सत्यमेव जयते

भारत सरकार Government of India
विद्युत मंत्रालय Ministry of Power
उत्तर पूर्वी क्षेत्रीय विद्युत समिति
North Eastern Regional Power Committee
एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय
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No.: No. NERPC/SE (O)/OCC/2021/*386-425* April 13, 2023

To
As per list attached

Sub: Minutes of 200th OCC Meeting.

Sir / Madam,

Please find enclosed herewith the minutes of the 200th OCC Meeting held at "NERPC Conference Hall", Shillong on 28th March, 2023 for your kind information and necessary action. The minutes is also available on the website of NERPC: www.nerpc.gov.in.

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

भवदीय / Yours faithfully,

(एस. एम. आइमोल / S. M. Aimol)
निदेशक / Director

Encl: As above

Distribution List:

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

(एस. एम. आइमोल / S. M. Aimol)

निदेशक / Director

सत्यमेव जयते

Minutes of 200th OCCM

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

North Eastern Regional Power Committee

Minutes of Meeting of the

200th Operation Coordination Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 28-03-2023 (Wednesday)

Venue : "NERPC conference Hall"

The list of Participants is attached as **Annexure 1**.

Member Secretary, NERPC welcomed all the participants. He apprised the forum that in the 74th Techno Economic Subgroup (TESG) meeting held on 17.03.2023, it was advised that NERPC may write to Ministry of Power for consideration SCADA under PSDF funding as special dispension to NER states. It was also suggested that NERPC/ NER State should send revised DPR for OPGW on existing transmission line and VSAT on strategic location with justification for line above 66 KV. He further informed that NERPC will send request letter to Ministry of Power for inclusion of SCADA under PSDF funding considering the difficult financial conditions of the NER states.

Member Secretary further stated that new market avenues in power sector, viz: High Price Day Ahead Market (HPDAM) segment on IEX and PushP portal (portal for flexibilization of PPAs and optimal utilization of generating units) have been launched by Hon'ble Minister of Power and New & Renewable Energy on 9th March 2023. He requested the utilities to make the best use of the above facilities. He also raised concern about the High demand and supply crunch season in the month of April and May'23, and requested the generating stations to ensure that their units run at full capacity.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 199th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 199th meeting of Operation Sub-Committee held on 22nd February, 2023 at Hotel Nandan, Guwahati was circulated vide letter No. NERPC/SE (O)/OCC/2021/ 2257-2296 dated 10th March, 2023.

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

Utility	Agenda Item	Recorded in MoM	Comments

AEGCL	B.15	SLDC AEGCL updated that identification of 33kV feeders for load cutting of 20MW at Narengi S/S is going on in consultation with APDCL and once logic is finalized, cost estimate will be decided	AEGCL intimated that disconnection of Narengi GSS, trip signal will have to be sent from Kahilipara GSS which is not possible as there is no OPGW connectivity in 132 kV Kahilipara-Narengi line. Hence, SLDC informed that additional 20 MW load disconnection at Sarusajai / Kahilipara GSS will be explored after consultation with DISCOM

The Sub-committee confirmed the minutes of 199th OCCM of NERPC with the above modification(s).

B. FOLLOW UP AGENDA ITEMS

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

NERLDC presented the Operational Performance and Grid Discipline for the month of February, 2023. (**Annexure B.1**)

The sub-committee noted as above

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

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

Plants	Reservoir level in meter (as on 20/02/2023)	MU content	Present DC (in MU)	No of days as per current generation
Khandong + Kopili stg II	Under outage and restoration process going on	Under outage and restoration process going on	**0**	Will be "0" until further intimation.
Kopili	Under outage and restoration process going on	Under outage and restoration process going on	**0**	Will be "0" until further intimation.
Doyang	**311.90**	**8**	**0.16**	**50**
Loktak	**766.63**	**16**	**0.24**	**67**

b. The outage of other generating stations was approved considering the present water levels in reservoirs and long-term outage of Kopili and Khandong HEPs. The list of outages of generating stations is provided in **Annexure B.2**.

The sub-committee noted as above

B.3. Outage Planning Transmission elements

It was agreed in the 99thOCC 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.

The list of approved shutdowns for transmission elements is provided at **Annexure B.2**.

The sub-committee noted as above

B.4. Estimated Transmission Availability Certificate (TAC) for the month of January, 2023:

Transmission Utilities have submitted the outage data for the month of January,2023. The attributability of outage of the said elements has been finalized by NERLDC & NERPC. The Availability percentage of the transmission elements of ISTS licensees for the month of January, 2023 are as follow:

SN	ISTS Licensee	Availability for Jan'23 (%)
1	NETC	100.0000
2	KMTL	99.8488
3	NER-II TL	99.4567
4	PGCIL	99.8235

The sub-committee noted as above

B.5. Mock Black Start Exercise:

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

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 the 199th OCCM:

Plant Name	Performed On	Due Date	Schedule of Testing/Status as per 199th OCCM
AGBPP	……	……	after upgradation of DG under R&M*
AGTTCCPP	09.04.2019	09.10.2019	Done on 4th Feb. 2023

PareHEP	25.01.2020	25.07.2020	Done on 15th Feb. 2023
Kopili HEP	10.05.2019	NA	NA
Kameng HEP	……	……	In Lean Hydro season**
Doyang HEP	-	-	Done on 21st Oct'22
KopiliStg-II	-	-	Under prolonged shutdown
RHEP	-	-	Done on 28th Nov'22

* Regarding AGBPP, GM NEEPCO updated that R&M of DG is under proposal stage only and he will make necessary arrangements to make the machine at AGBPP compatible for the MBS exercise.

** Regarding Kameng HEP, GM NEEPCO highlighted the problem related to the DAVR of the machine and also the disagreement on the procedure of the MBS exercise proposed by the OEM M/s BHEL.

Further, Sr. GM NERLDC informed that since almost all the Plants have completed the MBS exercise, the process has to be restarted in order to comply with the IEGC grid code i.e., MBS exercise is to be done once in six months.

Deliberation of the sub-committee

*Regarding AGBPP, GM NEEPCO updated that R&M of the plant is under DPR preparation stage only and will be submitted for approval soon. Further, he informed that although the machine (Frame 6) is capable of Black start, there is high power requirement for the Gas compressor which is beyond the capacity of existing DG, hence requirement of new DG with adequate capacity is essential.

**Regarding Kameng HEP, GM, NEEPCO intimated that M/s BHEL has not yet responded to the concerns raised by NEEPCO regarding the changes in circuitry as proposed by M/s BHEL.

Manager, NERLDC presented the next due dates for each of the ISGS stations for Mock Black start exercise in accordance with IEGC. The due dates are as under:

Plant Name	Last testing date	Due date
AGBPP	……	……

AGTTCCPP	04.02.2023	04.08.2023
RHEP	28.11.2022	28.05.2023
PareHEP	15.02.2023	15.08.2023
Kopili HEP	10.05.2019	Under prolonged shutdown
Khandong HEP	09.12.2021	Under prolonged shutdown
DHEP	21.10.2022	21.04.2023
Kameng HEP	……	……
Loktak HEP	16.12.2021	20.06.2022

NERLDC informed that MBS exercise has to be carried out at Loktak HEP as the due date for testing at Loktak HEP has already passed. The forum advised NHPC to schedule & conduct the MBS exercise in coordination with NERLDC.

The sub-committee noted as above

Action: NHPC

B.6. 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
DoP Ar. Pradesh	27-01-2021	Enabled & in-operation
AEGCL/APDCL	07-12-2020	Enabled & in-operation
MSPCL	24-11-2020	Enabled & in-operation
MePTCL/MePDCL	31-08-2020	Enabled & in-operation
P&ED Mizoram	22-02-2021	Enabled & in-operation
DoP Nagaland	17-11-2020	Enabled & in-operation
TSECL	24-12-2020	Enabled for three substations while yet to be enabled for other three substations

As updated in the 199th OCCM:

1. SLDC, TSECL reiterated that ADMS at Takerjhala, Bishalgarh and Badarpur will tentatively be enabled by the end of March'23. Also, NERPSIP updated that most of the work is completed.
2. Tripura, Arunachal Pradesh and Manipur to revise the tripping logic by next OCCM

3. Also, the forum opined that frequency setting in the logic has also to be changed to 49.90 Hz from 49.85Hz as per provisions of DSM 2022 regulations. States were also asked to send report regarding logic updation to NERPC & NERLDC.

Deliberation of the sub-committee

1. SLDC, TSECL reiterated that ADMS is yet to be installed at the Takerjhala, Bishalgarh and Badarpur substations as some shifting work is involved. Further tripping logic has been modified for the two substations where ADMS is installed.
2. Arunachal Pradesh and Manipur are yet to revise the tripping logic.
3. Assam updated that logic modification related to change in frequency will be done within a week time.
4. EE, SLDC Meghalaya requested following exemptions for the upcoming monsoon season-

i. In the monsoon season the schedule of Meghalaya becomes significantly low, so, the tripping criteria of deviation> min [40MW, 20% of the schedule] is satisfied very frequently and consequently frequent tripping of designated feeders may occur, this will lead to rapid deterioration of the CBs. Hence, it is requested to allow Meghalaya to use the logic deviation> 40MW only.

ii. With revision in frequency setting to 49.9 from 49.85 and high demand in the coming season will frequently push the frequency below 49.90 Hz, this will again lead to frequent tripping and deterioration of CBs. So, it is requested to set a tripping limit to 2 (for a day) for individual feeder.

The forum agreed to the request of Meghalaya.

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

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

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

State	Time Period	N-1 considered	Limiting element	TTC	RM	ATC
Arunachal Pradesh	Off-Peak	132kV Lekhi – Pare	132 kV Pare – Itanagar S/C	195	5	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 – Umiam1	132 kV Umiam-Umiam Umiam 1 II	340	10	330
	Peak			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) Budhjungnagar S/C	132 kV SM-Nagar (TR) – SM Nagar (ISTS) S/C	340	6	334
	Peak			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.

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

In 199th OCCM, NERLDC apprised the forum that all the states except Arunachal Pradesh are providing the ATC/TTC report regularly to NERLDC. Also, NERLDC appreciated that Meghalaya SLDC is doing extensive ATC/TTC study in case of any major shutdown.

Deliberation of the sub-committee

NERLDC apprised the forum that all the states except Arunachal Pradesh are providing the ATC/TTC report regularly to NERLDC. The forum requested all the states to provide the respective ATC/TTC to NERLDC on monthly basis. ED, NERLDC informed that NERLDC is going to organize a PSSE training program on 30th & 31st March'23, which will help SLDCs to conduct Load Flow and ATC/TTC calculations studies.

The sub-committee noted as above.

B.8. Issues pertaining to Kopili & Khandong.

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

Khandong & Khopili Power Stations have been under forced outage due to which there

has been vulnerabilities in the Meghalaya Power system.

Decisions as per previous meetings:

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

In 196th OCCM it was highlighted that Meghalaya Power system to operate in bifurcation mode (132kV Mawngap-Nongstoin T/L shall be opened and Nongstoin, Nangalbibra, Tura and Ampati to be fed from Agia) with installation of 20MVAR capacitor banks at 132/33kV NEHU SS till the reconductoring of Umiam stgI-stgIII D/C reconductoring work is done. After the reconductoring, it will shift to closed loop mode wherein maximum of 380MW maximum demand can be met with 107 MW Meghalaya internal generation.

B. Restoration works at Khandong and Kopili substations

Following the discussions in the 189th OCC and in the special meeting held on 27.04.2022 in presence of representatives from NERPC, NERLDC, NEEPCO, NERTS and AEGCL, Khliehriat – Khandong – Umrangshu link was charged as an interim special arrangement.

Khandong

1. One CRP for Khandong-Umrongso feeder at Khandong end is procured and expected to be commissioned by NEEPCO before February 2022.
2. One Temporary KIOSK rom has been identified and Cable trenches are under Construction and, cables are being re-routed.
3. For availability of Khnadong Khleihriat line, POWERGRID was requested to install 1(one) BCU based CRP Febreuary-2023. Status of the same may kindly be shared with NEEPCO.

4. NERTS, POWERGRID was requested to ensure the installation of PLCC panel for Khandong – Khliehriat line alongwith FOTE panels for digital and analog data/voice, protection and communication to NERLDC before synchronization of the Khandong Stage-II.
5. AEGCL was requested to provide a PLCC Panel for Khandong-Umrongso line and NEEPCO was to provide the 48V battery bank with charger for PLCC. Status of the same may please be intimated to NEEPO.

Kopili

1. 48V DC supply for PLCC panels is being undertaken by NEEPCO. PGCIL provided the load requirement of 20A max.

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

NEEPCO is planning to re-commission and synchronize 1X25MW Khandong Stage-II unit within this current financial year. Since all the Control & relay panels are submerged and damaged beyond repair during the inundation on 26.03.2022, for successful commissioning of the unit, the Khandong Switch Yard has to be adequately restored within February – 2023 and for reliable evacuation, any of the Khandong-Khleihriat ckt1 or ckt 2 along with 132kV Khandong-Umrangshu line (with full protection system) is required. And for evacuation of 2 units of Kopili, which are poised to come in May'23, either 220kV Misa-Kopili DC or Kopili-Khandong DC is required.

In 199th OCCM following points were discussed

A. Load Restriction on Meghalaya Power system

i. Regarding 132kV Jiribam-Haflong line, CGM PGCIL intimated that NBW clearance as well as clearance from Assam Forest Department has been obtained and assessment of corpus amount for afforestation is under process by the concerned DFO. After that, NHIDCL will deposit the requisite amount and applications for RIO clearance will be applied by PGCIL. He further updated that considering the processes involved the line may be charged within next 20 days.

ii. Regarding reconductoring of Umiam stg I-stg III, Meghalaya updated that the required CTs with appropriate rating will be arranged by 2nd week of March, 2023.

iii. Manager, NERPSIP stated that RoW issue in Mawngap section still persists and meetings at highest administrative level are being held. Matter will further be taken up after the Meghalaya state assembly elections.

B &C. Restoration of Khandong& Kopili substations and Recommissioning of 1x25 MW Khandong stg II:

i. Regarding PLCC for the Khadong-Umrangshu line, AEGCL updated that M/s ABB has submitted the cost estimated in Feb'23 and PLCC will be supplied within one month.

ii. About revival schedule, GM, NEEPCO updated that one unit of Kopili will come in May'23 while second in June'23. Also, Khandong stg II may come by March'23 or in the 1st week of April'23.

iii. Regarding complete restoration of Khandong-Khleriat D/C, PGCIL updated that cabling and termination work has started and the whole work (line side and switchyard) will be completed by end of March'23. He therefore assured that transmission system for evacuation of Khandong stg II will be ready on time.

iv. Regarding works at Kopili, PGCIL updated that GIS erection work (for Khangdong D/C and ICT I and II) will start soon and M/s GE has to supply SAS based CRP Panels (for Khandong ckt I and ICT 1), for which some delay is expected and the whole work will tentatively be completed by July'23.

Deliberation of the sub-committee

1. Regarding Jiribam-Haflong line, DGM NERTS updated that corpus amount has been conveyed by the forest department and NHIDCL has deposited the amount to PGCIL. PGCIL will now deposit the amount to the forest department in next 5days, after which forest department will issue the clearance. After that, clearance for RIO will be applied. Considering all the processes, the line is expected to return by 15th April 2023.

2. Regarding reconductoring of Umiam stg I-stg III, Meghalaya updated that the reconductoring has been completed.

3. NERPSIP stated that RoW issue in Mawngap section still persists and the matter is being followed up at the highest level.

4. Regarding PLCC for Khandong-Umrangshu line, AEGCL updated that PLCC panel has reached Umrangshu end. PLCC will also be supplied to Khandong end soon.

5. Regarding permanent restoration of Khliehriat-Khandong D/C, DGM NERTS apprised the forum that line part of ckt 1 is ready, however bay of ckt 1 belongs to NEEPCO, so NEEPCO has to make the bay ready in due time. Regarding the ckt II, he apprised that line side work is completed and bay belongs to POWERGRID and some connection changes have to be made in the bay. However, NEEPCO has to complete the SAS and SCADA related works. He also enquired about the readiness of Umrangshu bay at Khandong as the temporary arrangement to charge the Umrangshu line has to be stopped as soon as the Khliehriat-Khandong D/C is restored as per the permanent arrangement.

GM, NEEPCO updated that Umrangshu bay will be ready after the PLCC panels are supplied by AEGCL and added that SAS as well as SCADA related works at Khandong is underway.

Further, DGM NERTS intimated that for bay related works at Khandong, shutdown of the Khliehriat-Khandong-Umransgshu link shall be required for two days. AEGCL raised concern that Outage of the said link will lead to blackout in Haflong and Umrangshu area, hence the outage duration has to be either restricted to one day or day time shutdown be taken.

PGCIL assured to look into the possibility of restricting the shutdown period as suggested by AEGCL.

Regarding Revival schedule of Generating units, GM, NEEPCO updated that dry spinning of Khandong stg II turbine will start at the end of March'23 and the unit is well poised to be recommissioned by 15th April, 2023 subject to completion of permanent restoration of Khandong-Khliehriat D/C by PGCIL. He further added that one unit of Kopili will come by May, 2023 and the 2nd Unit will come by June 2023.

6. Regarding Evacuation for Kopili:

i. DGM, NERTS updated that for Kopili-khandong D/C, procurement SAS based panel from OEM is involved and the restoration work may go upto September'23.

ii. On the question of restoration status of 220kV Misa bays at Kopili, GM NEEPCO updated that bay equipments are ready, but cabling termination work is still left. He further added that restoration of 220/132kV ICTs has to be ensured by the PGCIL at

the earliest so that reliable station and auxiliary power supply can be ensured through the 132/33kV SST and SAT.

7. NERLDC and SLDC Meghalaya raised concern that restoration of Misa-Kopili-Khandong link in totality is essential for ameliorating the power supply scenario in Meghalaya, specially before the onset of next winter season.

The sub-committee noted as above

B.9. 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"

Pursuant to the above regulation NERPC, through an empowered committee, has finalized the Guwahati Islanding scheme and prepared the DPR. The DPR was presented in 23rd NERPC/TCC meeting to get approval for funding through PSDF.

In 196th OCCM, Member Secretary NERPC updated that the finalized DPR was discussed in 23rd NERPC meeting and issue of high cost was flagged. So, re-estimation of project cost will be done at the earliest.

In the 198th OCCM, AEGCL was requested to re-examine the cost estimates in the DPR and intimate the subcommittee.

In the 199th OCCM, AEGCL updated that the substations identified under the Guwahati islanding scheme are mostly devoid of OPGW connectivity with the SLDC and thus OPGW requirement is high. However, other OPGW suppliers are being consulted to reduce the cost implication.

After detailed deliberation, the forum decided that the empowered committee on islanding scheme will reassemble and explore the option of using existing fiber optic links, wherever present (on bandwidth sharing basis) and mull over the ways to reduce total cost of the islanding scheme. The report of the committee will be regularly discussed in the NeTEST meetings

Deliberation of the sub-committee

Director, NERPC stated that in the 24th NETeST 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.

It was decided that special meeting of the empowered committee members will study in totality and finalize the proposed scheme.

The sub-committee noted as above.

Action: NERPC and All empowered committee members

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

Status as updated in the 199th OCC meeting

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

Meghalaya	Submitted	17 out of 17 feeders completed. Forum requested to share the points with RLDC SCADA	Done
Mizoram	To be submitted	Completed	SCADA display has been made at SLDC but real time data is not reporting. The SCADA display is to be shared with NERLDC.
Nagaland	Submitted	Completed	Completed
Tripura	Submitted	Stage-1(49.4Hz), Stage-2 (49.2Hz), Stage-3(49Hz) require installation of UFR. Stg I UFR installed	Mapping by Feb'23

Deliberation of the sub-committee

Status as updated in 200th OCCM

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

Meghalaya	Submitted	17 out of 17 feeders completed. Forum requested to share the points with RLDC SCADA	Done
Mizoram	To be submitted	Completed	SCADA display has been made at SLDC but real time data is not reporting. The SCADA display is to be shared with NERLDC.
Nagaland	Submitted	Completed	Completed
Tripura	Submitted	Stage-1(49.4Hz), Stage-2 (49.2Hz), Stage-3(49Hz) require installation of UFR. Stg I UFR installed	Mapping by Feb'23 for P K Bari and Ambassa. For Badarghat (33kV ss), mapping not possible as no RTU available

The sub-committee noted as above

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

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

Schedule as agreed in the 199th OCC meeting:

Region	Station	No. of generators	Suggested Schedule		Duration (days)
			Test Start	Test End	
NER	NEEPCO-Monarchak	1	26th July'22	28th July'22	done
NER	NEEPCO-Kameng	1 (by M/s Solvina)	Oct'22	Oct'22	Done on 20th & 21st Oct, 2022
NER	OTPCL-Palatana	2 (by M/s Solvina)	Nov'22	Nov'22	To be done*

NER	Doyang-NEEPCO	2 (by M/s Siemens)	Oct'22	Oct'22	4(water level to be sufficient enough to run the units at full capacity)**

*In the 199th OCCM, OTPC intimated that M/s BHEL has raised concern about the standard procedure that in case the change in actual grid frequency opposes the simulated frequency input, the governor action will be unpredictable and might be dangerous also which in turn will compromise the safety of the machine. Consequently, BHEL has proposed for some modification in the software procedure, which will abort the testing procedure when a mismatch is detected. The modified procedure will be tested within 1 month and the machine is expected to be ready for PFR test procedure by the end of June, 2023. OTPC however added that details of the suggested modifications is yet to be received from M/s BHEL and assured that the same shall be provided to NERLDC and NERPC once received from M/s BHEL.

**Regarding testing at Doyang HEP, NERLDC highlighted that due to insufficient water at Doyang, conducting PFR testing might not be possible at all for the present season, so testing of other unit of Kameng by M/s Siemens can be mooted. GM, NEEPCO expressed hope that Doyang might get sufficient water for the testing soon and requested the forum to keep the PFR testing schedule at Doyang as per the original plan for the time being. Therefore, it was decided that PFR testing at Doyang HEP will still be explored.

Deliberation of the sub-group

Regarding PFR test at OTPC, NERLDC updated that M/s BHEL has intimated through email about the readiness of the software block (to ensure the safety of the machine) which is to be incorporated in the plant controller. A meeting, to discuss the functionality of the software block and further usage of the same for conducting the PFR test at OTPC as per NLDC approved procedure will be held soon.

In respect of Doyang HEP also, possibility of PFR testing will still be explored.

The sub-committee noted as above

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

There is a requirement of regular and proper maintenance of transmission lines. It is requested to carry out the patrolling activities as per 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 199th OCCM, MS NERPC requested all the states to submit the reports in timely manner. He further impressed upon members to have pre-monsoon exercise for maintenance of transmission elements so as to minimize outages and disturbances during monsoon season

Deliberation of the sub-group

Manager, NERLDC informed that line patrolling reports have not been submitted by SLDCs of Manipur, Mizoram and Tripura. MS, NERPC strongly advised all SLDCs to seriously take-up the matter of regular line patrolling with their respective state utilities and submit the patrolling reports to NERLDC/NERPC on regular basis.

The sub-committee noted as above.

B.13. Monthly Review of LGBR

PARTICULARS (Peak Demand in MW as per LGBR vs Actual)	Dec-22 (LGBR)	Dec-22 (Actual)	Jan-23 (LGBR)	Jan-23 (Actual)	Feb-23 (LGBR)	Feb-23 (Actual)
Arunachal Pradesh	142.19	144.74	128.42	166	164.59	159
Assam	1470.00	1586.27	1533.00	1643	1550.00	1572
Manipur	265.00	245.67	287.00	248	239.00	225
Meghalaya	368.00	394.41	384.00	404	381.00	394
Mizoram	133.35	143.34	132.99	159	143.49	139
Nagaland	160.00	152.09	165.00	139	160.00	148
Tripura (exc. Bangladesh)	240.00	240.56	230.00	247.71	227.80	252
NER DEMAND (exc. Bangladesh)	2774.00	2905	2680.00	2866	2709.00	2801

PARTICULARS (Energy Requirement in MU as per LGBR vs Actual)	Dec-22 (LGBR)	Dec-22 (Actual)	Jan-23 (LGBR)	Jan-23 (Actual)	Feb-23 (LGBR)	Feb-23 (Actual)
Arunachal Pradesh	67.53	77.81	72.81	75.01	65.79	68.87
Assam	775.57	813.88	770.53	814.320	713.23	735.650
Manipur	101.43	103.86	107.70	104.6	88.92	78.24
Meghalaya	209.04	222.42	213.03	223.25	185.66	190.97

Mizoram	57.25	65.43	65.63	65.33	56.55	53.02
Nagaland	73.05	72.88	68.16	65.81	61.70	59.19
Tripura (excl. Bangladesh)	108.78	114.26	110.21	118.43	100.63	108.86
NER DEMAND (exc. Bangladesh)	1374.44	1470.54	1368.52	1467.423	1264.84	1295.493

Deliberation of the sub-committee

The sub-committee noted the LGBR projected demand vis-à-vis actual demand as above.

B.14. Installation of AWS by IMD Guwahati

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

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

In 198th OCCM, NERLDC intimated that modified MoU by IMD has been shared with all the States by e-mail.

In 199th OCCM, Assam updated that IMD had proposed some modifications in the draft MoU and they have accepted the same. Signing of the MoU will take place shortly.

The forum requested NERLDC to facilitate signing of the MoU between Assam and IMD. ED, NERLDC agreed to facilitate the signing of MoU between Assam & IMD and also stressed on the importance of expediting the process of signing the MoU as early installation will help the states in forecasting the load accurately.

Arunachal Pradesh mentioned that the draft MoU has been sent to Government of Arunachal Pradesh for approval. The forum requested all States to sign the MoUs at the earliest

Deliberation of the sub-committee

AEGCL updated that the draft MoU, as finalized by AEGCL, has been sent to IMD, Guwahati in January'23 itself for signing. The later will respond soon.

The sub-committee noted as above

B.15. Status of implementation of SPS in Assam Power System:

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

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

Triggering condition 2: Tripping of 220kV Misa - Samaguri D/C SPS action: Tripping of 132kV Samaguri-Sankardevnagar Line

AEGCL may update on the latest status regarding implementation status of the proposed SPS.

In 199th OCCM, NERLDC intimated that a bilateral meeting with SLDC Assam was held on 1st Feb'23 and Assam agreed to the proposed SPS scheme for tripping condition 1 with additional load cutting of 20MW at Narengi S/S.

AEGCL intimated that disconnection of Narengi GSS, trip signal will have to be sent from Kahilipara GSS which is not possible as there is no OPGW connectivity in 132 kV Kahilipara- Narengi line. Hence, SLDC informed that additional 20 MW load disconnection at Sarusajai / Kahilipara GSS will be explored after consultation with DISCOM.

Regarding tripping condition 2, AEGCL agreed to implement the scheme without any modification and the work will start after obtaining their administrative approval

Deliberation of the sub-committee

Regarding tripping condition 1, AEGCL updated that distribution feeders for disconnection of 20MW at Sarusaji/Kahilipara has been identified and logic is being finalized. AEGCL further informed that, in order to implement the SPS, some communication equipment would be required at Kahilipara.

Regarding Tripping condition 2, AEGCL informed that they will implement the same.

The sub-committee noted as above

B.16. Installation of 10 MVAR Bus Reactor at 132 kV Meluri S/S for Closed loop formation of Kohima-Meluri-Kiphire-Tuensang-Mokokchung link

132 kV Kohima S/S is presently connected with the rest of the NER grid via 132kV Karong-Kohima line,132 kV Kohima-Chiephobozou-Wokha-Sanis-Doyang link,132 kV Dimapur-Kohima line & 132 kV Kohima-Meluri line but Kohima-Meluri-Kiphire-Tuesang-Mokokchung link is generally kept open from Kiphire end. Kohima S/S caters to the load of Capital area of Nagaland Power System; hence the availability of Kohima S/S is very important. However, this area is prone to frequent grid disturbances due to its geographical location.

On 2nd Nov'22 at 13:52 hrs during the visit of Hon'ble President of India, Grid disturbance occurred in Kohima area of Nagaland Power System with a load loss of 19 MW and generation loss of 8MW making it a critical situation.

Forming closed loop connection of Kohima-Meluri-Kiphire-Tuesang-Mokokchung will strengthen the connectivity of Kohima S/S and upgradation of 66kV Kiphire-Tuensang-Mokokchung link to 132 kV will enhance the reliability and security of the Capital area of Nagaland Power System. However, high voltage issue at Meluri S/S (upto 145 kV) is observed in the present condition. As per system study, installation of Bus reactor of 10 MVAR capacity at Meluri S/S will resolve the issue. Hence, the Kohima-Meluri-Kiphire-Tuesang-Mokokchung link at 66kV or 132 kV can be kept in closed loop only after installation of 10MVAR Bus Reactor otherwise high voltage condition will persist in Meluri and Kohima S/S.

DoP, Nagaland is requested to install the reactor at 132 kV Meluri S/S for closed loop operation of the above mentioned link and expedite the upgradation works of the same to 132 kV.

In 196th OCCM the forum had approved for installation of 10MVAR switchable line reactor at Meluri s/s to address high voltage scenario as highlighted by NERLDC and requested Nagaland to complete the upgradation of 66kV Mokokchung-Tuensang-Kiphire link to 132kV at the earliest. Also, the matter was referred to CMETS meeting, but CTU pointed out that concerned substations and lines are intra-state elements, so planning related to these elements is beyond its ambit. Therefore, the matter is referred to sub-committee for further deliberation.

Deliberation of the sub-committee

DoP Nagaland updated that proposal for installation of Bus Reactor will be proposed for PSDF funding and for upgradation of bay equipments at Mokochung and Kiphire substations, funding will be requested from North Eastern Council (NEC).

Member Secretary, NERPC requested NERPSIP to explore the option of covering the upgradation woks under NERPSIP projects. NERPSIP stated that they will look into it.

The sub-committee noted as above

B.17. Regarding construction Power 132KV line for upcoming TATO -I, II and HEO Hydro Electric Power Project.

NEEPCO is all set to start the Project activity of Tato - I, II and Heo H.E Project at Shi Yumi district of Arunachal Pradesh from this financial year. In order to execute the following point may be looked into.

1 Power Evacuation point: NEEPCO shall initially harness 1125 MW from these three projects and two more project namely Naying and Hirong is in pipeline. Therefore, power evacuation point for all the project may be located at Tato-II Power Site.

2 Initially to start the project activity it is required to have 132 KV at Tato Shi Yumi district which will be initially utilized for construction power and after that it can be utilized for power evacuations.

It is understood that there is one 132KV line under construction from Kamba to Mechoka via Tato under the Comprehensive Scheme. One sub-station either at Heo or Tatao I power house can also be planned under that Scheme. Else, the line please be constructed at a faster pace and NEEPCO can make a LILO at a suitable location at Tato Shi Yumi district to cater the construction power of the said upcoming H. E. Projects in coordination with DoP, Arunachal Pradesh.

In 199th OCCM, GM, NEEPCO requested DoP Ar. Pradesh to set up one substation at Tato II area at Tato under the scope of comprehensive scheme or make a LILO of the Kamba Mechoka line at Tato II so that construction power can be provided for the upcoming HEP projects of NEEPCO in the area.

SE SLDC, DoP Ar. Pradesh apprised the forum that Kamba Mechoka line under the scope of comprehensive scheme will be initially charged at 33kV as load requirement

is low in the Mechoka area and suggested that LILO of the line would be a better option. He asked GM NEEPCO to write a request letter to CE (Transmission) DoP Ar. Pradesh for LILO of the line at Tato.

The forum appreciated the need for timely provision of the dedicated feeder for construction power to NEEPCO and exhorted PGCIL Comprehensive Scheme to expedite the commissioning of Kamba-Mechoka line.

Deliberation of the sub-committee

GM, NEEPCO apprised the forum that they have written to transmission circle of DoP Arunachal Pradesh and the matter is under deliberation.

The forum urged Comprehensive Scheme to expedite the construction of 132kV Kamba-Mechoka line so that LILO can be made at Tato area on time.

B.18. Request for PSDF funding by MEPGCL for various projects

In 199th OCCM, MEPTCL had requested for approval of the OCC forum for PSDF funding for following projects-

i. Installation of two numbers Generator Transformer for Myntdu Leshka HEP
ii. Installation of Raccoon covered Conductor for 33kV Power supply from Myntdu Leshka stage-1 power station to MLHEP Dam
iii. Installation of open loop cooling water system and improvement of dewatering for Myntdu Leshka stage-I power station
iv. Installation of Raccoon covered conductor for outside source of 33kV power supply of Umiam stage IV Power Station, Nongkhyllem coming from Umiam stage III Power Station, Kyrdemkulai
v. Proposal for installation of equipments for Mobile Communication facilities for all Power Stations of Meghalaya

In the meeting Member Secretary informed that PSDF funding is accorded as per guidelines issued by Ministry of Power. He also stated that in order to minimize return/rejection and to facilitate acceptance of proposal from PSDF, thorough study of the objective and guidelines of PSDF is necessary.

After brief discussion, it was decided that RPC Secretariat will seek clarification from CEA for inclusion of such projects in the PSDF. All related items referred from 23th TCC/RPC meeting with respect to PSDF funding would also be taken up together.

The criteria for projects to be considered for PSDF funding is stated in the PSDF regulation as below:

"Quote"

4. Utilization of the PSDF:

(1) The funding for projects from PSDF to the project entities shall be in the form of grant.

(2) To ensure that the tariff in respect of such projects or schemes is not claimed for the portion of the grant from PSDF, such grant amount shall be reduced from capital cost of the project.

(3) PSDF shall be utilized for funding of projects or schemes for creation of necessary infrastructure for the following purposes:

(a) Creating necessary transmission systems of strategic importance based on operational feedback by Load Despatch Centers for relieving congestion in inter-State transmission system and intra-State Systems which are incidental to the ISTS;

(b) Installation of shunt capacitors, series compensators and other reactive energy generators for improvement of voltage profile in the Grid;

(c) Installation of standard and special protection schemes, pilot and demonstrative projects and for setting right the discrepancies identified in the protection audits on regional basis;

(d) Renovation and Modernization of transmission and distribution systems for relieving congestion; and

(e) Any other project in furtherance of the above objectives such as conducting technical studies and capacity building.

(4) Funds from PSDF may also be utilized for the projects proposed by the distribution utilities in the above areas which are incidental to inter-State transmission system and have a bearing on grid safety and security, provided that these projects are not covered under any other scheme of the Government of India or respective State Government(s).

(5) Any Central Government scheme in the interest of development of power system which requires support from PSDF as part of the scheme shall be eligible for assistance from PSDF.

(6) The Central Government may prioritize sanctioning and release of funds from PSDF based upon importance of the project or the scheme and quantum of fund involved.

(7) Private sector projects shall not be eligible for assistance from PSDF.

"Unquote"

Deliberation of the sub-committee

Member Secretary NERPC informed that according to NPC Division, CEA, the above proposal item no i, ii and iv will not be eligible for PSDF funding. He also clarified that communication elements like RTU, FOTE, OPGW etc for lines up to 66kV only are eligible for PSDF funding.

The sub-committee noted the request of MePGCL. MePGCL was advised to prepare proposal considering above guidelines and send to PSDF secretariat directly.

B.19. Meghalaya Power Transmission Corporation Limited (MePTCL) proposed the following for consideration and approval by the forum for funding under PSDF:

Item No.1: Erection, Procurement and Commissioning of 33 KV Bus in various Grid Substation.

Meghalaya Power Transmission Corporation Limited (MePTCL) proposed for construction of 33 KV Bus and outgoing 33 KV feeders with all terminal equipments along with control and Protection System where 33 KV bus are not available in the following 132 KV Grid Substation

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

Item No.2: Re-Conductoring of 132KV Mawlai-Mawphlang S/C Line by HTLS Conductor.

To cater to the increase power flow towards the capital city and surrounding areas of Shillong in the event of bus shutdown of Stage-I Power Station, it is proposed for re-conductoring of 132KV Mawlai-Mawphlang S/C line by HTLS Conductor.

Item No. 3: Installation of Capacitor Banks In 132kV Sub Station

Due to low voltage problem during peak hours at these Substations, it is proposed for installation of Capacitor Banks at the following 132KV Substation:

(i)132KV Rongkhon Substation

(ii) 132KV Ampati Substation

(iii) 132KV NEHU Substation

(iv) 132KV Mawlyndep Substation.

Item No. 4: Requirement of 132/33 KV, 2x25 MVA Sub-Station at Nongpoh under Ri Bhoi District

Requirement of 132/33 kV, 2X25 MVA Sub Station at Nongpoh with LILO of 132 kV Stage-III - Umtru Line. This district has been declared as Aspirational District by NITI Aayog. It is also the most industrialized district of the State of Meghalaya contributing to the economy and development of the State and the region. It has the maximum number of Hydro stations in the state and also the oldest Hydro Power Station in the region. Besides this district lies between Shillong and Guwahati. Although a number of Grid stations have been installed in the industrial area of the district but the head quarter is not having any 132KV substation to cater to the growing load demand and power supply reliability for the common public. Further areas adjacent to Byrniliat 400/220/132kV substation which are contiguous to Guwahati city do not have a single 132/33kV substation rendering poor quality of power supply to residents of Nongpoh and its adjoining areas.

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

i. 132/33KV Substation at Nongpoh with LILO of Stage III- Umtru line.

ii. 132/33kV Substation at the existing 400/220/132kV Killing Substation with LILO of 132 kV Umtru - Kahelipara D/C.

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

Item No. 5: Reconductoring of 132 KV NEHU-Mawlyndep-Mustem-Khliehriat Line

In order that snapping of conductors due to overloading and de-capping can be avoided, it is proposed to reconductor the 132kV NEH1J-Mawlyndep- Mustem-

Khliehriat S/C line with high temperature and low sag (HTLS) conductor using the existing towers. With this enhanced capacity, the grid will be more flexible and this will lead to fewer disturbances in the grid.

Deliberation of the sub-committee

The sub-committee noted the request of MePTCL. MePTCL was advised to prepare proposal considering above guidelines as discussed at item B.18, and send to PSDF secretariat directly.

NEW AGENDA ITEMS

Agenda form AEGCL

C.1. Proposal for shifting of 33 KV line crossings of MePDCL, executed by PGCIL under NERPSIP for charging of 132 KV Agia Hatsingimari line.

AEGCL is constructing a single circuit line on double circuit tower from Agia to Hatsingimari and a substation at Hatsingimari. The project is almost completed and targeted to be charged by March 2023. However, 33 KV distribution lines of MePDCL has been constructed by PGCIL and some of the locations of the 33 KV line are below the minimum electrical clearance required. Hence, PGCIL is requested to take necessary action for shifting of the electrical poles so that the transmission line can be charged at the earliest. The list of locations is as given below: -

Sl No	Span of Agia Hatsingimari line	GPS Co-ordinates of crossing	Place	33kV Feeder	Status
1	89/1-90/0	25.94657500 90.12463611	Hollaidanga	Phulbari-Tikrikilla	Not sufficient vertical clearance.
2	90/1-90/2	25.94410278 90.12089167	Hollaidanga		Not sufficient horizontal & vertical clearance. Near this crossing 2 nos. of 33kV pole; one single pole and one double pole have to shifted.
3	97/0-98/0	25.87361111 90.09583333	Bamundangra		Stringing of 33kV not done yet. Not sufficient vertical clearance. 33kV Single pole has to be shifted.
4	105/0 - 106/0	25.86138889 90.56444444	Chibinang	Phulbari-Rajabala	Insufficient vertical clearance. 33kV Single pole has to be shifted.
5	107/0-107/1	25.92972222 90.07972222			Insufficient vertical clearance. 33kV Double pole has to shift.
6	107/4-107/5	25.85685000 90.06697222	Shyamnagar		Insufficient vertical clearance. 33kV Single pole has to be shifted
7	107/5-107/6	25.85742500 90.06496944			Insufficient vertical clearance. 33kV Single pole has to be shifted.
8	123/0 - 124/0	25.81646944 90.97488056	Old Bhaibari		Stringing of 33kV not done yet. Insufficient vertical clearance.
9	124/0-125/0	25.81459444 90.97468611			Stringing of 33kV not done yet. Insufficient vertical clearance. 33kV Single pole has to be shifted.

Deliberation of the sub-committee

NERPSIP informed that shifting work of the mentioned lines is underway and will tentatively be completed within one week.

The sub-committee noted as above.

C.2. SEM meters of ISTS lines

All the interface meters installed at the point of interconnection of ISTS network for the purpose of energy accounting are being owned by the CTU. All the interface meters have been procured and maintained by the PGCIL since inception of the connection. AEGCL has only been given the responsibility to collect the data and send to NERLDC every week as per IEGC. Moreover, time drift and periodic calibration report need to be maintained by PGCIL for better accuracy in energy accounting.

Moreover, AEGCL has installed some SEM (Genus make) in series with the existing SEM (L&T make) with AMR facility at ISTS points under SAMAST scheme. In future, AEGCL will install meters at all the ISTS points in series at AEGCL sub-station.

Deliberation of the sub-committee

After detailed deliberation, the forum approved the proposal of AEGCL to connect new SEM meters with AMR facility (under SAMAST scheme) in series with the existing SEMs at all the ISTS points, provided that there is no disturbance or tampering with the existing SEMs.

The sub-committee noted as above

Agenda from NEEPCO

C.3. Shutdown Requirement of SEMs for recommissioning of Khandong stg II

With the E&C works of Khandong Stage II expected to be completed by last week of this month, overlooking any last-minute hindrances, the following ABT compliant SEM meters for the following feeders including both Main and Check Meters are required:

1. 132 kV Haflong Feeder - 02 nos
2. 132 kV Kheleriat II Feeder - 02 nos
3. Unit HV Feeder - 02 nos
4. Unit LV Feeder - 02 nos
5. 3.0 MVA SAT II - 02 nos

Deliberation of the sub-committee

DGM, PGCIL stated that PGCIL will request CTU for procuring the SEMs on the basis of letter from NERLDC on the same.

NERLDC asked NEEPCO to provide the bay SLDs, so that quantity of required SEMs be finalized.

The sub-committee noted as above

Agenda from NERPC/CEA

C.4. RPCs are requested to consider following agenda items in the next OCC/RPCs meeting 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 includes 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.

2) An analysis has been done on underutilized power of Generating Station (CGS, ISGS, State Gencos and IPPs) as per data provided by SRPC on the basis of 2022-2023. As per the analysis, states in SR region which are in surplus and deficit in the month of April, May and June on the basis of LGBR data for year 2023 are attached as **Annexure- C.4**.

All RPCs other than SPRC are requested to carry out similar kind of exercise and submit to NPC, CEA at the earliest.

Deliberation of the sub-committee

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.

The sub-committee noted as above.

C.5. Preparedness for implementation of Resource Adequacy Framework and requirement of Data

As per the draft resource adequacy guidelines published in September 2022, CEA is required to prepare long term National Resource Adequacy Plan (LT-NRAP). For preparing the LT-NRAP, State-wise information Viz: Demand, Installed Capacity, Generation (both RE and Conventional), Financial data, etc. are required to be furnished (as per the format circulated by NERPC through mail dated 21.03.2022) **(Annexure C.5).**

Deliberation of the sub-committee

Member Secretary, NERPC requested all States to furnish the requisite information at the earliest.

The sub-committee noted as above.

C.6. 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 the 24th NeTEST meeting, all state utilities suggested to go for collective Annual Maintenance Contract and the matter was referred to next OCC meeting for detailed discussion.

Deliberation of the sub-committee

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 24th NETeST meeting for cost effectiveness vis-à-vis individual AMC.

Member Secretary NERPC intimated the forum 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.

The sub-committee noted as above

Action: NERPC

Agenda from NERLDC

C.7. Preparedness for upcoming Summer and Monsoon season

Extreme weather has a significant impact on critical infrastructures, and is considered one of the main causes of wide-area electrical disturbances worldwide.

It may be mentioned that the All-India Demand had crossed 200 GW during 2021 and 2022 and a comparatively harsher summer is expected this year which will push up the weather beating load in the country. Keeping these aspects in view and to meet the increased power demand smoothly in the upcoming months ahead, following preparatory measures has been identified in line with directives by CEA:

Generating stations should build up coal stocks.

1. Hydro Generators are requested to plan their schedule for the summer season and avoid spillage to manage the summer load.
2. SLDCs should remain in high state of alert, particularly in case of forecast of an imminent cyclone / thunderstorm / heavy rainfall.
3. All constituents must manage their demand by proper utilization of intra state generation and by strictly maintaining their drawl as per their schedule. RLDC/SLDCs need to monitor closely and SLDCs should maintain their drawl from the grid as per the schedule at all points of time
4. Deferment of planned shutdown of generating units will be considered if necessary & critical transmission corridors will be monitored closely & planned shutdowns of the same may be deferred as per system conditions.
5. Thermal units, which are under reserve shutdown, should be kept in readiness for operation at a short notice period.

6. All protection systems including SPS, islanding schemes and Automatic Demand Management Schemes (ADMS), etc. need to be checked by the concerned utilities for their healthiness & proper functionality

Hence, all the NER constituents are requested to take the above-mentioned steps to maintain smooth supply of power to the consumers during summer / monsoon season.

Deliberation of the sub-committee

The forum requested all the utilities to follow the above guidelines and directive of CEA.

The sub-committee noted as above

C.8. Tripping of 400 kV Palatana-Silchar-1 and 400 kV Palatana-Silchar DC on 4th and 9th March'23

S.No	Element Name	Tripping Date and Time	RELAYINDICATION_A	RELAYINDICATION_B
1	400 kV Palatana - Silchar 1 Line	04-03-2023 19:55	Over Voltage started, which protection issued trip not concluded	DT received
2	400 kV Palatana - Silchar 1 Line	09-03-2023 18:36	DT send	DT received
3	400 kV Palatana - Silchar 2 Line	09-03-2023 18:36	DT send	DT received

As per DR output from Silchar, there was no fault on the system. The line tripped from Silchar end on DT signal received. As per FIR submitted by OTPC, DT signal was sent from Palatana end. However, no cause of tripping was intimated.

OTPC is requested to update the root cause of DT signal send issue and its remedial measures taken to the forum.

Deliberation of the sub-committee

The matter was referred to the upcoming Protection sub-group meeting.

The sub-committee noted as above

C.9. Outage of Important 400 kV bays at Palatana, OTPC:

GT-1 & Silchar 1 Tie Bay is under outage from 31/12/2022.

GT-2 & 400/132 kV ICT 2 Tie Bay is under outage from 10/02/2023

Palatana is requested to furnish the timeline for restoration of the above mentioned bays for maintaining reliability and security in NER Grid and expedite the same for meeting the increased power demand smoothly in the upcoming months ahead.

Deliberation of the sub-committee

Matter could not be discussed due to absence of representatives of OTPC.

C.10. SPS Review during 58th PCC meeting held on 14th March'23

NERLDC delivered a brief presentation about the SPS schemes of NER and SPS related to Bangladesh in the 58th PCC held on 14th Mar 2023 for review. NER Stakeholders are requested to share their comments, if any on the SPS schemes. The updated SPS list is as shown:

SPS within the region		
Sl. No	SPS Name	Remarks
1	SPS related to tripping of 400 kV Palatana-Silchar D/C when both modules of Palatana in service.	To be kept in service
2	SPS related to reverse power flow more than 60 MW from LV to HV side of 400/220 kV Azara ICTs	In the present scenario i.e. after commissioning of 400 kV Silchar-Misa DC and 400 kV Silchar-Imphal-New Kohima-Mariani-Misa link flow from LV to HV side of 400/220 kV Azara ICT is not observed. Also, NERLDC informed that this SPS has not operated till date. This SPS is to be discarded/removed
3	SPS related to tripping of 132 kV Umiam Stg-I to Umiam St-III D/C lines	MePTCL informed that 25 MW load shedding is common for both tripping of single ckt as well as tripping of Double ckt. SPS related to tripping of single ckt is required till Misa- Kopili- Khandong link is restored and SPS related to tripping of Double Ckt is to be kept in service in all cases.

4	SPS: When 220kV BTPS Salakati D/C gets overloaded or in case of outage of one circuit the other circuit gets overloaded i.e loading greater than 600A)	To be kept in service till reconductoring of 220 kV BTPS - Salakati D/C is completed
5	SPS associated with generation evacuation from BgTPP.	To be kept in service
6	SPS associated with generation evacuation from TGBPP, Monarchak	To be kept in service
7	SPS related to Outage of 220 kV BTPS – Rangia I & II	To be kept in service
8	SPS related to the tripping of Bus Reactors at 400 kV S M Nagar (ISTS)	To be kept in service
9	SPS related to the tripping of Bus Reactors at 400 kV P K Bari (ISTS)	To be kept in service
10	SPS related to the tripping of Bus Reactors at 400 kV Imphal (PG)	To be kept in service

SPS related to Bangladesh

1	SPS-2(Outage of 400kV Palatana – SMNagar line charged at 132kV) SPS Action: Entire load disconnection of South Comilla by way of tripping of 132kV SMNagar-South Comilla D/C	May be kept in On condition and reviewed after commissiong of: 1. Commissioning of Surajmaninagar – Monarchak 132kV D/c line. 2. Reconductoring of 132 kV-Surajmaninagar (ISTS)-Surajmaninagar(TSECL) with HTLS conductor 3. Reconductoring of 132 kV-Surajmaninagar (ISTS)-Budhjungnagar lines with HTLS conductor
2	SPS-3(Outage of one circuit of 400kV SM Nagar South Comilla D/C(charged at 132kV) SPS Action: 30MW load disconnection at South Comilla area of Bangladesh followed by shifti1221 ng of the load to main grid of Bangladesh	To be discussed in OCC Meeting with Bangladesh

3	SPS-4(Outage of both 400/132kV 2x125MVA ICTs at Palatana) SPS Action: Entire load disconnection of South Comilla by way of tripping of 132kV SMNagar-South Comilla D/C	May be kept in On condition and reviewed after commission of: 1. Commissioning of Surajmaninagar – Monarchak 132kV D/c line. 2. Reconductoring of 132 kV-Surajmaninagar (ISTS)-Surajmaninagar(TSECL) with HTLS conductor 3. Reconductoring of 132 kV-Surajmaninagar (ISTS)-Budhjungnagar lines with HTLS conductor

New SPS

Sl. No	SPS Name	Remarks
1	SPS related to secure & reliable operation of Leshka HEP	MePGCL informed that M/s Hitachi has responded to them and has required for schematic and other documents for providing the quotation. MePGCL is compiling the same. Also, the DPR for installation of TLSA and Leshka SPS is to be kept separate.
2	SPS related to prevention of cascading tripping in Assam power system (Upon tripping of either 220 kV Misa-Samaguri DC or 220 kV Azara-Sarusaji DC)	The Scheme is based on hardware logic-based tripping. POWERGRID suggested that analog based tripping from BCU can also be explored. AEGCL informed that they prefer hardware-based logic but the same will be discussed with higher management.

Deliberation of the sub-committee

The presentation of NERLDC on SPS schemes of NER is attached as **Annexure C.10**. Regarding SPS2 & SPS4(Related to Bangladesh) the scheme is to be continued till the reconductoring/commissioning works is completed. DGM, SLDC TSECL updated that the reconductoring works are taken up under PSDF and the work is underway but RoW issues is hampering the progress.

The sub-committee noted as above

C.11. Long Outage of 132KV Agartala-RC Nagar-1:

132KV Agartala-RC Nagar-1 line is under continuous shutdown since 18-12-2022 due to severe SF6 leakage from CB at RC Nagar end. Due to the non-availability of ckt-1 the major part of the generation of RC Nagar gets evacuated through ckt-2 to the major load areas of Agartala and SM Nagar. With the onset of summer, the drawl of Bangladesh has crossed 160 MW in the month of March, 2023. Most of the Bangladesh load is catered from the generation of Palatana, RC Nagar & internal generations of Tripura through 132KV SM Nagar-SM Nagar, 132KV SM Nagar-Agartala & 132KV Palatana-SM Nagar lines.

In the recent past it is observed that due to the increase in Bangladesh drawl, 132KV SM Nagar-SM Nagar loading has crossed 85MW in the evening peak hours. As such tripping of 132KV RC Nagar-Agartala ckt-2 may lead to tripping of 132KV SM Nagar-SM Nagar line further leading to Grid disturbance in Tripura & Bangladesh. To avoid any untoward incident considering N-1 contingency of either of 132KV Agartala-RC Nagar-2 & 132KV SM Nagar-SM Nagar line generation backdown may need to be imposed on AGTCCPP & Tripura own generation in the coming days.

Hence AGTCCPP is requested to restore 132KV RC Nagar-Agartala ckt-1 on priority for secure & reliable supply of power in Tripura and Bangladesh system.

Deliberation of the sub-committee

GM, NEEPCO intimated the forum that the OEM, M/s Hitachi has been communicated for procurement of CB spares and it will be supplied by the end of April, 2023.

The sub-committee noted as above

C.12. Near miss incident in Upper Assam are due to non-coordinated Switching of Intra state grid element.

Near miss incident has occurred in upper Assam area on 22-02-2023 due non-coordinated switching of Transmission line, which could have emerged as a grid disturbance. The Sequence of events for the incident are as follows.

1. 220kV-AGBPP-Mariani (As) was under Planned shutdown from 11:16 Hrs of 22-02-2023.

2. At 23:03hrs 220 kV Mariani – Amguri line tripped on distance protection.
3. At 23:22hrs 132kV Lakwa – Mariani line tripped on distance protection.
4. Due to tripping of 132kV Lakwa – Mariani line the power flow reached around 95MW on 132 kV Nazira – Teok T/L, immediately NERLDC instructed Assam to reduce their own generation and requested AGBPP to generate as per schedule.
5. However, at around 23:24 Hrs Assam hand tripped 132 Kv Nazira – Teok T/L without intimating NERLDC which led to overloading of 220kV-AGBPP-Mariani (PG) T/L (286MW), causing a near miss incident in Upper Assam area.
6. Generation reduction in AGBPP & LTPS was observed at around 23:40 Hrs & subsequently around 00:08 Hrs 132kV Lakwa – Mariani & 132 Kv Nazira – Teok lines were charged.
7. Combined effect of generation reduction by Assam, AGBPP & charging the above two lines, led to reduction in loading in 220kV Mariani (PG) - Kathalguri T/L to 139MW.

Hence all constituents are requested to remain proactive to avoid such incidents.

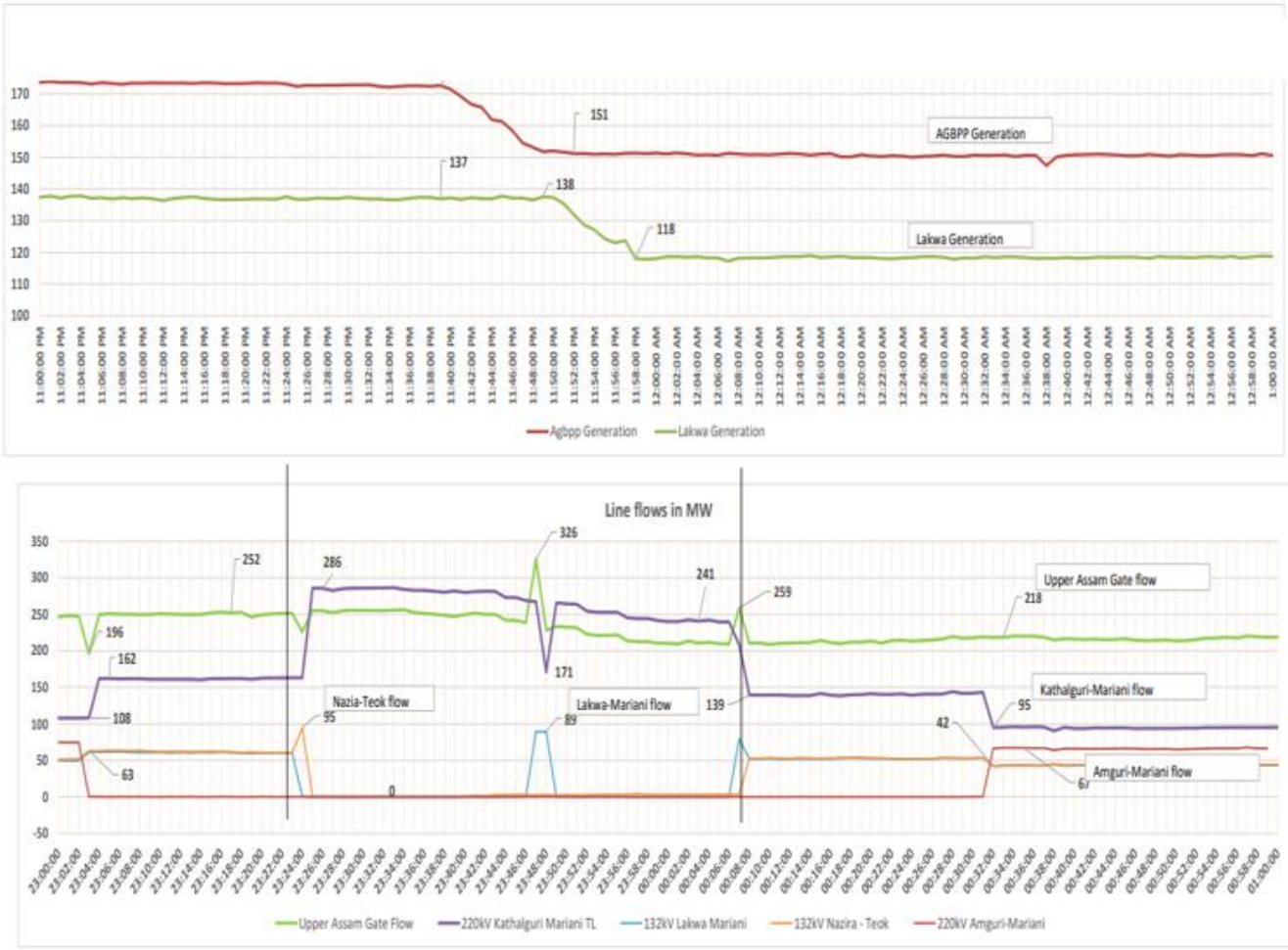


Fig: Sequence of events

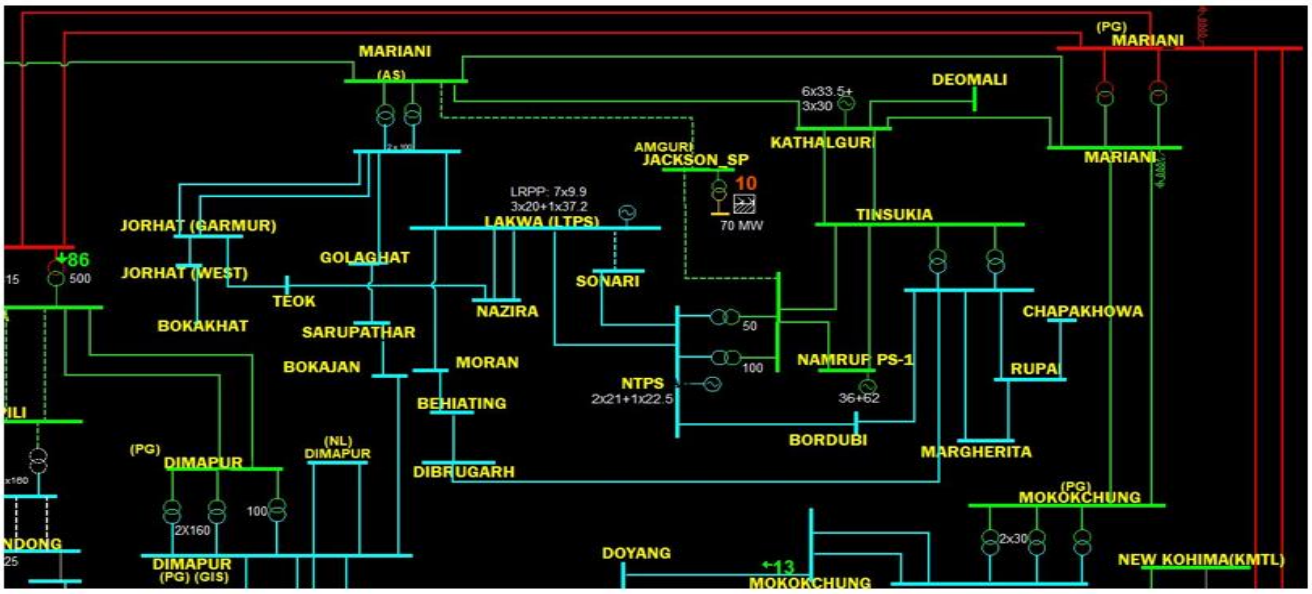


Fig: Upper Assam SLD

Deliberation of the sub-committee

NERLDC stated that as per Regulation 5.2(b) of IEGC "No part of the grid shall be deliberately isolated from the rest of the National/Regional grid, except (i) under an emergency, and conditions in which such isolation would prevent a total grid collapse and/or would enable early restoration of power supply, (ii) for safety of human life (iii) when serious damage to a costly equipment is imminent and such isolation would prevent it, (iv) when such isolation is specifically instructed by RLDC".

ED, NERLDC stated that this near miss event has provided an important learning and requested AEGCL to follow the pertinent regulations. He further stated that state SLDCs should coordinate with individual utilities on the matter of grid operation of intra-state lines and no utility should take unilateral action on grid operation. He also advised all SLDCs to coordinate with NERLDC in real time whenever it is anticipated that any operation on intra-state elements shall have impact on the elements of regional grid or important grid elements.

The sub-committee noted as above

C.13. Availing of Shutdown without approval of competent authority

400Kv Silchar-Misa-2 was under shutdown from 10-March-23 for permanent restoration of 400kV Silchar – Misa D/C Line which earlier was charged through ERS (availed by Indigrid). The shutdown was restored on 18-March-23 at 20:36 Hrs. While charging the above line, main bay of 400 kV Silchar-Misa-2 at Silchar was not taken into service as the bay was taken into shutdown (By Powergrid) since 10th March for attending CB Marshalling box. However, no prior intimation/approval was accorded from competent authority for the work. But the matter was intimated to NERLDC through mail dated 20-March-2023. The shutdown of the bay is yet to be returned (expected on 31-March-2023) reducing the reliability of the system.

This is considered to be a violation of grid code. Powergrid is requested to refrain from such practices in future.

Deliberation of the sub-committee

DGM, PGCIL stated that during the restoration of shutdown on 18th March'23, the breaker of main bay did not close and since the bay is GIS, the OEM has been communicated and the matter will be resolved by the end of the month. Further he

apologized for non-intimation of the outage of the main bay of 400 kV Silchar-Misa-2 at Silchar to NERLDC and informed the forum that such practice will not happen in future.

The sub-committee noted as above

Agneda from NERTS

C.14. Shutdown requisition: 132kV Bus Reactor at Aizawl Sub-station for Pilot project on Retro-filling of Mineral Oil with Ester Oil

With vision of reducing carbon footprint & increasing Life of equipment, a pilot project is being taken up by POWERGRID of retro-filling 132KV 20MVAr Bus Reactor at Aizawl from Mineral Oil to Ester Oil.

Ester fluids are increasingly being used world-wide due to advantages like better Thermal Performance, biodegradability & fire-retardant properties. Natural ester premium Grade oil by M/s APAR is said to have higher Oxidation stability which ensures longer life and low viscosity build-up- which results in better cooling characteristics. Moreover, this will reduce the dependency on Fossil fuel based mineral oil also.

Along-with concerned OEM of Reactor anticipate higher operating temperatures – As such a joint supervision is also in place during this process of retro-filling.

Hence with the prospect of utilizing retro-filling for the very first time in 132kV Bus Reactor at Aizwal for any Element >66KV, continuous Shutdown proposal of the same is requested for a period of 02 months. (in the month of April- May 2023.). This will provide the confidence in retro filling of Transformer / Reactor at 132kV voltage level also. NER Grid being mainly 132kV equipment's, it shall be helpful in future.

Deliberation of the sub-committee

The forum suggested that NERLDC will do the system study first, and if it is ascertained that there is no significant adverse effect on the voltage profile of the grid (or any part thereof), the said shutdown may be allowed.

The sub-committee noted as above

D. ITEMS FOR STATUS

D.1. Implementation of projects funded from PSDF:

The status as updated in the 200th OCCM:

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 TESG queries.	30% requisition submitted.	Revised DPR including both 132kV Aizawl-Luangmual and 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	Revised DPR for LDP of 132kV Imphal-Yurembam-III to be submitted by June'22.

				for IT portion after completion of 3rd milestone. 30% to be disbursed for Meter, AMR portion	
	33kV System Integration with SLDC	In tendering stage			
	Reliable Communications for grid connectivity	In tendering stage			
Tripura	Completed. Final UC submitted on 04th 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

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

The status as updated in the 200th OCCM:

Sl. No	Element	Owner	Status as informed in the 199th OCCM	Latest Status (200th OCCM)
1	132kV Mariani – Mokokchung (*out since April'2008*)	AEGCL	Non clearance due to persisting funding issue	Non clearance due to persisting funding issue
3	132kV Roing-Pasighat (*charged through ERS tower*	NERTS	1st tower by April'23 while 2nd tower requires tendering, tentative completion by June'23	1st tower by April'23 while 2nd tower requires tendering, tentative completion by June'23
4	220kV Misa-Kopili D/C, 220/132kV ICTs at Kopili, 132kV Khandong –Kopili D/C(*out since Oct'19*)	NEEPCO/ NERTS	Refer to item B.8	Refer to item B.8
5	132kV Srikona – Panchgram	AEGCL	Tender floated on 21.11.2022, Under evaluation	LOA issued on 18.02.2023, Work in progress, tentative completion within 8 months
6	400kV Imphal – Thoubal-I and 315MVA 400/132kV ICT at Thoubal	MSPCL	RoW, litigation pending in court.	RoW, litigation pending in court.
7	63MVAR Bus Reactor at Byrnihat to be replaced with 80MVAR Reactor	MePTCL	Logistics issue. Under process	Coordination issues with the vendor. WIP
9	400kV Silchar-Misa ckt DC (permanent restoration)	NER-II TL	Work near to completion. Tentative completion by March'23	Completed
10	LR2- BNC at Balipara ss (50MVAR, 400kV)	PGCIL	Expected revival by April'23	Replacement with spare LR, tentatively by the end of March'23

D.3. Status of commissioning for upcoming projects:

The status as updated in the 200th OCCM:

Sl. No	Name of the element	Utility	Status as informed in 199th OCC meeting	Latest Status (200th OCCM)

1	132kV Monarchak-Surjamaninagar	TSECL	July'23	July'23
2	PLCC for 132kV Loktak-Ningthoukong and 132kV Loktak-Rengpang(existing lines)	MSPCL	Under R&M by NHPC. July'23	Under R&M by NHPC. July'23
3	Commissioning of 220kV Balipara-Sonabil-2 ckt 2	AEGCL	2nd Bay at Balipara charged on 20th Feb'23. NERTS to complete bay side work at Sonabil and line side work. Tentative completion by March'23	Auto-recloser integration work is pending at Sonabil end. Assam shall coordinate regarding SIO clearance for potion of the line owned by AEGCL. Forum advised NERTS to apply for FTC for the whole line to NERLDC.
4	Upgradation of 132kV Lumshnong – Panchgram line	MePTCL	Upgradation work to be taken after 15th March	Work has started, tentative completion by June'23
5	PLCC for 132kV Karong-Kohima. PLCC at Kohima	DoP Nagaland	Awaiting sanction from PSDF	Awaiting sanction from PSDF
6	132kV Loktak-Ningthoukhong-II	MSPCL		
7	132kV Roing-Chapakhowa	NERTS	Request has been made to forest department of Arunachal Pradesh for clearance of thick vegetation/trees in the Deopani Reserve Forest. Support requested from NERPC	2 foundation pending owing to RoW issues. Vegetation clearance in forest area started, stringing will be completed in 15days.
8	Re-conductoring 220kV BTPS-Salakati D/C	NERTS	March'23	Ckt 2 reconductored and ckt 1 reconductoring underway
9	420kV 80MVAR Bus Reactor	NEEPCO	Transportation and logistics issue, by Dec'23	By Dec'23
10	220kV Killing – Mawngap	NERPSIP	March'23 subject to resolution of long pending RoWs in Ri-Bhoi and East Khasi Hills district.	April'23 subject to resolution of long pending RoWs in Ri-Bhoi and East Khasi Hills district.

11	220kV Samaguri – Mariani-I	AEGCL	FC for Samaguri-Khumtai section is still awaited.	FC for Samaguri-Khumtai section is still awaited.
12	Reconductoring of 132kV UmiamStg-III to UmiamStg-I by HTLS	MePTCL	CT replacement by March'23	Completed
13	PLCC/DTPC for 220kV Balipara- Sonabil	AEGCL	After the completion of 2nd bay at Balipara for 220KV Balipara-Sonabil-2	WIP to be completd by April'23
14	220kV AGBPP –Namsai D/C	TBCB	Tentative completion by Oct'25	Oct'25
15	Upgradation of 132kV Surjamaninagar-Surjamaninagar(ISTS), 132kV Bodhjungnagar-SMNagar, 132kV P.K.Bari-Ambassa, 132kV P.K. Bari-P.K.Bari(ISTS)	TSECL	New tender has been floated for joint venture of PGCIL and STU.	Same status
16	LILO of 132kV Leshka-Khliehriat-I at Mynkre and Mynkre SS and 33kV downstream at Mynkre.	NERPSIP	LILO ready. Substation WIP-March'23.	LILO ready. Substation WIP-April'23.
17	220kV Tinsukia-Behiating D/C	NERPSIP	WIP-March'23	WIP-March'23
18	LILO of 132kV Kamalpur-Kamakhya& 132kV Kamalpur-Sishugram at Amingaon	NERPSIP	Completed. Ready for charging.	Completed. Ready for charging.
19	220kV Rangia – Amingaon D/C and 220/132kV 2x160MVA Amingaon S/S	NERPSIP	March'23	March'23
20	132kV Rengpang-Tamenglong and 132/33kV 4x6.67MVA at Tamenglong at Manipur	NERPSIP	March'23	March'23
21	132/33kV 2x20MVA Gamphazol at Manipur	NERPSIP	Test charged in Dec'22	Test charged in Dec'22
22	132/33kV West Phaileng S/S at Mizoram	NERPSIP	Ready for charging. Line WIP.	Ready for charging. Line WIP.
23	132/33kV 2x12.5MVA Marpara S/S at Mizoram	NERPSIP	March'23	March'23

24	132/33kV 2x12.5MVA Lungsen S/S at Mizoram	NERPSIP	March'23	March'23
25	132kV Lungsen-Chawngte S/C at Mizoram	NERPSIP	Ready for charging.	Ready for charging.
26	132kV Chawngte – S.Bungtlang S/S at Mizoram	NERPSIP	March'23	March'23
27	132kV W.Phaileng-Marpara S/C at Mizoram	NERPSIP	March'23 subject to RoW clearance in Pukzing village in Manit district.	March'23 subject to RoW clearance in Pukzing village in Manit district.
28	220kV Zhadima – Mokokchung at Nagaland	NERPSIP	March'23	March'23
29	LILO of 132kV Wokha – Kohima at 132/33kV New Kohima at Nagaland	NERPSIP	Ready for charging.	Ready for charging.
30	132kV Wokha-Zunheboto – Mokokchung at Nagaland	NERPSIP	March'23	March'23
31	132kV Tuengsang – Longleng at Nagaland	NERPSIP	Tuengsang substation upgradation under tendering.	Tuengsang substation upgradation under tendering.
32	132/33kV Amarpur S/S at Tripura	NERPSIP	March'23	March'23
33	132/33kV Manu(new) S/S at Tripura	NERPSIP	March'23	March'23
34	132kV Dharmanagar-Kailashor	NERPSIP	March'23	March'23
35	132kV Ziro-Yazali and 132/33kV Yazali S/S	POWERGRID-Comprehensive	March'23	March'23
36	132kV Yazali – Palin and 132/33kV Palin S/S	POWERGRID - Comprehensive	No forest clearance achieved. Work under process. Estimated to be completed in 12 months.	No forest clearance achieved. Work under process. Estimated to be completed in 12 months.
37	132kV Palin- Koloriang and 132/33kV Koloriang S/S	POWERGRID - Comprehensive	No forest clearance achieved. Work under process. Estimated to be completed in 12 months.	No forest clearance achieved. Work under process. Estimated to be completed in 12 months.
38	132kV Khonsa –Deomali and 132/33kV Khonsa S/S	POWERGRID - Comprehensive	Khonsa substation completed.	Khonsa substation completed.

39	132kV Miao – Namsai and 132/33kV Miao S/S	POWERGRID - Comprehensive	Next year i.e 2024	
40	132kV Chimpu – Holongi and 132/33kV Holongi S/S	POWERGRID - Comprehensive	OPGW has been installed in the line, but stringing work at 6 locations are held up due to RoW issue Holongi substation completed.	Ready for charging
41	Lower Subansiri HEP	NHPC	Unit 1 and 2 by June'23	Unit 1 and 2 by June'23
42	400kV Lower Subansiri-BNC line1	PGCIL	Anti theft charging on 24/02/2023. Completion by March 2023.	Line charged, DoCO declared
43	400kV Lower Subansiri-BNC line2	PGCIL	June'23	June'23
44	Conversion of MT to DM at (i)132kV Khliehriat, (ii)132kV Badarpur, (iii)132kV Nirjuli, (iv) 132kV Imphal	NERTS	Nirjuli- March'23 Imphal- April'23 Badarpur & Khliehriat - In tendering stage	Nirjuli- March'23 Imphal- April'23 Badarpur & Khliehriat - In tendering stage
45	Construction of Pare-N.Lakhimpur DC along with LIO at Nirjuli	Sterlite(TBCB)	Mid-April'23. Shutdown of PLHPS-Lekhi approved till 5th April to facilitate the work	WIP, shutdown taken
46	LILO of BNC-Chimpu ckt II at Gohpur	Indigrid	Technical work completed. Signing of supplementary-connection agreement remaining	Technical work completed. Signing of supplementary-connection agreement remaining
47	220kV New Shillong-NangalBibra(ISTS 220/132kV) TL	MEPTCL	Survey works underway	Survey completed, tendering to start soon
48	400kV Bongaigaon-Nangalbibra (ISTS) DC(to be charged at 220kV initially)	Sterlite	By Dec'23	Dec'23

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

Status as updated in the 200th OCCM:

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

	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 200th 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	Preliminary survey completed	By Jan'25
2	New Kohima (TBCB)	Naga land	400/220kV, 2x500MVA	220	2	Commissioned	New Kohima (TBCB) – New Kohima (Nagaland) 220kV D/c line	LoA Feb'2021	Line stringing completed, PLCC works to be completed by Feb'23. For OPGW, PGCIL is requested to Install it.
3	Nangalbibra (TBCB)	Megha laya	220/132kV, 2x160MVA	132	2	Under construction (Dec'23)	Nangalbibra (ISTS) – Nangalbibra (MePTCL) 132kV D/c (HTLS,800A) Line:about 5km	DPR prepared and survey completed. Approval awaited.	Dec'23

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

Sl. No.	Substation/Location	Transformation Capacity/ Element	Date of Award	Completion Schedule
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 byDec'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 8thjune 2022 to M/S Sumaja Electro infra Pvt ltd.	June'2025
a)	2 no. 132kV GIS line bays at Gohpur for termination of LILO of one circuit of BiswanathChariali – Itanagar 132kV D/c ine (line works under ISTS through TBCB route)	132kV	1. LoA by Jun'22	June'2025
IV	**Upgradation of Sonapur S/s from AIS to GIS**	-	1. Contract to be awarded by Jun'23. LoA by Jun'23	June'2026
a)	LILO of 400kV Silchar-Byrnihat at Sonapur	-	1. LoA by Jun'23	June'2026

Sl. No.	Substation/Location	Transformation Capacity/ Element	Date of Award	Completion Schedule
B	**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 a tSurajmaninagar (TSECL) S/s	400kV D/c	All works except 400kV termination at Surjamaninagar (TSECL) by POWERGRID to be done. Balance works under separate contract.	LILO completed for 400kV ckt 2 (by PGCIL) without bay readiness, LILO to be charged, total completion subjected to Sub-station readiness at Surajmaninagar
C	**NEEPCO (to be implemented by NEEPCO)**			
I	**Extension works at Ranganadi HEP end**			
a)	420kV 80MVAR Bus Reactor at Ranganadi Generation Switchyard		LOA on 11.01.2022	Dec'23 (Logistics and Transportation issue)
II	**Extension works at Pare HEP end**			
a)	Bypassing of LILO of Ranganadi - Naharlagun / Nirjuli at Pare HEP so as to form direct Ranganadi-Naharlagun / Nirjuli132 kV S/c line	132kV	Regarding bypassing of LILO at (a), work has been awarded in Dec, work to be completed in 4 months from LoA, The LILO portion is about 2.2km & the cost estimates have been received by NEEPCO. Upon approval of the same, work shall be awarded. Expected to be awarded shortly.	To be completed by NEEPCO by April2023 i.e. prior to ISTS works i.e. July 2023.
b)	Re-conductoring of LILO portion at Pare end (of Ranganadi - Naharlagun / Nirjuli 132kV S/c line) with HTLS (HTLS equivalentto ACSR Zebra) along with modification of 132kVbay equipment at Pare HEP	132kV		

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

Status as updated in the 200th OCCM

SL. No.	Item for Discussion	Status as per 199thOCCM	Latest Status (200th OCCM)
1.	Introduction of SPS in Leshka S/Sn of Meghalaya	As updated in 58th PCC, communication has resumed with M/s Hitachi and the	Communication with

	(Agenda No. C4 of 189th OCCM)	later has requested for configuration details from MePGCL and then cost estimate will be prepared	M/s Hitachi underway
2.	Voltage and MVAR issues at 400kV Kameng S/Sn (Agenda No. C7 of 189th OCCM)	Discussion with OEM is underway	Discussion with OEM M/s BHEL is underway
3.	Difficulty in test synchronization at Ningthoukhong S/Sn (installation of line CVT) (Agenda No. C11. of 189th OCCM)		
4.	Outage of 400kV Imphal (PG) – Thoubal-I (Agenda B.15 of 184th OCCM)	Litigation pending in court	Litigation pending in court
5.	Charging of 33kV Khupi-Kimi line at 132kV: Recommendations of the 187th OCCM to be implemented: (a) Installation & Commissioning of PLCC and additional Wave Trap with accessories at Khupi (NEEPCO) - By Mar'22 Minutes of 188th OCC meeting held on 16th March, 2022 at Guwahati (b) Defective Relays at Khupi end to be repaired (NEEPCO) – By Mar'22 (c) PID testing and replacement of defective insulators (NEEPCO) – By Mar'22 (d) Infringement checking and vegetation clearance (NEEPCO) – By Mar'22 (e) Stringing of OPGW by POWERGRID Comprehensive – By Mar'22 (f) Procurement and installation of Line Differential Relays (NEEPCO) – By Mar'22 (Agenda B.15 of 188th OCCM)	To rectify the CB, gasket replacement work is being done and expected revival date is 5th Feb'23	NEEPCO work done, Only OPGW stringing by Comprehen sive to be completed by 15th April
6.	Synchronization issue of 220kv AGBPP – Tinsukia 1 & 2 at AGBPP end. (NEEPCO to update the status of CVT procurement and other relevant details.)	Tender floated in the month of August'2022.	Tender floated in the month of

	Item B.24 of 190th OCCM.		August'2022.
7.	Implementation of Single Phase Auto-Reclosure for 132kV Rangia- Motonga (C.14 of 191st OCCM)	Shutdown applied for the month of March'23	Completed
8.	Grid Disturbance in Dhaligaon area of Assam Power System (C.18 of 191st OCCM)	Revised estimate submitted to Disaster Risk reduction Works, 2022-2023, yet to be approved	Same status
9.	Tower schedule of 220 KV D/C Transmission line (from Zhadima 400/220 KV GIS Substation to Zhadima 220 KV Substation) (B.18 OF 194TH OCC)	Will be provided before OPGW installation in N Kohima -Zhadima Line.	Same status
10.	Restoration of 400 kV STG-1 Main Bay at OTPC Palatana (C.6 of 194th OCCM)	OEM visited the site, faulty cables to be replaced soon. WIP	Completed
11.	Occurrence of Multiple grid disturbance in Gohpur and radially connected areas of Assam Power System (C.10 of 194th OCC)	SEM meters provided by PGCIL, both lines bays commissioned from AEGCL end. AeGCl scope of work done, Sterlite scope of work remaining	Same status
12.	Status of Installation of TLSA in 400kV Silchar-Azara T/L & 400 kV Silchar-Byrnihat T/L (C.12 of 194th OCCM)	LoA placed, expected completion of the delivery by June'23	LoA placed, expected completion of the delivery by June'23
13.	PLCC & protection related issues at 132kV Tipaimukh S/s (C.15 of 194th OCC) & (C.8 of 197th OCC)	PLCC engineer to visit the SS. (MSPCL)	To be updated by MSPCL
14.	48V System reliability at Pasighat end (C.16 of 194th OCC)	March'23	April'23
15.	Construction of Anchor tower at location 433 by PGCIL and reconductoring of 220kV Mariani-Mariani SC with Moose conductors(B.16 of 196th OCCM)		Shutdown taken, WIP
16.	Early Restoration of Y-pole Circuit Breaker at AGTCCPP for 132 kV Agartala I Line (Agenda C.11 of 198th OCCM)	To rectify the CB, gasket replacement work is being done and expected revival date is 5th Feb'23. WIP	CB spares to be supplied by April'23
17.	Commissioning of 400kV Bus-B at Ranganadi Power Station (C.14 of 192ndOCCM)	In 193rd OCCM, forum requested NEEPCO to put forth agenda for upgradation of 400 kV switchyard to GIS and implementation of 400 kV	Same status

		Bus–B together. Status of the same may be provided by NEEPCO	
18.	Implementation of Bus Bar Protection at 132 kV Kahilipara (AEGCL) Substation (C.8 of 196th OCCM)	As per minutes of 196th OCCM, AEGCL to expedite the installation and update latest status.	AEGCL to update
19.	Furnishing of data as per Detailed Procedure on interim methodology for estimation of Reserves under CERC (Ancillary Services) Regulations, 2022(item C.4 pf 198th OCCM)	NERLDC thanked SLDC Nagaland for furnishing the data for estimation of reserves. Other NER states assured to provide the data at the earliest. NERLDC mentioned that the states may contact Manager NERLDC for clarifications (if any).	
20.	Voltage discrepancy at 400kV Mirza S/S (AEGCL, C.4 of 199th OCC)	To rectify the CB, gasket replacement work is being done and expected revival date is 5th Feb'23	Issue resolved
21.	TLSA installation on 132kV Leshka-Khleihriat DC	DPR prepared, to be submitted by MEPTCL, for PSDF sanction	DPR to be submitted

E. METERING ITEMS

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

NERTS may intimate the status of procurement of Additional 40 nos. of DCD.

In 199th OCCM, NERTS intimated that the OEM M/s SANDS has proposed some changes in the design of the DCDs, for which type testing will be conducted in 1st week of March'23 and if approved, dispatch will start from the second week of March'23

Deliberation of the sub-committee

NERTS, POWERGRID informed that 40 Nos. DCDs have been received on 24th March 2023 and shall be available for allotment to utilities as per requirement.

E.2. Issues regarding SEM Data Processing:

Non-receipt of SEM data from 132 kV Pailapool Substation:

Weekly SEM data of 132 kV Pailapool (As) Substation is important for accounting of Assam drawal. However, SEM data from the said substation is not being received. In 199th OCCM, SLDC AEGCL updated that procurement of new laptop is under process and new issues have emerged with the DCD, rectification underway.

Status may be reviewed.

Non-receipt of SEM data from 132 kV Kahilipara (As) Substation:

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

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.

Deliberation of the sub-committee

(i) **Non-receipt of SEM data from 132 kV Pailapool Substation:** SLDC AEGCL stated that laptop has been procured and DCD issue rectification is underway.

(ii) **Non-receipt of SEM data from 132 kV Kahilipara (As) Substation:** SLDC AEGCL stated that they raised the issue to NERTS to which NERTS mentioned that there are no additional chargers supplied by OEM for DCDs and that additional chargers have to be procured locally and utilized.

(iii) **Non-receipt of SEM data from 132 kV Rengpang (Man) Substation:** The issue could not be discussed due to the absence of representative from MSPCL (Manipur).

E.3. High Time Drifted SEMs:

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

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

S.No	ENTITY	FEEDER NAME	METER NO	TIME DRIFT
1	ASSAM	220 kV TINSUKIA END OF KTG FDR-I	NP-9654-A	Display not functional
2	ASSAM	220 kV TINSUKIA END OF KATHALGURI FDR-II	NP-9658-A	16 mins
3	ASSAM	132 kV UMRANGSOO END OF KHLEIRIAT (PG)	NP-5290-A	16 mins
4	ASSAM	132 kV UMRANGSOO END OF HAFLONG	NE-0019-A	4 mins
5	ASSAM	132 kV RANGIA END OF MOTONGA	NP-9669-A	5 mins
6	MIZORAM	132 kV KOLASIB END OF AIZAWL(PG) FDR	NE-0087-A	4 mins
7	POWERGRID	400/132 kV SILCHAR ICT-3 (HV SIDE)	NP-6946-A	33 mins
8	POWERGRID	400 kV BONGAIGAON END OF NTPC_BgTPP-2	NP-9477-A	7 mins

Note: Out of 90 Locations, appx. 35-40 Nos. of locations send SEM Time Drift Report. Status may be reviewed.

Note: Time drift report from the following locations are not being received.

S.No	ENTITY NAME	LOCATION/ SUBSTATION
1	POWERGRID	BADARPUR
2	POWERGRID	HAFLONG
3	POWERGRID	MARIANI

4	POWERGRID	SALAKATI
5	POWERGRID	DIMAPUR
6	POWERGRID	NIRJULI
7	POWERGRID	KUMARGHAT
8	POWERGRID	BALIPARA
9	POWERGRID	AIZAWL
10	POWERGRID	MELRIAT
11	POWERGRID	ZIRO
12	ASSAM	MARIANI
13	MIZORAM	LUNGMUAL

Deliberation of the sub-committee

NERLDC informed that POWERGRID has started to send Time Drift reports from majority of the substations mentioned in the list above.

Regarding SEM no. NP-6946-A connected at HV side of 400/132 kV Silchar ICT-3, NERTS, POWERGRID informed that they will replace the SEM due to high time drift.

Further, forum advised Assam and Mizoram to correct the time drift through DCDs wherever possible and replace the SEMs if correction through DCDs is not possible.

E.4. Non-receipt of Quarterly RPO Compliance details from Arunachal Pradesh & Tripura:

As per MoP RPO Order vide 29th January 2021, POSOCO will maintain data related to compliance of RPOs. In line to that necessary communication had been sent to all SLDCs and we are receiving data on regular basis from all SLDCs except SLDC, Arunachal Pradesh & SLDC, Tripura.

In 199th OCCM, DoP Ar. Pradesh and SLDC Tripura assured the forum that they will start providing the required data regularly to NERLDC. However, data from DoP, Ar. Pradesh is yet to be received by NERLDC and data that has been received from SLDC Tripura is not in accordance with MoP order.

Deliberation of the sub-committee

The issue could not be discussed due to absence of representative from DoP, Arunachal Pradesh in the 200th OCC Meeting

Annexure-I

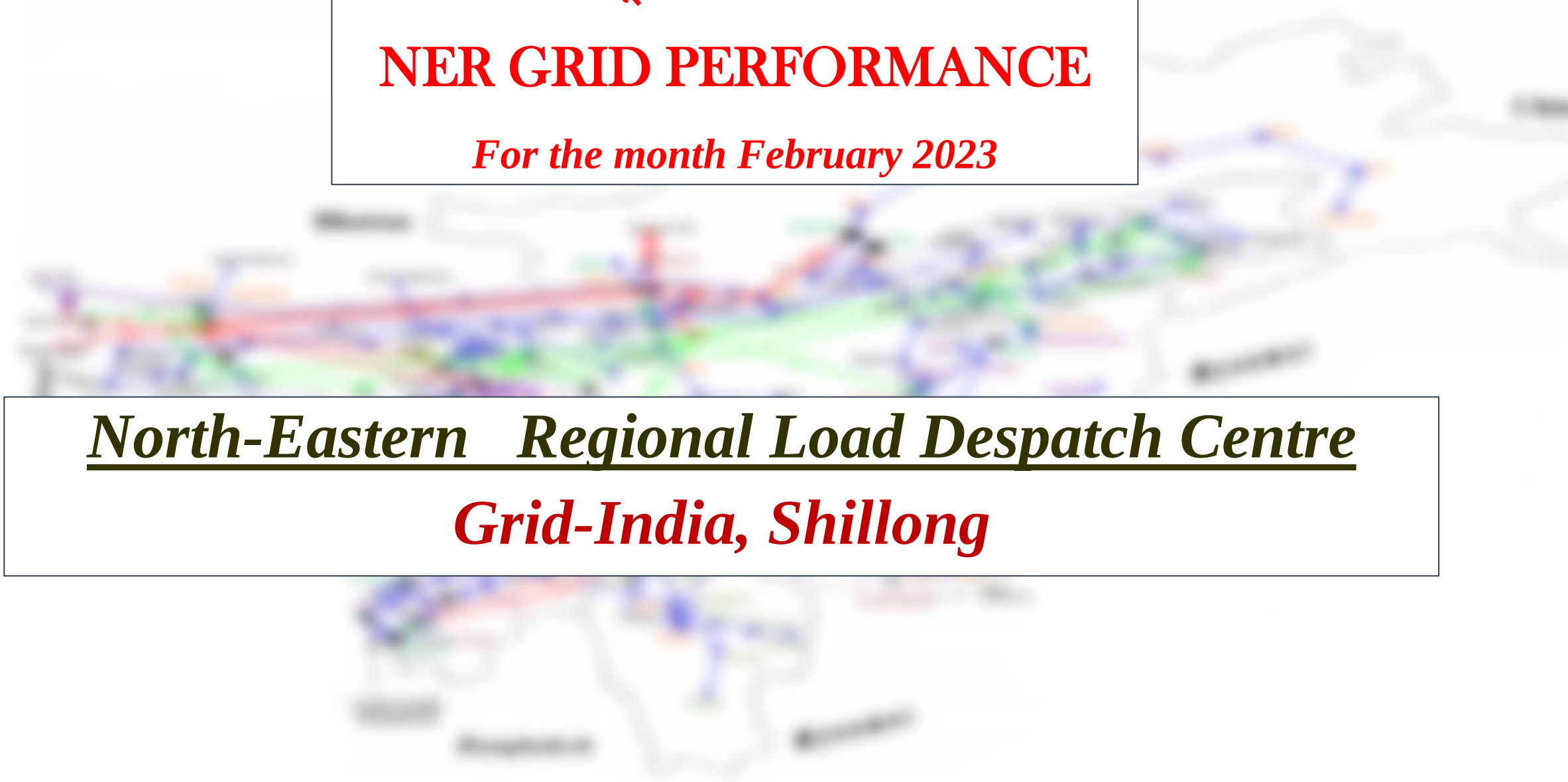
List of Participants in the 200th OCC Meeting held on 28.03.2023

SN	Name & Designation	Organization	Contact No.
	No Representative	**Ar. Pradesh**	-
1	Sh. S.M.M.Naser, CGM(SLDC), AEGCL	Assam	09435233786
2	Sh. Tridip Borah, AGM, AEGCL	Assam	09864602779
3	Sh. Rajkamal Saikia, AGM (IT), APDCL	Assam	08638496439
4	Sh. Rodali Khaund, DGM, SLDC	Assam	06901255808
5	Sh. Samidhya Baruah, DGM (IT), APDCL	Assam	09435355692
6	Ms. Barsha Kashyap, Dy.Mgr (SLDC)	Assam	09706692773
7	Sh. Jharna Devi, Dy. Mgr (PP&D), AEGCL	Assam	07002202605
	No Representative	**Manipur**	-
8	Sh. T.Gidon, EE (SLDC), MePTCL	Meghalaya	06009094044
9	Sh. D.J.Lyngdoh, EE (SM), MePTCL	Meghalaya	-
10	Sh. R.Lalchawisanga, SDO	Mizoram	07640954240
11	Sh. P.Tiakaba Yinchunger, JE (SLDC)	Nagaland	08974020151
12	Sh. Anil Debbarma, DGM (SLDC)	Tripura	09612589250
13	Sh. Joypal Roy, GM	NEEPCO	08837200069
14	Sh.N.Roy, ED	NERLDC	09869080265
15	Sh. Mintu Mandal, Chief Mgr.	NERLDC	09436335243
16	Sh. Sourav Mandal, Manager	NERLDC	09402102354
17	Sh. Palash Jyoti Borah, Manager	NERLDC	08761093397
18	Sh. Chitra Bahadur Thapa, Manager	NERLDC	08135989964
19	Smt. Laxmi Prabha Das, Engineer	NERLDC	08794092007
20	Sh. Ankit Vaish, DGM (AM)	PGCIL	09409305725
21	Sh. R.Hari Babu, DGM (RTAMC)	PGCIL	09446021006
22	Sh. Chayanika Das, AM, NERPSIP	PGCIL	08486161373
23	Sh. Sajeev Mohandas, AGM	NTPC	09496006403
24	Sh. K.B.Jagtap, Member Secretary	NERPC	09436163419
25	Sh. S.M.Aimol, Director	NERPC	08974002106
26	Sh. Shaishav Ranjan, DD	NERPC	08787892650
27	Sh. Vikash Shankar, AD-I	NERPC	09455331756
28	Sh. Dinesh Kr. Singh, AD-I	NERPC	07042118261
29	Sh. Rajib Das, AD-I	NERPC	-
30	Sh. Ashim Kumar Goswami, AD-II	NERPC	08638966481

उ.पू.क्षे ग्रिड प्रदर्शन

NER GRID PERFORMANCE

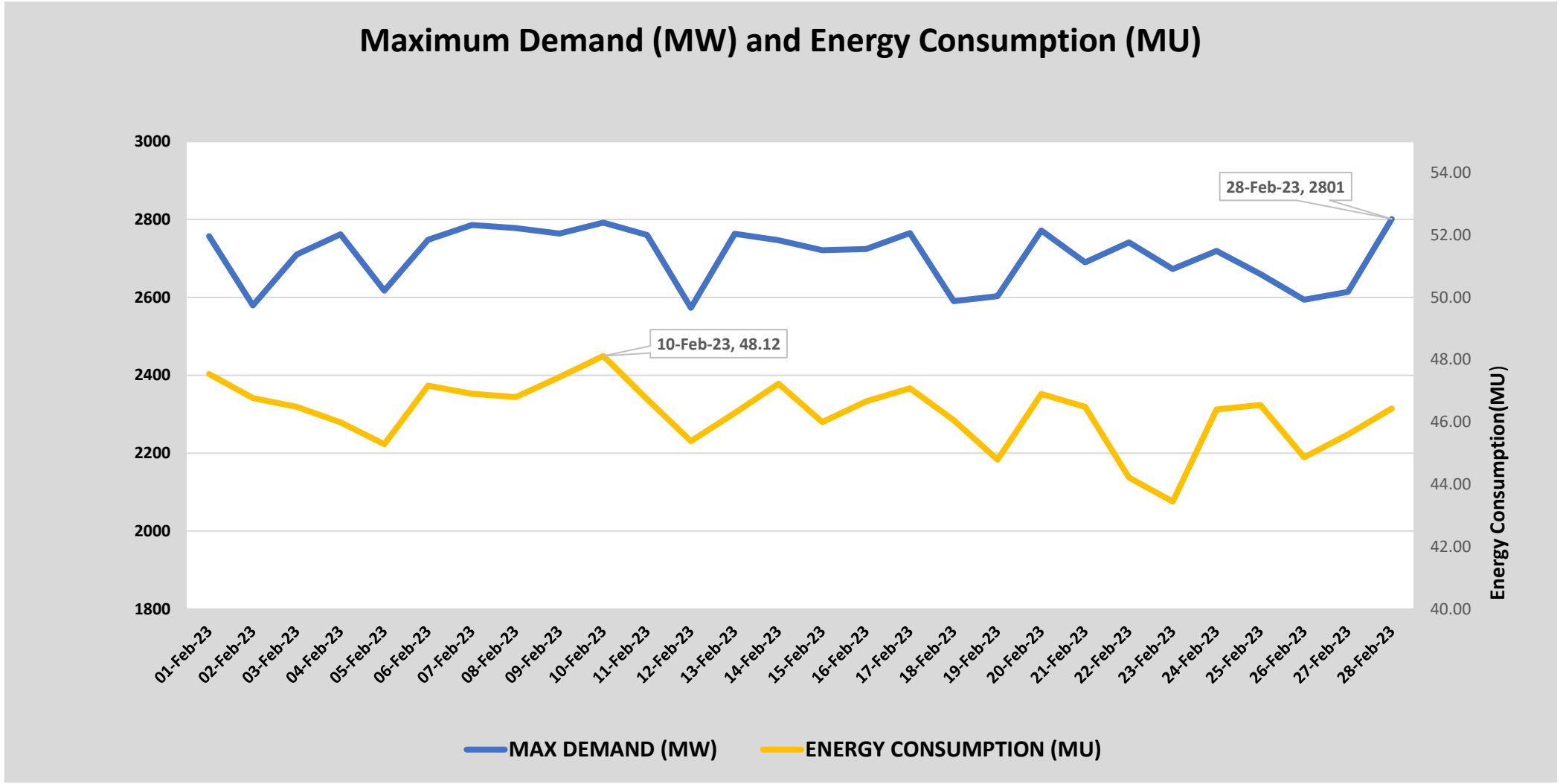
For the month February 2023



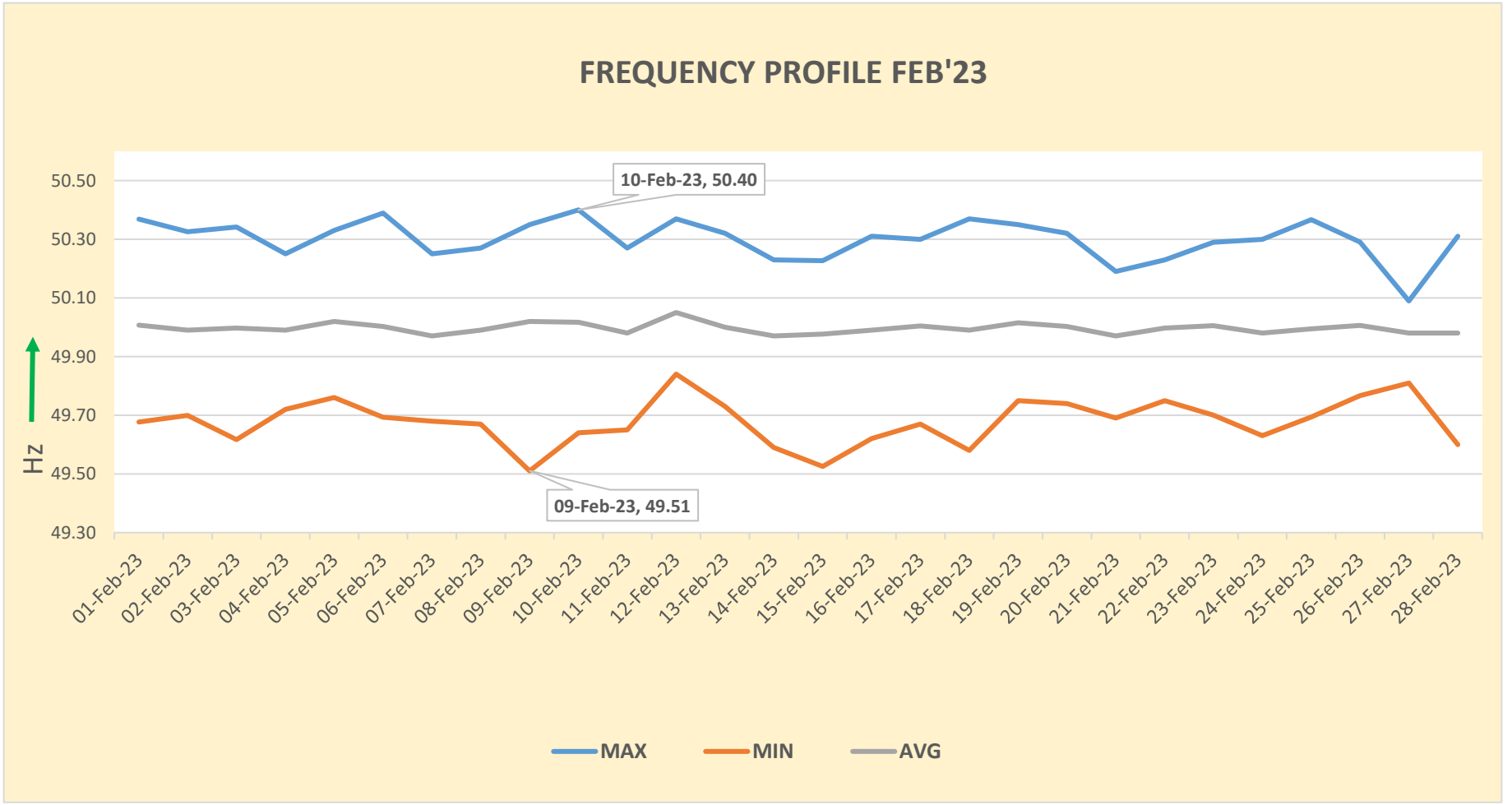
North-Eastern Regional Load Despatch Centre

Grid-India, Shillong

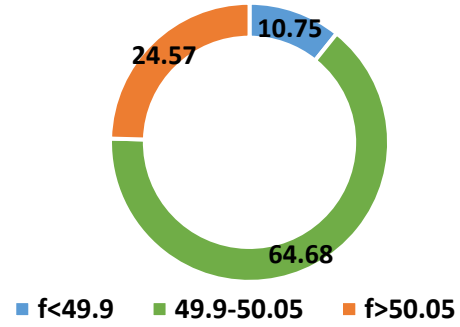
Maximum MW and MU in NER: February 2023



Frequency Profile

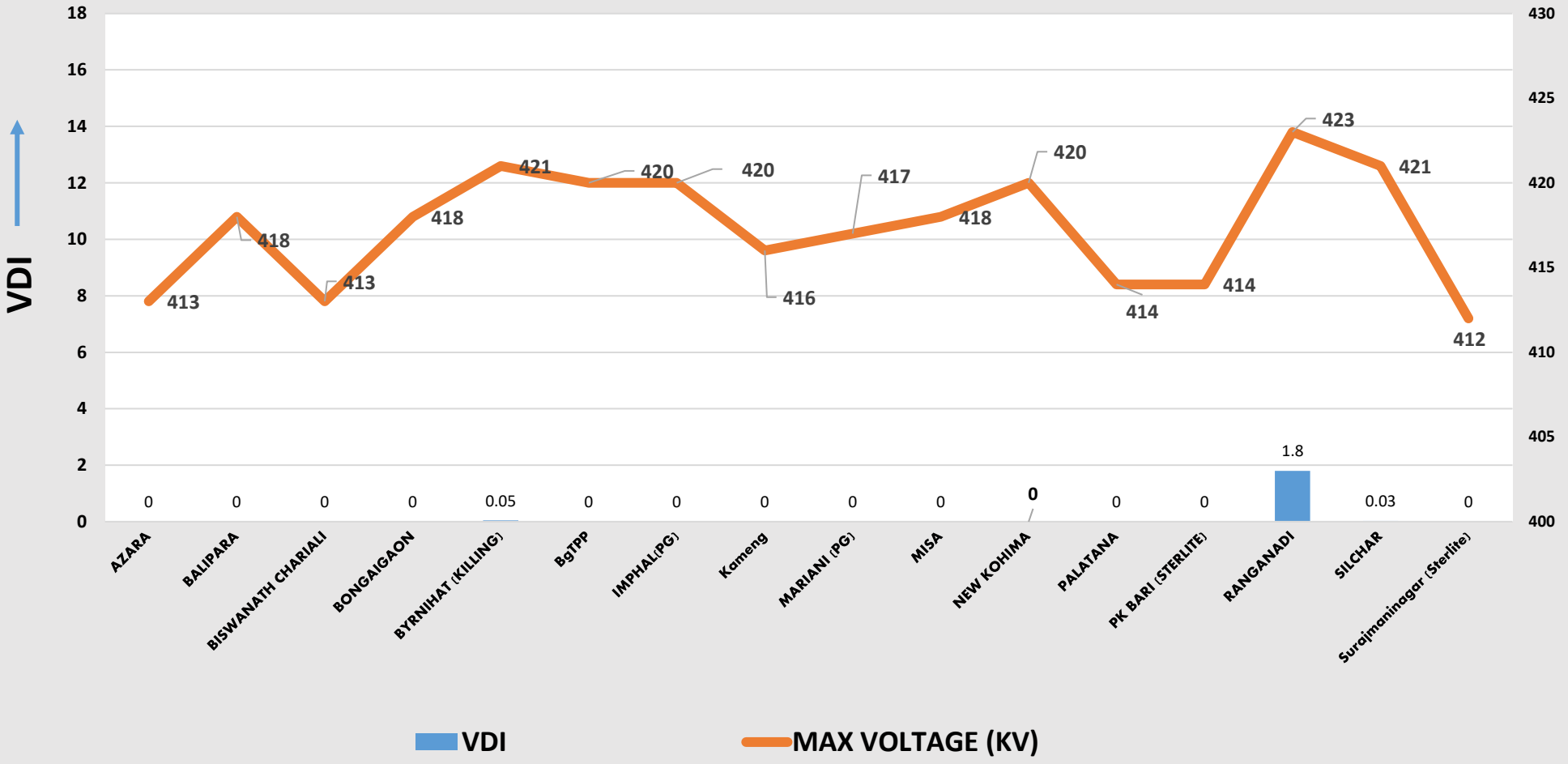


FREQ PROFILE FOR FEB'23



VDI (400 KV) FOR FEBRUARY 2023

No. of 400 kV lines kept open for over voltage : 0

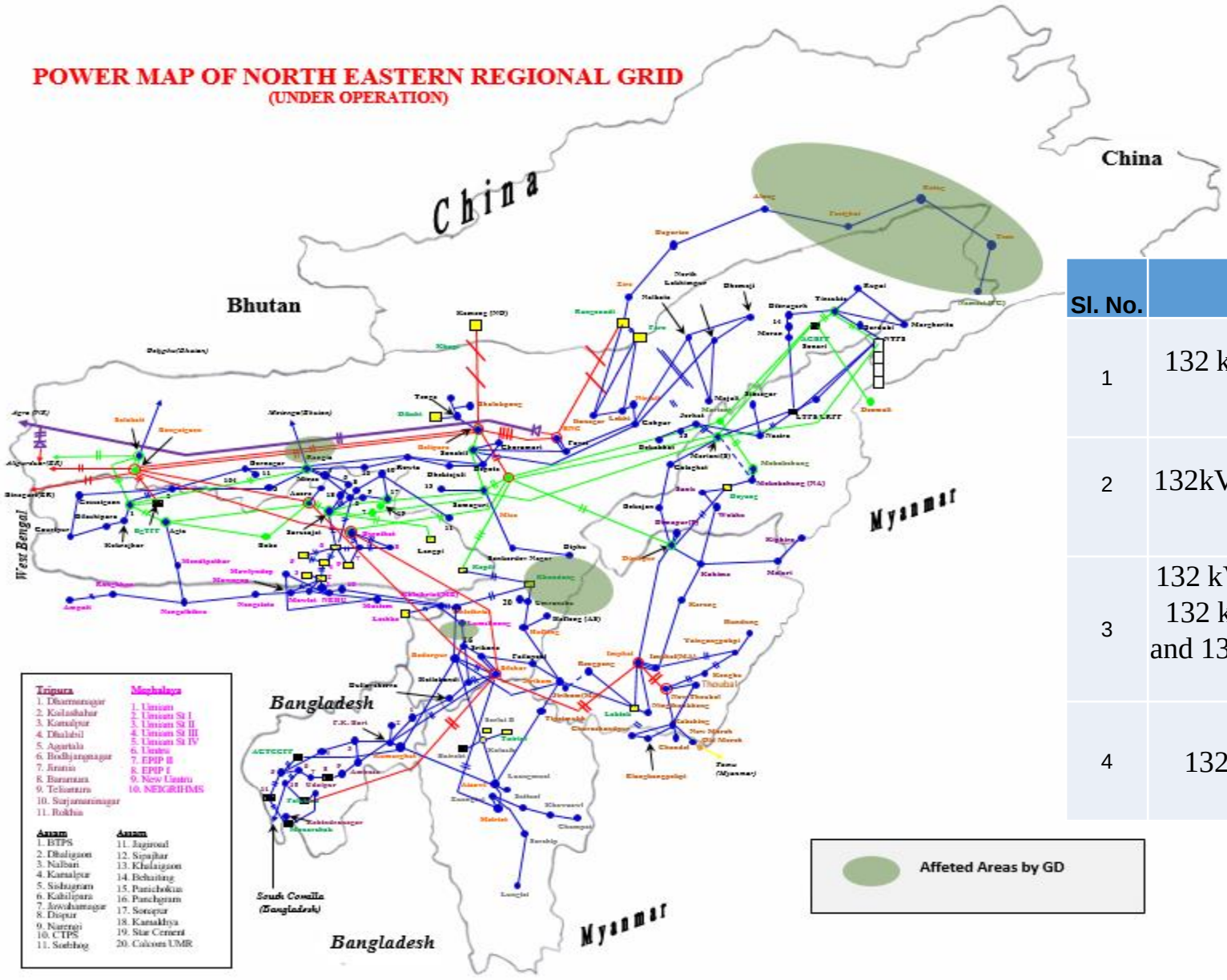


MOCK BLACK START TEST STATUS IN NER

Name of GS	Mock Black Start Test		
	Last testing date	Due date	Next proposed test date
AGBPP	……..	……..	After upgradation of DG under R&M
AGTTCCPP	04.02.2023	04.08.2023	
RHEP	28.11.2022	28.05.2023	
PareHEP	15.02.2023	15.08.2023	
Kopili HEP	10.05.2019	10.11.2019	Under Prolonged Outage
Khandong HEP	09.12.2021	09.06.2022	Under Prolonged Outage
DHEP	21.10.2022	21.04.2023	
Kameng HEP	……..	……..	In Lean Hydro season**
OTPC	NA	NA	
BGTPP	NA	NA	
Loktak HEP	16.12.2021	20.06.2022	

Data as on 28.03.2023

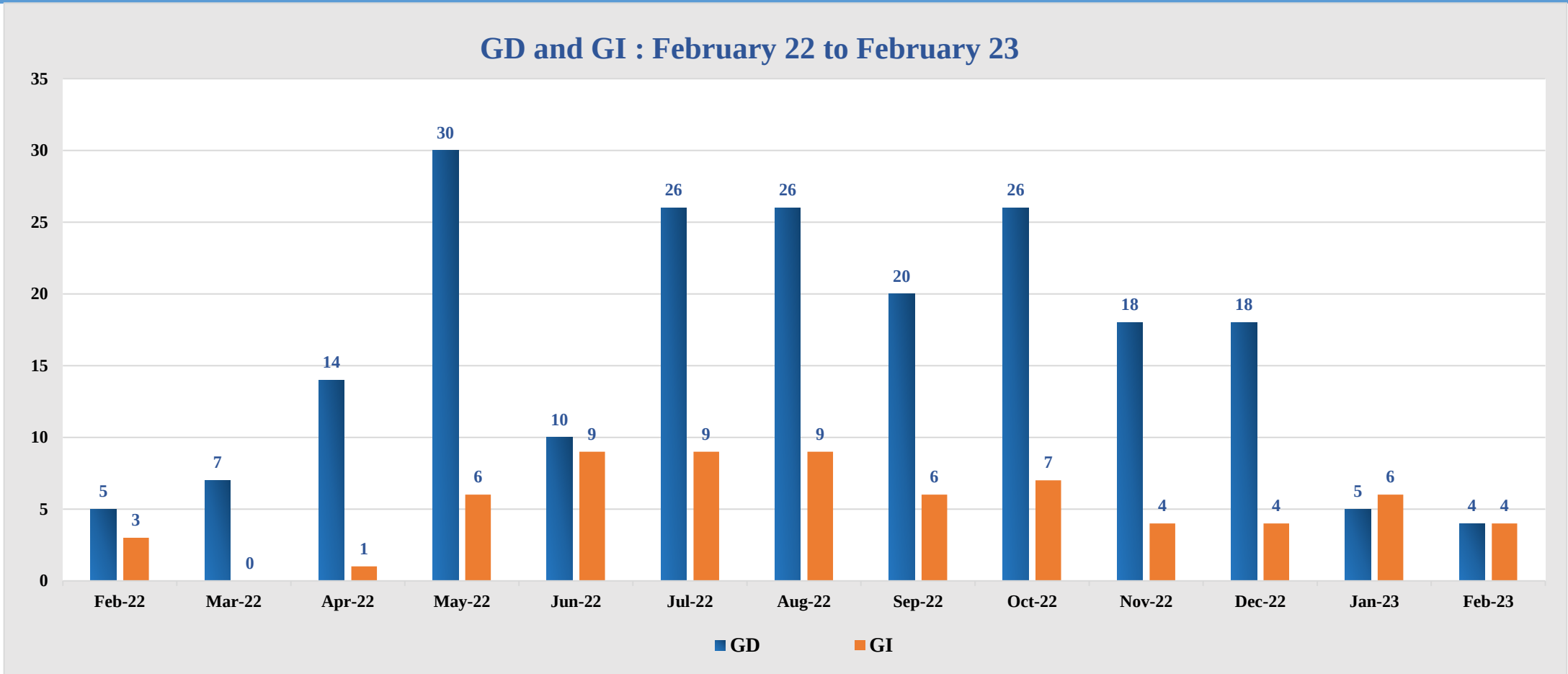
Grid Disturbance during February 2023



No. of GD	4
No. of GI	4

Sl. No.	Element	Number of times
1	132 kV Khandong - Khliehriat 1 line	caused GD 1 time
2	132kV New Rangia - Rangia -1 & 2 lines	caused GD 1 time
3	132 kV Panchgram - Lumshnong, 132 kV Hailakandi - Panchgram and 132 kV Badarpur - Panchgram lines	caused GD 1 time
4	132 kV Daporijo-Along Line	caused GD 1 time

Grid Disturbance/Incidences for last 12 Months



Projected Hydro Generation Availability

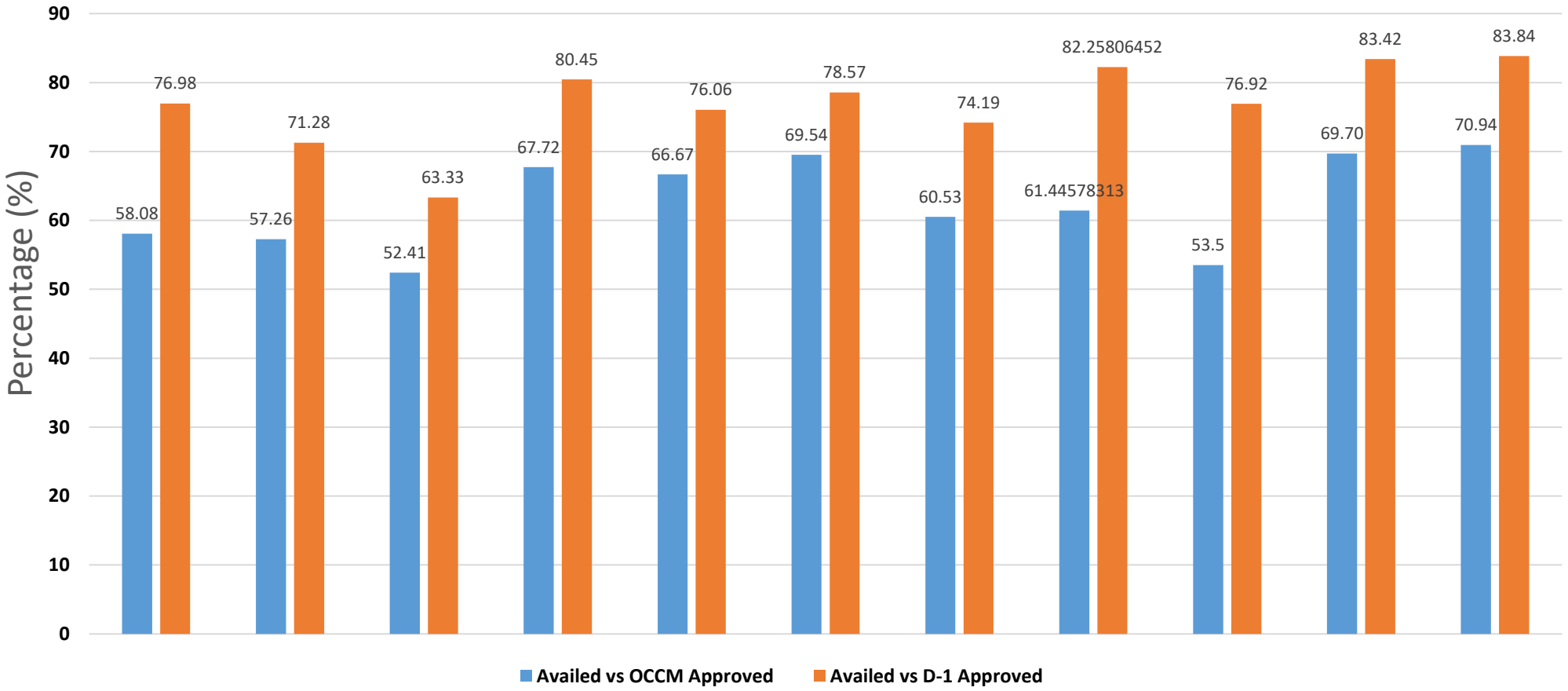
Plants	Reservoir Level in meters (as on 28/03/2023)	MU Content	Present DC (MU)	No of days as per current Generation
Khandong + Kopili STG II	-	-	-	-
Kopili	-	-	-	-
Doyang	308.05	3	0.16	19
Loktak	766.52	13	0.38	34

OCC approved shutdown availing status for the month of February 2023

SUMMARY OF NER OUTAGE						
MONTH	PLANNED IN OCC	APPROVED IN D-1	AVAILED IN REAL TIME	AVAILED VS PLANNED	AVAILED VS APPROVED	DEFFERED BY RLDC DUE TO SYSTEM CONSTRAINT
February-23	234	198	166	70.94%	83.84%	07

	OCC Approved	D-1 Approved	Availed	Not Availed	RLDC Deferred
NER	234	198	166	28	7
NERTS	121	102	90	12	2
ASSAM	75	63	52	7	5
MANIPUR	0	0	0	0	0
MEGHALAYA	7	7	7	0	0
NAGALAND	0	0	0	0	0
MIZORAM	0	0	0	0	0
TRIPURA	8	5	2	3	0
Arunachal Pradesh	0	0	0	0	0
NETC	5	4	4	0	0
KMTL	0	0	0	0	0
NEEPCO	4	3	3	0	0
NTPC	4	4	0	4	0
OTPC	0	0	0	0	0
INDIGRID	8	8	6	2	0
NHPC	2	2	2	0	0

Approved Shutdown availing trend in percentage April 22 to Feb 23



RMSE of Load forecast for Feb'23

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

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

Where,
Predicted$_i$ = Forecasted Value
Actual$_i$ = Actual value
N = Total number of observations.

	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median	14	5	13	9	9	6	7

Thank You

Annexure B.2

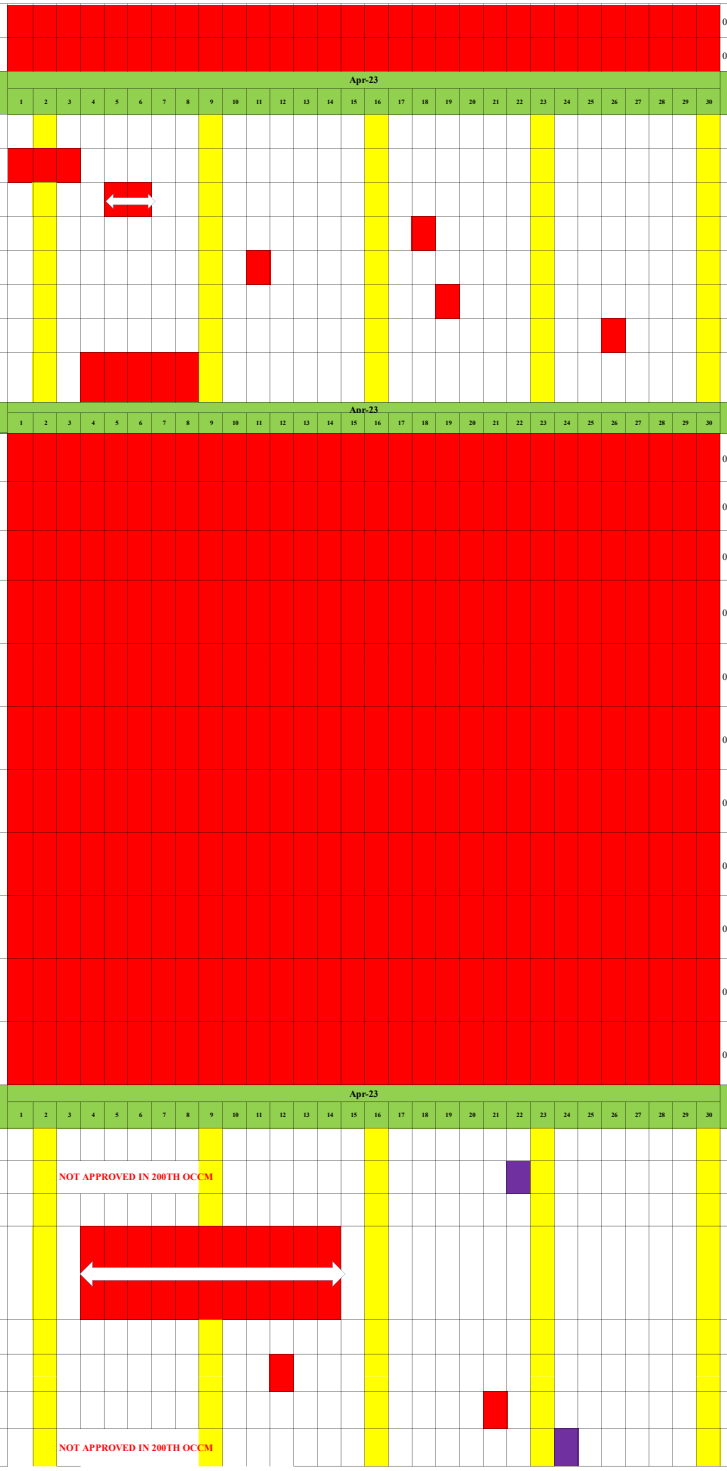
Shutdown Approved for the month of April 2023

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
	SHUTDOWNS PROPOSED BY PGCIL					
	132kV Transmission lines					
1	132KV R C Nagar - Agartala Line - I TL	INTIMATION TO NEEPCO — CONSENT RECEIVED FROM TRIPURA	0800 Hrs to 1600 Hrs	Installation and comissioning of DTPC panel	Existing system improvement related shutdown.	The SD may be availed subject to availability of 132KV R C Nagar - Agartala Line - II TL, 132 kV R C Nagar- Kumarghat line and 132 kV R C Nagar - P K Bari I & II. Consent from SLDC Tripura required.
2	132KV R C Nagar - Agartala Line - II TL	INTIMATION TO NEEPCO — CONSENT RECEIVED FROM TRIPURA	0800 Hrs to 1600 Hrs	Installation and comissioning of DTPC panel	Existing system improvement related shutdown.	The SD may be availed subject to availability of 132KV R C Nagar - Agartala Line - I TL, 132 kV R C Nagar- Kumarghat line and 132 kV R C Nagar - P K Bari I & II. Consent from SLDC Tripura required.
3	132kV BNC- ITANAGAR - 1 TL	CONSENT RECEIVED FROM ARUNACHAL	0800 Hrs to 1600 Hrs	AMP of Bay Equipments	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132kV BNC- ITANAGAR - 2 TL, 132 kV BNC - Pavoi D/C, 132 KV Itanagar- Pare and 132 kV Itanagar - Lekhi
4	132kV BNC- ITANAGAR - 2 TL	CONSENT RECEIVED FROM ARUNACHAL	0800 Hrs to 1600 Hrs	AMP of Bay Equipments	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132kV BNC- ITANAGAR - 1 TL, 132 kV BNC - Pavoi D/C, 132 KV Itanagar- Pare and 132 kV Itanagar - Lekhi
6	132KV Mokokchung- Mokokchung #1 TL	CONSENT RECEIVED FROM NAGALAND	0800 Hrs to 1600 Hrs	Dismantling of Old Relay , Installtion, wiring Testing & Integration of New P546 Relay with Existing SAS & NTAMC	Existing system improvement related shutdown.	The SD may be availed subject to availability of 132 kV Mokokchung - Mokokchung - 2 & 132 kV Doyang-Mokokchung line. Consent from SLDC Nagaland to be taken
7	132KV Mokokchung- Mokokchung #2 TL	CONSENT RECEIVED FROM NAGALAND	0800 Hrs to 1600 Hrs	Dismantling of Old Relay , Installtion, wiring Testing & Integration of New P546 Relay with Existing SAS & NTAMC	Existing system improvement related shutdown.	The SD may be availed subject to availability of 132 kV Mokokchung - Mokokchung - 1 & 132 kV Doyang-Mokokchung line. Consent from SLDC Nagaland to be taken
8	132KV Niirjuli- Lekhi TL	CONSENT RECEIVED FROM ARUNACHAL	0800 Hrs to 1600 Hrs	Dismantling of Old Relay , Installtion, wiring Testing & Integration of New P546 Relay with Existing SAS & NTAMC	Existing system improvement related shutdown.	SD may be availed subject to the availability of 132 kV Gohpur-Nirjuli ckt
9	132KV Badarpur Kolasib TL	CONSENT RECEIVED FROM MIZORAM	0800 Hrs to 1600 Hrs	Dismantling of Old Relay , Installtion, wiring Testing & Integration of New P546 Relay with Existing SAS & NTAMC&Broken conductor replacement work at loc 206	Existing system improvement related shutdown.	The SD may be availed subject to availability of 132 kV Aizawl-Kolasib, 132 kV Aizawl - Melriat line, 132 kV Aizawl - Tipaimukh-Jiribam link and 132 kV Aizawl - Kumarghat line.
10	132KV Hailakandi Silchar #1 TL	CONSENT RECEIVED FROM ASSAM	0800 Hrs to 1600 Hrs	Dismantling of Old Relay , Installtion, wiring Testing & Integration of New P546 Relay with Existing SAS & NTAMC	Existing system improvement related shutdown.	The SD may be availed subject to avaiilability of 132kV Silchar - Hailakandi - 2.
11	132KV Hailakandi Silchar #2 TL	CONSENT RECEIVED FROM ASSAM	0800 Hrs to 1600 Hrs	Dismantling of Old Relay , Installtion, wiring Testing & Integration of New P546 Relay with Existing SAS & NTAMC	Existing system improvement related shutdown.	The SD may be availed subject to avaiilability of 132kV Silchar - Hailakandi - 1.
12	132kV Badarpur-Badarpur(AEGCL) TL	NOT APPROVED IN 200TH OCCM	0800 Hrs to 1600 Hrs	Firmware upgradation of Micom P442 relay. Installation & commissioning of Line Differential relay.	Existing system improvement related shutdown.	At present, due to low generation at Meghalaya power system and outage of 132 Khandong-Kopili link, 132 kV Haflong-Jiribam line and 132 kV Loktak-Jiribam line, the Meghalaya power system is not N-1 compliant. The SD may
13	132kV Badarpur-Silchar-2	NOT APPROVED IN 200TH OCCM	0800 Hrs to 1600 Hrs	Firmware upgradation of Micom P442 relay.	Existing system improvement related shutdown.	At present, due to low generation at Meghalaya power system and outage of 132 Khandong-Kopili link, 132 kV Haflong-Jiribam line and 132 kV Loktak-Jiribam line, the Meghalaya power system is not N-1 compliant. The SD may
14	132kV Badarpur-Khliehriat TL	NOT APPROVED IN 200TH OCCM	0800 Hrs to 1600 Hrs	Firmware upgradation of Micom P442 relay.	Existing system improvement related shutdown.	At present, due to low generation at Meghalaya power system and outage of 132 Khandong-Kopili link, 132 kV Haflong-Jiribam line and 132 kV Loktak-Jiribam line, the Meghalaya power system is not N-1 compliant. The SD may
15	132KV AIZAWL-TIPAIMUKH TL	CONSENT RECEIVED FROM MANIPUR	0800 Hrs to 1600 Hrs	OPGW installation works & Safe Dismantling of Earth-Wire between Loc 206-214 & DN-24 by M/s APAR	Existing system improvement related shutdown.	SD may be availed subject to the availability of 132 kV Jiribam - Tipaimukh

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
16	132kV Khliehriat - Khandong - 1 TL	CONSENT RECEIVED FROM ASSAM & NEEPCO	0800 Hrs to 1600 Hrs	LBB relay retrofitting	Normal Maintenance related shutdown.	SD may be availed with consent from SLDC Assam and NEEPCO. No overloading issue in 132 kV Khliehriat Khandong II TL as 132 kV Jiribam - Haflong line is kept opened.
17	132kV Khliehriat - Badarpur TL	NOT APPROVED IN 200TH OCCM	0800 Hrs to 1600 Hrs	Removal of Balance arching horns from the line	Existing system improvement related shutdown.	At present, due to low generation at Meghalaya power system and outage of 132 Khandong-Kopili link, 132 kV Haflong-Jiribam line and 132 kV Loktak-Jiribam line, the Meghalaya power system is not N-1 compliant. The SD may
18	132kV Loktak - Jiribam TL		CSD 0800 Hrs to 1600 Hrs	For conductor restringing to HTLS under NERSS project	Construction Related Shutdown	SD may be availed. FTC to be processed.
19	132 KV Balipara - Khupi TL	CONSENT RECEIVED FROM ARUNACHAL	0800 Hrs to 1600 Hrs	AMP of Khupi Bay	Normal Maintenance related shutdown.	SD may be availed. Consent from SLDC, Arunachal Pradesh may be obtained as Khupi, Tenga, Dikshi will be out of service when the shutdown is availed.
21	132kV Silchar - Badarpur - 1	NOT APPROVED IN 200TH OCCM	0900 Hrs to 1200 Hrs	Rectification of Bus Isolator and replacement of Bus jumper	Normal Maintenance related shutdown.	At present, due to low generation at Meghalaya power system and outage of 132 Khandong-Kopili link, 132 kV Haflong-Jiribam line and 132 kV Loktak-Jiribam line, the Meghalaya power system is not N-1 compliant. The SD may
22	132kV Silchar - Srikona - 1	CONSENT RECEIVED FROM ASSAM	1300Hrs to 1600Hrs	Rectification of Bus Isolator and replacement of Bus jumper	Normal Maintenance related shutdown.	The SD may be availed subject to avaiilability of 132kV Silchar - Srikona - 2 TL.
23	132kV Silchar - Melriat - 2		0800 Hrs to 1600 Hrs	Insatllation and comissioning of DTPC panel	Existing system improvement related shutdown.	SD may be availed subject to availability of 132 kV Silchar - Melriat - 1 line.
24	A/R of 132KV AIZAWL-TIPAIMUKH TL		0700Hrs to 1700Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	SD may be availed subject to the availability of 132 kV Jiribam - Tipaimukh
25	A/R of 132kV Pasighat-Roing TL		0700Hrs to 1700Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
26	AR of 132KV AIZAWL-TIPAIMUKH		0700Hrs to 1700Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
27	AR of 132 KV KHUPI - KIMI LINE		0700Hrs to 1700Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
28	AR of 132 KV BALIPARA - KHUPI LINE		0700Hrs to 1700Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode

		Apr-23			Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
	220kV Transmission lines					
29	220kV New Mariani - Kathalguri		0800 Hrs to 1600 Hrs	CLR Polymer replacement of Procelean insulator changing to polymer in major crossing	Existing system improvement related shutdown.	SD may be availed. Flowgate of Upper Assam to be maintained below 245 MW during the SD period.
30	220kV Old Mariani - Kathalguri	CONSENT RECEIVED FROM ASSAM	0800 Hrs to 1600 Hrs	CLR Polymer replacement of Procelean insulator changing to polymer in major crossing	Existing system improvement related shutdown.	SD may be availed. Flowgate of Upper Assam to be maintained below 300 MW during the SD period.
31	220kV Bongaigaon - Salakati # 2		0800 Hrs to 1600 Hrs	AMP of Bay equipments	Normal Maintenance related shutdown.	The SD may be availed subject to availability of 220kV Salakati - Bongaigaon -1 and both 400/220 kV ICTs at BgTPP.
32	220kV Bongaigaon - Salakati # 1		0800 Hrs to 1600 Hrs	AMP of Bay equipments	Normal Maintenance related shutdown.	The SD may be availed subject to availability of 220kV Salakati - Bongaigaon -2 and both 400/220 kV ICTs at BgTPP.
33	A/R of 220 KV Misa - Samaguri #1		0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for PID works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
34	A/R of 220 KV Misa - Samaguri #2		0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for PID works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
35	A/R of 220 KV Misa - Dimapur -1 TL		0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
36	A/R of 220 KV Misa - Dimapur -2 TL		0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode

37	A/R of 220kV Misa-Kopili #1	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	SD may be availed
38	A/R of 220kV Misa-Kopili #2	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	SD may be availed
		Apr-23		Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			
	400kV Transmission lines				
39	400kV Silchar - Imphal - 1 TL	0800 Hrs to 1600 Hrs	Replacement of lighting damaged insulator string at loc 130 & 131	Normal Maintenance related shutdown.	SD may be availed subject to the availability of 400 kV Silchar-Imphal II
40	400kV Silchar - Imphal - 1 TL	0800 Hrs to 1600 Hrs	Replacement of lighting damaged insulator string and replacement of conductor at loc 34 to 37	Normal Maintenance related shutdown.	SD may be availed subject to the availability of 400 kV Silchar-Imphal II
41	400kV Misa - New Mariani - 2 TL	0800 Hrs to 1600 Hrs	CLR Polymer replacement of Procelean insulator changing to polymer in major crossing	Existing system improvement related shutdown.	SD may be availed. 400 kV Misa - New Mariani I to be kept in service.
42	400 KV Misa - Balipara -1 TL	0800 Hrs to 1600 Hrs	CLR Polymer replacement of Procelean insulator changing to polymer in major crossing	Existing system improvement related shutdown.	SD may be availed subject to the availability of 220 kV BTPS-Salakati D/C
43	400kV Silchar - Brynihat TL along with LR	0800 Hrs to 1600 Hrs	Modification in OTI/WTI and PRV circuit to reduce maloperation of the equipment & Modification in PRV circuit to reduce maloperation	Existing system improvement related shutdown.	SD may be availed.
44	400kV Silchar - Palatana - 1 TL	0800 Hrs to 1600 Hrs	Firmware upgradation of distance relay	Existing system improvement related shutdown.	SD may be availed subject to availability of 400 kV Palatana- Silchar line II.SPS-2 of NER to be kept in service during the SD period.
45	400kV Bongaigaon - Balipara - 4 TL	0800 Hrs to 1600 Hrs	For OPGW reconductoring works at Nakkati Hills	Existing system improvement related shutdown.	SD may be availed
SN	**Name of Element**	Time	Reason	Category	
		Apr-23			
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			
46	A/R of 400kV New Mariani - Misa - 1 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
47	A/R of 400kV New Mariani - Misa - 2 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
48	A/R of 400 KV Misa - Balipara -1 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
49	A/R of 400 KV Misa - Balipara -2 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
50	A/R of 400kV New Mariani - Misa - 1 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
51	A/R of 400kV New Mariani - Misa - 2 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
52	A/R of 400kV Balipara - Bongaigaon # 1 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
53	A/R of 400kV Balipara - Bongaigaon # 2 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
53	A/R of 400kV Balipara - Bongaigaon # 3 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
54	A/R of 400kV Balipara - Bongaigaon # 4 TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
55	A/R of 400kV Silchar-Byrnihat TL	0700Hrs to 1800Hrs	Auto reclosure to be kept at non auto mode for OPGW works	Existing system improvement related shutdown.	A/R may be kept in Non-Auto Mode
		Apr-23		Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			
	132 kV Badarpur SS				
56	132kV Main Bus at Badarpur	0800Hrs to 1600 Hrs	AMP of Bay equipments	Normal Maintenance related shutdown.	At present, due to low generation at Meghalaya power system and outage of 132 Khandong-Kopili link, 132 kV Haflong-Jiribam line and 132 kV Loktak-Jiribam line, the Meghalaya power system is not N-1 compliant. The SD may
	132KV Aizawl SS				
57	20MVar Bus Reactor at Aizawl	CSD 0800Hrs to 1600 Hrs	Overhauling of Gaskets and 03 No of valve replacement along with gasket replacments, filter top 50 mm flanged , Conservator drain valve 25 mm flanged & Buccholz shut off valve 80 mm : To prevent leakages thereby moisture ingress and improve system availability.	Normal Maintenance related shutdown.	SD may be availed
	400kV Silchar SS				
58	63MVAr Bus Reactor - 1 at Silchar	0900 Hrs to 1500Hrs	Modification in OTI/WTI and PRV circuit to reduce maloperation of the equipment & Modification in PRV circuit to reduce maloperation	Existing system improvement related shutdown.	SD may be availed. About 2 kV voltage change is observed in Silchar S/s
59	400/132kV 315MVA ICT 3 at Silchar	0900 Hrs to 1500Hrs	Modification in OTI/WTI and PRV circuit to reduce maloperation of the equipment & Modification in PRV circuit to reduce maloperation	Existing system improvement related shutdown.	SD may be availed. Other 2 ICTs at Silchar may be availed.
60	132kV Bus - 1 at Silchar	0900 Hrs to 1600 Hrs	AMP of Bus	Normal Maintenance related shutdown.	At present, due to low generation at Meghalaya power system and outage of 132 Khandong-Kopili link, 132 kV Haflong-Jiribam line and 132 kV Loktak-Jiribam line, the Meghalaya power system is not N-1 compliant. The SD may



	Name of Element	Apr-23 (1–30)	Time	Remarks	Category	
	400kV Bongaigaon SS					
60	220kV ICT # 2 LV side at Bongaigaon		0900 Hrs to 1600 Hrs	AMP of bay equipments. ICT will be charged from HV side only	Normal Maintenance related shutdown.	SD may be availed subject to availability of ICT I at Bongaigaon.
61	220kV ICT # 1 LV side at Bongaigaon		0900 Hrs to 1600 Hrs	AMP of bay equipments. ICT will be charged from HV side only	Normal Maintenance related shutdown.	SD may be availed subject to availability of ICT II at Bongaigaon.
62	220kV Bus Coupler along with BUS-1 at Bongaigaon		0900 Hrs to 1600 Hrs	AMP of Bay Equipments	Normal Maintenance related shutdown.	SD may be availed. All elements to be transferred to other Bus
63	400kV Alipurduar # 2 and Balipara # 4 Tie bay at Bongaigaon		0900 Hrs to 1600 Hrs	AMP of Bay Equipments	Normal Maintenance related shutdown.	SD may be availed
	400kV Balipara SS					
64	400kV 50MVAR Biswanath Chariali -2 L/R at Balipara		CSD 0900Hrs to 1700Hrs (upto April 2023)	Rectification of the Existing Reactor	Existing system improvement related shutdown.	SD may be availed. 2 kV Voltage change is expected at 400kV Balipara SS.
65	132 kv Side of 160 MVA ICT-1 at Balipara		0800 Hrs to 1600 Hrs	AMP of Bay Equipments	Normal Maintenance related shutdown.	SD may be availed subject to no outage of other elements.
66	50 MVar Bus Reactor-1 at Balipara		0800 Hrs to 1600 Hrs	Modification in OTI/WTI and PRV circuit to reduce maloperation of the equipment & Modification in PRV circuit to reduce maloperation	Existing system improvement related shutdown.	SD may be availed. 2 kV Voltage change is expected at 400kV Balipara SS.
67	Bongaigaon # 4 Main Bay at Balipara		1000 Hrs to 1300 Hrs	For CT oil Sampling	Normal Maintenance related shutdown.	SD may be availed. BNG-Balipara 4 shares dia with 400 kV Kameng-Balipara 1
68	315 MVA ICT#1 & Bus Recator # 1 Tie bay at Balipara		0800 Hrs to 1600 Hrs	AMP of Bus Reactor	Normal Maintenance related shutdown.	SD may be availed
69	315 MVA ICT#2 at Balipara		1000 Hrs to 1300 Hrs	For CT oil Sampling, Preventive norms	Normal Maintenance related shutdown.	SD may be availed subject to availability of 400/220 kV ICT-I at Balipara.
	Name of Element	**Apr-23 (1–30)**	**Time**	**Remarks**	**Category**	
	800kV BNC SS					
70	200 MVA 400/132KV ICT # 2 at BNC		0900Hrs to 1600Hrs	Formware upgradation of B/U Impedance relay	Existing system improvement related shutdown.	The SD may be availed subject to availability of 400/132kV 200MVA ICT-1 and 132 kV BNC-Chimpu DC.
	400kV Misa SS					
71	50 MVAr New Mariani 1 LR at Misa		0800Hrs to 1600Hrs	AMP of line reactor. Line will be out during switching operations due to system constraints	Normal Maintenance related shutdown.	SD may be availed. 2 kV Voltage change is expected at 400kV Misa SS.
72	50 MVAr New Mariani 2 LR at Misa		0800Hrs to 1600Hrs	AMP of line reactor. Line will be out during switching operations due to system constraints	Normal Maintenance related shutdown.	SD may be availed. 2 kV Voltage change is expected at 400kV Misa SS.
73	80 MVAr Silchar #1 Line Reactor at Misa		0800Hrs to 1600Hrs	AMP of line reactor	Normal Maintenance related shutdown.	SD may be availed. 3 kV Voltage change is expected at 400kV Misa SS.
74	80 MVAr Silchar #2 Line Reactor at Misa		0800Hrs to 1600Hrs	AMP of line reactor	Normal Maintenance related shutdown.	SD may be availed. 3 kV Voltage change is expected at 400kV Misa SS.
	Name of Element	**Apr-23 (1–30)**	**Time**	**Remarks**	**Category**	
	Interregional/International					
75	A/R HVDC BnC -Agra Pole-1	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	0800Hrs to 1800Hrs	For diversion of line in section 3715 to 3724 for construction of Ganga Expressway	Construction Related Shutdown	A/R may be kept in Non-Auto Mode
76	A/R HVDC BnC -Agra Pole-2	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	0800Hrs to 1800Hrs	For diversion of line in section 3715 to 3724 for construction of Ganga Expressway	Construction Related Shutdown	A/R may be kept in Non-Auto Mode
77	800KV AGRA BNC - I (S/D proposed by NR3)	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	CSD 0800Hrs to 1800Hrs	For diversion of line in section 3715 to 3724 for construction of Ganga Expressway	Construction Related Shutdown	SD may be availed. Consent from NLDC is to be taken.
78	800KV AGRA BNC - II (S/D proposed by NR3)	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	CSD 0800Hrs to 1800Hrs	For diversion of line in section 3715 to 3724 for construction of Ganga Expressway	Construction Related Shutdown	SD may be availed. Consent from NLDC is to be taken.
79	400kV Bongaigaon - Alipurduar - 1 TL	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	0900Hrs to 1600Hrs	For Firmware upgradation of P444 relay	Existing system improvement related shutdown.	SD may be deffered until 400KV BINAGURI-BONGAIGAON D/C comes into service
80	400kV Bongaigaon - Alipurduar - 2 TL	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	0900Hrs to 1600Hrs	For Firmware upgradation of P444 relay	Existing system improvement related shutdown.	SD may be deffered until 400KV BINAGURI-BONGAIGAON D/C comes into service
81	400KV BINAGURI-BONGAIGAON - 1 TL	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	CSD 0800Hrs to 1800Hrs	Re- Conductoring work under NERSS - XII pakage	Construction Related Shutdown	Consent from NLDC may be obtained. At max only 1 circuit 400 kV Binaguri - Bongaigaon D/C may be taken under shutdown at the same time.
82	400KV BINAGURI-BONGAIGAON - 2 TL	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	CSD 0800Hrs to 1800Hrs	Re- Conductoring work under NERSS - XII pakage	Construction Related Shutdown	
83	400KV BINAGURI-BONGAIGAON - 1 and BINAGURI BONGAIGAON-2 TL	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	CSD 0800Hrs to 1800Hrs	Reconductoring work at Railway crossing at various location	Existing system improvement related shutdown.	
84	A/R of 400KV BINAGURI-BONGAIGAON - 1 TL	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	0800Hrs to 1800Hr	Re- Conductoring work under NERSS - XII pakage	Construction Related Shutdown	A/R may be kept in Non-Auto Mode
85	A/R of 400KV BINAGURI-BONGAIGAON - 2 TL	SD WILL BE ALLOWED SUBJECT TO CONSENT FROM NLDC	0800Hrs to 1800Hr	Re- Conductoring work under NERSS - XII pakage	Construction Related Shutdown	A/R may be kept in Non-Auto Mode

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
	SHUTDOWNS PROPOSED BY NAGALAND					
1	132kV Wokha - Kohima TL		CSD 0800Hrs to 1600Hr	NERPSIP related work.	Existing system improvement related shutdown.	SD may be availed subject to availability of 132 kV Sanis-Wokha & 132 kV Dimapur-Kohima & 132 kV Karong-Kohima
2	132kV Mokokchung - Doyang TL.		0800Hrs to 1600Hr daily	Vegetation Clearing.	Existing system improvement related shutdown.	SD may be availed subject to availability of 220 kV Mariani-Mokukchung D/C.
3	132kV Dimapur - Kohima TL.		CSD 0800Hrs to 1600Hr	Replacement of 132kV Circuit Breaker of 132kV Dimapur Main Incomer at 132/33kV Kohima sub-station.	Existing system improvement related shutdown.	SD may be availed. 132 kV Yurembam - Karong - Kohima line and 132 kV Kohima - Wokha - Sanis - Doyang link to be kept in service.
4	ICT 1 & 2 (2x100) MVA, 132/66/33kV Transformer at Nagarjan S/s.		06:00 hours to 09:00 hours.	Annual Plan Maintenance.	Existing system improvement related shutdown.	SD may be availed. This shutdown will lead to blackout of Dimapur area

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
	SHUTDOWNS PROPOSED BY NTPC BgTPP					
1	ICT 2 (Interconnecting Transformer-2 400KV/ 220KV/33KV, 315 MVA) at BgTPP		CSD 0800Hrs to 1600Hrs	ICT 2 bushing replacement by M/s BHEL, ICT 2 Main Tank complete Oil filtration (92kl, ICT 2 400 KV & 220 KV Breaker PM/O/H & testing by M/s GE, ICT 2 Protection	Existing system improvement related shutdown.	SD may be availed subject to availability of 315 MVA ICT- II at BgTPP and 220 kV BTPS-Salakati D/C. RELIABILITY OF THE SYSTEM IS REDUCED.

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
	SHUTDOWNS PROPOSED BY ASSAM					
1	AUTORECLOSER OF 220KV NAMRUP-AMGURI SOLAR		0600Hrs to 1800Hrs	FACILITATE OPGW STRINGING WORKS	Construction Related Shutdown	A/R may be kept in Non auto mode
2	220 KV Samaguri-Mariani Ckt-2		0800Hrs to 1600Hrs	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. At present, the Upper Assam power system is connected with 220 kV Samaguri-Mariani(AS) line, 220 kV Mariani(AS) - Mariani (PG) line, 220 kV AGBPP-Mariani(PG) line and 132 kV Mariani - Golaghat
3	221 KV Samaguri-Mariani Ckt-2		0800Hrs to 1600Hrs	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. At present, the Upper Assam power system is connected with 220 kV Samaguri-Mariani(AS) line, 220 kV Mariani(AS) - Mariani (PG) line, 220 kV AGBPP-Mariani(PG) line and 132 kV Mariani - Golaghat
4	220 KV Samaguri-Sonabil Ckt-1		0800Hrs to 1600Hrs	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Samaguri-Sonabil-2 line. RELIABILITY OF THE SYSTEM IS REDUCED.
5	220 KV Samaguri-Sonabil Ckt-2		0800Hrs to 1600Hrs	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Samaguri-Sonabil-1 line.RELIABILITY OF THE SYSTEM IS REDUCED.
6	132 kV Pailapool- Jiribam Line		0800Hrs to 1600Hrs	S/D required for maintenance of line & corridor cleaning works	Normal Maintenance related shutdown.	SD may be availed. 132kV Badarpur - Jiribam (PG) line, 132 kV Tipaimukh - Jiribam (PG) line , 132 kV Jiribam (MA) - Jiribam (PG) line to be kept in service during the period of the shutdown
7	132 KV Haflong(AEGCL)-Haflong (PGCIL) line		0830Hrs to 1230Hrs	S/D required for maintenance of line & corridor cleaning works	Normal Maintenance related shutdown.	SD may be availed
8	220KV SARUSAJAI-SONAPUR GIS		0900Hrs to 1600Hrs	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Sarusajai-Jawaharnagar-Samaguri link, 220 kV Samaguri - Sonapur line and 220 kV Sarusajai-Azara DC. RELIABILITY OF THE SYSTEM IS REDUCED.
9	220KV SARUSAJAI-SONAPUR GIS		0800Hrs to 1600Hrs	CORRIDOR CLEANING	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Sarusajai-Jawaharnagar-Samaguri link, 220 kV Samaguri - Sonapur line and 220 kV Sarusajai-Azara DC. RELIABILITY OF THE SYSTEM IS REDUCED.
10	220KV SARUSAJAI-JAWAHARNAGAR GIS		070Hrs to 0900Hrs	PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Sarusajai-Sonapur-Samaguri link, 220 kV Sarusajai - Jawaharnagar line and 220 kV Sarusajai-Azara DC. RELIABILITY OF THE SYSTEM IS REDUCED.
11	220KV JAWAHARNAGAR GIS- SAMAGURI		0800Hrs to 1600Hrs	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Sarusajai-Jawaharnagar line and 220 kV Sarusajai-Azara DC. RELIABILITY OF THE SYSTEM IS REDUCED.
12	220KV JAWAHARNAGAR GIS- SAMAGURI		0900Hrs to 1600Hrs	CORRIDOR CLEANING	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Sarusajai-Jawaharnagar line and 220 kV Sarusajai-Azara DC. RELIABILITY OF THE SYSTEM IS REDUCED.

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
13	220KV SONAPUR - SAMAGURI & AR OF 220KV SAMAGURI- JAWAHARNAGAR		0700Hrs to 1600Hrs	Raising the height of conductors between Loc. no. 276-285 to maintain minimum ground clearance.	Existing system improvement related shutdown.	SD may be availed subject to availability of 220 kV Sarusajai-Sonapur line and 220 kV Sarusajai-Azara DC. RELIABILITY OF THE SYSTEM IS REDUCED. & A/R may be kept in Non Auto Mode
14	220KV MIRZA-BOKO		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. 220 kV Agia - Boko line to be kept in service.
15	220KV MIRZA-BOKO		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. 220 kV Agia - Boko line to be kept in service.
16	220KV MIRZA-AGIA		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. 220 kV Agia - Boko - Mirza link to be kept in service.
17	220KV MIRZA-AGIA		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. 220 kV Agia - Boko - Mirza link to be kept in service.
18	220kV TINSUKIA-NTPS		9:00-15:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 KV Tinsukia-NRPP-NTPS line & 220 kV Mariani- Amguri - NTPS line. RELIABILITY OF THE SYSTEM IS REDUCED.
19	220KV TINSUKIA-NRPP		9:00-15:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 KV Tinsukia-NRPP-NTPS line & 220 kV Mariani- Amguri - NTPS line. RELIABILITY OF THE SYSTEM IS REDUCED.
20	132 KV PANCHGRAM-HAILAKANDI		8:00-16:00	LINE MAINTENANCE & INSPECTION WORK	Normal Maintenance related shutdown.	SD may be availed. 132 kV Panchgram - Hailakandi line to be kept in service.
21	132 KV PANCHGRAM-HAILAKANDI		8:00-16:00	LINE MAINTENANCE & INSPECTION WORK	Normal Maintenance related shutdown.	SD may be availed. 132 kV Panchgram - Hailakandi line to be kept in service.
22	132 KV PANCHGRAM-HAILAKANDI		8:00-16:00	LINE MAINTENANCE & INSPECTION WORK	Normal Maintenance related shutdown.	SD may be availed. 132 kV Panchgram - Hailakandi line to be kept in service.
23	132 KV PANCHGRAM-LUMSHNONG	CONSENT FROM MEGHALAYA RECEIVED	8:00-16:00	LINE MAINTENANCE & INSPECTION WORK	Normal Maintenance related shutdown.	Combined loading of 132 kV Panchgram - Lumshnong line and 132 kV Badarpur - Khliehriat line to be kept within 100 MW before availing the SD. Consent from SLDC Meghalaya before availing the shutdown.
24	132 KV PANCHGRAM-LUMSHNONG	CONSENT FROM MEGHALAYA RECEIVED	8:00-16:00	LINE MAINTENANCE & INSPECTION WORK	Normal Maintenance related shutdown.	Combined loading of 132 kV Panchgram - Lumshnong line and 132 kV Badarpur - Khliehriat line to be kept within 100 MW before availing the SD. Consent from SLDC Meghalaya before availing the shutdown.
25	132 KV DULLAVHERRA-DHARMANAGAR	CONSENT FROM TRIPURA RECEIVED	8:00-16:00	LINE MAINTENANCE & CORRIDOR CLEANING WORK	Normal Maintenance related shutdown.	Consent from SLDC Tripura is required. SD may be availed. 132 kV PK Bari - Dullavcherra line and 132 kV Hailakandi - Dharmanagar line to be kept in service.
26	132 KV DULLAVHERRA-DHARMANAGAR	CONSENT FROM TRIPURA RECEIVED	8:00-16:00	LINE MAINTENANCE & CORRIDOR CLEANING WORK	Normal Maintenance related shutdown.	Consent from SLDC Tripura is required. SD may be availed. 132 kV PK Bari - Dullavcherra line and 132 kV Hailakandi - Dharmanagar line to be kept in service.
27	132 KV DULLACHERRA-DHARMANAGAR	CONSENT FROM TRIPURA RECEIVED	8:00-16:00	LINE MAINTENANCE & CORRIDOR CLEANING WORK	Normal Maintenance related shutdown.	Consent from SLDC Tripura is required. SD may be availed. 132 kV PK Bari - Dullavcherra line and 132 kV Hailakandi - Dharmanagar line to be kept in service.
28	132 KV SRIKONA-PAILAPOOL		8:00-16:00	LINE MAINTENANCE & INSPECTION WORK	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Jiribam(PG)-Pailapool line.
29	132 KV HAILAKANDI-DULLAVCHERRA		8:00-16:00	LINE MAINTENANCE & INSPECTION WORK	Normal Maintenance related shutdown.	SD may be availed. 132 kV PK Bari - Dharmanagar - Dullavcherra link to be kept in service.

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
30	132kV MARIANI-GOLAGHAT		8:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Golaghat - Sarupathar line. RELIABILITY OF THE SYSTEM IS REDUCED.
31	132KV GOLAGHAT-SARUPATHAR		8:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Golaghat - Mariani line and 132 kV Sarupathar - Bokajan line. RELIABILITY OF THE SYSTEM IS REDUCED.
32	132KV BOKAJAN-SARUPATHAR		8:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Golaghat - Sarupathar line and 132 kV Dimapur - Bokajan line. RELIABILITY OF THE SYSTEM IS REDUCED.
33	132KV BOKAJAN-DIMAPUR		8:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Bokajan - Sarupathar line. RELIABILITY OF THE SYSTEM IS REDUCED.
34	220kv AGIA-BTPS CKT 1		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	The SD may be availed subject to availability of 220 kV BTPS -Salakati DC and 220kV Agia-BTPS 2 line.
35	220kv AGIA-BTPS CKT 1		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	The SD may be availed subject to availability of 220 kV BTPS -Salakati DC and 220kV Agia-BTPS 2 line.
36	220kv AGIA-BTPS CKT 2		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	The SD may be availed subject to availability of 220 kV BTPS -Salakati DC and 220kV Agia-BTPS 1 line.
37	220kv AGIA-BTPS CKT 2		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	The SD may be availed subject to availability of 220 kV BTPS -Salakati DC and 220kV Agia-BTPS 1 line.
38	220KV AGIA-BOKO		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. 220 kV Mirza - Boko line and 132 kV Agia - Mirza line to be kept in service.
39	220KV AGIA-BOKO		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. 220 kV Mirza - Boko line and 132 kV Agia - Mirza line to be kept in service.
40	220KV MIRZA-AGIA		8:00-16:00	Pre Monsoon Maintenance and Breaker Analyser, Tan Delta Testing.	Normal Maintenance related shutdown.	SD may be availed. 220 kV Agia - Boko line to be kept in service.
41	220KV MIRZA-AGIA		9:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. 220 kV Agia - Boko line to be kept in service.
42	220KV BUS AT BOKO(BOTH BUS)		5:00-8:00	ROUTINE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed. 220 kV Agia - Azara line to be kept in service.

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
43	220KV AMGURI-MARIANI		8:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Amguri-NTPS line.
44	220KV AMGURI-NTPS		8:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Amguri-Mariani line.
45	220KV AMGURI-NTPS		8:00-16:00	CORRIDOR CLEANING & PREVENTIVE MAINTENANCE	Normal Maintenance related shutdown.	SD may be availed subject to availability of 220 kV Amguri-Mariani line.
46	220kV SALAKATI(BTPS)-RANGIA CKT -1		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT II. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
47	220kV SALAKATI(BTPS)-RANGIA CKT -1		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT II. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
48	220kV SALAKATI(BTPS)-RANGIA CKT -1		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT II. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
49	220kV SALAKATI(BTPS)-RANGIA CKT -1		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT II. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
50	220kV SALAKATI(BTPS)-RANGIA CKT -1		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT II. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
51	220kV SALAKATI(BTPS)-RANGIA CKT -2		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT I. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
52	220kV SALAKATI(BTPS)-RANGIA CKT -2		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT I. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
53	220kV SALAKATI(BTPS)-RANGIA CKT -2		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT I. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
54	220kV SALAKATI(BTPS)-RANGIA CKT -2		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT I. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED
55	220kV SALAKATI(BTPS)-RANGIA CKT -2		7:00-16:00	DOUBLE JUMPERING WORKS	Existing system improvement related shutdown.	SD may be availed subject availability of 220 kV BTPS-RANGIA CKT I. SPS at Rangia should be kept in ON condition. RELIABILITY OF THE SYSTEM IS REDUCED

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
	SHUTDOWNS PROPOSED BY NEEPCO					
1	Complete Plant Shutdown of 3x25MW Doyang		CSD 0000Hrs to 1700Hrs	For replacement of MIV seals of all the three Units.	Existing system improvement related shutdown.	SD may be availed subject to availability of 220 kV Mariani-Mokokchung D/C. Consent from all SLDCs is required

SN	Name of Element	Apr-23	Time	Reason	Category	
		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30				
	SHUTDOWNS PROPOSED BY TRIPURA					
1	132 KV Kamalpur - Dhalabill		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
2	132 KV Udaipur - Palatana		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Monarchak-Rokhia line & 132 kV Monarchak-Udaipur line. SPS at Monarchak to be in OFF condition. Combined Flowgate of 132 kV Monarchak-Rokhia line & 132 kV Monarchak-Udaipur line to be maintained below 70 MW during the SD period.
3	132 KV Bus-2 of Grid SS with 132 KV Agartala - Dhalabil & Agartala - RC Nagar Line I		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed.
4	132 KV P.K. Bari - Missiontilla line.		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Hailakandi-Dhullavcherra-Dharmanagar link.
5	132 KV P.K. Bari (TSECL) - P.K. Bari (ISTS)		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed. During the period of the shutdown, 132 KV Surjamaninagar - Surjamaninagar (ISTS), 132 kV Surajmaninagar - Bodhjungnagar line and 132 kV PK Bari - Ambassa line to be kept in service.
6	132 KV Surjamaninagar - Bodhjungnagar		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 KV Surjamaninagar - Surjamaninagar (ISTS), 132 kV PK Bari - PK Bari line and 132 kV PK Bari - Ambassa line. Maximum generation from Baramura has to be ensured during the SD period.
7	132 KV Rokhia to Agartala Line II		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to the availability of 132 KV Rokhia to Agartala Line I. Combined Generation of Monarchak and Rokhia Generation to be kept within 75 MW.
8	132 KV Monarchak - Rabindranagar	NOT AN NERLDC PURVIEW ELEMENT	9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
9	132 KV Ambassa - P.K Bari (ISTS)		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed. Other lines connected to Ambassa to be kept in service.
10	132 KV Rokhia to Agartala Line - I		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to the availability of 132 KV Rokhia to Agartala Line II. Combined Generation of Monarchak and Rokhia Generation to be kept within 75 MW.
11	132 KV Kamalpur - Dhalabill		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed

12	132 KV Udaipur - Palatana		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Monarchak-Rokhia line & 132 kV Monarchak-Udaipur line. SPS at Monarchak to be in OFF condition. Combined Flowgate of 132 kV Monarchak-Rokhia line & 132 kV Monarchak-Udaipur line to be maintained below 70 MW during the SD period.
13	132 KV Bus-1 of Grid S/S with Agartala - Rokhia Line I & II		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed. Monarchak and Rokhia generation will be evacuated via 132 kV Monarchak - Udaipur line only. Therefore the combined generation may be kept within the limits of the loading of 132 kV Monarchak - Udaipur line, loads at Rabindranagar and loads at Rokhia (65+5+10)=80 MW.
16	132 KV Mohanpur - Dhalabil line		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
17	132 KV Mission Tilla S/S (132 KV Bus)	CONSENT FROM ASSAM RECEIVED	9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
18	132 KV Rokhia - Monarchak		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed . SPS at Monarchak to be in OFF condition. Flowgate of 132 kV Monarchak-Udaipur line to be maintained below 65 MW during the SD period.
19	132 KV Ambassa S/S (132 KV Bus)		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
20	132 KV Surjamaninagar - Bodhjungnagar		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 KV Surjamaninagar - Surjamaninagar (ISTS), 132 kV PK Bari - PK Bari line and 132 kV PK Bari - Ambassa line. Maximum generation from Baramura has to be ensured during the SD period.
21	132 KV Baramura - Gamaitilla		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
22	132 KV Dharmanagar - Durllavcherra	CONSENT FROM ASSAM RECEIVED	9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed. 132 kV PK Bari - Dullavcherra line and 132 kV Hailakandi - Dharmanagar line to be kept in service.
23	132 KV Surjamaninagar (TSECL)- Surjamaninagar (ISTS)		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 KV Surjamaninagar - Bodhjungnagar line, 132 kV PK Bari - PK Bari line and 132 kV PK Bari - Ambassa line. Maximum generation from Baramura has to be ensured during the SD period.
24	132 KV P.K Bari - Kumarghat PowerGrid line		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed. All other lines connected to Kumarghat Bus to be kept in service.
25	132 KV Rokhia to Agartala Line I		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to the availability of 132 KV Rokhia to Agartala Line II. Combined Generation of Monarchak and Rokhia Generation to be kept within 75 MW.
26	132 KV Baramura - Gamaitilla		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
27	132 KV Surjamaninagar (TSECL)- Surjamaninagar (ISTS)		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 KV Surjamaninagar - Bodhjungnagar line, 132 kV PK Bari - PK Bari line and 132 kV PK Bari - Ambassa line. Maximum generation from Baramura has to be ensured during the SD period.
28	132 KV Rokhia - Monarchak		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	
29	132 KV P.K Bari (TSECL) - P.K Bari (ISTS)		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed. During the period of the shutdown, 132 KV Surjamaninagar - Surjamaninagar (ISTS), 132 kV Surajmaninagar - Bodhjungnagar line and 132 kV PK Bari - Ambassa line to be kept in service.
30	132 KV Surjamaninagar - Bodhjungnagar		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 KV Surjamaninagar - Surjamaninagar (ISTS), 132 kV PK Bari - PK Bari line and 132 kV PK Bari - Ambassa line. Maximum generation from Baramura has to be ensured during the SD period.
31	132 KV Bodhjungnagar - Jirania		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
32	132 KV PK Bari - Missiontilla line.		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Hailakandi-Dhullavcherra-Dharmanagar link.
42	132 KV Monarchak - Udaipur		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed. Generetion of Monarchak to be kept within 70 MW to limit the flow in 132 kV Monarchak - Rokhia line within 65 MW.
43	132 KV Main Bus Gamaitilla S/S		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
44	132 KV Udaipur - Palatana		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 kV Monarchak-Rokhia line & 132 kV Monarchak-Udaipur line. SPS at Monarchak to be in OFF condition. Combined Flowgate of 132 kV Monarchak-Rokhia line & 132 kV Monarchak-Udaipur line to be maintained below 70 MW during the SD period.
45	132 KV Bus at Rabindra Nagar S/S		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
46	132 KV Agartala - Bodhjungnagar line.		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed. Generation Support from Baramura is required.
47	132 KV Gamaitilla - Ambassa		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed
48	132 KV Bus-3 of Grid SS with Agartala - Bodhjungnagar, Agartala - SMNagar Line I & II, RCNagar-II		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed provided 13 2kV Agartala - RC Nagaar I is brought back into service
49	132 KV Bodhjungnagar S/S (132KV Main Bus)		9:00-16:00	Pre-Monsoon' activities	Normal Maintenance related shutdown.	SD may be availed subject to availability of 132 KV Surjamaninagar - Surjamaninagar (ISTS), 132 kV PK Bari - PK Bari line and 132 kV PK Bari - Ambassa line. Maximum generation from Baramura has to be ensured during the SD period.
SN	**Name of Element**	**Apr-23** (1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30)	**Time**	**Reason**	**Category**	
	SHUTDOWNS PROPOSED BY MEGHALAYA					
1	132 Nangalbibra - Agia feeder II	CONSENT FROM ASSAM RECEIVED	8:00-15:00	Infringement Clearence	Normal Maintenance related shutdown.	Study couldn't be done due to late submission
	SHUTDOWNS PROPOSED BY NHPC					
1	Loktak-Jiribam-2 Line		8:00-16:00	for testing of protection relays	Normal Maintenance related shutdown.	Study couldn't be done due to late submission
2	Loktak-Jiribam-1 (Rengpang) Line	CONSENT FROM MANIPUR RECEIVED	8:00-16:00	for testing of protection relays	Normal Maintenance related shutdown.	Study couldn't be done due to late submission
3	Loktak-Imphal-1 (Ningthoukhong) Line	CONSENT FROM MANIPUR RECEIVED	8:00-16:00	for testing of protection relays	Normal Maintenance related shutdown.	Study couldn't be done due to late submission
4	Loktak-Imphal-2 Line		8:00-16:00	for testing of protection relays	Normal Maintenance related shutdown.	Study couldn't be done due to late submission
	APPROVED					
	REJECTED					

Annexure C.4

Annexure-I

Details of Under Utilised power of Generating Station (CGS, ISGS, State Gencos and IPPs)

(More than 50 MW Avg)

	Generating Station	April	May	June	Remarks
SR	**CGS/ISGS**	NTPC KUDGI STPS (56 MW)	**(1)**NTPC RSTPS Stage 1 &2 (130 MW), (**2))**NTPC SIMHADRI Stage 2 (108 MW) (**3)** NTECL VALLUR TPS (149 MW) , (**4)** NTPL (166 MW) , (**5)** NTPC SIMHADRI Stage 1 (118 MW) (**6)** NTPC KUDGI STPS (761 MW)	**(1)**NTPC RSTPS Stage 1 &2 (74 MW) , (**2)** NTPC SIMHADRI Stage 2 (55 MW) , (**3)** NTECL VALLUR TPS (92 MW) , (**4)** NTPL (100 MW) , (**5)** NTPC SIMHADRI Stage 1 (114 MW), (**6)** NTPC KUDGI STPS (573 MW)	**Surplus Gencos as per data provided by RPCs on the basis of 2022-2023**
	State Gencos	**(1)** DrNTTPS (VTPS) (1452 MW), **(2)** RTPP (1148 MW) ,**(3)**SDSTPS(Krishnapatnam) (745 MW), **(4)** HNPCL(415 MW), **(5)** NCTPS-1 (501 MW), **(6)** NCTPS-2 (767 MW), **(7)** TTPS (479 MW), **(8)** MTPS-1 (684 MW), **(9)** MTPS-2 (412 MW), **(10)** TAQA (241 MW) **Range – (241 MW to 1452MW)**	**(1)** DrNTTPS (VTPS) (1299 MW), **(2)** RTPP (1054 MW) ,**(3)**SDSTPS(Krishnapatnam)(647 MW), **(4)** HNPCL (535 MW), **(5)** NCTPS-1 (460 MW) , **(6)** NCTPS-2 (576 MW), **(7)** TTPS (398MW), **(8)** MTPS-1 (565MW) , **(9)** MTPS-2 (383 MW), **(10)** TAQA (208 MW), **(11)** SEPC (256 MW) **Range – (208 MW to 1299MW)**	**(1)** DrNTTPS (VTPS) (1269 MW), **(2)** RTPP (1066 MW) ,**(3)**SDSTPS(Krishnapatnam)(407 MW), **(4)** HNPCL 494 MW), **(5)** NCTPS-1 (393 MW) , **(6)** NCTPS-2 (376 MW), **(7)** TTPS (652 MW), **(8)** MTPS-1(610 MW), **(9)** MTPS-2 (396 MW), **(10)** TAQA (200 MW), **(11)** SEPC (289 MW) **Range – (200 MW to 1269MW)**	

	IPPs	AP SEIL (204 MW)	AP SEIL (201 MW)	AP SEIL (137 MW)	
	States	ANDHRA PRADESH (84 MW), PUDUCHERRY (23MW)	ANDHRA PRADESH (469 MW), PUDUCHERRY(2 MW), KARNATAKA (500 MW), TELANGANA (1868)	ANDHRA PRADESH (576 MW) , PUDUCHERRY 19MW), KARNATAKA (500 MW), TELANGANA (571 MW), KERALA (510 MW)	**Surplus (as per LGBR ,2023)**
		KARNATAKA (-503 MW), KERALA(-235 MW), TAMIL NADU (-4400 MW), TELANGANA (-2268 MW)	KERALA (-304), TAMIL NADU (-277)	TAMIL NADU (-466 MW)	**Deficit (as per LGBR ,2023)**
	Total in SR	**-7299 MW Deficit in April**	**2258 MW Surplus in May**	**1710 MW Surplus in June**	

Annexure C.5

File no. CEA-PL-11/37/1/2018-IRP Division /121-125

Government of India
Ministry of Power
Central Electricity Authority

Sewa Bhawan, RK Puram,
New Delhi, 17th March, 2023

To,

Member Secretaries (All RPCs), CEA

Sub: - Requirement of data from States for implementation of Resource Adequacy Framework- Reg.

Sir,

Ministry of Power has notified the Electricity (Amendment) Rules, 2022, which inter alia, aims to implement Resource Adequacy (RA) Framework to ensure reliable supply of Electricity to the consumers across a broad range of system operating conditions.

As per Rule 16 (i) of the Electricity (Amendment) Rules, 2022 CEA has to issue guidelines for assessment of resource adequacy during the generational and operational planning stages. Accordingly, CEA has prepared draft Resource Adequacy Guidelines, which are currently in approval stage at Ministry of Power. As per the draft Resource Adequacy Guidelines published in September 2022, Central Electricity Authority is supposed to prepare Long Term-National Resource Adequacy Plan (LT-NRAP). For preparing the LT-NRAP State-wise information viz. Demand, Installed Capacity, Generation (both RE and conventional), financial data etc. (As per the attached format) may be required. We have already requested states to furnish the data in the attached format vide email dated 15.03.2022.

In view of the above, it is kindly requested to coordinate with States of your respective regions for timely collection of data pertaining to Resource Adequacy studies.

Yours Sincerely,

(Ammi Ruhama Toppo)

Chief Engineer (IRP)

Enclosure: Data format

Annexure C.10

SPS REVIEW IN NE REGION

March 2023

SYSTEM PROTECTION SCHEMES (SPS) IN NER

Sl. No	SPS Name
1	SPS related to tripping of 400 kV Palatana-Silchar D/C when both modules of Palatana in service.
2	SPS related to reverse power flow more than 60 MW from LV to HV side of 400/220 kV Azara ICTs
3	SPS related to tripping of 132 kV Umiam Stg-I to Umiam St-III D/C lines
4	SPS: When 220kV BTPS Salakati D/C gets overloaded or in case of outage of one circuit the other circuit gets overloaded i.e loading greater than 600A)
5	SPS associated with generation evacuation from BgTPP.
6	SPS associated with generation evacuation from TGBPP, Monarchak
7	SPS related to Outage of 220 kV BTPS – Rangia I & II
8	SPS related to the tripping of Bus Reactors at 400 kV S M Nagar (ISTS)
9	SPS related to the tripping of Bus Reactors at 400 kV P K Bari (ISTS)
10	SPS related to the tripping of Bus Reactors at 400 kV Imphal (PG)

SPS RELATED TO REVERSE POWER FLOW MORE THAN 60 MW FROM LV TO HV SIDE OF 400/220 KV AZARA ICTS

SPS related to reverse power flow more than 60 MW from LV to HV side of 400/220 kV Azara ICTs was designed based on following criteria

1. Low generation in southern part of NER grid
2. High load in southern part of NER grid
3. Tripping of 400 kV Bongaigaon-Azara line

The SPS was meant to relieve the congestion in 220 kV Salakati-BTPS DC line by tripping 400/220 kV,2x315 MVA ICTs at Azara (AEGCL).

In the present scenario i.e. after commissioning of 400 kV Silchar-Misa DC and 400 kV Silchar-Imphal-New Kohima-Mariani-Misa link flow from LV to HV side of 400/220 kV Azara ICT is not observed.

SPS: TRIPPING OF 132 KV UMIAM STG-I TO UMIAM STG-III D/C LINES

Presently, SPS related to tripping of any one circuit of 132 kV Umiam Stg-I to Umiam Stg-III D/C has been implemented which will lead to 25 MW instantaneous load shedding near Mawphlang area . SPS related to tripping of both 132 kV Umiam StgI to Umiam Stg-III D/C is under implementation stage.

Reconducting work of 132 kV Umiam Stg-I to Umiam Stg-III D/C with HTLS conductor is in final stage and single circuit of 132 kV Umiam Stg-I to Umiam Stg-III D/C may carry up to 137 MVA (CT ratio 600/1 has been considered).

SPS: TRIPPING OF 132 KV UMIAM STG-I TO UMIAM STG-III D/C LINES

System Study result:

Case1: *With Misa-Kopili-Khandong link and 132 kV Haflong Jiribam line*
Meghalaya load: 430 MW and Meghalaya Generation: 100 MW

Observation: *On tripping of any one circuit of 132 kV Umiam Stg-I to Umiam Stg-III D/C, maximum* ***108 MW*** *load observed in other circuit of 132 kV Umiam Stg-I to Umiam Stg-III D/C*

Case2: *Without Misa-Kopili-Khandong link and 132 kV Haflong Jiribam line*
Meghalaya load: 430 MW and Meghalaya Generation: 100 MW

Observation: *On tripping of any one circuit of 132 kV Umiam Stg-I toUmiam Stg-III D/C, maximum* ***128 MW*** *load observed in other circuit of 132 kV Umiam Stg-I to Umiam Stg-III D/C*

SPS: TRIPPING OF 132 KV UMIAM STG-I TO UMIAM STG-III D/C LINES

Observations:

1. *The present SPS related to tripping of* ***any one circuit of 132 kV Umiam Stg-I to Umiam Stg-III D/C*** *may be kept in* **ON** *condition till* ***the restoration of Misa-Kopili-Khandong link and 132 kV Haflong Jiribam line.***

2. *The SPS related to tripping of 132 kV Umiam Stg-I to Umiam Stg-III D/C may be implemented at the earliest since tripping of both circuit may lead to cascading tripping in Meghalaya power system.*

SPS: WHEN 220KV BTPS SALAKATI D/C GETS OVERLOADED OR IN CASE OF OUTAGE OF ONE CIRCUIT THE OTHER CIRCUIT GETS OVERLOADED I.E LOADING GREATER THAN 600A)

Reconducting work of 220 kV BTPS-Salakati D/C with HTLS conductor is under implementation stage.

As per 2nd meeting of NERSCT the ampacity of single HTLS shall be 1596A,which is equivalent to Twin ACSR Moose conductor for 45ºC ambient and 85ºC maximum conductor temperature. Thus, the single circuit of 220 kV BTPS-Salakati D/C may carry up to 608 MVA.

The present SPS related to tripping of 220 kV Boko feeder and 220 kV Azara feeder at 220 kV Agia GSS when loading in any one circuit of 220 kV BTPS-Salakati D/C greater than 600A may not required after the completion of reconducting work of 220 kV BTPS-Salakati D/C with HTLS conductor.

CROSS-BORDER SPS IN NER

Sl. No	SPS Name
1	SPS related to Outage of 400 kV Palatana – Surajmani Nagar line (Charged at 132kV)
2	SPS related to Outage of both 400/132 kV, 2x125 MVA ICTs at Palatana

SPS RELATED TO OUTAGE OF BOTH 400/132 KV, 2X125 MVA ICTS AT PALATANA

Presently, SPS related to tripping of 132 kV Surajmani Nagar - South Comilla DC on outage of both 400/132 kV, 2x125 MVA ICTs at Palatana was meant to avert the cascading tripping thus saving the Tripura power system

Study suggest that

- ***On outage of both 400/132 kV, 2x125 MVA ICTs , 50 % load is being shifted to 132 kV Surajmani Nagar (ISTS)- Surajmani Nagar(Tsecl) line.***
- ***The loading of 132 kV Surajmani Nagar (ISTS)- Surajmani Nagar(Tsecl) line during summer season is more than 90MW during peak hours.***
- ***Outage of both 400/132 kV, 2x125 MVA ICTs at Palatana may lead to severe loading in 132 kV Surajmani Nagar (ISTS)- Surajmani Nagar(Tsecl), and tripping of the same may lead to cascading tripping in Tripura Power sytem.***
- ***The situation may become more severe on low internal generation in Tripura power system.***

SPS RELATED TO OUTAGE OF BOTH 400/132 KV, 2X125 MVA ICTS AT PALATANA

Observations:

The present SPS related to ***Outage of both 400/132 kV, 2x125 MVA ICTs at Palatana*** *and SPS related to* ***Outage of 400 kV Palatana – Surajmani Nagar line*** *(****Charged at 132kV****) may be kept in ON condition and reviewed after the following upgradation.*

1. *Commissioning of* ***Surajmaninagar – Monarchak 132kV D/C*** *line.*
2. ***reconductoring*** *of 132 kV-Surajmaninagar (ISTS)-Surajmaninagar(TSECL) with HTLS conductor*
3. ***reconductoring*** *of 132 kV-Surajmaninagar (ISTS)-Budhjungnagar lines with HTLS conductor*

THANK YOU

ग्रिड-इंडिया
GRID-INDIA