | 0.00 | 5083.70 | 170.34 |
| 02-Sep-23 | 4885.50 | 4760.70873 | 2.55 | 5023.50 | 262.79 |
| 03-Sep-23 | 4894.00 | 4418.47776 | 9.72 | 4892.30 | 473.82 |
| 04-Sep-23 | 4784.25 | 4133.50400 | 13.60 | 4506.10 | 372.60 |



ISO 14001 : 2015
ISO 9001 : 2015
ISO 45001 : 2018

Dial 1219 for Complaints on Electric

नॉर्थ ईस्टर्न इलेक्ट्रिक पावर कॉर्पोरेशन लिमिटेड

(भारत सरकार का संस्थान)

NORTH EASTERN ELECTRIC POWER CORPORATION LTD.

(A Govt. of India Enterprise)

Assam Gas Based Power Plant

BOKULONI, DIST. DIBRUGARH, ASSAM, PIN - 786 191

E-mail : agbp.bokuloni@gmail.com



No: NEEPCO/AGBPS/ HOP/2023-24/T-48(B)/ 161

Date: 05.09.2023

To,

The Sr. G.M. (S.O.)
NERLDC, Lower Nongrah,
Lapalang, Shillong-793006.

Ref: Letter no. NERLDC/SOII/14/5172 dated 04.09.2023.

Sub: Regarding request to ensure maximum generation availability in view of prevailing high demand condition in the All India grid

Dear Sir,

With reference to the above, we would like to highlight the followings points regarding generation of the Power Station (AGBPS):

- 1. Low Schedule for Generation:** AGBPS has been consistently given a low schedule for generation most of the time. For example, during the month of August 2023, AGBPS got an average 15.64% less schedule than the DC (please refer to the attachment). AGBPS got full schedule generation only for 3 days (21st, 31st August and 01st Sept 2023) during August 2023 and highest reduction occurred upto 36.14% on 02.08.23.
- 2. Triggering of Ancillary Service (AS):** Most of the time the low schedule is due to triggering of Ancillary Service. As, AS is triggered around 12 minutes before commencement of the affected time block, there is no option on the part of AGBPS to maximise generation in such blocks.
In the event of low schedule given by the beneficiaries, AGBPS tries to sell the surplus power in the Real Time Market. Even if the surplus power gets sold in the RTM, triggering of AS brings down the schedule.
It has also been observed that AS has been triggered for AGBPS during non-solar hours and low scheduled has been given. For example, from 23.08.2023 to 29.08.2023, AGBPS' schedule from mid night to morning were reduced to very low.
- 3. Irregular Schedule effects gas drawl:** AGBPS gets its fuel i.e. Natural Gas, from M/s Oil India Ltd. M/s OIL is requesting us to keep the gas drawl steady so that the gas grid in the region remains stable. When the schedule is reduced, the generation also is reduced which in turn reduces the gas drawl from M/S OIL. In such cases, M/s OIL diverts this excess gas to their other customers. However, when the schedule is increased again, M/s OIL is unable to divert gas to AGBPS, resulting it is not possible to adhere the schedule given for generation. As such, AGBPS is unable to ensure steady gas drawl due to the very short notice time period of AS triggering. So, M/s OIL refuses to divert the gas from their customers having steady drawl characteristics. These circumstances forces AGBPS to reduce the DC further.
- 4. Base Load Operation:** AGBPS being a Gas Based Thermal Power plant is suitable for running as a base load plant. It will be very much beneficial if AGBPS is allowed to run at the maximum possible load round the clock.
- 5.** It may kindly be noted that on 21st, 31st August 2023 and 1st Sept, 2023 AGBPS generation was at per with the schedule. If steady schedule can be ensured, M/s OIL can be assured of steady



ISO 14001 : 2015
ISO 9001 : 2015
ISO 45001 : 2018

Dial 1219 for Complaints on Electric

नॉर्थ इस्टर्न इलेक्ट्रिक पावर कॉर्पोरेशन लिमिटेड

(भारत सरकार का संस्थान)

NORTH EASTERN ELECTRIC POWER CORPORATION LTD.

(A Govt. of India Enterprise)

Assam Gas Based Power Plant

BOKULONI, DIST. DIBRUGARH, ASSAM, PIN - 786 191

E-mail : agbp.bokuloni@gmail.com



gas supply and in such condition AGBPS can certainly declare higher DC and maximise its generation.

AGBPS is very much capable and interested to generate to the fullest of its capacity at its design condition, subject to Schedule of generation and steady availability of gas supplied by M/S OIL.

Therefore, it is requested to ensure steady and full schedule for AGBPS not only in non-solar hours but also round the clock- keeping it as a base load plant, so that the safe, secure and reliable operation of the grid can be ensured.

Thanking you,

Yours sincerely,

Goswami
5/9/23

(Sri Bhupendra Goswami)
ED (Tech) & Head of Power Station,
AGBPS, NEEPCO Ltd.,
Bokuloni Charial, Dibrugarh,
Assam-786191