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: NERPC/NETeST/2025/2268 - 2307 . 24th September 2025

सेवा में / To

As per list attached

विषय: 32 वीं एन.इ टेस्ट बैठक का कार्यवृत्त
Sub: Minutes of 32nd NETeST Meeting.

महोदय/महोदया,

कृपया 29 अगस्त, 2025 को एन.ई.आर.पी.सी कॉन्फ्रेंस हॉल, शिलांग में आयोजित 32 वीं एन.इ टेस्ट बैठक के कार्यवृत्त को आपकी सूचना एवं आवश्यक कार्रवाई हेतु संलग्न देखें। कार्यवृत्त एन.ई.आर.पी.सी की वेबसाइट: www.nerpc.gov.in पर भी उपलब्ध है।

कृपया कोई भी टिप्पणी जल्द से जल्द एन.ई.आर.पी.सी सचिवालय को सूचित करें।

Sir/Madam,

Please find enclosed herewith the minutes of the 32nd NETeST Meeting held at NERPC Conference Hall, Shillong on 29th August, 2025 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,

24/9/2025

(डी.के. बौरी/D.K Bauri)
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.

24/IX/2025

(डी.के. बौरी/D.K Bauri)

निदेशक / Director

MINUTES

OF

32ND NETeST MEETING

Time of Meeting: 11:00 Hrs.

Date of meeting : 29th August, 2025 (Friday)

Venue : NERPC Conference Hall,Shillong

Contents

NORTH EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 32ND NETeST MEETING HELD ON 29.08.2025 (FRIDAY) AT 11:00 HRS

1. PART-A: CONFIRMATION OF MINUTES

1.1. Confirmation of Minutes of 31st Meeting of NETeST Sub-Committee of NERPC

The minutes of 31st meeting of NETeST Sub-committee held on 04.04.2025 at NERPC Conference Hall, Shillong were circulated vide letter No. NERPC/NETeST/2025/3938-3977 17th April, 2025.

As no comments have been received, the sub-committee confirmed the minutes of 31st NETeST meeting of NERPC.

2. PART-B: ITEMS FOR DISCUSSION

2.1. Commencement of Audit of Communication systems installed at ISTS/SLDC stations-NERPC

As per Clause 10 of Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017 – "The RPC Secretariat shall conduct a performance audit of communication system annually as per the procedure finalized in the forum of the concerned RPC. Based on the audit report, RPC Secretariat shall issue necessary instructions to all stakeholders to comply with the audit requirements within the time stipulated by the RPC Secretariat."

The Communication Audit Committee of North Eastern Region vide NERPC letter dated 30.07.2024(Annexure-B 2.1) has been formed based on the provision of Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017.

NERPC along with NERLDC have identified some critical stations for audit of communication system and physical inspection in view of performance of the communication network. List of proposed stations (priority wise) for carrying out communication Audit has been shared by NERLDC (Annexure B 2.1(i)). NERPC vide e mail dated 22/11/24 and 10/01/25 (Annexure B 2.1(ii)) has requested PGCIL to submit the data in respect of Kahilipara substation to carry out the communication audit. Accordingly, PGCIL has submitted the requisite response for Kahilipara substation.

In 31st NETeST meeting, NERPC apprised the forum that the communication audit in respect of Kahilipara substation was carried out for the PGCIL owned equipments on 01.04.2025. The observations of the communication audit has been shared as an audit report. NERPC further requested AEGCL to submit the requisite information for AEGCL owned equipments in Kahilipara substation so that communication audit can be carried out for the same.

The forum further agreed that the next communication audit shall be carried out at SLDC Tripura and Surajmaninagar. The forum requested Tripura to submit the requisite information in respect of SLDC Tripura and Surajmaninagar to NERPC at the earliest.

Deliberation of the subcommittee:

PGCIL informed that they would submit the compliance report for the communication audit carried at Kahilipara substation at the earliest.

Tripura updated the forum that data for communication audit for SLDC Tripura and Surajmaninagar has been prepared and would be shared within a week.

Further, the forum emphasized that the communication audit for the critical sub-stations of NER to be carried out in time bound manner and advised the respective utilities to submit the required information in the desired format which are to be audited in the near future. The data in respect of following sub-stations may be submitted at the earliest so that the :

Sl No.	**State/Utility**	**Name of sub station**
1	Arunachal Pradesh	SLDC Arunachal Pradesh, Chimpu
2	Assam	Kahilipara and Sarusajai
3	Nagaland	SLDC Nagaland
4	Meghalaya	NEHU and SLDC Meghalaya
5	Manipur	SLDC Manipur
6	Tripura	SM Nagar (Tripura)
7	Mizoram	SLDC Mizoram
8	PGCIL	Nirjuli, Aizawl, Dimapr, Imphal and Misa
9	Indigrid	SM Nagar
10	NHPC	Loktak
11	NEEPCO	Kathaguri

All the above utilities were requested to furnish the required data in the prescribed format **(Annexure 2.1 enclosed)** by the end of September 2025.

2.2. Communication System Outage Planning-NERPC

As per Regulation 7.3 of Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017:

Quote:

The RPC Secretariat shall be responsible for outage planning for communication system in its region. RPC Secretariat shall process outage planning such that uninterrupted communication system is ensured.

Unquote

Communication System Outage Planning will be limited to the following systems:

(i) ISTS Communication System including ISGS
(ii) Intra-state Communication System being utilized for ISTS Communication
(iii) ICCP links between Main & Backup RLDCs, Main & Backup SLDCs & Main & Backup NLDCs.
(iv) Inter-regional AGC links
(v) Any other system agreed by the sub-group

- Communication System Outage Planning (CSOP) meeting shall be conducted during the third week of every month normally (preferably through VC) to discuss and approve the proposed outages of communication links and equipment.
- In case of any emergency outage requirement of communication links and equipment, Entities/Users/Owners may directly apply to respective RLDC with intimation to respective RPCs on D-2 basis. Confirmation of approval/rejection will be provided on D-1 basis by RLDCs in consultation with respective RPCs considering 24hrs processing window.

- Detailed SOP of Communication System Outage Planning attached at **Annexure-B 2.2**
- As per Communication system outage planning SOP provision, Monthly Communication system Outage planning meeting needs to be conducted in current month for approval of planned outage of communication equipment's and links in next month.
- Hence, it is proposed to start outage planning for Communication system in line with provisions of Communication system regulations, 2017.

In 31st NETeST meeting, NERPC shared the format of communication outage protocol to all the constituents. NERLDC also agreed to share the list of important communication links and equipments to all utilities for their consent. The forum advised all the constituents to share the planned communication outages for the next month by the 7th of the previous month in the prescribed format. All the constituents agreed to the same.

After 31st NETeST meeting:

None of the utilities have submitted the list of important lines critical from a communication perspective to NERLDC as mandated in the 29th NETeST Meeting.

NERPC is requested to intervene and instruct all utilities to strictly follow the regulations and established protocols to ensure smooth communication outage management.

Respective utilities are requested to submit the list of critical lines from a communication perspective to NERLDC.

Deliberation of the sub-committee:

NERLDC presented a draft list of critical communication elements which impacts the NER grid during outage (the presentation is at **Annexure B2.2(i)**). The forum requested all constituents to review the list and provide their inputs, including any modification, additions of any communication links, devices, or related elements, at the earliest.

It was further decided that proposal for communication system outages shall be discussed and approved along with the monthly OCC Shutdown of Transmission elements, and the status would be updated in the subsequent NETeST meetings on a quarterly basis for the information of members.

2.3. Guidelines on Availability of Communication system-NERPC

CERC vide order dated 19.01.2024 had approved the "Guidelines on Availability of Communication System" (**Annexure-B.2.3**) under the *Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017*.

- In 28th NETeST meeting, the sub-committee decided that CTU shall provide the details of communication channels to NERLDC and NERLDC shall forward the information of the channels to NERPC for computation of availability of the communication systems.
- CTU agreed to provide the list of channels as per guidelines from UNMS. Member Secretary, NERPC asked CTU to provide the information within 2 weeks. CTU has not provided the requisite information. CTU to update on the matter.
- In 30th NETeST Meeting, CTU apprised the forum that sharing the desired list of communication channels comes under the operational aspect of grid communication and CTU being a planning body shall not be responsible for sharing the list of communication channels. CTU informed that they file Petition in Hon'ble CERC in October-2024 in this regard & hearing for the petition has been scheduled on 13/02/25. CTU further stated that the course of action shall be decided as per the hearing of Hon'ble CERC.
- NERPC responded that as per Communication regulations shared by the Hon'ble CERC in January-2024, it is the responsibility of CTU to share the details of channels for communication. NERPC further stated that it is important to determine the channels whose availability is to be calculated. ULDC-POWERGRID agreed to share the list of important ISTS channels.

- The forum advised ULDC-POWERGRID to share the list of important ISTS channels by 10th February-2025.

In 31st NETeST meeting, ULDC-POWERGRID shared the list of important ISTS channels to NERPC. However, the forum noted that the format of the shared list does not clarify the type of service for which the channel is being used. Moreover, the nature of the outages and the duration of the down time of the channels are not specified. PGCIL responded that these evolving requirements should be resolved after the proper tagging process is completed.

The forum noted that PGCIL would share the information as per the uniform format for sharing the requisite data after finalization of the same by NPC.

Deliberation of the sub-committee:

It was informed that the uniform format for Communication Availability was approved in 16th NPC meeting. The forum agreed to adopt the finalized format as approved in 16th NPC meeting.

Further, PGCIL informed that the standard naming convention of Communication channels and equipment is under finalization. The forum advised Powergrid/CTU to share the requisite information at the earliest so that the NERPC can issue the Availability of Communication System.

2.4. Usage of POWERTEL OPGW in view of the order of Hon'ble CERC against petition no. 494/MP/2020 - NERLDC

As per the Hon'ble CERC order in Petition No. 494/MP/2020, all assets including OPGW regardless of whether commissioned by POWERGRID or POWERTEL, are under the management and control of POWERGRID. Consequently, the ownership of the OPGW in question vests with POWERGRID.

In the 8th CTU Planning Meeting (CPM) dtd. 28-07-2025, NERLDC requested POWERGRID to provide communication links for Power System usage over all such OPGW networks previously managed by POWERTEL, including the 400 kV Silchar – Imphal, 400 kV Balipara–Bongaigaon Lines 3 & 4 and the 132 kV Kumarghat–Aizawl line.

Forum may discuss further if any other such fibre needs to brought in usage for Power System.

Deliberation of the sub committee:

PGCIL updated the forum as follows:

1. **400 kV Silchar – Imphal line:** The matter would be taken up with POWERTEL at the earliest.
2. **400 kV Balipara–Bongaigaon Lines 3 & 4-** The matter has already been taken up with POWERTEL and is in progress.
3. **132 kV Kumarghat–Aizawl line-** There is high loss in this link. PGCIL will submit detailed loss report (OTDR) within 15 days.

NERLDC further apprised the forum that the only communication link between NER and ER is Salakati to Alipurduar. NERLDC requested the forum for exploring fibre/ bandwith allocation via Binaguri to Siliguri link to establish redundant communication link between NER and ER.

Forum in principle agreed for the proposal of redundant communication link between NER and ER and also advised NERLDC to take the matter to CTU/NLDC being inter-regional issue.

2.5. Optimised utilisation of OPGW & FOTE across the NER considering the assets that are being commissioned under NERPSIP, Comprehensive T&D, State-owned projects, TBCBs and ULDCs- NERLDC

With the recent commissioning of numerous links under various State and Central projects, the communication infrastructure of the NER Grid has witnessed significant development. However, **the optimal utilization of the**

infrastructure is essential to derive its full benefits. Few of such examples are outlined below:

Usage of BNC-HVDC → Balipara → Rangia → Bongaigoan → Alipurduar, the OPGW is laid over BNC- Agra HVDC link **however it is still not being utilized for Inter-regional communication link.**

The Connectivity Tinsukia →Kathalguri → Namsai →Tezu - - -> Roing - - -> Pasighat → Along → Basar →Daporizo →Ziro consist of Tejas SDH which are either owned by Comprehensive T&D or ULDC POWERGRID, **however all the Tejas SDHs are not connected till now.**

Kameng → Khupi → Tenga → Balipara OPGW is completed, however this link is not being utilised till now.

Inter-patching requirement at multiple locations of NER to facilitate a redundant communication path between Central Sector Station and NERLDC after commissioning of various assets under NERPSIP-Tripura:

(a) Gohpur (Assam owned station),

(b) Rokhia (Tripura owned station),

(c) Udaipur (Tripura owned station),

(d) Agartala-79 Tilla (SLDC-Tripura)

Deliberation of the sub-committee:

Regarding the connectivity from HVDC BNC to HVDC Agra, PGCIL apprised that the fibre connectivity from HVDC BNC to Rangia (repeater station) is healthy. But the fibre connectivity from Rangia (repeater station) to Alipurduar is unhealthy and is reporting high losses. PGCIL further informed that rectification works on the unhealthy portion (Rangia to Alipurduar) is in process and would take some time. PGCIL was advised to share the loss report within a week. **Annexure B 2.5 attached for reference.**

Regarding the connectivity from Tinsukia to Ziro, NERLDC apprised that inter-patching is pending at Kathalguri. Moreover, OPGW connection is pending between Namsai and Tezu and also SDH is not connected between Roing and Pasighat.

CTDS and POWERGRID agreed to mutually complete the necessary connections.

Regarding the connectivity from Kameng to Balipara, NERLDC apprised that inter-patching is pending from Balipara to Kameng which will enable a ring communication for Kameng.

MS, NERPC suggested NERLDC to write a letter to the concerned utilities, highlighting the gaps and possible solutions regarding inter-patching and fibre sharing issues as mentioned above. This would help ensure optimal utilisation of communication infrastructure in NER. NERLDC agreed to take the necessary action.

2.6. Establishing Communication Link between 400 kV New Kohima and 220 kV Zhadima via 220 kV Zhadima–New Kohima Line – Restoration of Connectivity in View of Link Failure-NERLDC

The communication link between **400 kV New Kohima and 400 kV Imphal** has remained non-functional since June 2024. Restoration efforts by Aparva (TSP) have been hindered due to prevailing law and order issues in Manipur, resulting in a prolonged outage and communication blackout at New Kohima. However, there exists an alternative opportunity to restore connectivity through the OPGW laid on the 220 kV Zhadima–New Kohima transmission line, which is being executed by the Department of Power (DoP), Nagaland.

A Fibcom FOTE is installed at 220 kV Zhadima.

An ABB FOTE is available at 400 kV New Kohima.

A direct fiber patch between these FOTEs using the available OPGW on the Zhadima–New Kohima line can restore essential communication for New Kohima until the primary route via Imphal is re-established.

ULDC-POWERGRID, Aparva and **DoP-Nagaland** are requested to coordinate with the respective vendors (Fibcom and ABB) and execute the necessary inter-patching to restore communication between New Kohima and Zhadima via the aforementioned OPGW route, which will enhance the reliability of New Kohima (Aparva) S/s and in turn for NER. A diagram depicting the connectivity is attaches as **Annexure B 2.6.**

Deliberation of the sub-committee:

DoP-Nagaland informed that approach cabling work is in progress from New Kohima (Aparva, KMTL) to Zhadima (DoP-N) and is expected to be completed by November-2025. The forum further advised PGCIL and KMTL to provide hardware support at Zhadima and New Kohima respectively, if required.

The KMTL representative apprised that they were unable to access certain towers of the 400 kV New Kohima - Imphal line, where communication links had failed, due to the prevailing law and order situation in Manipur. This has led to a prolonged outage and communication blackout at New Kohima.

Member Secretary, NERPC, assured the forum that he would discuss the matter with Commissioner (Power), Government of Manipur, along with KMTL officials, and also to deliberate on operational issues and to facilitate early restoration of connectivity between New Kohima and Imphal. He has also advised KMTL to kept in touch and make regular follow up with Manipur (MSPCL).

2.7. Installation of OPGW on the existing lines of ISTS and STU- Agenda by CTU

2.7.1 CEA has intimated vide letter dtd.22.05.2024 (attached at Annexure-I) that all the transmission lines of **110kV and above shall have Optical Ground Wire (OPGW)** along with necessary terminal equipment for speech transmission, line protection, and data channels. Further primary path for tele-protection shall be on point-to-point Optical Ground Wire and alternative path shall be either on Power Line Carrier Communication or predefined physically diversified Optical Ground Wire paths. Subsequently CEA vide their letter dtd. 22.11.24 (attached at Annexure-II) communicated that all the upcoming lines shall be provided with 48 Fiber OPGW to cater for broadband and internet requirements in the rural areas and hinterlands to provide reliable Telecom connectivity.

2.7.2 In the present scenario of increased RE penetration, frequent system expansion and strengthening, many of the existing lines are proposed for LILO frequently during transmission planning. However, it has been observed many times during planning/execution of these LILO systems that main line is not having OPGW, which leads to issues such as compromising on the alternate path/ redundancy/ protection. Further installation of OPGW on the existing lines being LILOed leads to time mismatch. Moreover, these OPGW laying schemes take even more time than execution of planned TBCB/RTM schemes as Live Line installation of OPGW require PTW from respective RLDCs and also involve ROW for OPGW laying.

As per para 2.7.2 above:

POWERGRID Transmission lines under RTM without OPGW: Tentative figure is given Below:

S.No	Region	Total Transmission Length (Kms)
1	NR	4091
2	WR	5200
3	SR	644
4	ER	2754
5	**NER**	**127**
	Grand Total	12816

TATA Powerlink (Joint Venture of POWERGRID & TATA Power) Transmission lines without OPGW:

S.No	Region	Total Transmission Length (kms)
1	ER	309
2	NR	742
	Total	1051

(c) Private TBCB Transmission Lines without OPGW:

S.No	TSP Name	Region	Total Transmission Length (kms)
1	Indigrid	ER	162
		WR	615
		NER	**220**
2	Adani	WR	1892
		Total	2889

Grand Total for the Transmission Lines without OPGW – 16,775 Kms(Pan-India).

In NER Region, 400kV Silchar-P K Bari-1 line having length 127km of doesn't have OPGW.

It is requested that all TSPs i.e. POWERGRID, Indigrid, Sterlite/Resonia, , Aparaava, etc. and RLDC may also check and intimate if any lines without OPGW is not mentioned here so that same may be included. Further, detail of required FOTE may also be checked and confirmed by respective TSPs.

2.7.3 State lines without OPGW

Many STU lines also got LILOed on the ISTS substations, for which OPGW installation in the main line is to be taken care by respective State Utilities.

STUs are also requested to identify and list out such lines for planning OPGW installation.

As a proactive approach, all the Central and State Sector utilities prioritize the implementation of the 48F-OPGW laying across the transmission network to ensure compliance with regulatory requirements and directive as mentioned above.

Accordingly, it's proposed that:

For ISTS lines CTU has prepared the schemes of implementation of OPGW on existing transmission lines of voltage 132kV and above, on which OPGW is not available, along with estimated cost which could be taken up as follows:

a) For TBCB projects, the scheme would be implemented by respective TSP under Change in Law / RTM
b) For RTM projects, the scheme would be implemented by respective TSP under RTM
c) For intra state projects, it is suggested that STUs shall formulate the scheme of implementation of OPGW on existing system for their respective states.

For North Eastern Region:

In NER region following ISTS lines doesn't have OPGW

400kV P K Bari-Silchar line and

400kV Binaguri- Alipurduar-Bongaigaon (upto bypass point under NERES-XXV Part-A)

It has been deliberated in 8th CPM held on 28.07.2025. In the meeting it has been agreed by the forum that OPGW may be laid on the above mentioned ISTS lines. Further OPGW laying work for Alipurduar- Bongaigaon (upto bypass point under NERES-XXV Part-A) may be carried out on priority with matching timeline of NERES XXV- Part-A Scheme (Attached as Appendix-I).

Accordingly, the scheme for laying of OPGW on above mentioned lines in NER has been prepared**.**

POWERGRID & Indigrid may provide the following details:

Sl. No	Station Name	Addl. FOTE including Amplifiers (If any)	Remarks
1	PK Bari		
2	Silchar		
3	Alipurduar		
4	Binaguri		STM-64 already proposed in Congestion scheme. Requirement of Amplifier (If any) may be provided.

Further, POWERGRID may provide the details of OPGW laid on LILO section.

Deliberation of the sub-committee:

NERLDC has shared the list of ISTS lines and Deemed ISTS lines where OPGW is not available in NER Region (List is attached at **Annexure 2.7.3 (a)**). CTU and respective states are requested to review the list and share the inputs if any.

After detail deliberation:

(i) The forum in principle agreed for the OPGW schemes for following ISTS lines:

1) 400kV P K Bari-Silchar line and

2) **400kV Alipurduar-Bongaigaon** (upto bypass point under NERES-XXV Part-A)

(ii) The forum advised CTU regarding the OPGW implementation, the details regarding the mode of implementation and financial estimates for above ISTS lines shall be worked out and shared with NERPC. Further suggested to obtain confirmation from the ER Region for the portion of 400 kV Binaguri–Alipurduar line.

(iii) After finalisation of these details, the matter may be placed before the forthcoming CCM/TCC for further discussion.

2.8. Replacement of Earthwire on second peak of Nangalbibra-Bongaigaon Transmission Ltd (NBTL) with OPGW (48F) for commercial utilization- Agenda by STERLITE

NBTL is an ISTS licensee (Transmission Service Provider) under TBCB scheme holding license no. 77/Transmission/2022/CERC dated 28.07.2022 issued by CERC.

As per the Transmission Service Agreement (TSA) dated 06.07.2021 (refer Specific Technical Requirement for Communication under Schedule 2), signed between NBTL and LTTCs, one 24F OPGW is to be installed on one peak & Earthwire (or OPGW if desired by NBTL) on second peak. Accordingly, NBTL has done the installation of 1 OPGW cable (24F) on one E/W peak and earthwire on the second peak. As per the requirements all 24F of the existing installed OPGW have been handed over to CTUIL for critical grid communication, supporting SCADA, PMU, VoIP, AGC, and other real-time operations. Therefore, there is no spare capacity available with NBTL for monetization for commercial purposes.

With this background, **NBTL proposes to replace the existing earthwire on second peak with 48F OPGW for commercial utilization of the fiber assets**. This would be installed on the following elements:

S No	Element	Length (Kms)
1.	400 KV D/c Bongaigaon - Nangalbibra Line	122.8
2.	132 KV D/c Hatsingimari - Ampati Line	18.6
	Total	**141.4**

As per the TSA, NBTL will undertake the maintenance of OPGW cable & OPGW hardware and the same will be the responsibility of NBTL. **This replacement will be undertaken by NBTL at its own costs.**

Further, as per the recommendation of NERLDC, the agenda is to be taken up with CTUIL and NERPC (in NETeST meeting) for further deliberation and perusal.

Deliberation of the subcommittee:

The forum advised NBTL to follow the guideline issued by CEA on fibre sharing. It was also advised to NBTL to seek approval from CERC, as per the applicable guidelines, for replacing the existing earth wire on the second peak of the 400 kV D/c Bongaigaon – Nangalbibra line with 48F OPGW, which is intended for the commercial utilization of fibre assets on the proposed line.

The CTU representative further informed that this matter was also discussed in the 8th CPM, where it was similarly advised to approach CERC, since the issue pertains to Right of Way (RoW) compensation and revenue-sharing, considering that the RoW belongs to the ISTS line.

2.9. Delay in signing of SCADA/EMS System AMC Agreement for Extended Support of SLDC Tripura- Agenda by TRIPURA

The SCADA/EMS system of Tripura SLDC, operational since 2016, had its 9-year Comprehensive AMC (7 Years AMC + 2 Years extended AMC) with M/s GEV (formerly GE T&D India Ltd) expired on 31st March 2025.After several communication and persuasion from Tripura SLDC end, **the revised offer of**

₹3.66 Crores (excluding GST) was placed by M/s GEV dated on 12th June 2025 which remains excessively high (approximately 4.15 times higher than the prior AMC cost of ₹90 Lakhs over a period of two-years.).

The offered AMC price breakup is as below:

- AMC price for 1st Year INR 1.73 Crores (Excluding GST)
- AMC price for 2nd Year INR 1.93 Crores (Excluding GST)

Later it was again requested to M/s GEV from Tripura SLDC end to quote the price keeping parity with the contract rate at which M/s GEV had entered AMC contract with Assam SLDC in the end of 2024 with a similar scope of work. But despite of several requests response is till date pending from M/s GEV end. Moreover, as the matter is quite delayed now after the expiry of the last AMC dated 31st March 2025, seeking intervention of NERPC for settlement of Fresh AMC with M/s GEV at the earliest for existing EMS/SCADA System of Tripura SLDC considering in line with the ongoing contract with Assam.

Now, the matter is placed before the Forum for kind deliberation as the matter is urgent and of utmost importance for maintaining the steady Power System Operation of Tripura as well as NER.

Deliberation of the sub-committee:

The forum noted that an offline meeting shall be scheduled with the sales team and technical team of M/s GE Vernova at Guwahati on 23rd September 2025 to resolve the issues of AMC of SCADA project for the NER states.

2.10. Integration of communication nodes in UNMS:

The integration of following Inter State Transmission System Nodes is still pending in UNMS.

- PK Bari 400kV
- SM Nagar 400kV

The above UNMS integration are quite essential for monitoring the overall communication system on pan India basic.

Deliberation of the sub-committee:

ULDC POWERGRID apprised the forum that the nodes (400kV PK Bari and 400kV SM Nagar) have been uploaded in UNMS and the integration works are in progress.

2.11. SAMAST Project – Agenda by Genus Power Infrastructures Limited

With reference to LOA NO: - 1. NERPC/SE(0)/SAMAST/2021/221 Dt.23/09/2021.

NERPC-2 (Nagaland, Mizoram, Tripura, Manipur, Arunachal Pradesh)

Nagaland –

- Release pending 10% payment: We have completed our work in Nagaland and have received go live. **We kindly request the release of the remaining 10% balance payment.**

Arunachal Pradesh-

- Release pending 10% payment: We have completed our work in the state and have received go live. **We kindly request the release of the remaining 10% balance payment.**

Mizoram-

- Release pending 10% payment: We have completed our work in the state and have received go live. **We kindly request the release of the remaining 10% balance payment.**

Manipur -

- Release pending 40% payment: We have completed our work in the state and have received go live. **We kindly request the release of the remaining 40% balance payment**.

Tripura -

- Material Handover: The balance BOQ items which was supply under the SAMAST project need to be handed over to utility. Need support on the same.

- Release pending 40% payment: We have completed our work in the state and have received go live. **We kindly request the release of the remaining 40% balance payment.**

AMC: *-*

- We have submitted our offer for AMC to Assam, Meghalaya, Nagaland and Mizoram on receipt of their request. But we have **not received the AMC order from any of the states**.

Deliberation of the sub-committee:

DoP-Nagaland informed that the balance payment shall be cleared by August-2025.

DoP-Arunachal Pradesh intimated that request for fund has been placed with PSDF for clearing the balance payment.

Mizoram apprised that requisition for fund to be sent to PSDF for clearing the balance payment.

Manipur apprised that 40% instalment of fund from PSDF has been received and will be disbursed to M/s Genus shortly.

Tripura informed that balance payment shall be cleared by August, 2025.

The subcommittee noted as above.

2.12. Presentations proposed on Security Operations Center (SOC) and PMU-PQ meter:

M/s Orbit Techsol India Pvt. Ltd will share a presentation on Security Operations Center (SOC).

M/s MB Control will share a presentation on PMU-PQ meter.

Deliberation of the sub-committee:

M/s Orbit Techsol India Pvt. Ltd delivered a brief presentation on Security Operations Center (SOC).

The forum noted the key aspects of SOC/NOC and advised M/s Orbit TIPL to extend their support to NER States for preparing DPR on SOC/NOC.

M/s MB Control gave a brief presentation on PMU-PQ meter. Further, it was informed that they would like to install two PMU-PQ meters in NER as pilot project for demonstration purpose without any cost implication to beneficiaries.

The forum noted the advantages of PMU-PQ meters and agreed for installation of PMU-PQ meters at two locations of NER i.e. one in Assam- for RE (Solar SPV) generation and one in Meghalaya.

3. PART-C: ITEMS FOR UPDATE/FOLLOW-UP

3.1. Status of Construction of Backup SLDC in NER states (as per (agenda 2.4) in 31st NETeST MoM.)

As deliberated in 86th Meeting of the TESG of PSDF held on 22nd October 2024, TESG has communicated the NER States that civil construction for setting of infrastructure for backup control centres at NER SLDCs is not being funded through PSDF as per the laid guidelines. Hence, all NER state has to arrange necessary fund for construction of backup SLDC on their own resources.

S. No.	Name of state	Status of submission of Documents to PSDF	Status of construction of Back up SLDC as per 29th TCC meeting.
1	Arunachal Pradesh	Backup Control Centre will be constructed for SCADA/EMS System at the new 132 kV New Pasighat (Napit) Substation.	Land identified at Niglok substation. Proposal has been submitted to government of Arunachal Pradesh for budget provision of this year.
2	Assam	Tarriff petition is filed in AERC, which is expected to be approved in March 2025.	Assam updated that the DPR has been submitted with a budget of around 8.5 Cr. to Govt. of Assam for approval of funds for construction of a new building for Backup SLDC at Samaguri S/S premises of AEGCL. Assam clarified that the cost shall not form part of tariff as it is proposed to be part of Grant by Govt. of Assam.
3	Manipur	Site Survey with NERLDC was carried out in 400 kV Thoubal S/s on 15th January 2025.	Location identified at 400kV Thoubal SS. Space required for accommodating UPS and Battery.
4	Meghalaya	In principle board approval accorded on 24th January 2025, the LoA will be placed in six months.	Tendering under process. Space identified at Mawphlang SS.

5	Mizoram	Proposal was submitted to the Government of Mizoram on 6th December 2024 for allocation of funds during the FY 2025-26. The Government of Mizoram typically prepares budgetary allocations in April.	Budget amount approved; expenditure sanction expected by next month. (Meeting held on 17th and 18th July, 2025).
6	Nagaland	A new two-story building is being constructed for the Backup Control Centre at the 220/132 kV Zhadima Substation	Space ready at New Kohima S/S (New Secretariat).
7	Tripura	Team of SLDC and NERLDC conducted a site survey for the proposed Backup SLDC location. The site survey was carried out on 9th January 2025 at the SM Nagar Grid Substation Complex, where an one-story building, previously designated as a Training Institute, has been identified for conversion into the Backup SLDC.	The proposal for modification of the existing building at S M Nagar Grid S/S (Tripura) has been submitted for approval of BOD which is expected shortly.

Deliberation of the sub-committee:

It was informed that the status is same as per last 29th TCC Meeting.

3.2. Progress of SCADA-EMS upgradation/replacement systems at Regional/State level in North-Eastern Region. (Agenda 3.19 of 31st NETeST Meeting)

The extended AMC period for existing (ULDC-Phase II) of the SCADA/EMS Project for SLDC-Assam State ends on 11th November 2024, and for SLDC-Meghalaya on 31st March 2025. Moreover, NER states are already facing financial difficulties in paying the AMC charges for the ongoing SCADA projects, which is hindering the proper service delivery by the vendor, M/s GE T&D India Limited. M/s GE T&D, India is quoting AMC amounts that are three (3) times higher than previous rates for further extension, exacerbating the financial strain. Additionally, the existing SCADA-EMS systems are facing cybersecurity risks due to outdated critical devices(firewall) and the aging servers are unable to support new operating systems due to hardware limitations.

Hence, in view of the same the SCADA-EMS upgradation/replacement is being taken up by NER SLDCs in consultation with Grid-India. NER SLDCs has approached PSDF for 100% funding. Monitoring Committee, PSDF in its 21st meeting held under Chairmanship of Secretary (Power) on 17th August 2023, agreed for funding of the SCADA/EMS projects (ULDC-Phase III) for the seven NER SLDCs including AMC for 7 years.

Subsequently, the Detailed Project Reports (DPRs) for SCADA/EMS project at main as well as backup control centers and Part B (Civil Works) for setting up of backup control centre of SCADA-EMS for the Load Despatch Centers of the North Eastern Region (NER), for each of the seven NER states, were submitted to PSDF Committee for approval on 16th August 2024.

Following multiple discussions in the 86th, 87th, 88th, and 89th TESG meetings, and based on TESG's direction, NERLDC prepared a cost estimate for the upgradation of SCADA/EMS proposals for the states of NER. This estimate was based on the latest Letter of Award (LoA) available, which was for SLDC Tamil Nadu.

NERLDC submitted these cost estimates via email on May 2, 2025, applying a 30% cost escalation on the SCADA/EMS project cost of SLDC, Tamil Nadu.

These estimates were subsequently discussed in the 90th Meeting of the TESG of PSDF, held on May 2, 2025.

As per minutes of 90th meeting released on 28th May 2025, TESG sought following directions on SCADA Proposals of NER states from Appraisal Committee of PSDF:

1. ***Direction on the 30% escalation considered on the LoA costs of SCADA/EMS project of SLDC, Tamil Nadu.***
2. ***Direction on mandatory spares which are considered in the range of 7.51% to 8.51% for these proposals.***

NERLDC requests the forum to take up the matter appropriately so that PSDF approval can be obtained at the earliest.

As per 29th TCC/NERPC Member (GO&D), CEA, apprised the forum that the matter has been referred by monitoring committee to form a joint committee, comprising of Member (GO&D) CEA, CMD, Grid India and JS(FA), MoP. Further he informed that the meeting of the committee will be organised shortly to resolve the matter at the earliest

Deliberation of the sub-committee:

MS, NERPC informed that meeting of joint committee, comprising of Member (GO&D) CEA, CMD-Grid India and JS(FA)-MoP was conducted in August 2025, where the technical recommendation for implementing the SCADA/EMS is recommended and the proposal is with monitoring committee.

The subcommittee noted as above.

3.3. Frequent power failure issue at Boko and Sarusajai (Agenda 2.5 in 31st NETeST Meeting)

It has been observed that the battery bank support to FOTE at Boko and Sarusajai is not proper, which leads to outage of Boko and Sarusajai node during any outage of AC power. Such outages lead to failure of significant

data of stations owned by AEGCL such as 400 kV Mirza, 220 kV Boko, 220 kV Agia and 220 kV Sarusajai etc. And also impacts the following services of NERLDC/NLDC:

A. ICCP link between NERLDC and NLDC/Backup NLDC
B. AGC link between Loktak/Kopili and NLDC
C. RTU/SAS data of BgTPP (NTPC), 400 kV Bongaigoan and 220 kV Salakati

Example:

1. At 16:24 hrs of 13th March 2025 Sarusajai power supply failure which led to shutdown of FOTE.
2. At 15:05hrs of 02nd March 2025 ; 11:15hrs of 06th March 2025; 16:42 hrs of 13th March 2025 Boko Power Supply failure which led to shutdown of FOTE.
3. At 15:25 hrs of 18th March 2025, Sarusajai power supply failure which led to shutdown of FOTE.

In 31st NETeST meeting, SLDC Assam informed the forum that, a new battery bank is being installed at 132kV Boko S/s and also a different battery bank has been arranged for 220kV Sarusajai S/s. Battery replacement at both locations is expected to be completed by 15th April 2025.

Deliberation of the sub-committee:

SLDC Assam informed that the new battery bank at 132kV Boko substation has been installed. Assam further stated that the matter at 220kV Sarusajai sub-station would be resolved by November-2025.

The sub committee noted as above.

3.4. Inter-patching of FOTE at Assam owned Rangia s/s between Fibcom and ABB as backup path to avoid dependency on Boko-Agia node (Agenda 2.6 in 31st NETeST Meeting).

NERLDC and NLDC are primarily using Bongaigoan – Salakati – BTPS (Assam) – Agia – Boko – Sarusajai – Kahilipara – NERLDC Shillong/ NERLDC Guwahati for carrying data of Bongaigaon (PG), Salakati (PG), AGC of Loktak & Kopili with NLDC, ICCP links between NERLDC and Backup NLDC/NLDC/SLDCs. However, it has been observed that during maintenance or outage of any node mentioned above impacts significant critical services. Hence, in order to avoid such outages of critical services, it is requested to inter-patch recently commissioned FIBCOM SDH and ABB SDH at Rangia (AEGCL). After inter-patching, a new link will be available: Bongaigoan (PG) – Rangia (AEGCL) – Amingoan (AEGCL) – Sishugram (AEGCL) – Kamakhaya (AEGCL) – Kahilipara (AEGCL) – NERLDC Shillong/NERLDC Guwahati. Subsequent to the inter-patching, necessary KLM sharing or bandwidth sharing may also be carried out at Rangia (AEGCL). This new link will be used as secondary path between NERLDC Shillong/Guwahati and Bongaigoan (PG).

It has been observed that inter-patching between NERPSIP installed FOTE and ULDC-FOTE is not being carried out properly. It is further requested to have review meeting of NERPC sub-committee constituted for detailed monitoring of progress (such as Commissioning of DCPS, FOTE, inter-patching, OPGW stringing, integration of telemetry data) of NERPSIP and Comprehensive-Arunachal Pradesh Scheme.

In 31st NETeST meeting, ULDC-POWERGRID informed the forum that, another redundant communication path was also being established through the newly commissioned lines connecting Bongaigaon and Balipara substations which will help in mitigating the issue. However, as requested by NERLDC, ULDC team of POWERGRID assured that the inter-patching work shall also be completed within 7 days, resulting in the creation of additional redundant communication paths to NERLDC.

Deliberation of the sub-committee:

NERLDC informed that Under NERPSIP even after the commissioning of compatible SDH equipment and the availability of functional OPGW links at several strategic locations, the absence of interconnection between ULDC-SDH and NERPSIP-SDH has resulted in significant under-utilisation of available infrastructure and has limited the development of necessary main and redundant communication paths critical to power system operations.

ULDC-POWERGRID assured that all such inter-connections would be carried out at the earliest.

3.5. Request to integrate DoP, Arunachal Pradesh Stations over OPGW (Agenda 2.7 in 31st NETeST Meeting).

As informed by the POWERGRID-COMPREHENSIVE Arunachal Pradesh team, installation of OPGW, FOTE and commissioning of FOTE in the OPGW communication path from Pasighat to Ziro i.e Niglok-> Napit-> Pasighat-> Along-> Basar->Daporizo-> Ziro has been completed and commissioned.

NERLDC requested DoP, Arunachal Pradesh via email dated 11th March 2025, to integrate the following stations over OPGW also apart from the available VSAT:

1. Along
2. Pasighat
3. Daporizo

This will help in increasing reliability of real time telemetry of Arunachal Pradesh.

As the agenda could not be discussed due to absence of representative from DOP, Arunachal Pradesh, the same was discussed on 225th OCC meeting agenda 2.11, where in Member Secretary, NERPC advised DoP-AP to take up the matter with the co-ordinator of M/s GE and resolve the issue by the next OCC meeting.

Deliberation of the sub-committee:

DoP-Arunachal Pradesh apprised the forum that the matter has been resolved on 19th June 2025.

3.6. Data integration of Panyor and Pare in Chimpu S/s RTU (Agenda 2.8 in 31st NETeST Meeting).

NERLDC observed that the data (MW, MVAR, CB, and isolators) for Panyor and Pare bays at Chimpu S/s is not being reported. Upon further analysis, it has come to NERLDC's attention that MFTs and CMRs for the mentioned bays are yet to be installed. Since the above-mentioned lines are connected to ISGSs, monitoring of the same is imperative from Chimpu end also.

NERLDC requested DoP, Arunachal Pradesh to carry out the following actions to enable data reporting for the mentioned bays via email dated 17th February 2025 and reminder mail on 11th March 2025, 16th April 2025, 08th May 2025 and 05th August 2025, attached as **Annexure-C 3.6:**

1. ***Installation of MFTs:***
   - MFTs need to be installed for both bays.
   - Appropriate CT and PT connections must be completed.
   - MFTs should then be integrated with the Chimpu RTU.
2. ***Installation of CMRs:***
   - CMRs need to be installed for both bays.
   - CB and isolator status should be integrated with the Chimpu RTU.

As the agenda could not be discussed due to absence of representative from DOP, Arunachal Pradesh, the same was discussed on 225th OCC meeting agenda 2.12, where in DoP-AP apprised the forum that MFTs and CMRs have been received at site. DoP-AP further apprised the forum that cabling work is pending and will be resolved within 2 weeks' time.

Deliberation of the sub-committee:

DoP-Arunachal Pradesh informed the forum that the wiring issue has been pending due to manpower issues.

The forum advised DoP-Arunachal Pradesh to expedite the matter and resolve the issue within a month on priority basis.

3.7. Integration of weather parameter data as per CERC guideline on Interface Requirements (as per agenda 3.4 in 31st NETeST MoM)

In accordance with the CERC Guidelines on Interface Requirements dated 19th January 2024, all state-owned and central sector stations are required to integrate weather parameters, including Temperature, Wind Speed, Humidity, and Rainfall, into the SCADA system.

NERLDC requests the states to prioritize the incorporation of these weather parameters in the state capitals and other important load centres as a first step.

In 30th NETeST meeting, the forum advised all the stakeholders to prioritize the incorporation of the said weather parameters.

In the 31st NETeST meeting, NEEPCO apprised the forum that they have incorporated the weather parameter data at Khandong Stage –II with a cost implication of approximately ₹2.5 lakhs only. **MS, NERPC requested all utilities to integrate the data as per CERC guidelines.**

Deliberation of the sub-committee:

NERLDC submitted the status of implementation of weather station at ISTS/ISGS station, which is tabulated as below:

Sl. No.	Name of Utility	Total Number of Station	Stations in which Weather Station is integrated
1	PGCIL	22	05

2	NTPC	01	00
3	NHPC	01	01
4	NEEPCO	09	01
6	OTPC	01	00
7	Indigrid	02	00
8	Sterlite	01	01
9	KMTL (Aparva)	01	00

Forum advised all ISTS/ISGS station to complete the integration of weather station at the earliest. Forum also requested states to formulate the plan for integration of weather station in existing stations.

It was further emphasized that all utilities must ensure integration of weather stations whenever a new station is connected to the grid.

3.8. Integration of protection signals and substation data as per CERC guideline on Interface (as per agenda 2.9 in 31st NETeST MoM)

In accordance with the CERC Guidelines on Interface Requirements dated 19th January 2024, all state-owned and central sector stations are required to integrate protection points as applicable, such as

Transmission element: Master Trip, Over Voltage Trip, LBB Trip

Generator specific protection: Setpoint of Unit, DELTAP Of AGC of Unit, Droop Settings of Unit, AVR Reference Voltage of Unit, PSS ON/OFF status of unit, AVR ON/OFF of Unit, Class A, B & C protection Operated for Unit

NERLDC requests the states to prioritize the incorporation of these parameters in the state stations and central sector stations.

NERLDC has submitted a checklist for central sector for compliance of the above guidelines in 31st NETeST.

All utilities are requested to update the status.

Deliberation of the sub-committee:

The forum advised all the utilities to take note and comply as above.

3.9. Dual Connectivity between Main-1 & Main-2 NERLDC and SLDCs (additional agenda 1.4 in 31st NETeST meeting)

NERLDC currently operates under the Main-1 and Main-2 concept, with its establishments located in Shillong and Guwahati. This structure enhances operational efficiency and ensures redundancy in case of failures. To strengthen grid reliability and communication resilience, a dual independent physical connectivity path between NERLDC and State Load Despatch Centres (SLDCs) is crucial.

In case of last mile connectivity all SLDCs should ensure that the minimum two physical OPGW/underground/ADSS fiber is available between SLDC and the last mile sub-station.

ULDC-NERTS and SLDCs are requested to ensure the dual independent physical path between SLDC and Main-1 & Main-2 NERLDC.

NERLDC has submitted the preliminary map of each SLDC in 31st NETeST meeting which is attached as **Annexure C 3.9 .**

In 31st NETeST meeting, MS NERPC requested all SLDCs to ensure the availability of dual connectivity between SLDC and its last mile connectivity and subsequently to NERLDC. NERLDC has shown a presentation on the requirements for establishing dual connectivity.

Deliberation of the sub-committee:

The forum advised all the states/SLDCs to devise their respective plans for dual connectivity between SLDCs and their last mile connectivity and subsequently to NERLDC and share the plan at the earliest.

3.10. Re-configuring RTUs of NEEPCO owned stations for reporting to NERLDC Guwahati (as per Agenda 3.2 of 31st NETeST MoM)

NERLDC Guwahati was inaugurated on 11th March 2024, following which NERLDC is operating under the Main-1 and Main-2 concept, with its establishments located in Shillong and Guwahati. At present, some NEEPCO stations report exclusively to NERLDC Shillong. In view of achieving 100% redundancy of Main-1 and Main-2 NERLDC, there is a critical need to reconfigure the RTUs to enable simultaneous reporting to NERLDC Guwahati. Correspondence regarding this matter has been initiated through emails dated 25th September 2024 ,18th November 2024 and 12th March 2025, as well as a formal letter addressed to CGM (O&M), NEEPCO, under reference number NERLDC/SL/COMMUNICATION/7171 dated 27th December 2024. However, the necessary actions from NEEPCO remain pending.

The stations requiring reconfiguration are as follows:

RC Nagar: The RTU need to be configured in the IEC-60870-104 protocol to facilitate reporting to NERLDC Guwahati.

Pare HEP: The RTU need to be configured in the IEC-60870-104 protocol to facilitate reporting to NERLDC Guwahati.

In addition to above, NERLDC has communicated with NEEPCO via email 11th March 2025.

Deliberation of the sub-committee:

NEEPCO updated the status as follows:

RC Nagar: NEEPCO informed that the Work order is already placed to M/s GE. NEEPCO further requested NERLDC to assist in configuration of the RTU database in similar way as similar way assistance was provided for Panyor HEP station.

Pare HEP: NEEPCO informed the forum that the RTU/PLC has been configured, however due to configuration issue the data is not getting telemetered properly. NEEPCO requested that further configuration of RTU/PLC would be carried out during the lean hydro period i.e., Nov'25 –

Dec'25 as the same RTU/PLC is being used to control the units which are running continuously.

3.11. Re-configuring RTUs of POWERGRID owned stations for reporting to NERLDC Guwahati (as per Agenda 3.3 of 31st NETeST MoM)

NERLDC currently operates under the Main-1 and Main-2 concept, with its establishments located in Shillong and Guwahati. Presently, several stations owned by POWERGRID report exclusively to NERLDC Shillong. To address this, there is a need to reconfigure the RTUs to enable simultaneous reporting to NERLDC Guwahati.

With help of PGCIL-NERTS and PGCIL-ULDC ten (10) stations out of sixteen (16) stations are reporting parallelly to NERLDC Shillong and NERLDC Guwahati.

We request POWERGRID-NERTS to kindly extend further support to configure rest six (0) stations to enable them to report to NERLDC Shillong and NERLDC Guwahati. The status is tabulated below:

Sl. No.	Sub-station	Configuration required	Completion status	Bottleneck/issues faced
1	Misa	Creation of a new IEC-104 in the GE SAS Gateway. Or Alternatively old IEC-101 can be attempted to restore.	Pending	OEM support is required for Creation of new IEC-104 in the GE SAS Gateway Or Alternatively old IEC-101 can be attempted to restore.
2	Mokokchung	Creation of a new IEC-104 in the SAS Gateway.	Pending	OEM support is required for Creation of

				new IEC-104 in the GE SAS Gateway
3	Salakati	Network reconfiguration of D400 gateway-2 for RLDC	Pending	OEM support is required for netwrok reconfiguration of one of the Gateways.
4	Silchar	Creation of a new IEC-104 in the GE SAS Gateway.	Pending	OEM support is required for Creation of new IEC-104 in the GE SAS Gateway
5	Roing	Network reconfiguration of One of SAS Gateway and router (post OPGW link completion).	Partially Completed	Only one Gateway is reporting at a time.
6	Tezu	Network reconfiguration of One of SAS Gateway and router (post OPGW link completion).	Partially Completed	Only one Gateway is reporting at a time.

The requests emails were sent to POWERGRID on 24th June 2025 and 16th July 2025.

POWERGRID is requested to provide an update on the current status of these actions.

In the 31st NETeST meeting, POWERGRID informed the forum that, reconfiguration work has been started in a station where port is available and in the event of non-availability of the ports, SAS upgradation shall be required which shall involve cost implication.

Deliberation of the sub-committee:

NERLDC informed that with help of PGCIL-NERTS and PGCIL-ULDC eleven (11) out of sixteen (16) stations are reporting parallelly to NERLDC Shillong and NERLDC Guwahati.

NERLDC requested POWERGRID-NERTS to kindly extend further support to configure rest five (05) stations to enable them to report NERLDC Shillong and NERLDC Guwahati. The status as updated is as tabulated below:

Sl. No.	Sub-station	Configuration required	Completion status	Status as per 32nd NETeST
1	Misa	Creation of a new IEC-104 in the GE SAS Gateway. Or Alternatively old IEC-101 can be attempted to restore.	Pending	ULDC-POWERGRID informed that LoA has been placed for the SAS upgradation of the Misa and expected to complete within 7-8 months. NERLDC requested ULDC to configure existing SAS with any existing port either ethernet or serial port over IEC-60870-104 or IEC-60870-101 in order to establish redundancy.
2	Mokokchung	Creation of a new IEC-104 in the SAS Gateway.	Pending	ULDC-POWERGRID informed that LoA has been placed for the SAS upgradation of the Mokokochung and expected to complete within 7-8 months. NERLDC requested ULDC to configure existing SAS with any existing port either ethernet or serial port over IEC-60870-104 or IEC-60870-

				101 in order to establish redundancy.
3	Salakati	Network reconfiguration of D400 gateway-2 for RLDC	Pending	The OEM would visit the Salakati soon in order to establish the parallel reporting.
4	Roing	Network reconfiguration of One of SAS Gateway and router (post OPGW link completion).	Partially Completed	ULDC-POWERGRID informed that LoA has been placed for the SAS upgradation of the Roing and expected to complete within 7-8 months.
5	Tezu	Network reconfiguration of One of SAS Gateway and router (post OPGW link completion).	Partially Completed	ULDC-POWERGRID informed that LoA has been placed for the SAS upgradation of the Tezu and expected to complete within 7-8 months.

3.12. Consolidated list of Circuit Breaker and Isolator for all utilities (as per agenda 3.5 in 31st NETeST MoM).

As per Agenda 2.5 of the Minutes of Meeting (MoM) for the 221st OCC, the forum requested NERLDC to share a consolidated list of all utilities, along with the status of their circuit breakers and isolators.

In response, the consolidated list of telemetry availability for all stations is included in the weekly Telemetry Report.

The latest version of this report is attached as **Annexure – C 3.12** for reference.

Members may note.

Deliberation of the sub-committee:

The forum advised all the utilities to go through the consolidated list of telemetry availability for their respective stations. Members noted.

3.13. Connectivity of 132 kV Hastingmari – Ampati link with existing OPGW network of NER (as per Agenda 3.9 of 31st NETeST MoM):

The connectivity of the 132 kV Hatsingimari – Ampati link with the OPGW network is crucial to ensure the reliable reporting of data/voice for Hatsingimari and to enable future connectivity between Assam and Meghalaya.

As per the Minutes of the NERPC Special Meeting on the Establishment of an Alternate Path for the Hatsingimari – Ampati Line, held on 9th December 2024, the responsibilities of various utilities are outlined in the table below:

Sl No.	Location	Details of Work	Responsibility	Timeline
1	Ampati	Optical patching at Ampati has been completed. KLM is shared between the ECI multiplexer (owned by NBTL) and the ABB multiplexer (owned by Meghalaya).	M/s Sterlite	Completed
2	Nangalbibra	Supply of one GE make and one ABB make STM-1 SFP. Notify MePTCL 2–3 days before delivery.	M/s Sterlite (supply), MePTCL (patching & KLM)	2-3 days after receipt of material

		MePTCL to complete inter-patching of GE and ABB FOTE within 2 days after receipt of material. Extend the KLM to Agia substation.		
3	Agia	Assam FOTE at Agia node maintained by ULDC POWERGRID. POWERGRID to provide one ECI make SFP. POWERGRID and MePTCL to perform inter-patching between GE and ECI FOTE Mux. POWERGRID to extend KLM to SLDC Assam.	POWERGRID & MePTCL (works)	2–3 days after completion of Nangalbibra
4	Testing of Links	Joint testing between SLDC Assam and Hatsingimari to verify link establishment.	SLDC Assam, POWERGRID, AEGCL and MePTCL	In parallel with completion of Nangalbibra works

As per 30th NETeST meeting, M/s Sterlite communicated over mail that all hardware as requested by MePTCL has been delivered at site except ABB make SFP. The same is expected by the end of January-2025.

As per 31st NETest meeting, the SAS reconfiguration at Hastingmari is required in order to telemeter the data from Hatsignmari SAS to SLDC Assam. SLDC Assam assured the forum that they will configure and integrate 132kV Hatsingimari S/s SAS over IEC-104 by end of April 2025.

Deliberation of the sub-committee:

SLDC Assam apprised that configuration and integration of 132kV Hatsingimari substation SAS over IEC-104 is not feasible. Assam further informed that configuration and integration process can be done by converting to IEC-101. The forum advised Assam to resolve the issue at the earliest.

3.14. Missing link OPGW in 132 kV Karong-Kohima line (as per Agenda 3.12 of 31st NETeST MoM)

NERPSIP-Manipur has laid OPGW from Karong (in Manipur) up to Mao (the border of Manipur and Nagaland). However, there is currently no project planned to extend the OPGW from Mao to Kohima, which is necessary to complete the link from Karong to Kohima. This line is an ISTS connection between the two states. The OPGW connectivity will enhance the reliability and redundancy of the power systems in both Manipur and Nagaland, as well as for the entire North Eastern Region (NER).

As per MOM of 32nd CMETS-NER, DoP, Nagaland has agreed to install OPGW and associated equipment in the Nagaland portion of 132 kV Kohima (Nagaland) – Karong line i.e in the Mao to Kohima portion. (Please refer to Points 2.9 and 2.10 of MOM of 32nd CMETS-NER).

In 29th NETeST meeting DOP Nagaland has been requested to prepare a DPR to be submitted to PSDF under State Reliable Communication Scheme or any other suitable scheme for 100% funding from PSDF.

In 30th NETeST meeting, DOP-Nagaland informed that they shall update the status of DPR via e-mail to NERPC.

In 31st NETeST meeting, DOP-Nagaland apprised the forum that they will submit a separate DPR for Mao-Kohima link for PSDF funding as the same

was not included in the State Reliable Communication Scheme for Nagaland which has been recently approved by PSDF.

Deliberation of the sub-committee:

DOP-Nagaland informed that they are in process to submit a separate DPR for Mao-Kohima link for PSDF funding.

NERLDC requested the forum to take the laying of Mao to Kohima as part of project under Agenda Item no 2.7

The proposed link connection is shown below:

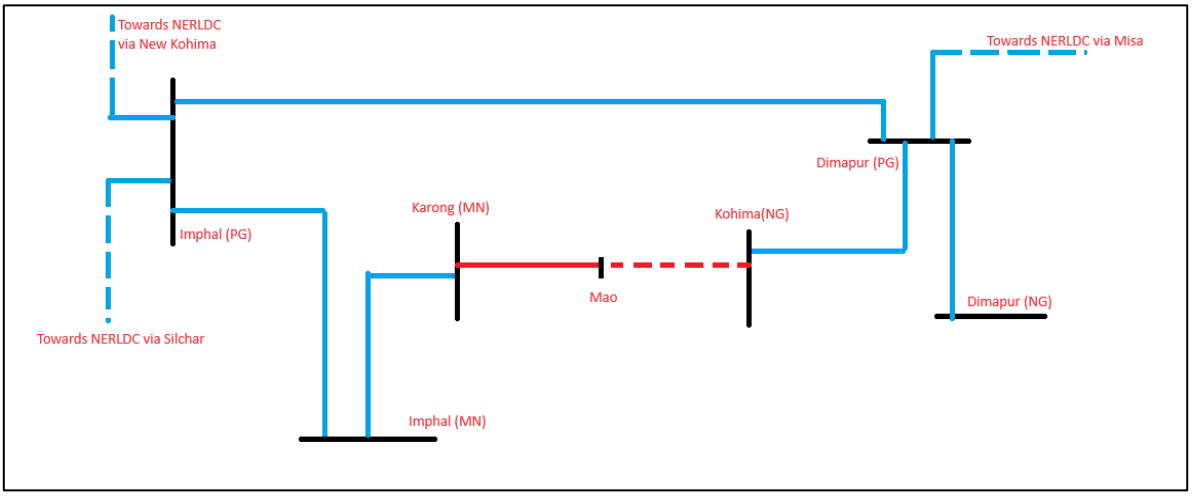

Figure 1: Connectivity Depicting Karong-Kohima

3.15. Feeble condition of State-Estimator of NERLDC SCADA system due to low availability of Real-time Telemetry. (as per Agenda 3.1 of 31st NETeST MoM)

As per IEGC 33.2, "SLDCs, RLDCs and NLDC shall utilize network estimation tool integrated in their EMS and SCADA systems for the real time operational planning study. All users shall make available at all times real time error free operational data for the successful execution of network analysis using EMS/SCADA. Failure to make available such data shall be immediately reported to the concerned SLDC, the concerned RLDC and NLDC along with a firm timeline for restoration. The performance of online network estimation

tools at SLDC and RLDC shall be reviewed in the monthly operational meeting of RPC. Any telemetry related issues impacting the online network estimation tool shall be monitored by RPC for their early resolution."

It is to report that the real-time telemetry availability for states such as Tripura, Mizoram, Manipur, and others is currently in the range of 30-60%. This low availability is significantly impacting the accuracy of state estimation, which relies heavily on the status of Circuit Breakers (CBs), Isolators, and Analog values to ensure reliable estimates. It is highlighted that the feeble state estimation is a direct consequence of the inadequate real-time telemetry data. The states are therefore strongly urged to prioritize the integrity of their Remote Terminal Units (RTUs) and communication systems to enhance the availability and quality of real-time telemetry data. This improvement is crucial for achieving accurate state estimation and ensuring the stability and reliability of the power system in the region.

In the 29th NETeST meeting, MS NERPC has set a target and timelines for improvement of telemetry for all NER states, the target and timelines are as shown below:

State	*Target Telemetry Percentage (Analog)*	*Timeline to achieve the target*
Assam	*80 %*	*2 Months*
Arunachal Pradesh	*80 %*	*2 Months*
Manipur	*60 %*	*2 Months*
Meghalaya	*70 %*	*2 Months*
Mizoram	*50 %*	*2 Months*
Nagaland	*60 %*	*2 Months*
Tripura	*50 %*	*2 Months*

In the 30th NETeST meeting, Assam apprised the forum that the maximum instantaneous telemetry availability has been 82.5% and the average telemetry percentage has improved from 70% to 75%. Member Secretary, NERPC advised the states to achieve minimum telemetry availability percentage as per the following table by March'2025:

Sl. No.	State	Minimum telemetry percentage
1	Assam	85%
2	Arunachal Pradesh	85%
3	Manipur	70%
4	Meghalaya	80%
5	Mizoram	60%
6	Nagaland	70%
7	Tripura	80%

The present status of NER-states is attached as **Annexure-C 3.15.**

Deliberation of the sub-committee:

NERLDC presented the current status of telemetry for all NER states which is as tabulated below:

Telemetry Statistics for the month of July 2025 Annexure C 3.15

Sl. No.	Utility	Average Total Percentage	Average Analog Percentage	Average Digital Availability	Average RTU Availability	Target as per 30th NeTEST MOM
1	PGCIL	97.88	97.3	98.16	98.14	
2	NEEPCO	97.65	97.43	97.79	99.2	
3	NTPC	99.85	99.93	99.8	99.95	
4	NHPC	94.23	96.2	93.18	98.94	
5	OTPC	99.67	98.97	100	99.99	
6	KMTL	98.55	98.57	98.54	99.95	
7	Sterlite	99.27	99.25	99.28	99.25	
8	Indigrid	97.87	96.06	98.62	99.99	
9	Arunachal Pradesh	48.43	48.98	48.08	47.78	85
10	Assam	71.21	72.4	70.34	78.23	85
11	Manipur	34.95	38.73	32.7	40.65	70
12	Meghalaya	72.3	82.73	64.49	88.5	80
13	Mizoram	42.21	50.48	35.85	73.75	60
14	Nagaland	43.6	41.99	44.58	55.69	70
15	Tripura	44.14	48.27	41.46	50.87	80

Member Secretary, NERPC advised all the states to aspire for 95% minimum telemetry availability.

3.16. Non reporting of Deemed ISTS stations (as per Agenda 3.15 of 31st NETeST MoM)

Real-time data from deemed ISTS Stations (Stations owned by states) is being regularly observed by NERLDC as these are important stations connecting two different states.

However, following such stations are connected to ISTS but not reporting to NERLDC since very long.

Substation Name	**Connected With**	**Remarks as per 31st NETeST**
132 kV Dharmanagar (TPTL)	132 kV Dullavcheera	Tripura updated the forum that FOTE commissioning under NERPSIP project at 132kV Dharmanagar is still pending. NERPSIP-POWERGRID informed that the same will be completed by end of April 2025.
132 kV Tipaimukh (MSPCL)	132 kV Aizawl (PG)	ULDC-Powergrid mentioned that OPGW link between Aizawl and Tipaimukh is yet to be completed due to the prevailing situation of unrest in Manipur leading to withdrawal of manpower from construction sites. ULDC-Powergrid also requested MS, NERPC to take up with Ministry/ appropriate state authority for deployment of security forces protection in order to enable work completion.

Deliberation of the sub-committee:

132 kV Dharmanagar (TPTL): FOTE commissioning under NERPSIP project at 132kV Dharmanagar is still pending. TPTL informed that the same would be completed by end of September 2025.

132 kV Tipaimukh (MSPCL): ULDC-Powergrid informed that Aizawl – Tipaimukh OPGW section would be completed by end of December '25.

3.17. Connectivity of 132 kV Roing, Tezu and Namsai on OPGW (as per Agenda 3.16 of 31st NETeST MoM)

Since October 2020, the 132 kV substations at Roing, Tezu, and Namsai have been reporting data over VSAT. It is now requested that ULDC-POWERGRID connect the data and voice communications of these substations over Optical Ground Wire (OPGW), as the necessary OPGW infrastructure is already available along the route Namsai → Tezu → Roing → Chapakhowa → Rupai → Tinsukia → Namrup → Lakwa → Mariani (AS) → Samaguri → Sarusajai → Kahilipara → NERLDC, Guwahati.

Specifically:

The Namsai → Tezu → Roing → Chapakhowa segment falls under ULDC-POWERGRID.

The Chapakhowa → Rupai → Tinsukia → Namrup → Lakwa → Mariani (AS) → Samaguri → Sarusajai → Kahilipara segment is managed by AEGCL.

ULDC-POWERGRID and NERPSIP committed to complete the necessary inter-patching work required at 132 kV Chapakhowa within 15 days of last NETeST (i.e. by 20th September 2024).

In the 30th NETeST meeting, the forum decided that ULDC-POWERGRID and NERPSIP shall update the status via e-mail to NERPC.

It is further to inform that there is a break in OPGW from Rupai to Chapakhowa which needs to restore by NERPSIP. NERLDC has written mail to NERPSIP on 11th February 2025 and reminder mail on 18th March 2025.

In 31st NETeST meeting, NERPSIP-POWERGRID apprised the forum that Rupai - Chapakhowa link will be restored within 15 days i.e., by 20th April 2025.

Deliberation of the sub-committee:

AEGCL informed that Rupia – Chapakhowa OPGW section is still unhealthy, which needs to be restored by NERPSIP-Assam.

The forum advised AEGCL to co-ordinate with NERPSIP-Assam and resolve the issue at the earliest.

3.18. Adherence to CERC order dated 04th August 2023 for petition 197/MP/2020 (Arunachal Pradesh), 201/MP/2020 (TPTL), 263/MP/2020 (DoP, Nagaland) and 556/MP/2020 (PE&D, Mizoram). (as per Agenda 3.17 of 31st NETeST MoM)

NERLDC would like to draw the forum's attention to the adherence by states to the CERC order dated 04th August 2023, concerning petition 197/MP/2020 (Arunachal Pradesh), 201/MP/2020 (TPTL), 263/MP/2020 (Department of Power, Nagaland), and 556/MP/2020 (Power & Electricity Department, Mizoram).

In 29th NETeST meeting, NERLDC informed that only PE&D, Mizoram has been submitting the monthly progress report while DOP-Arunachal Pradesh, DOP-Nagaland and TPTL (Tripura) has not yet submitted the monthly progress report to NERPC and NERLDC. MS NERPC has further emphasize the need to adhere to CERC order strictly and comply accordingly.

However, DOP-Arunachal Pradesh, DOP-Nagaland and TPTL (Tripura) are yet to submit the progress report.

In the 30th NETeST meeting, the forum decided that DOP-Arunachal Pradesh, DOP-Nagaland and TPTL (Tripura) shall update the status via e-mail to NERPC.

NERLDC has received reports from DoP-Nagaland and PE&D-Mizoram.

Deliberation of the sub-committee:

The forum advised Tripura and DoP-Ar. Pradesh to comply with CERC order in the above petitions and submit the monthly progress report in timely manner.

3.19. Status of State reliable communication scheme (Agenda 3.20 of 31st NETeST Meeting)

It is pleased to inform the forum that the Ministry of Power (MoP) has issued Revised Guidelines for the disbursement of funds from the Power System Development Fund (PSDF) on 12th March 2024. According to clause 6.2.iv, "Schemes from the States of the North-Eastern region and other hilly States/UTs, including Jammu & Kashmir, Ladakh, Sikkim, Himachal Pradesh, and Uttarakhand, shall be eligible for a grant of up to 100% for the schemes mentioned in para-5.1(a), 5.1(b), 5.1(c), 5.1(d), 5.1(e) & 5.1(f)."

Additionally, as per Point (g) read under Clause 5.1(c) of Annexure III, states can apply for 100% funding for projects related to Communication Schemes for Automated Meter Reading (AMR) and real-time telemetry aimed at achieving 100% grid visibility.

NERLDC would like to inform the forum that as per Minutes of 23rd Monitoring Committee meeting of PSDF, it was decided to approve the PSDF funds for NER and requested Appraisal committee to ask NER states to put the DPRs accordingly. Using the positive opportunity NERLDC requests all states to submit DPRs in PSDF for approval at the earliest.

State reliable communication scheme is being funded 100% by PSDF as per Point (g) read under Clause 5.1(c) of Annexure III, states can apply for 100% funding for projects related to Communication Schemes for Automated Meter Reading (AMR) and real-time telemetry aimed at achieving 100% grid visibility. As decided in the special meeting held on 09th January 2024, NERLDC has circulated the draft template DPR for "State Reliable Communication Scheme" to all the SLDCs in which entire scope has been

divided into 4 parts – Part A (OPGW), Part B (SDH based End Equipment), Part C (VSAT) & Part D (Remote Terminal Units). It was also decided that in case of any state already submitted DPR under "State Reliable Communication Scheme" head to PSDF Secretariat, then also these additional requirements shall be put in form of new DPR and can be submitted under heading "Additional requirements under State Reliable Communication Scheme for real-time data availability strengthening". The status is tabulated below and states are requested to kindly update further:

Name of State	**Status as per 31st NETeST**
Arunachal Pradesh	DoP-Arunchal Pradesh – Representative not available
Assam	DPR submitted to PSDF on March 2025.
Manipur	MSPCL – representative not available
Meghalaya	MePTCL submitted the DPR to PSDF on 11th March 2025
Mizoram	PE&D, Mizoram informed as per request from TESG revised DPR is being prepared. To be submitted by end of April 2025.
Nagaland	DoP, Nagaland informed the scheme has been recently sanctioned by 24th Meeting of the Monitoring Committee of PSDF.
Tripura	TPTL informed that they will revised the DPR with a new rate reference and submit to PSDF.

Deliberation of the sub-committee:

DoP-Arunachal Pradesh informed that the proposals are already covered in Comprehensive Scheme (CTDS) so they would not submit DPR for PSDF funding.

Mizoram apprised that the DPR would be submitted to PSDF in the first week of September-2025.

Tripura apprised the forum that the DPR would be submitted to PSDF by September-2025.

3.20. Implementation of Guwahati Islanding Scheme (Agenda 3.21 of 31st NETeST Meeting)

In 27th NETeST meeting, AEGCL informed that Detailed Project Report (DPR) for the Guwahati Islanding Scheme has been formally submitted to the Power System Development Fund (PSDF) for review and consideration. SLDC, Assam also informed that DPR for the communication part shall be submitted shortly.

In 28th NETeST meeting, AEGCL informed that DPR for the communication part would be submitted by 3rd week of May'24.

In 29th NETeST meeting, AEGCL informed that the revised DPR has been submitted to PSDF on 06th July 2024.

In the 30th NETeST meeting, the forum decided that AEGCL/SLDC, Assam shall update the status via e-mail to NERPC.

In the 31st NETeST meeting, AEGCL/SLDC Assam informed that response from PSDF is still awaited.

As per 29th TCC/NERPC, representative of Assam informed forum that on 7th July-2025 TESG has approved the funding for the Guwahati Islanding Scheme. Further he apprised the forum that TESG has not approved the funding for the Optical Fiber communication link.

Deliberation of the sub-committee:

The sub-committee noted as above.

3.21. Non-availability of real-time data pertaining to POWERGRID-owned bays installed at AEGCL-owned stations (Agenda 3.22 of 31st NETeST Meeting)

It has been observed that the real-time data of POWERGRID-owned bays installed at AEGCL stations are not reporting to NERLDC. These bays have been identified as follows:

a) Silchar bays installed at Srikona station isolator data since 28th Nov - 2022.
b) Silchar bays installed at Hailakandi.
c) 132 kV BNC HVDC bays at Pavoi S/s.

All these bays are ISTS elements, thus data availability is important for real-time drawl calculation and monitoring of ISTS element. Thus, POWERGRID is requested to update the status as per the table below:

Sl. No.	**Name of Bay**	**Latest status (as per 31st NETeST meeting)**
1.	Silchar bays installed at Srikona station	ULDC-NERTS informed that CMR has been handed over to Assam. Wiring to be executed by Assam.
2.	Silchar bays installed at Hailakandi.	ULDC-NERTS informed that there is gateway issue at Hailakandi
3.	132 kV BNC HVDC bays at Pavoi S/s.	ULDC-NERTS informed that wiring work has been completed and reconfiguration at RTU needs to be done by Assam

Deliberation of the sub-committee:

The forum advised Assam to resolve the issues for Silchar bays installed at Srikona and Hailakandi substation at the earliest.

Assam informed that data reporting has started for 132kV HVDC BNC bays at Pavoi substation with minimal data mismatch which shall be corrected shortly.

3.22. Restoration of OPGW owned by Manipur (Agenda 3.23 of 31st NETeST Meeting)

It has been noticed that seven stations i.e., 132 kV Chandel, 132 kV Churachandpur, 132 kV Hundung, 132 kV Kakching, and 132 kV Kongba of Manipur are not reporting due to outage of 132 kV Churachandpur – Ningthoukhong OPGW link. It was reported that there is a break in the Optical Ground Wire (OPGW) approximately eight (08) Kilometers from the 132 kV Ningthoukhong Substation. However, the rectification work could not be undertaken as The subjected OPGW installation was done by POWERGRID-ULDC under NER-FO. Incomplete Handing over documents (absence of signatures by POWERGRID executives) was furnished by POWERGRID to SLDC, Manipur on 06th April 2021. SLDC Manipur has requested ULDC-POWERGRID to sign the documents on 11th December 2023. SLDC Manipur has conveyed that proper documentation is essential for addressing the issue. The forum requested POWERGRID furnish complete handing over document.

During 28th NETeST meeting, POWERGRID-ULDC informed that in a meeting with Managing Director, MSPCL, Manipur had requested POWERGRID to complete the entire task. However, the financial aspects of the work were not discussed with MSPCL. Member Secretary, NERPC advised POWERGRID and MSPCL to discuss the issue bilaterally.

During 29th NETeST meeting, ULDC-NERTS informed that all necessary documents has been handed over to SLDC, Manipur in April 2024. However, Manipur has requested ULDC-NERTS to complete this work. ULDC-NERTS assured the forum to complete the work within three months after having discussion internally.

In the 30th NETeST meeting, the forum decided that POWERGRID-ULDC and MSPCL shall update the status via e-mail to NERPC.

In the 31st NETeST meeting, POWERGRID-ULDC informed that matter has been taken up internally by MSPCL for restoration of the OPGW link

Deliberation of the sub-committee:

NERLDC apprised the forum that official letter in connection to the matter has been sent to MD, MSPCL.

The sub committee noted as above.

3.23. Connectivity of NERLDC Guwahati with Sarusajai and Umiam bypassing Kahilipara for its redundancy. (Agenda 3.18 of 31st NETeST Meeting)

As per point 3.21 of MoM of 26th TCC/RPC meeting held on 4th and 5th July 2024, RPC and TCC forum approved the following connectivity for NERLDC Guwahati:

POWERGRID to lay two 24-core fibre optic cables from NERLDC Guwahati to Gantry of Kahilipara. At Gantry, a Joint Box would be installed, facilitating the connection of one cable from NERLDC to the Sarusajai direction and the other cable to the NEHU direction. (2 x 1 KMs): 26th TCC/RPC has approved the project.

POWERGRID to lay 48F-OPGW on 132 kV Sarusajai – Umtru line (Approximately 37 kms): 26th TCC/RPC has approved the project subject to board approval of Meghalaya (MeECL).

The replacement of 12F to 48F OPGW on 132 kV Kahilipara – Umtru - Umiam Stg. III – Umiam Stg. I- Umiam – NEHU line by POWERGRID (Approximately 151 kms): 26th TCC/RPC has approved the project subject to board approval of Meghalaya (MeECL).

As per MoM of 26th TCC/RPC meeting, NERPC gave in-principle approval of the project subject to board approval of Meghalaya and sharing of fiber laid

under the scheme shall be subject to the outcome of the decision of the CEA Committee on formulating comprehensive guidelines on OPGW sharing.

The matter was deliberated in 27th TCC meeting held on 7th-8th November 2024 and after detailed deliberation, NERPC forum granted in-principle approval for the redundant fibre path to enhance grid security, with 24 fibres allocated for state use and 24 for ISTS use, subject to CEA guidelines for OPGW sharing. Meghalaya and Assam will provide the board approval accordingly to CTU/NERPC.

In the 31st NETeST meeting, Meghalaya (MeECL) informed they have shared the CEA guidelines of Fibre Sharing with their Board, and the approval of the board for the above links is still awaited and they will update the status on board approval over mail as soon as it is available. ULDC-Powergrid mentioned that as per approval of 26th NCT (MoM 4.10) meeting, all the links mentioned in point a,b,c is under tendering phase.

Deliberation of the sub-committee:

Forum opined that Meghalaya would get fibre allocation as per the Sharing Guidelines for OPGW/UGFO cables for power system issued by Power System Communication Development Division, CEA in February 2025.

3.24. Establishment of redundant fibre path between NERLDC Shillong and NEHU for reliability of power system communication link till RLDC. (Agenda 3.24 of 31st NETeST Meeting)

A. As per MoM of 26th RPC/TCC meeting held on 04th and 05th July following are the update:

1. From T-25 to NERLDC on 132 kV NEHU-Mawlydep line: POWERGRID-ULDC to lay and maintain the underground 48F cable under the ongoing reliable communication scheme out of which 24F will be connected to NEHU and the balance 24F to be connected with Mawlyndep: 26th TCC/RPC has approved the project.

2. Replacement of 12F OPGW with 48F OPGW from NEHU to Khliehriat on 132 kV NEHU-NEIGRIMS-Khliehriat line: The Forum approved that the

OPGW should be upgraded to 48F by POWERGRID: 26th TCC/RPC has approved the project subject to board approval of Meghalaya (MeECL).

Meghalaya (MeECL) is requested to intimate the forum about the target date for taking board approval.

B. As per 29th NETeST MoM:

a. 48F OPGW from NEHU-Mawlyndep-Mustem-Khliehriat: MePTCL to propose 48F OPGW on 132 kV NEHU-Mawlyndep- Mustem- Khliehriat line (132 kV NEHU – Khliehriat CKT-II) under the State reliable communication Scheme or other suitable schemes. MePTCL to lay and subsequently maintain the link as well.
b. From T-23 to NERLDC: Communication link from Tower-23 to NERLDC is already part of the Reliable Communication Scheme and is already approved. ULDC – POWERGRID informed that PwD Meghalaya clearance has been obtained for laying 24F UG Cable from Tower 23 of 132 kV NEHU – NEIGRIHMS line to NERLDC.

In 29th NETeST meeting Meghalaya (MeECL) has updated the status of board approval. After deliberation, MS NERPC has informed that matter will be taken up by NERPC.

The matter was deliberated in 27th TCC meeting held on 7th-8th November 2024 and after detailed deliberation, NERPC forum granted in-principle approval for the redundant fibre path to enhance grid security, with 24 fibres allocated for state use and 24 for ISTS use, subject to CEA guidelines for OPGW sharing. Meghalaya and Assam will provide the board approval accordingly to CTU/NERPC.

In the 30th NETeST meeting, the forum decided that Meghalaya and Assam shall update the status via e-mail to NERPC.

In the 31st NETeST meeting, Meghalaya (MeECL) informed they have shared the CEA guidelines of Fibre Sharing with their Board, and the approval of the board for the above links is still awaited and they will update the status on board approval over mail as soon as it is available. ULDC-Powergrid

mentioned that as per approval of 26th NCT (MoM 4.10) meeting, all the links mentioned in point a,b,c is under tendering phase.

Deliberation of the sub-committee:

PGCIL informed that survey of the project has already been started. MePTCL requested forum to confirm whether 24F out of 48F would be allotted to MePTCL.

It was informed that fiber sharing would be done as per the CEA Guidelines of Fiber Sharing.

3.25. Status of Fiber-Optic works under different projects (Agenda 3.25 of 31st NETeST Meeting)

S. No.	Link name	Utilities which may respond	As per 31st NETeST
I. Fiber Optic Expansion Projects			
Meghalaya State Sector			
1	132kV NEHU - NEIGRIMS	POWERGRID-NERTS	No response has been obtained from original vendor. ULDC-NERTS is trying to Partially off load the contract, so that pending work can be assigned to new contractor.
Central Sector			
2	400kV Bongaigaon (PG) - 220kV Salakati - 220kV BTPS	POWERGRID-NERTS	No response has been obtained from original vendor. ULDC-NERTS is trying to Partially off load the contract, so that pending work can be assigned to new contractor.

3	400kV Mirza (Azara) – Byrnihat (Killing)		No response has been obtained from original vendor. ULDC-NERTS is trying to Partially off load the contract, so that pending work can be assigned to new contractor.
4	400kV Silchar – Palatana		No response has been obtained from original vendor. ULDC-NERTS is trying to Partially off load the contract, so that pending work can be assigned to new contractor.

Deliberation of the sub-committee:

The updated status is as given below:

S. No.	Link name	Utilities which may respond	As per 32nd NETeST
I. Fiber Optic Expansion Projects			
Meghalaya State Sector			
1	132kV NEHU - NEIGRIMS	POWERGRID-NERTS	Completed
Central Sector			
2	400kV Bongaigaon (PG) - 220kV Salakati - 220kV BTPS	POWERGRID-NERTS	The original vendor M/s TCIL has agreed to restart the work. Expected to be completed by December-2025.

3	400kV Mirza (Azara) – Byrnihat (Killing)		The original vendor M/s TCIL has agreed to restart the work. Expected to be completed by December-2025.
4	400kV Silchar – Palatana		The original vendor M/s TCIL has agreed to restart the work. Expected to be completed by December-2025.

The sub-committee noted as above.

3.26. Status and details of Fiber-Optic projects approved in 17th TCC/RPC meeting (Agenda 3.26 of 31st NETeST Meeting)

A. Additional Communication Scheme: Status may be provided

Action: POWERGRID-ULDC may update the status.

B. Reliable Communication Scheme:

a. Replacement of existing fibre: Status may be provided

b. Fibre on new lines: Status may be provided

Action: POWERGRID-ULDC may update the status.

Deliberation of the sub-committee:

The updated status is enclosed as **Annexure 3.26a and 3.26b**

3.27. Integration of Dikshi HEP real time data and pending Voice communication (Agenda 3.27 of 31st NETeST Meeting)

As per 27th NETeST meeting, DoP-Arunachal Pradesh assured the forum that the matter shall be resolved by the next NETeST meeting.

As per 28th NETeST meeting, DoP-AP informed that the matter shall be resolved by May-2024.

During 29th NETeST meeting, DOP-Arunachal Pradesh informed that Dikshi HEP is now connected to a dedicated leased line from July'24 onwards and they are in the process of connecting the VOIP phone.

In the 31st NETeST meeting, the matter could not be deliberated as representative of DoP-AP was absent.

Deliberation of the sub-committee:

Forum advised DoP, Arunachal Pradesh to expedite the matter at the earliest.

3.28. Automatic Generation Control (AGC) in Indian Grid (Agenda 3.28 of 31st NETeST Meeting)

The status is tabulated below:

Station Name	Background	Status as per 31st NETeST Meetir
AGBPP (Kathalguri)	OEM visits was envisaged as per following – Some units are of Mitsubishi make which require team from Japan to visit plant. Other units are of GE-make and BHEL-make	NEEPCO mentioned that AGC cannot be implemented in STG as it is only slave to GTG. NEEPCO raised the concerned regarding the ramping UP/down for the gas/steam. MS NERPC informed to follow as per discussion with Member Technical CERC and keep the AGC system ready
Doyang	NEEPCO may update the status	Order placed for one unit and will be upgraded during 40days shutdown. After completion of one-unit, subsequent unit will be executed.
Kopili Stage -2	25 MW	NEEPCO yet to decide whether to implement AGC or not as the

Station Name	Background	Status as per 31st NETeST Meetir
		system rating has been revised to 23MW.
Khandong	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	Under progress
Kameng	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	Quotation not yet received from vendor.
Ranganadi (Panyor)	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	Quotation not yet received from vendor.
Pare	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	Upgradation of DCS required. Quotation received from vendor.
RC Nagar	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	NEEPCO mentioned that due to gas shortage 1 module is always in off condition. For rest module, same shall be followed as per discussion with member technical CERC
Palatana	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	OTPC raised the concerned regarding the ramping UP/down for the gas/steam. MS NERPC informed to follow as per discussion with Member Technical

Station Name	Background	Status as per 31st NETeST Meetir
		CERC and keep the AGC system ready.

Deliberation of the sub-committee:

Station Name	Background	Status as per 32nd NETeST Meeti
AGBPP (Kathalguri)	OEM visits was envisaged as per following – Some units are of Mitsubishi make which require team from Japan to visit plant. Other units are of GE-make and BHEL-make	NEEPCO re-iterated that AGC cannot be implemented in STG as it is only slave to GTG. The forum advised NEEPCO to get the exemption from CERC.
Doyang	NEEPCO may update the status	SD has been applied for Nov-Dec 2025. Expected to be completed by January-2026.
Kopili Stage -2	25 MW	NEEPCO yet to decide whether to implement AGC or not as the plant capacity has been derated to 23MW.
Khandong	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	Under progress
Kameng	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	In process.

Station Name	Background	Status as per 32nd NETeST Meeti
Ranganadi (Panyor)	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	In process
Pare	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	In process
RC Nagar	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	NEEPCO mentioned that due to gas shortage one module is always in off condition. For rest module, same shall be followed as per discussion with member technical CERC
Palatana	As per new Ancillary Services Regulation 2022, all ISGS plant will be participating in AGC.	OTPC raised the concerned regarding the ramping UP/down for the gas/steam. MS NERPC informed to follow as per discussion with Member Technical CERC and keep the AGC system ready.

The forum opined that this issue may be placed for further deliberations in the OCC meetings.

3.29. Pending issues of State Utilities of NER (Agenda 3.29 of 31st NETeST Meeting)

Utility	Pending issues	Status as per 31st NETeST Meeting
Assam	SAS upgradation related works may be updated.	Assam informed upgradation is completed.
Tripura	Dharmanagar	Dharmanagar: delayed due to NH diversion work in PK Bari – Kamalpur section. Inter-patching is required at PK Bari for route diversion. Tripura has requested POWERGRID NERPSIP to provide 50 Mtrs approach cable for expediting the work
	Ambassa	Work in progress.
Manipur	Chandel, Churachandpur, Rengpang, Tipaimukh, and Yiangangpokpi	Update yet to receive - Representative not available
	Hundung, Yurembam, Kakching, Konga and Ningthoukhong	Update yet to receive - Representative not available
	Elangkhangpokpi, Thanlon, 132kV Thoubal, 132 kV Moreh	Update yet to receive - Representative not available
Nagaland	Kiphire	Work in progress.as State reliable scheme has been sanctioned by

		PSDF
Mizoram	Luangmual	Work in progress.with OEM for rectification
	Zuangtui	Work in progress.with OEM for rectification
	Kolasib	Work in progress.with OEM for rectification
Arunachal Pradesh	VSAT installation and other issues	Update yet to receive. Representative not available

The forum advised the concerned utilities to update the latest status through e-mail.

3.30. Feasibility to connect Lekhi Substation over Fiber-Optic Network (Agenda 3.30 of 31st NETeST Meeting)

During 25th NETeST meeting, POWERGRID informed the forum that SDH equipment has been diverted from Monarchak and the same shall be installed by 15th June, 2023. POWERGRID requested DoP, Arunachal Pradesh to provide space for installation & they have agreed to provide the same. POWERGRID also informed that due to DCPS issue, presently they were using DC convertor. DoP, Arunachal Pradesh agreed to look into the matter.

During 26th NETeST meeting, POWERGRID-ULDC informed the forum that new SDH is proposed under NER Reliable communication scheme. Currently the DC converter of Lekhi S/s is not working due to which Lekhi PDH is not powered up and thus not reporting to SLDC Arunchal Pradesh over fiber network. DoP-AP is requested to update on the status for providing space DCPS. POWERGRID is requested to update on the status for installation of the DCPS.

During 27th NETeST meeting, DoP-AP informed that space for installation of DCPS will be provided. DC converter of Lekhi is not working due to which Lekhi is not connected over OPGW network. POWERGRID-ULDC is requested to restore the DC converter as an interim measure till the new SDH and DCPS are installed.

During 28th NETeST meeting, POWERGRID informed that they had taken up the matter with vendor M/s Tejas for the supply of DC converter. The work shall be included under the NER reliable communication scheme.

During 29th NETeST meeting, DOP-Arunachal Pradesh informed that the new control room will be ready by December 2024, so the necessary work can be completed by ULDC-NERTS after commissioning of new control room.

In the 30th NETeST meeting, the forum decided that POWERGRID-ULDC shall update the status via e-mail to NERPC.

In the 31st NETeST meeting, POWERGRID-ULDC apprised the forum that the FOTE system is now connected with new battery bank, however relocation to new control room is pending. DOP- Arunachal Pradesh representative was absent.

Deliberation of the sub-committee:

DOP- Arunachal Pradesh informed that work for new control room is almost complete, hence POWERGRID-ULDC can start the work.

POWERGRID-ULDC informed that they will complete the work by Oct'25.

The subcommittee noted as above.

3.31. Discussion on operational issues and punch points for UNMS of NER (as per Agenda 3.7 of 31st NETeST MoM)- Additional agenda from NERLDC

Deliberation of the sub-committee:

POWERGRID-ULDC informed that forum that necessary NoCs are received from all the states and requested forum to issue the ToC with effective date from 04th December 2023.

Forum requested NERLDC to process the ToC as majority of punch points are closed and rest points will be taken up with on-going projects.

NERLDC Updated the status of punch points to NERPC forum:

Addressed Points

1.Public Access to Mail Service – Limited Accessibility to U-NMS Email Notifications:

Update: The issue is resolved.

2.Mismatch in Status of Links in U-NMS – Discrepancies with Actual Network Status:

The issue is resolved.

3.Submission of No Objection Certificates (NoCs) by ULDC-POWERGRID – State-wise Status Update:

All states has submitted the NoC.

Partially closed points

4.Integration of NMS of NERPSIP and Comprehensive T&D-Arunachal Pradesh with U-NMS System – State-wise Progress:

Arunachal Pradesh: Delivery of Tejas-supplied NMS is still awaited.

Manipur:

Nagaland: Site readiness and space provisioning for Tejas NMS installation are in progress.

Meghalaya:

Mizoram: Installation and commissioning are expected by early 2025.

5.Integration of Fiber Optic Terminal Equipment (FOTE) for Various TSPs (MUML, Aparva, and Indigrid) – Incomplete SNMP Integration and Configuration Updates:

Indigrid: Several nodes have been partially integrated and are visible in the U-NMS system. However, these nodes are currently not communicating over the SNMP protocol, which is necessary for full operational integration and status monitoring within U-NMS. The support from Indigrid is required.

Aparva (KMTL): Integration remains pending due to the absence of a required gateway IP configuration, which is to be provided by the vendor ABB. This has caused long-standing delays in completing integration of critical nodes like New Kohima, Imphal, and Mariani. The support from Aparva (KMTL) is required.

Points yet to be addressed

6.Naming Nomenclature Standardization – Lack of Uniformity Across Vendors:

NERLDC has raised persistent operational challenges due to the lack of a standardized naming convention for services within the U-NMS system. The service identifiers auto-generated by different OEM platforms such as ECI, ABB, and Fibcom are often ambiguous and do not clearly indicate the nature or function of the respective service (e.g., RTU, PMU, VoIP). This ambiguity hampers efficient fault identification and resolution during service disruptions. To address this, GA&C-POWERGRID circulated a draft document on standard naming conventions. Grid-India reviewed the draft and submitted its comments to GA&C on **17th April 2025**. Based on the feedback, **GA&C released the final version of the naming nomenclature standard on 16th May 2025**. However, execution of the standard across vendor platforms and network layers is yet to be implemented in a time-bound manner.

Update:

ULDC-POWEGRID informed that POWERGRID-GA&C has submitted the standardised nomenclature document to CTUIL, CTUIL informed that they will submit the inputs by end of September 2025.

7.Supply of 2 x 6 kVA UPS System across NER SLDCs and NERPC:

Presently, the U-NMS System delivered at NER SLDCs & NERPC are on raw power supply in absence of healthy UPS System at NER SLDCs & NERPC. So, it was decided that 2 x 6 kVA UPS Systems would be procured and delivered/commissioned at respective sites.

Update:

POWERGRID would deploy the UPS by Jan'26.

3.32. Installation of PMU at 220kV Nangalbibra S/s (as per agenda 3.6 in 31st NETeST MoM).

NERLDC informed the forum that M/s NBTL has taken exemption from CEA for the installation of the PMU as per letter attached as **Annexure 3.32.**

NERLDC further informed that provision of PMUs at 220 kV Nangalbibra is kept in URTDSM Phase -2 project.

The forum advised that the agenda may be dropped.

REGIONAL COMMUNICATION AUDIT REPORT			
General Information:			
1	**Substation Name**		
2	**SS Voltage level**		
3	**Date of commissioning of the substation**	**XX.XX.XXXX**	
4	**Region & State / Auditee**	**/**	
5	**Audit Date**		
6	**Name of the Utility which owns the SS**		
Details of Audit Team Members :			
SL	**Name**	**Designation**	**Organization**
1			
2			
3			
4			
Attached Documents, if any			
SL	**Name of the document**		**Original / Signed / Copy**
1			
2			
3			
4			
5			
6			
7			

8		
9		
10		
11		
12		
13		
14		
15		
16		
17		

Communication Channels and Equipments Audit Format

(A) List of channels in usage for data (64 kbps, 104, PMU, VC, 101) / Voice / Protection circuits / others:

Sl	Description (64 kbps, 104, PMU, VC, 101) / Voice / Protection circuits / Others)	Source	Destination	Channel Routing	Ownership details of terminal equipment / Links
1					
2					
3					
4					
5					
6					
7					
8					

(B) List of terminal communication equipments:

Sl	Name of Station	Equipment Type (SDH / PDH / Radio / VSAT / EPABX)	Make / Model	Ownership
1				
2				
3				
4				
5				
6				
7				
8				

(C) Communication System Details:

I. SDH Equipment

(1) Card Details:

Slot No	IP Address & Path / Direction Name	Card Details	Place a ✓mark if on usage, else Write as "Spare"	Whether Card is healthy / Faulty ? (H / F)	Cards Redundancy available (Yes / No)	Power Supply Card / Optical Card (Yes / No)	MSP configured? (Yes / No)	Action Plan for faulty cards	Other Information, if any
1									
2									
3									
And so on									

(2) Whether equipment is time synchronized : Yes / No

If Yes, how is it being done?

(3) Failures during last Fin. year / since last Audit :

Particulars	Number of failures of Card / Power Supply	Reason for failures	Measures taken for rectification
Card		**(i)** **(ii)** **(iii)**	**(i)** **(ii)** **(iii)**
Power Supply		**(i)** **(ii)** **(iii)**	**(i)** **(ii)** **(iii)**

(4) Configuration of the Node:

Name of Equipment	Number of Nodes	Number of directions	Name of Directions	Number of links down, with details	Details of corrective action, if any, taken

(5) Preventive maintenance schedule and its compliance:

Date of Last Preventive maintenance	Maintenance carried out as per schedule? (Yes / No)	Whether all the defects have been attended? (Yes / No) Give details

II. PDH Equipment

(1) Card Details :

Slot No	IP Address	Card Details	Place a ✓mark if on usage, else Write as "Spare"	Whether Card is healthy / Faulty ? (H / F)	Cards Redundancy available (Yes / No)	Power Supply Card / Optical Card (Yes / No)	MSP configured? (Yes / No)	Action Plan for faulty cards	Other Information, if any
1									
2									
3									
And so on									

(2) Whether equipment is time synchronized : Yes / No

If Yes, how is it being done?

(3) Failures during last Fin. year / since last Audit :

Particulars	Number of failures of Card / Power Supply	Reason for failures	Measures taken for rectification
Card		**(i)** **(ii)**	**(i)** **(ii)**

		(iii)	**(iii)**
Power Supply		**(i)** **(ii)** **(iii)**	**(i)** **(ii)** **(iii)**

(4) Configuration of the Node:

Name of Equipment	Number of Nodes	Number of directions	Name of Directions	Number of links down, with details	Details of corrective action, if any, taken

(5) Preventive maintenance schedule and its compliance:

Date of Last Preventive maintenance	Maintenance carried out as per schedule? (Yes / No)	Whether all the defects have been attended? (Yes / No) Give details

III. OPGW / Optical Fibre Details

Number of Directions	**Name of Direction**	**No. of Pairs**	**No. of Fibers used**	**No. of spare & healthy Fibers**	**Unarmoured cable laid within PVC/Hume duct pipe?**	**Fibre Count in OPGW? Whether matching with Approach cable to FODP?**	**Overall Optical Fibre Path Attenuation (dB/km)**	**Power Received**	**Conformation to Compliance of CEA Standards**

IV. Healthiness of Auxiliary System:

(1) Details of 2 independent Power Sources :

Source	Commissioning Date	Battery Back up (Hour)	Battery capacity (AH)	Supply Voltage (V)	Healthiness of Battery (Yes / No)	Make of Charger	Charger Capacity (A)	Periodicity of Maintenance Schedule	Date of Last 2 Actual Maintenance carried out	Remarks
1										
2										

(2) Conformation to Compliance of CEA Standards :

V. Healthiness of Earthing of each equipment:

Sl	Equipment	Status on Healthiness of Earthing

VI. Details of Voice communication available between Sub-station and Control Centre:

Sl	Voice communication (Sub-station - Control Centre)	Status on Healthiness of Voice communication	Healthiness of air-conditioning of communication room as per OEM recommendation

VII. PLCC Details:

Number of Panels	Make and Model	Direction	Frequency (Tx & Rx) KHz	Status on Healthiness	Last preventive maintenance		Details of defects, if any, attended	Status of Availability of Spares	Conformation to Compliance of CEA Standards
					Schedule	Actual			

VIII. Radio Communication Details:

Number of Equipments	Make and Model	Status on Healthiness	Last preventive maintenance		Details of defects, if any, attended	Status of Availability of Spares	Conformation to Compliance of CEA Standards
			Schedule	Actual			

IX. Data Retention :

(i) Earliest Date of availability of data: _____

(ii) Historical data availability : ____ days.

X. Control Command Delay :

(i) Time delay in seconds from Control Centre for SCADA : ____ Seconds

(ii) Time delay in seconds from Control Centre for WAMS : ____ Seconds

XI. Wide Band Network :

(i) Absolute channel delay in protection applications : _____ ms

(ii) Channel delay asymmetry in protection applications : _____ ms

(iii) Switching Time delay to alternate path/route during failure of one path : _____ ms

XII. Any other information :

Audit Team Member	Audit Team Member	Audit Team Member	Audit Team Member
NERPC	NERLDC	PGCIL (Internal / External)	State (Internal / External)

Communication Audit Checklist (Annexure-II)

S.No	Check list points	Expected	Actual	Reference
1	Whether OPGW is terminated properly. Down lead shall be fixed property in sufficient locations. Metallic part shall be connected to earth mat riser.	Yes		
2	Distinct approach cable shall be laid 1 Protection & Communication 2 Fibers for commercial applications Item no 1 cable shall be terminated in communication room FODP One number FODP panel shall be available in communication room			
3	Fiber Identification shall be done in FODP properly			
4	Whether End to end tests were carried out during installation and records are available (both Optical Power Source/receiver testand OTDR Test results			
5	Whether patch chords 1 Cross labelled (source/ receive) 2 Tx – Rx Marking 3 Mechanical protection is provided for pach chords laid between panels			
6	Whether separate room for communication is available with following:- 1 Air conditioning with standby A/C Unit 2 AC Distribution board with ELCB 3 Single point earthing bar which shall be connected to substation Earth mat			
7	Two sets of 48 V (Positive Earthed) DC Systemshall be available with 1 Common DC Distribution board/ Panels with incoming MCB, coupler MCB , out doing MCBsetc 2. Minimum 200 Ah (2 sets of battery) VRLA batteries are preferred to keep chargers and battery in communication room. 3. Battery Charger shall be Thryristorised/SMPS			
8	Battery Charger alarms /measurements shallbe made available to SAS (if available) It can be achieved through MOD bus or connecting analogue/ digital signals to Common BCU of SAS. If such system is not available major			

	alarms shall b alarmed in common substation annunciator			
9	2 nos of substation Data (From RTU or SAS Gateway)shall route in different roots to Main and Standby Load Dispatch centres			
10	Kindly assure proper protection is available for AC Distribution (ELCB, MCB, Backup fuse),			
11	Aux Transformer neutral Earthing shall be connected to Stations earth mat (Aux Transformers shall be installed in yard earth mat area only)			
12	Whether DG sets with AMF panels are provided for Aux AC Supply			
13	Whether 2 nos 11 kV (or 33kV) supplies are available for Each station aux Transformer			

Final Standard Operating Procedure (SoP) for Communication System Outage Planning

1. As per the following CEA and CERC Regulations, the Communication Outage for the Region shall be carried out by RPC Secretariat:
   a) Regulation 7.3 of Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017 stipulates as below:

   Quote:

   7.3 Role of National Power Committee (NPC) and Regional Power Committee (RPC):

   ……

   (iv) The RPC Secretariat shall be responsible for outage planning for communication system in its region. RPC Secretariat shall process outage planning such that uninterrupted communication system is ensured.

   ……

   Unquote

   b) Regulation 10 Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020 notified on 27.02.2020 envisages as below:

   Quote:

   10. Outage Planning: Monthly outage shall be planned and got approved by the owner of communication equipment in the concerned regional power committee, as per detailed procedure finalized by the respective regional power committee.

   Unquote

2. A Communication System Outage Planning Sub-Group/ TeST Sub Committee shall be formed in each region constituting the members from all the entities connected to ISTS including all CGS, ISGS, REGs/SPPDs/SPDs, STUs, SLDCs etc., of the respective Region, RLDC/Grid-India, PGCIL, CTUIL, Private Transmission licensees in respective region & RPC secretariat. The sub-group/ Sub Committee may co-opt any other member from any organization for facilitating the activities of the sub-group/ Sub Committee.

3. Communication System Outage Planning will be limited to the following systems:
   (i) ISTS Communication System including ISGS
   (ii) Intra-state Communication System being utilized for ISTS Communication
   (iii) ICCP links between Main & Backup RLDCs, Main & Backup SLDCs & Main & Backup NLDCs.
   (iv) Inter-regional AGC links.

(v) Any other system agreed by the sub-group.

4. Communication Equipment/link within the scope of the Procedure would include :

   (i) Optic Fibre links
   (ii) Any other link being used for ISTS communication
   (iii) ICCP links between Main & Backup RLDCs, Main & Backup SLDCs & Main & Backup NLDC
   (iv) VC links between LDCs
   (v) Inter-regional AGC links
   (vi) SPS Links
   (vii) Tele-Protection
   (viii) AMR
   (ix) PMU
   (x) SDH & PDH
   (xi) DCPC
   (xii) RTU & its CMU cards
   (xiii) DTPCs
   (xiv) Battery Banks and Charging Equipment
   (xv) EPABX
   (xvi) Any other equipment/link agreed by the sub-group

5. A Web Portal named as "Communication System Outage Planning Portal" shall be developed by respective RLDCs. Log-in credentials shall be provided to all the ISTS connected entities/concerned entities.

6. Entities/Users/Owners shall add their communication links and the equipment to the Web Portal as soon as they are commissioned. The same has to be furnished to RPC Secretariat /RLDCs.

7. Entities/Users/Owners of the communication equipment shall upload the outage proposals of communication links and the equipment (in the prescribed format only) to be availed during subsequent month by 7th/8th of every month in the Web Portal.

8. RPC Secretariat consolidates the list of outage proposals received from various Entities/Users/Owners of the communication links and equipment by downloading from the Web portal and circulate the same among all the respective region entities by 15th of every month. Communication outages affecting other regions would be coordinated by respective RLDC through NLDC.

9. Communication System Outage Planning (CSOP) meeting shall be conducted during the third week of every month normally (preferably through VC) to discuss and approve the proposed outages of communication links and equipment.

10. The approved outages of Communication links and equipment in the CSOP meeting shall be published in the RPC website and respective RPCs Communication Outage Portal within 3 days from the date of CSOP meeting.

11. Outage of the approved communication links and equipment shall be availed by the respective owner /entities after confirming the same with RLDC on D-3 basis.

12. In case of any emergency outage requirement of communication links and equipment, Entities/Users/Owners may directly apply to respective RLDC with intimation to respective RPCs on D-2 basis. Confirmation of approval/rejection will be provided on D-1 basis by RLDCs in consultation with respective RPCs considering 24hrs processing window.

13. Entities/Users/Owners shall take the code from the respective RLDC before availing the planned outage of the communication links & equipment and before restoration of the same.

14. Entities/Users/Owners of the communication links and equipment shall submit the deviation report for the approved outages (approved dates & approved period) availed during the previous month and the report on planned / forced / other outage of communication links / equipment by 10th of the month to RPC Secretariat as per the format at **Annexure-I** .

15. In the monthly CSOP meetings, communication links and equipment whose outage duration (Planned / Forced / Others) more than 48 hours for the last 12 months of rolling period shall be deliberated for the measures to be taken in future for the better outage management. The date deviations and non-availing the outages that were approved in the previous CSOP meetings shall also be deliberated in the CSOP meetings.

***

Annexure: DCOA-I

Outage Deviation Report : List of outages of Communication Links, availed / deviated during the month of June, 2021

Dated :

A Details of Communication Links (Point to Point) availed :

SL	Name of Requesting Agency	Description of Link	Source	Destination	Channel Routing	Ownership	Reason for availing outage with the details of equipment attended	Approved Start Date : Time [dd-mm-yy<>hh:mm]	Approved End Date : Time [dd-mm-yy<>hh:mm]	Approved Outage Hours	Outage availed Start Date : Time [dd-mm-yy<>hh:mm]	Outage availed End Date : Time [dd-mm-yy<>hh:mm]	Total hours of outage availed now	Deviation ? (Y/N)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Example**	Back up Control Center (BCC) : Data	KAYATHAR 230 kV SS	MADURAI LDC	Data will be availble throu	TANTRANSCO	Shifting of FODB panel at Kayathar 230 KV SS	10-Mar-2021 09:00	10-Mar-2021 18:00	**09:00**	10-Mar-2021 14:07	10-Mar-2021 17:30	**03:23**	**N**

Annexure: DCOA-II

Outage Deviation Report : List of outages of Communication Equipment availed / deviated during the month of June, 2021

Dated : 00:00

B Details of Communication Equipment availed :

SL	Name of Requesting Agency	Name of the communication equipment	Location of the Equipment / Name of Station	Name of the Link/Channel/Path / directions affected	Alternate Channel/Path available ? (Furnish details)	Ownership	Reason for availing outage with the details of faults	Approved Start Date : Time [dd-mm-yy<>hh:mm]	Approved End Date : Time [dd-mm-yy<>hh:mm]	Approved Outage Hours	Outage availed Start Date : Time [dd-mm-yy<>hh:mm]	Outage availed End Date : Time[dd-mm-yy<>hh:mm]	Total hours of outage availed now	Deviation ? (Y/N)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Example**	DC Charger -2, Amararaja, 48v	Edamon	Nil	Nil	KSEBL	Monthly maintenance. No interruption as alternate chargers available	16-Mar-21, 11:00	16-Mar-21, 16:00	**05:00**	16-Mar-21, 10:30	16-Mar-21, 16:00	**05:30**	Y

Annexure B 2.3

सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत संचार विकास प्रभाग
Power System Communication Development Division
****

Subject: Comprehensive guidelines for the usage and sharing of optical fibers of OPGW/UGFO cables for power system applications - reg

महोदय / Sir,

The rapid expansion and modernization of the power sector necessitate a robust, secure and efficient communication infrastructure. Optical Ground Wire (OPGW)/Underground Fiber Optic Cable (UGFO) plays a crucial role in ensuring seamless data exchange, real-time monitoring, and reliable operation of power systems. However, with increasing demands and multiple stakeholders involved in fiber usage, it became essential to establish a structured framework governing the sharing and utilization of fiber cores of OPGW/UGFO cable.

A Committee was constituted under the chairmanship of Member (Power System), CEA tasked with formulating comprehensive guidelines for the usage and sharing of fiber cores of Optical Ground Wire (OPGW)/ Under Ground Fiber Optic (UGFO) Cable for power system applications.

With the collective efforts of the Committee, CEA has formulated Comprehensive guidelines for the usage and sharing of fiber cores of Optical Ground Wire (OPGW)/ Under Ground Fiber Optic (UGFO) Cable for power system applications. The list of nominated members and the Terms of Reference of the Committee are attached as Annexure to the guidelines.

It is requested that all utilities/TSPs, power system stakeholders, and users to adopt and adhere to these guidelines.

भवदीय,
Signed by Suman Kumar Maharana
Date: 03-03-2025 13:13:55
(S K Maharana)
Chief Engineer,
Power System Communication Development Division,
Central Electricity Authority

Comprehensive guidelines for the usage and sharing of fiber cores of Optical Ground Wire (OPGW)/ Under Ground Fiber Optic (UGFO) Cable for power system applications

भारत सरकार
Government of India

केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority

विद्युत मंत्रालय
Ministry of Power

February 2025

Acknowledgement

The rapid expansion and modernization of the power sector necessitate a robust, secure and efficient communication infrastructure. Optical Ground Wire (OPGW)/Underground Fiber Optic Cable (UGFO) plays a crucial role in ensuring seamless data exchange, real-time monitoring, and reliable operation of power systems. However, with increasing demands and multiple stakeholders involved in fiber usage, it became essential to establish a structured framework governing the sharing and utilization of OPGW fibers.

The formulated guidelines establish a structured approach to fiber allocation, safeguarding power system communication needs and mitigating future conflicts. These guidelines also ensure that commercial leasing of fiber cores is managed in a way that does not hinder the grid's operational efficiency and reliability.

A committee was constituted with the approval of the Chairperson, CEA, to formulate comprehensive guidelines for the usage and sharing of fiber cores of OPGW/UGFO cable for power system applications. The complete list of the nominated members of the Committee as well as Terms of Reference of the Committee has been annexed with the guidelines.

As the Convenor of the Committee, I express my deepest gratitude to all committee members for their invaluable contributions in shaping these guidelines. Their collective efforts have resulted in a standardized framework that will ensure transparency and efficiency in the usage and sharing of OPGW fiber infrastructure. The technical insights and dedication of all Committee members have played a crucial role in developing these comprehensive guidelines, which will significantly mitigate conflicts and enhance the reliability of grid communications.

I extend special thanks to Shri Ghanshyam Prasad, Chairperson, CEA, for his vision and leadership in constituting this Committee. I am also grateful to Shri A K Rajput, Member (Power Systems), CEA, for chairing the Committee and steering discussions towards a balanced and effective outcome.

Furthermore, I would like to acknowledge the specific contribution made by the officers of Power System Communication Development Division, CEA namely Ms. Priyam Srivastava, Deputy Director; Shri Akshay Dubey, Deputy Director and Shri Arjun Agarwal, Assistant Director. The guidelines have been brought out by the dedicated and sincere efforts of these officers.

Shri S K Maharana,
Chief Engineer, PSCD Division & Convenor of the Committee

Table of Contents

Abbreviations:

1.	AGC - Automatic Generation Control
2.	CERC - Central Electricity Regulatory Commission
3.	CTU - Central Transmission Utility
4.	FOTE - Fiber Optic Terminal Equipment
5.	GSS - Grid Substation
6.	IEEE - Institute of Electrical and Electronics Engineers
7.	IEC - International Electrotechnical Commission
8.	InSTS - Intra-State Transmission System
9.	IPPs - Independent Power Producers
10.	ISGS - Inter-State Generating Station
11.	ISTS - Inter-State Transmission System
12.	LILO - Loop-in-Loop-Out
13.	NLDC - National Load Dispatch Center
14.	NoC - No Objection Certificate
15.	OPGW - Optical Ground Wire
16.	PMU - Phasor Measurement Unit
17.	PSCD - Power System Communication and Development
18.	RLDC - Regional Load Dispatch Center
19.	RoW - Right of Way
20.	SCADA - Supervisory Control and Data Acquisition
21.	SERC - State Electricity Regulatory Commission
22.	SLDC - State Load Dispatch Center
23.	STU - State Transmission Utility
24.	TSP - Transmission Service Provider
25.	UGFO – Under Ground Fiber Optic Cable
26.	VoIP - Voice over Internet Protocol

Comprehensive guidelines for the usage and sharing of fiber cores of Optical Ground Wire (OPGW)/ Under Ground Fiber Optic (UGFO) Cable for power system applications

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1. Introduction

1.1. These guidelines have been formulated to establish a uniform procedure for the sharing of fiber cores of Optical Ground Wire (OPGW)/ Under Ground Fiber Optic (UGFO) Cable deployed across the power transmission network, ensuring reliable, secure, and continuous monitoring and operation of the grid. They provide a comprehensive framework for fiber allocation, addressing the diverse needs of grid operations, system protection, as well as authorized commercial use. It establishes principles for effective resource allocation, maintaining sufficient redundancy to support future requirements, such as Loop-in-Loop-Out (LILO) expansions, network reconfiguration and scalability to accommodate evolving operational demands.

1.2. In alignment with the *Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020*, and the *Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022*, these guidelines have been formulated to support seamless communication needs for power system at national level, regional level, inter-state and intra-state level. By fostering a consistent approach to fiber sharing and allocation, these guidelines intends to promote interoperability and efficiency across multiple entities and users within the power system, ensuring reliable and uninterrupted communication system, which is critical for grid stability and operations.

2. Allocation Requirements

2.1. On any transmission line, minimum of 6 fibers are always in use for critical grid communication, supporting Supervisory Control and Data Acquisition (SCADA), Phasor Measurement Unit (PMU), Voice over Internet Protocol (VoIP), Automatic Generation Control (AGC), and other real-time operations (2 Main, 2 Hot Standby, 2 Spares).

Additionally, for transmission lines requiring line differential protection:

- **4 fibers** are used for reliable differential protection of single feeder (S/c line).
- **8 fibers** are used for reliable differential protection of a double circuit (D/c) line.

2.2. Over and above these fibers which are already in use, the fibers that shall be spared for future grid communication requirements, based on need, is tabulated below:

Type of Future Grid Communication Requirements	**Fiber Allocation**	**Remarks**
Alternate Communication Path/Future expansion/Reconfiguration/LILO requirement/Inter-Utility Communication etc.	Upto 6 Fibers	Shall be spared as and when required for future grid communication requirements of ISTS/In-STS/ISGS/Radial feeders etc.

Type of Future Grid Communication Requirements	Fiber Allocation	Remarks
Line Differential Protection with future reconfiguration, if applicable.	Upto 4 Fibers per circuit	Shall be spared in case new differential protection schemes are required due to system expansion, reconfiguration or LILO additions.
Technology Migration/Centralised Asset Management & Control.	Upto 4 Fibers	Shall be spared for simultaneous transition to next-generation communication networks (e.g., packet-based systems).

Additional Considerations:

1. The actual number of healthy fiber cores to be spared free of cost for future grid telemetry requirements, within the limits stipulated in table above, shall be decided as and when the need arises.
2. **Commercial Utilisation of Fiber cores** –

   - While leasing excess fibers for **non-grid applications**, utilities/Transmission Service Providers (TSPs) must **reserve the right to intervene, seek withdrawal, or cease utilization of leased fibers** to address any emerging grid requirements. The contract to include flexibility for renewal or termination based on evolving needs.

   - The **number of fiber cores to be leased** and the **duration of leasing** must be planned in a rational way, such that, whenever the need arises to spare fibers for grid applications, their availability cannot be denied on the premise that the spare fibers are already leased out for commercial purpose. Additionally, under no circumstances should the routing of grid application data to the SLDC/RLDC (State/Regional Load Dispatch Centers) be adversely affected.

3. Commercial Utilization of OPGW Fibers for other purposes

3.1. While Optical Ground Wire (OPGW) is primarily implemented on transmission assets for telemetering power system parameters and ensuring reliable grid communication, spare fiber cores may be commercially utilized under the following conditions:

3.1.1. **Grid Applications Take Priority** – Spare fibers can be leased for commercial purposes, provided that whenever the need arises for grid applications, the number of cores within the limits stipulated in the Allocation Requirements, is made available without exception.

3.1.2. **Assessment of Future Grid Communication Needs –** Before leasing fiber cores, STUs/TSPs must conduct an assessment of impending grid communication requirements for atleast next five years. This assessment shall be holistic considering state/regional/national level requirements for routing of the data to SLDCs/RLDCs. STUs/TSPs intending to lease fiber cores to collaborate with CTU to discuss:

- Upcoming **grid expansion plans** and their communication requirements.
- Possible dependencies where **ISTS/STU networks need mutual data routing support**.
- The spare fiber capacity that should be **retained for future grid needs** before considering commercial leasing.

Based on this assessment, entities must determine **how many cores can be leased** and the **duration of leasing**, without affecting the availability for future grid applications.

3.1.3. **Termination Clause in Leasing Contracts** – All leasing contracts must include a termination clause, mandating at max 18 month notice period for making the fiber cores available for grid applications whenever required. This ensures that grid operator can reclaim the necessary fibers for critical grid operations with adequate notice. However, it is always advisable to retain some spare fibers for emergency or future grid communication needs in advance, rather than having to invoke the termination clause of the contract when the need arises.

3.1.4. **Regulatory Compliance** – Any commercial utilization of spare fibers must adhere to applicable CERC/SERC regulations pertaining to the 'Sharing of Revenue Derived from Utilization of Transmission Assets for Other Business.'

3.1.5. **Intimation to RPCs for ISTS Fiber Leasing** –

Any ISTS licensee/TSPs proposing to lease fiber cores on a commercial basis must provide prior intimation to the concerned Regional Power Committees (RPCs) regarding:

i. The number of fiber cores proposed for commercial utilization.
ii. The duration of the lease.
iii. The mechanism incorporated in the contract to ensure fiber availability in case of future grid requirements.

3.2. It must be emphasized that the primary purpose of fibers in OPGW/UGFO implemented as part of a transmission scheme is reliable telemetering of power system parameters. Commercial utilization of these transmission assets can only be done after a prudent evaluation of future grid communication needs, ensuring that grid operations are never compromised.

3.3. Proper planning and foresight are necessary to ensure that the commercial use of spare fibers does not jeopardize the security, reliability, and expansion needs of the power system communication network.

4. Sharing Scenarios

The table below outlines fiber-sharing arrangements across different transmission line ownership scenarios, ensuring that:

- Fibers essential for grid operations are spared free of cost, irrespective of whether they are required for Intra-State (InSTS) or Inter-State (ISTS) communication needs.
- Entities to spare healthy fibers, within the limits stipulated in the Allocation Requirements, whenever grid needs arise.

Scenario	**Entity to manage the allocation for grid operation purposes.**	**Fiber Sharing**
i) OPGW Laid Under ULDC Scheme on ISTS Lines	Owned and maintained by POWERGRID. Allocation to be managed by CTU.	Fibers to be **spared free of cost** as per Allocation Requirements outlined in Clause 2, whenever required by **STUs, ISTS Licensees/TSPs** for any type of future grid communication requirements.
ii) OPGW Laid Under ULDC Scheme on Intra-State Lines (InSTS)	Owned and maintained by POWERGRID. Allocation to be managed by STU with CTU coordination.	Fibers to be **spared free of cost** as per Allocation Requirements outlined in Clause 2, whenever required by **STUs, ISTS Licensees/TSPs** for any type of future grid communication requirements.
iii) OPGW Laid by STUs on Intra-State Lines	Owned and maintained by STU. Allocation to be managed by STU.	Fibers to be **spared free of cost** as per Allocation Requirements outlined in Clause 2, whenever required by **STUs, ISTS Licensees/TSPs** for any future grid communication requirements.
iv) OPGW Laid by CTU/POWERGRID on Intra-State Lines	Owned and maintained by POWERGRID. Allocation to be managed by CTU with STU coordination.	50% fibers allocated for **ISTS operations**, 50% for **Intra-State operations**. If more than 50% is required by either, fibers to be **spared free of cost**, for any type of future grid communication requirements.
v) OPGW Laid by TSPs on ISTS Lines under TBCB/RTM Projects	Owned and maintained by TSP. Allocation to be managed by CTU	Fibers to be **spared free of cost** as per Allocation Requirements outlined in Clause 2, whenever required by **STUs, ISTS Licensees/TSPs** for any type of

Scenario	Entity to manage the allocation for grid operation purposes.	Fiber Sharing
		future grid communication requirements.
vi) OPGW Laid by TSPs on Intra-State Lines through TBCB	Owned and maintained by TSP. Allocation to be managed by STU	Fibers to be **spared free of cost** as per Allocation Requirements outlined in Clause 2, whenever required by **STUs, ISTS Licensees/TSPs** for any type of future grid communication requirements.
vi) OPGW Laid by POWERGRID/STU's on Deemed ISTS Lines	Owned and maintained by POWERGRID/STU. Allocation to be managed by CTU with STU coordination.	50% fibers allocated for **ISTS operations**, 50% for **Intra-State operations**. If more than 50% is required by either, fibers to be **spared free of cost** for any type of future grid communication requirements.
vi) OPGW Laid by TSPs at their own cost, utilizing the ISTS asset/RoW, with necessary approvals from CERC.	Owned and maintained by TSP. Allocation to be managed by CTU, as the OPGW now, is forming integral part of backbone ISTS Communication network. It is assumed that: • No OPGW was included in the originally approved scheme for the transmission line. • The TSP obtained necessary approvals from the competent authority prior to laying the OPGW.	Fibers to be **spared free of cost** as per Allocation Requirements outlined in Clause 2, whenever required by **STUs, ISTS Licensees/TSPs** for any type of future grid communication requirements.

5. Integration of FOTE for Differential Protection

5.1. Differential teleprotection is a vital component of power system protection, ensuring rapid and selective fault clearance. The choice of communication medium, whether IEEE C37.94 (herein after referred as C37.94) protocol over a shared fiber or separate optical fibers, significantly impacts the reliability and performance of this protection scheme.

5.2. The choice between C37.94 compliant FOTE and separate fiber cores for differential teleprotection depends on a variety of factors, including line length, voltage level, criticality, and network conditions. While C37.94 can be a cost-effective solution for certain applications, separate fibers offer superior reliability and faster fault clearance, making them the preferred choice for critical transmission lines, especially at higher voltage levels.

5.3. The Regional Power Committees (RPCs) generally prioritize a **reliable and dedicated communication link for line differential protection** to ensure the integrity and security of protection signals, especially given the criticality of fast and accurate fault detection for power system stability.

5.4. While specific practices may vary depending on the line's voltage level, length, and criticality, however, in order to guarantee reliable communication for line differential protection systems, the Committee recommends the following provisions:

Condition	**Recommendation**	**Reason**
High-Criticality and High-Voltage Lines (220 kV and above) requiring line differential protection	Preference to dedicated or separate fiber cores for line differential protection rather than shared fibers.	As per IEC 60834, which governs teleprotection equipment, the RPCs lean towards using communication setups that meet high reliability and availability standards, favoring separate fibers to reduce signal attenuation and improve reliability for critical protection.
Lower-Criticality or lines with Voltage below 220 kV requiring line differential protection	Line differential protection may be allowed on shared fibers via Fiber Optic Terminal Equipment (FOTE) using the C37.94 protocol	Multiplexing protection signals over a shared fiber can be a cost-effective solution, particularly when the risk of latency and interference is lower due to shorter transmission distances and moderate fault current levels.
High-Criticality and High-Voltage Lines (220 kV and Above) requiring line differential protection. However, having constraint in availability of dedicated Optical fibers.	Line differential Protection using C37.94-compliant FOTE over shared fiber may be allowed with the following condition: • The setup must meet the provisions of IEC 60834 regarding speed, security, and dependability standards under real-time conditions.	By ensuring reliable and timely communication, C37.94-compliant FOTEs can contribute to meeting the requirements of IEC 60834.

6. Routing of OPGW Fibers during LILO

6.1. In case of Loop-In-Loop-Out (LILO) of transmission lines, routing OPGW fibers must be done in a way that preserves the operational integrity of the grid's communication infrastructure. Key recommendations are elucidated in table below:

Main Line and LILO Configuration	**LILO Tower Type**	**OPGW Installation Requirement**	**Fiber Routing/Splicing in New Substation**	**Configuration Adjustments in Existing Substations**
Main Line: D/c, 24-Fiber OPGW; S/c LILO	M/c Or D/c Tower (Single Tower for Loop In and Out) with two Earth wire peaks	Install 24 F OPGW on both earthwire peaks i.e same Nos. of OPGW as that of main line on both earth wire peaks.	Route required no. of fibers only through the new substation. Splice the required number of fibers for the LILO section at the appropriate point.	Configure protection schemes and data transfer systems to accommodate the new line and substation Ensure fiber continuity for main line traffic.
Main Line: D/c, 24-Fiber OPGW; D/c LILO	Two Separate D/c Towers (Separate Loop In and Out)	Install 24F OPGW i.e same Nos. of fiber cores as that of main line on one earthwire peak per tower.	Route all fibers of OPGW from the main line through the new substation. Splice the required number of fibers for the LILO line at the new substation, if the new S/stn is of different entity.	Configure protection schemes and data transfer systems to accommodate the new line and substation Ensure fiber continuity for main line's traffic through the new S/stn
Main Line: D/C, 24-Fiber OPGW; D/c LILO	Multi-Circuit Tower	Install 24 F OPGW on both earthwire peaks i.e same Nos. of OPGW as that of main line on both earth wire peaks.	Route all fibers of OPGW from the main line through the new substation. Splice the required number of fibers for the LILO line at the new substation, if the new S/stn is of different entity.	Configure protection schemes and data transfer systems to accommodate the new line and substation Ensure fiber continuity for main line's traffic through the new S/stn

Main Line and LILO Configuration	LILO Tower Type	OPGW Installation Requirement	Fiber Routing/Splicing in New Substation	Configuration Adjustments in Existing Substations
Main Line: D/c (220 kV/132 kV), 24-Fiber OPGW; S/c LILO	Tower with Singe Earth wire peak	Install 48F OPGW i.e., double the number of fiber cores as that of main line on single peak available in LILO portion	Route half number of fibers (12F) of OPGW from the main line through the new substation Splice the required number of fibers for the LILO section at the appropriate point.	Configure protection schemes and data transfer systems to accommodate the new line and substation. Ensure fiber continuity for main line traffic.
Main Line: S/C (220kV/132 kV), 24-Fiber OPGW; S/c LILO	Tower with Singe Earth wire peak	Install 48F OPGW i.e., double the number of fiber cores as that of main line on single peak available in LILO portion	Route all fibers (24F) of main line OPGW through the new substation to maintain continuity between the existing stations. Splicing of all the fibers at the new S/stn to be done to integrate LILO traffic.	Configure protection schemes and data transfer systems to accommodate the new line and substation. Ensure fiber continuity for main line's traffic through the new S/stn.

6.2. Whenever a Transmission Licensee implements a Loop-In-Loop-Out (LILO) arrangement on an existing transmission line, adjustments must be made in the **existing Substations**, including **Fiber Optic Terminal Equipment (FOTE)**, **relays**, and **other protection equipment** to ensure seamless integration and reliable protection.

Table summarizing LILO adjustments in existing Substations

Equipment	Adjustments Required	Details
Fiber Optic Terminal Equipment (FOTE)	Signal reconfiguration, routing modifications, capacity upgrades, synchronization, integration with new FOTE, supply of necessary optical	Ensure compatibility with new LILO traffic, enhance capacity if required, and synchronization with relays.

Equipment	Adjustments Required	Details
	interfaces to meet link budget requirement.	
Relays	Reconfiguration of protection schemes, distance zone adjustments, differential protection tuning.	Modify relay settings for fault detection across LILO, adjust impedance settings, and back-up coordination.
SCADA and Telemetry	Data routing, alarm configuration, SCADA system updates.	Integrate new LILO substation data into SCADA, configure additional alarms for LILO events.
Amplifiers/Signal Boosters	Installation if required, signal quality testing.	Ensure strong signal levels across LILO paths, perform attenuation checks.
Protection Redundancy	Ensure redundancy, perform testing and commissioning.	Verify that no single point of failure exists, conduct fault simulations, and document updated settings.

6.3. The entity undertaking the LILO installation and commissioning of the new substation shall ensure that all necessary adjustments, interfaces, and configuration support are implemented to maintain seamless data communication and reliable operation of protection schemes without signal degradation or loss. It is incumbent upon this entity to provide comprehensive support to the owner of the existing substation, facilitating integration and ensuring that all configuration and interoperability requirements are met to uphold continuous, high-integrity signal transmission and effective protection functionality across the network.

6.4. When the LILO is performed at the substation, the leased fiber cores, if any, by the main line owner must be routed continuously through the LILO section. Entity undertaking LILO cannot commercialize fibers routed for main line owner's use to prevent potential disputes.

7. Maintenance of Database:

7.1. CTU for ISTS/ STUs for InSTS shall be responsible for monitoring the utilization of OPGW fibers and ensuring compliance with the established conditions. The CTU/STU shall maintain a comprehensive database that clearly segregates:

1. **Total number of OPGW fiber cores:** The total number of fiber cores available on the OPGW of the transmission lines.
2. **Number of cores utilized for grid applications:** The number of fiber cores currently being used for essential grid operations
3. **Spare cores reserved for grid applications:** The number of fiber cores specifically retained for future grid applications.

4. **Number of fiber cores already being shared for grid applications:** The number of fiber cores shared with other grid entities (e.g., other TSPs, STUs, DISCOMs) for grid-related purposes. This should include details of the entities involved in each sharing arrangement.
5. **Number of cores leased on a commercial basis:** The number of fiber cores leased to entities for non-grid applications (e.g., telecom providers, internet service providers). This should include details of the lease agreements, including the lessee, lease period, and terms of termination.

7.2. CTU/STU shall prepare a standardized format/procedure for the TSPs/Licensees to furnish the above data pertaining to OPGW fibers. CTU/STU shall display the data on its website.

8. OPGW Implementation in New Transmission Projects and Upgradation Schemes

8.1. In all the new transmission projects and upgradation schemes, the Planning agency should ensure that any decision regarding deployment of fiber cores considers both present needs and future expansions, balancing the infrastructure's capability with associated costs.

8.2. Planning of OPGW with a minimum of 48 fiber cores to be done, as per feasibility and requirement. For installations within city limits, OPGW may be equipped with 96 fiber cores to also facilitate usage by DISCOMs, SLDCs, RLDCs, and NLDC for last-mile connectivity, contingent upon the load-bearing capacity of the line. This approach will accommodate any additional future requirements, including Loop-In-Loop-Out (LILO) configurations or increased capacity utilizing the same Right of Way (ROW).

8.3. Additionally, since OPGW fibers can also support long-distance telecommunications network across India, the planning exercise should also take into account the dynamics of the telecom industry while determining the number of fibers to be deployed.

8.4. This strategy will facilitate the establishment of a robust, scalable communication network while maintaining efficiency and responsiveness to evolving operational needs across all areas.

9. Implementation Strategy for Existing ISTS/ InSTS Lines

9.1. Any ISTS TSP/In-STS utility/entity planning to lease out spare fiber cores of its OPGW on existing lines on commercial basis shall adhere to all the provisions and framework for fiber sharing and usage, as outlined in these guidelines.

9.2. For TSPs/utilities that have already leased out fiber cores before the issuance of these guidelines, it is expected that, as and when the need arises to spare fibers for grid applications, they will explore all possible means to make available the minimum no. spare fibers that can serve the purpose, free of cost. In cases where conflicts or stalemate arises regarding the availability of requisite number of fibers, a resolution committee shall be formed. This committee will include representatives from the RPCs, PSCD Division of CEA, CTU, concerned STUs /TSPs , with the goal of resolving the issue in a fair and balanced manner.

10. Conclusion

10.1. These guidelines aim to establish a standardized approach to the allocation and sharing of Optical Ground Wire (OPGW) fibers across power sector, ensuring secure, reliable, and scalable communication infrastructure that meets both present and future grid requirements. By implementing uniform principles for fiber allocation and usage, entities across the power sector—including CTU, STU, TSPs, DISCOMs, SLDCs, RLDCs, and NLDCs—can achieve consistent and efficient communication system for grid operations, protection, and commercial applications. These guidelines provide a clear and standardized framework for the allocation and sharing of Optical Ground Wire (OPGW) fibers, balancing the commercial prospects of fiber usage with the imperative of maintaining secure, reliable, and scalable grid operations.

11. Brief of Recommendations for Adoption

11.1. Uniform Fiber Allocation

Entities should adhere to this fiber allocation guidelines/framework for grid operations, ensuring designated fibers for essential communication and protection. Excess fibers may be designated for commercial use, subject to periodic review and regulatory oversight, thereby maximizing resource utilization without compromising the grid stability.

11.2. Compliance with CEA Regulations

All implementations should align with the CEA (Technical Standards for Communication System in Power System Operations) Regulations, 2020 , CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022, CERC Interface Requirements and CEA Cyber Security Guidelines, to promote standardized, high-quality communication infrastructures across the power transmission networks.

11.3. Scalability for Future Needs

In areas with high potential for future growth or within city limits, entities are encouraged to install OPGW with 48/96 fiber cores to provide sufficient capacity for last-mile connectivity, future expansions, and LILO requirements, leveraging the Right of Way (ROW) effectively.

11.4. Commercial Usage Protocol

Any commercial usage should adhere to the applicable CERC/SERC Regulations. All leasing contracts must include a termination clause, mandating at max of 18-month notice period for making the fiber cores available for grid applications whenever required. This ensures that grid operator can reclaim the necessary fibers for critical grid operations with adequate notice. However, it is always advisable to retain spare fibers for emergency or future grid communication needs in advance, rather than having to invoke the termination clause of the contract when the need arises.

11.5. **Coordination and Monitoring**

For LILO implementations and OPGW installations in new and upgraded transmission schemes, the entity responsible for installation of the same must provide continuous support to existing substations, facilitating configuration adjustments and ensuring reliable data transfer. Continuous monitoring by CTU is recommended to assess the impact of commercial use and maintain high standards of operational reliability.

These recommendations will ensure that all stakeholders in power system communication can operate within a unified framework, promoting efficiency, compliance, and grid security.

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Composition of the Committee constituted under the chairmanship of Member (Power System), CEA tasked with formulating comprehensive guidelines for the usage and sharing of optical fibers (OPGW) for power system applications:

S.no	Members	Organisation/Association
1.	Member (Power System) (Chair)	CEA
2.	Chief Engineer, PCD	CEA
3.	Chief Engineer, NPC	CEA
4.	Chief Engineer, ET & I	CEA
5.	Member Secretary, RPCs	RPCs
6.	Executive Director, CTU	CTU
7.	Executive Director, Grid India	GridIndia
8.	Executive Director, Powergrid	Powergrid
9.	Representative of Electric Power Transmission Association – 2 TSPs	EPTA
10.	Representative from STUs (at the level of Chief Engineer or equivalent)	• Northern Region: UPPCL, RRVPNL • Western Region: GETCO, MPPTCL •Southern Region: KSEBL,TANTRANSCO • Eastern Region: WBSETCL, OPTCL • North Eastern Region: AEGC

The Terms of Reference (ToR) of the Committee is as follows:

1) **Scope and Purpose:** Define the need to develop guidelines that address the unique requirements and challenges associated with the sharing of OPGW fibers among CTU, STUs, and Private Transmission Licensees.

2) **Allocation Requirements:** Define/determine the number of fibers required for catering to varied applications/services for grid management such as data, speech, protection etc., including minimum spare fibres to be earmarked for grid applications/requirements.

3) **Sharing Scenarios**: Analyse the scenarios wherein the spare fibers in the OPGW laid by an entity is to be shared amongst several entities (CTU, STU, TSPs) to facilitate real time grid monitoring. Formulating the uniform mechanism governing the access, usage, or other aspects of the shared fibers in following scenarios:

(i) Sharing of OPGW laid under ULDC scheme on the ISTS lines.
(ii) Sharing of OPGW laid under ULDC scheme on the Intra-State lines.
(iii) Sharing of OPGW laid by STUs on the Intra State lines.
(iv) Sharing of OPGW laid by CTU/Powergrid on the Intra State lines.
(v) Sharing of OPGW on the ISTS lines laid by TSPs under TBCB and RTM projects.

Identify and define the role and responsibilities of Centre, State, and Private Transmission Licensees in the sharing of OPGW fibers.

4) Investigate the integration of Fiber Optic Terminal Equipment (FOTE) for differential protection in accordance with the C37.94 protocol and bring out recommendations.

5) Define the uniform mechanism of routing of OPGW fibers in case of LILO taken up on any transmission line.

6) Recommend the scenarios/limit of OPGW fibers beyond which it can be utilized for other commercial purposes.

7) Formulate recommendations for seamless adoption of these guidelines.

Nominated Members of the Committee

S. No.	Nominated Member's Name	Designation	Division & Organisation
1.	Shri A K Rajput	Member (Power Systems)	Central Electricity Authority
2.	Shri V K Singh	Member Secretary	NRPC, CEA
3.	Shri Asit Singh	Member Secretary	SRPC, CEA
4.	Shri N S Mondal	Member Secretary	ERPC, CEA
5.	Shri Deepak Kumar	Member Secretary	WRPC, CEA
6.	Shri K B Jagtap	Member Secretary	NERPC, CEA
7.	Smt Rishika Sharan	Chief Engineer	NPC, CEA
8.	Shri Surata Ram	Chief Engineer	ET&I, CEA
9.	Shri S K Maharana	Chief Engineer	PSCD, CEA
10.	Shri J B Len	SE	SRPC, CEA
11.	Shri Shiv K Gupta	Sr. DGM	Comm, CTUIL
12.	Shri Ankur Gulati	DGM	GRID-INDIA
13.	Shri. Doman Yadav	Executive Director	Grid Automation & Communication (GA&C), Powergrid
14.	Smt S.Kannika Parameswari	Chief Engineer	P&C, TANTRANSCO
15.	Shri. Viju Rajan John	Chief Engineer	Transmission System Operation, KSEBL
16.	Shri Binaya Ku Mallick	DGM(Telecom)	E & Q, OPTCL,HQRS
17.	Shri N. K Patel	SE (Telecom)	TR Department, Corporate Office, GETCO, Vadodara
18.	Shri R. B Kathiria	EE (Telecom),	Telecom Unit, 220kV S/s, GETCO, Gondal
19.	Shri Jayesh A Mehta	DE (Telecom)	Telecom Unit, 220kV S/s, GETCO, Ranasan
20.	Shri Arup Sarmah	AGM	LA Communication Division, Kahilipara, AEGCL
21.	Smt. Punam Biswakarma	AGM	CA Communication Division, Samaguri, AEGCL
22.	Shri Ashutosh Bhattacharjee	GM	(T&C and Comm.)
23.	Shri Rajesh Gupta	SE (SLDC)	MPPTCL
24.	Shri Sudhir Nema	SE (Planning)	MPPTCL

S. No.	Nominated Member's Name	Designation	Division & Organisation
25.	Smt. Kshama Shukla	EE (P&D)	MPPTCL
26.	Shri Debasis Sarkar	Chief Engineer	Communication Department, WBSETCL
27.	Shri Vivek Dixit	Chief Engineer	Sanchar and Niyantran, UPPTCL
28.	Shri Sanjay Johari	VP	Business Development & Adani Energy Solutions Ltd.
29.	Shri Tarun Tayal	Head- Govt. Alliances and Partnerships	Sterlite Power

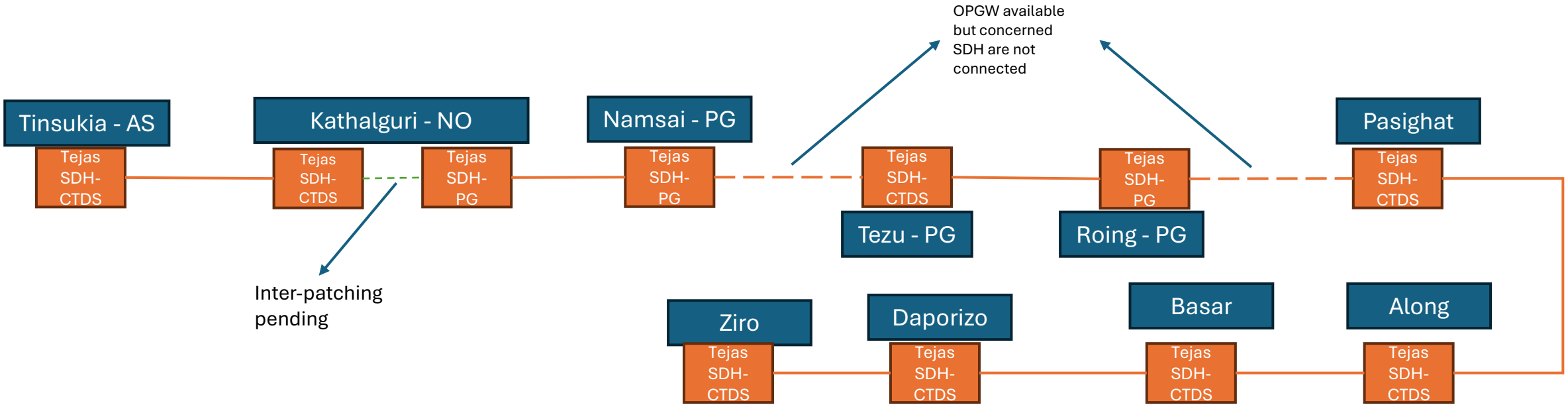
Special Invitee - Power System Technology Development Division, CEA

Agenda: 2.5:

Annexure B 2.5

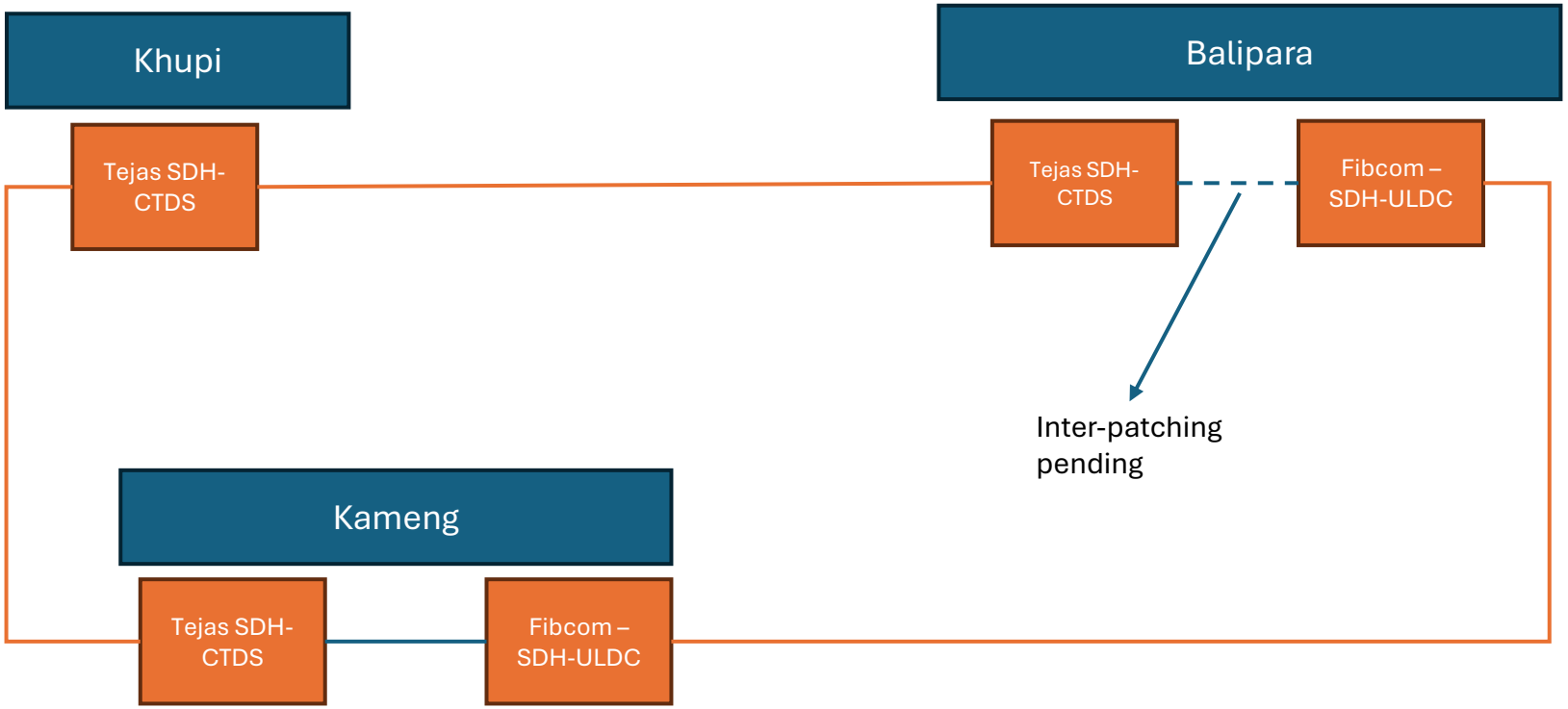
Case 1: Non-utilisation of BNC-Agar HVDC OPGW for Inter-regional Purpose

Case 2: Non-connection of Same make SDH even after availability of OPGW



Agenda: 2.5:

Case 3: Utilisation of Kameng → Khupi → Tenga → Balipara OPGW

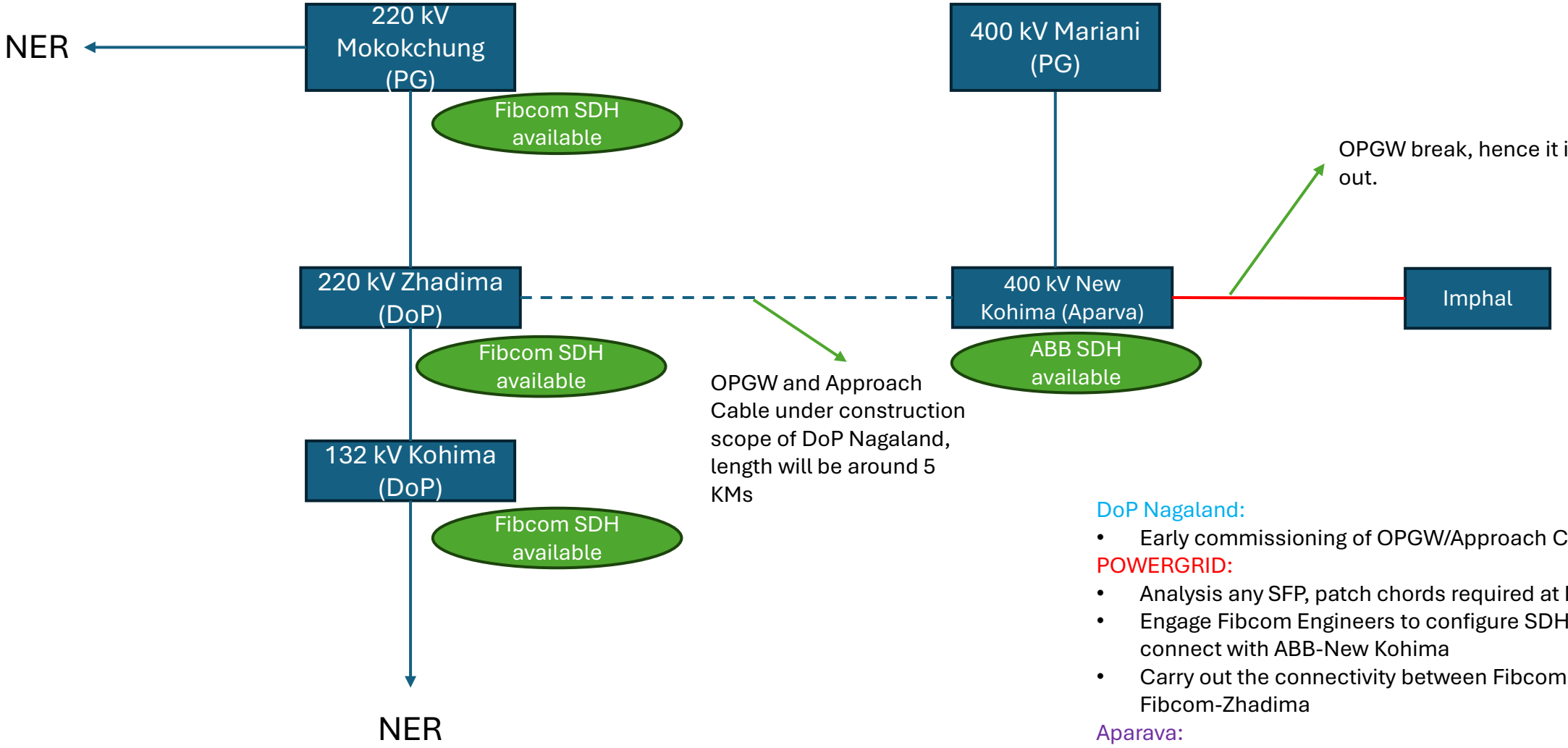


Case 4: Inter-patching pending between NERPSIP and ULDC

FOTE Interpatching requirement				
Sl no	Location	ULDC MUX	NERPSIP MUX	Remarks
1	Rangia (Assam)	Fibcom	ABB	To be used for redundant path for central sector station such as Bongaigoan(PG), Balipara, BgTPP, ICCP to NLDC/BLDC, AGC Link of Kopili, Loktak, etc to NERLDC
2	Balipara(PG)	ECI	ABB	To be used for redundant path for central sector station such as HVDC-BNC,Misa, Nirjuli, Pare, ranganadi, etc to NERLDC
3	Gohpur(Assam)	ECI	ABB	To be used for redundant path for central sector station such as HVDC-BNC,Nirjuli, Pare, ranganadi, etc to NERLDC
4	Rokhia(Tripura)	Fibcom	ECI	To be used for redundant path for central sector station such as Palatana, SMNagr(ST),PKBari(ST), RC Nagar, etc to NERLDC
5	Udaipur(Tripura)	Fibcom	ECI	To be used for redundant path for central sector station such as Palatana, SMNagr(ST),PKBari(ST), RC Nagar, etc to NERLDC
6	Agartala SLDC (Tripura)	Fibcom	ECI (NERPS	To be used for redundant path for central sector station such as Palatana, SMNagr(ST),PKBari(ST), RC Nagar, etc to NERLDC

Annexure A4: Proposed Connectivity of 400 kV New Kohima (Aparva) with 220 kV Zhadima (DoP, Nagaland)

Annexure B 2.6



DoP Nagaland:

- Early commissioning of OPGW/Approach Cable along with line.

POWERGRID:

- Analysis any SFP, patch chords required at New Kohima end
- Engage Fibcom Engineers to configure SDH at Zhadima in order to connect with ABB-New Kohima
- Carry out the connectivity between Fibcom-Mokokchung and Fibcom-Zhadima

Aparava:

- Analysis any SFP, patch chords required at New Kohima end
- Engage ABB/Hitachi Engineers to configure SDH at New Kohima to connect Fibcom-Zhadima

Sakal Deep (सकल दीप)

Annexure C 3.6

From: Sakal Deep (सकल दीप)
Sent: 05 August 2025 11:55
To: apsldc.sd; nicegeyi@gmail.com
Cc: S P Barnwal (एस पी बर्नवाल); Saugato Mondal (सौगाता मंडल); NERLDC SCADA; Executive Engineer; Assistant Engineer
Subject: RE: Request to integrate data of Panyor and Pare in Chimpu S/s RTU.

Dear Sir,

Gentle reminder-4.

Regards,
Sakal Deep/सकल दीप
North Eastern Regional Load Despatch Centre/उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र
Grid Controller of India Limited/ ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(A Government of India Enterprise) / (भारत सरकार का उद्यम)

From: Paominlal Doungel (पाओमिंलाल डौंगेल) <paominlal@grid-india.in>
Sent: 08 May 2025 10:26
To: apsldc.sd <apsldc.sd@gmail.com>; nicegeyi@gmail.com
Cc: S P Barnwal (एस पी बर्नवाल) <spbarnwal@grid-india.in>; Saugato Mondal (सौगाता मंडल) <saugato@grid-india.in>; NERLDC SCADA <nerldc.scada@grid-india.in>; Executive Engineer <eesldcitaap@gmail.com>; Assistant Engineer <aesldc2021@gmail.com>; Sakal Deep (सकल दीप) <skldeep@grid-india.in>
Subject: Re: Request to integrate data of Panyor and Pare in Chimpu S/s RTU.

Sir,

As per agenda 2.8of 31st NETeST minutes and agenda 2.12 of 225th OCC meeting (*Snapshot of relevant minutes is attached)*, it is kindly requested to update the status.

_____

Regards,

Paominlal Doungel,

System Logistics

North Eastern Regional Load Despatch Centre, Shillong

Grid Controller of India Limited/ ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड

(Formerly known as Power System Operation Corporation Ltd)

(A Government of India Enterprise)

From: Sakal Deep (सकल दीप)
Sent: 16 April 2025 14:52
To: apsldc.sd <apsldc.sd@gmail.com>
Cc: S P Barnwal (एस पी बर्नवाल) <spbarnwal@grid-india.in>; Saugato Mondal (सौगाता मंडल) <saugato@grid-india.in>; NERLDC SCADA <nerldc.scada@grid-india.in>; Executive Engineer <eesldcitaap@gmail.com>; Assistant Engineer <aesldc2021@gmail.com>; nicegeyi@gmail.com
Subject: RE: Request to integrate data of Panyor and Pare in Chimpu S/s RTU.

Dear Sir,

Gentle reminder-2.

Regards,
Sakal Deep (सकल दीप)
North Eastern Regional Load Despatch Centre
Grid Controller of India Limited/ ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(Formerly known as Power System Operation Corporation Ltd)
(A Government of India Enterprise)

From: Sakal Deep (सकल दीप)
Sent: Tuesday, March 11, 2025 15:33
To: apsldc.sd; nicegeyi@gmail.com
Cc: S P Barnwal (एस पी बर्नवाल); Saugato Mondal (सौगाता मंडल); NERLDC SCADA; Executive Engineer; Assistant Engineer
Subject: RE: Request to integrate data of Panyor and Pare in Chimpu S/s RTU.

Dear Sir,

Gentle reminder-1.

Regards,

Sakal Deep (सकल दीप)

North Eastern Regional Load Despatch Centre

Grid Controller of India Limited/ ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड

(Formerly known as Power System Operation Corporation Ltd)

(A Government of India Enterprise)

From: Sakal Deep (सकल दीप)
Sent: Monday, February 17, 2025 11:07 AM
To: apsldc.sd <apsldc.sd@gmail.com>; nicegeyi@gmail.com
Cc: S P Barnwal (एस पी बर्नवाल) <spbarnwal@grid-india.in>; Saugato Mondal (सौगाता मंडल) <saugato@grid-india.in>; NERLDC SCADA <nerldc.scada@grid-india.in>; Executive Engineer <eesldcitaap@gmail.com>; Assistant Engineer <aesldc2021@gmail.com>
Subject: Request to integrate data of Panyor and Pare in Chimpu S/s RTU.

Dear Sir,

It has been observed that the data (MW, MVAR, CB, and isolators) for Panyor and Pare bays at Chimpu S/s is not being reported. Upon further analysis, it has come to our attention that MFTs and CMRs for the mentioned bays are yet to be installed.

Kindly coordinate with M/s GE to carry out the following actions to enable data reporting for the mentioned bays:

1. **Installation of MFTs:**
    - MFTs need to be installed for both bays.
    - Appropriate CT and PT connections must be completed.
    - MFTs should then be integrated with the Chimpu RTU.
2. **Installation of CMRs:**
    - CMRs need to be installed for both bays.
    - CB and isolator status should be integrated with the Chimpu RTU.

We request you to kindly coordinate with M/s GE for the integration of Panyor and Pare bay data into the Chimpu S/s RTU.

Regards,

Sakal Deep (सकल दीप)

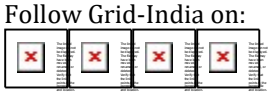
North Eastern Regional Load Despatch Centre

Grid Controller of India Limited/ ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड

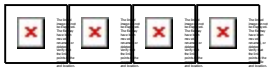
(Formerly known as Power System Operation Corporation Ltd)

(A Government of India Enterprise)

Follow Grid-India on:

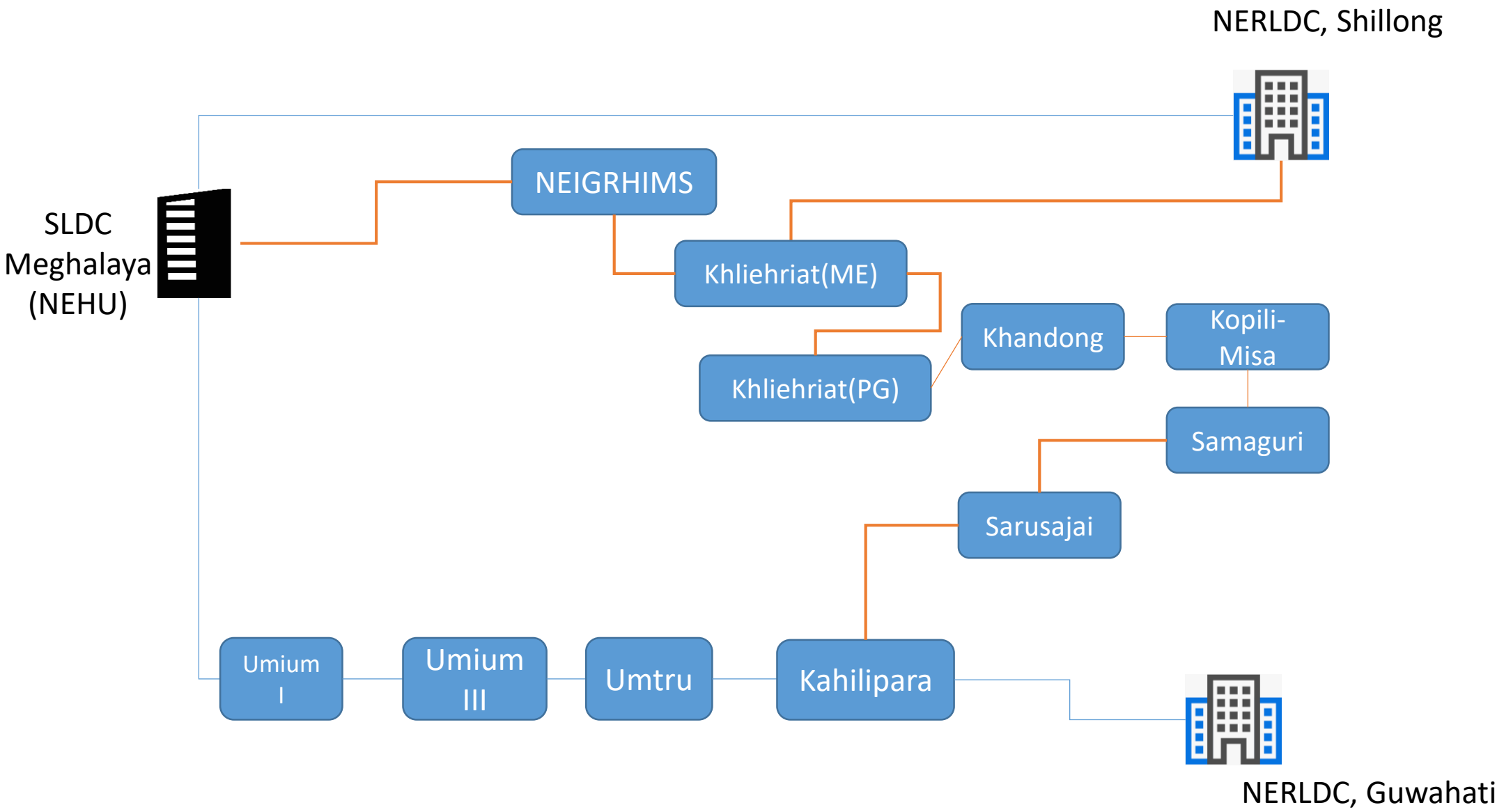


Follow Grid-India on:

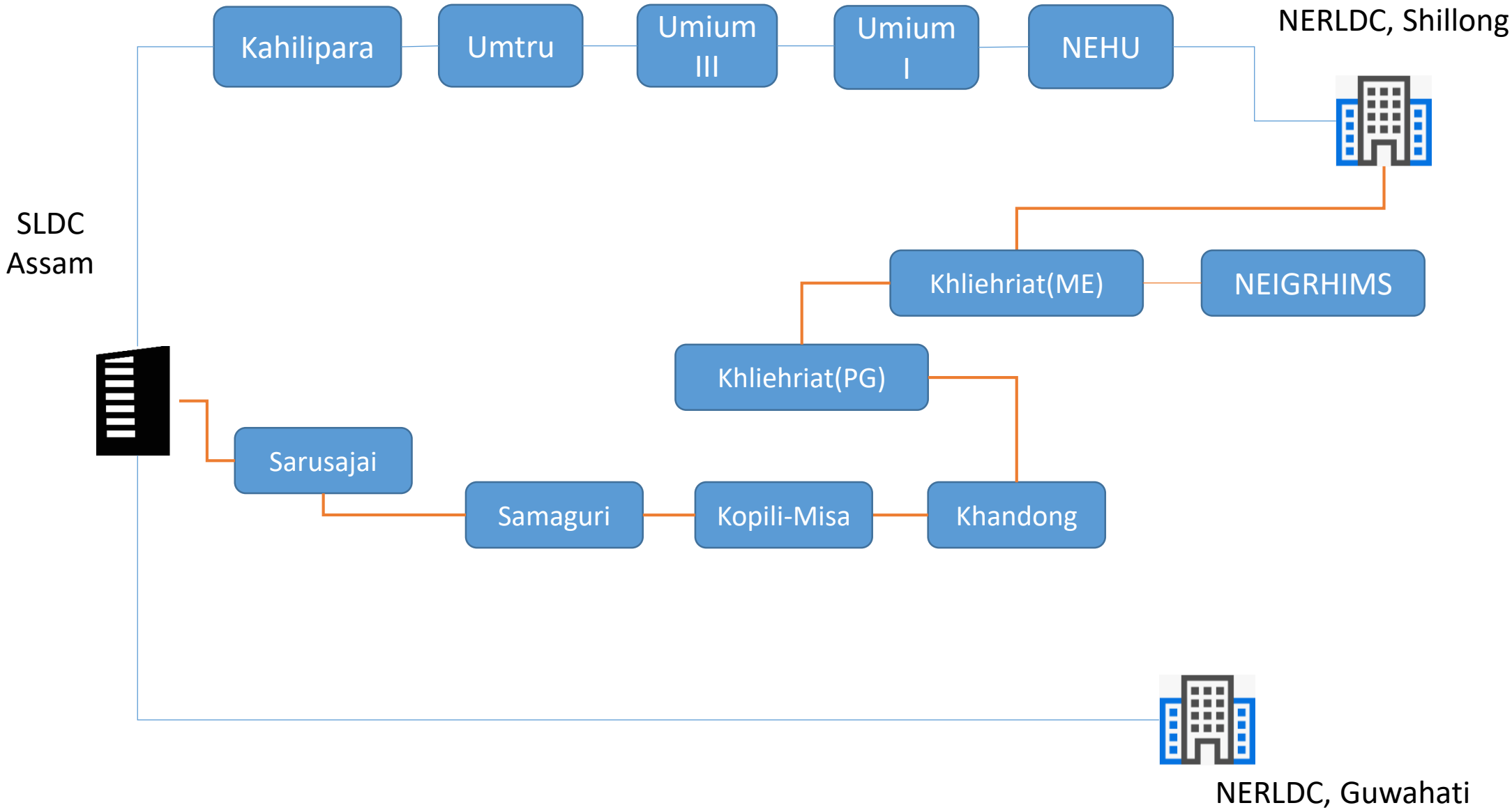


Connection between NERLDC to SLDC, Meghalaya

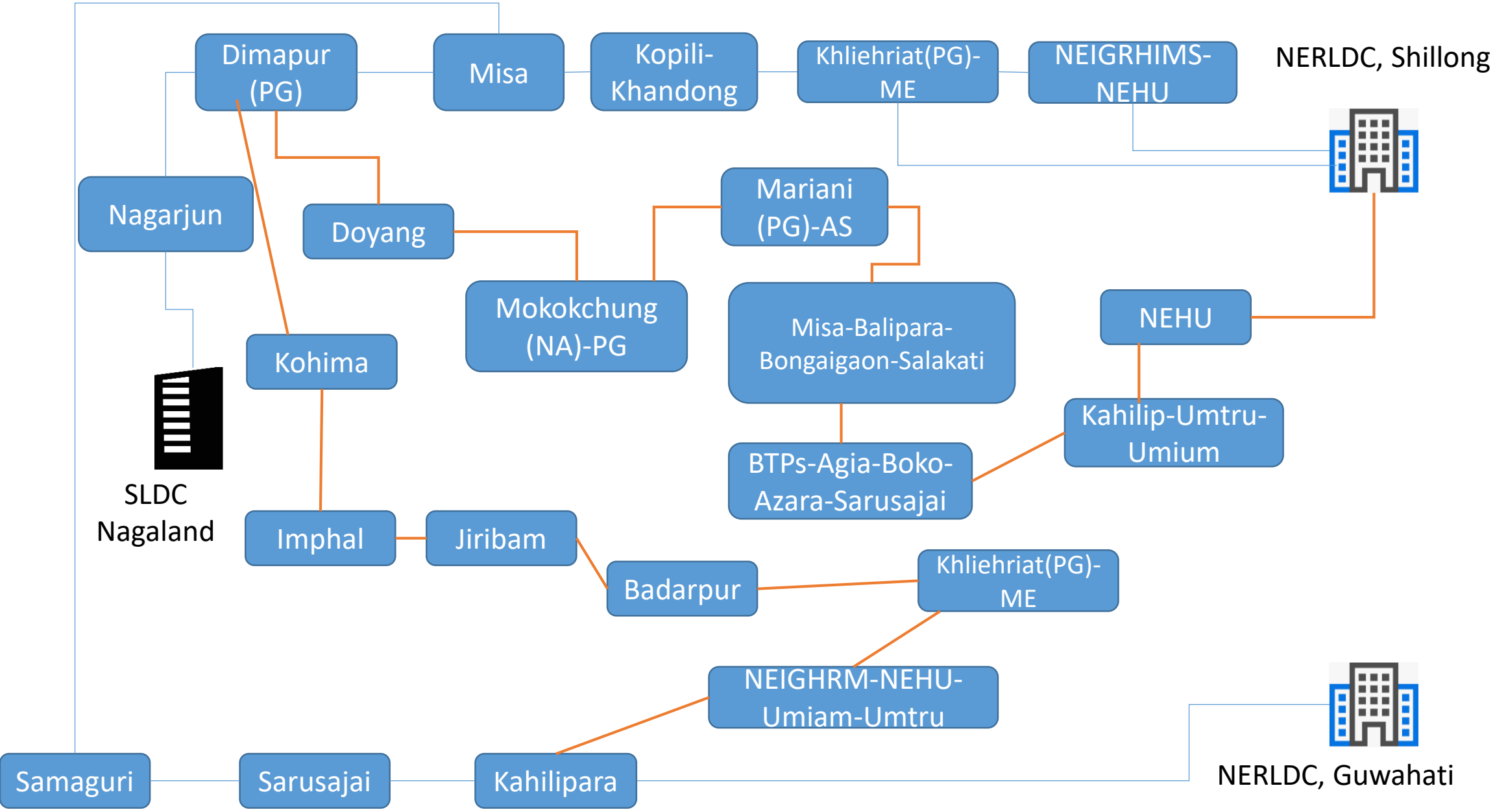
Annexure C 3.9



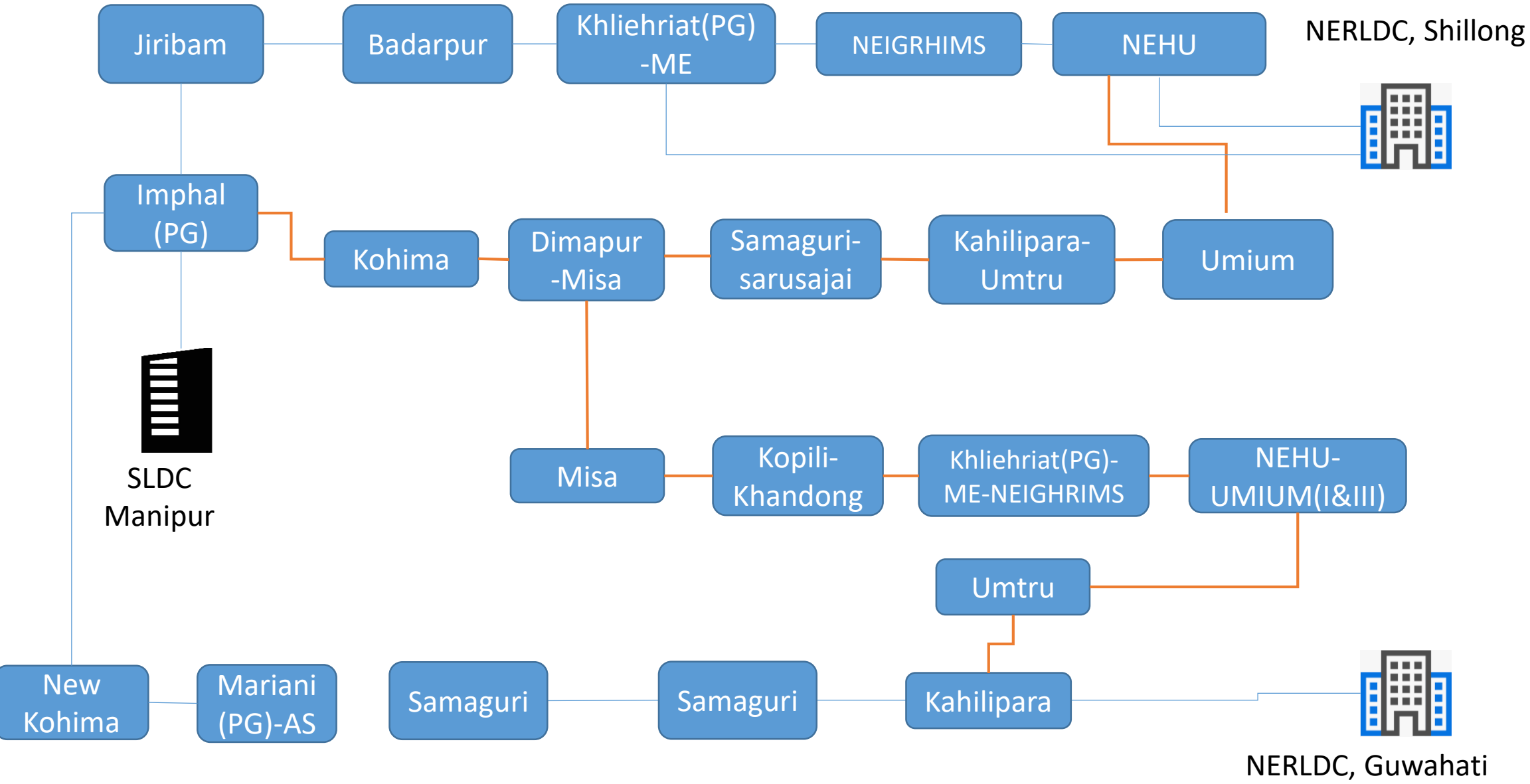
Connection between NERLDC to SLDC, Assam



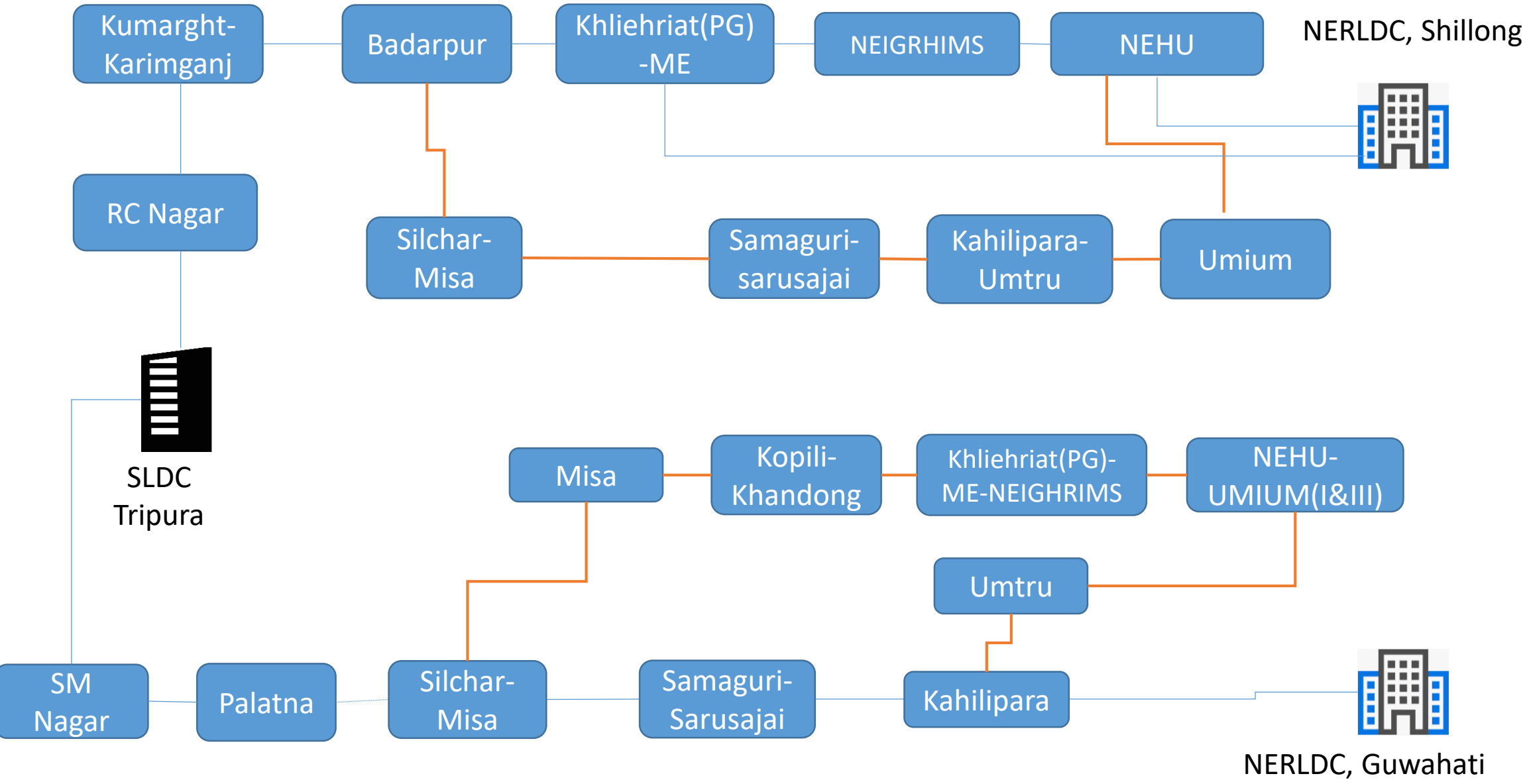
Connection between NERLDC to SLDC, Nagaland



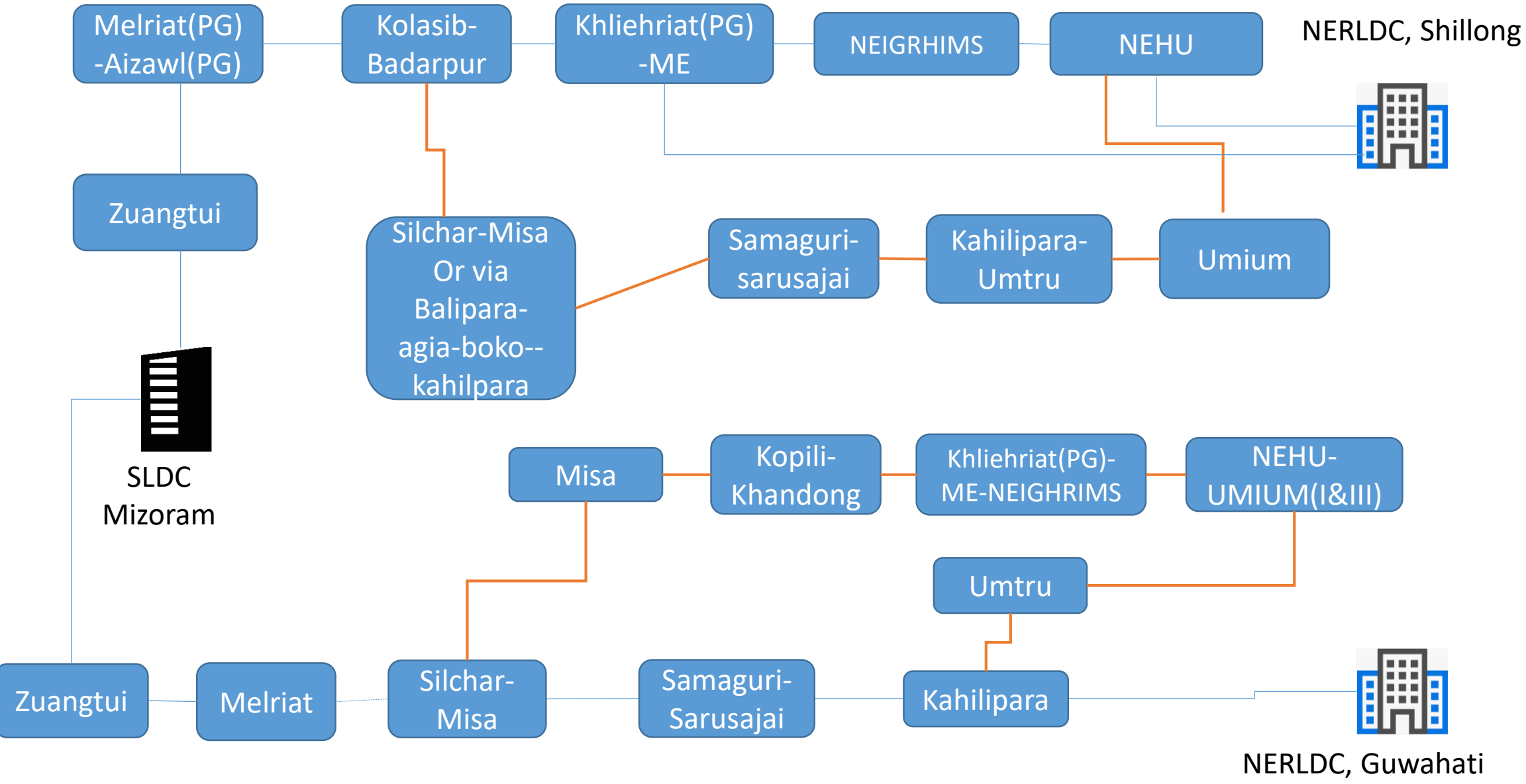
Connection between NERLDC to SLDC, Manipur



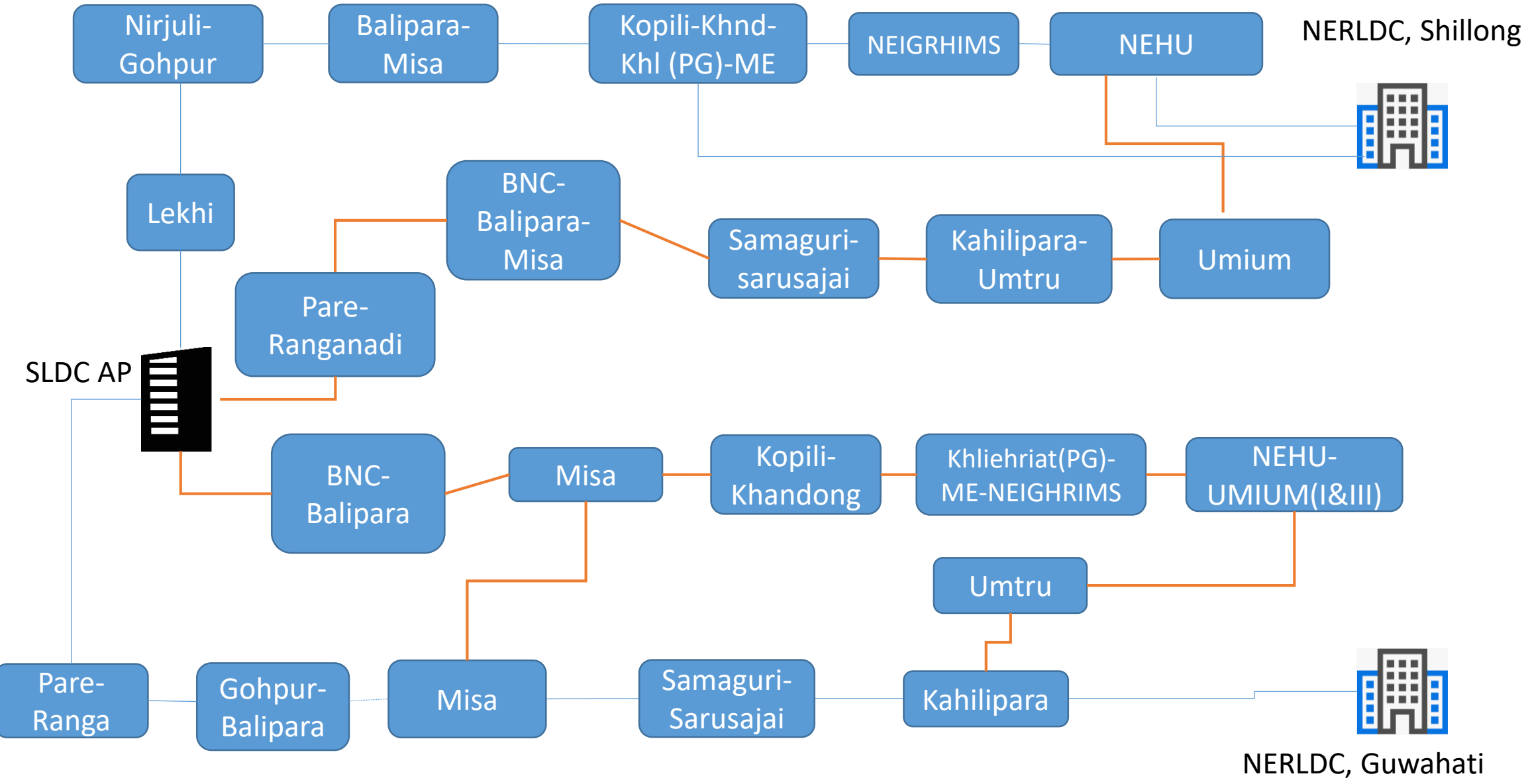
Connection between NERLDC to SLDC, Tripura



Connection between NERLDC to SLDC,Mizoram



Connection between NERLDC to SLDC,Arunachal Pradesh



ग्रिड-इंडिया
GRID-INDIA

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[Formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र/ North Eastern Regional Load Despatch Centre
कार्यालय: लोअर नोंगराह, लापालांग, शिलांग- 793006 (मेघालय)
Office: Lower Nongrah, Lapalang, Shillong- 793006 (Meghalaya)
CIN:U40105DL2009GOI188682, Website: www.nerldc.in, E-mail: nerldc@grid-india.in,Tel:0364-2537470/427,Fax:03642537486

Ref No: NERLDC/SL/SCADA/F/050/ **दिनांक/Date:05.08.2025**

सेवा में/To (Through e-mail)

1. Dy. General Manager (MRT), AEGCL, Narengi,Guwahati-781026, Assam.
2. Senior General Manager (Project/ULDC), NERTS, POWERGRID, Lapalang Shillong.
3. Executive Engineer (SM), NEHU S/S, MePTCL, NEHU Campus, Umjarain, Shillong-793022
4. Dy. General Manager, SLDC, TSECL,79 Tilla S/S, Agartala-799006
5. Executive Engineer (SLDC), Dept. of Power, Govt. of Arunachal Pradesh, Itanagar-791111.
6. General Manager (Trans/SLDC), MSPC Ltd, Keishampat, Imphal-795001 Manipur.
7. Superintending Engineer (SLDC), P&ED, Tuikhuahtlang, Aizawl-796001
8. Executive Engineer (SLDC), Dept. of Power, Govt. of Nagaland, Full Nagarjan, Dimapur.
9. Sr. Manager (Elect) Loktak HEP, NHPC, Vidyut Vihar, Komkeirap, Manipur-795124.
10. Manager (Elect), OTPC Ltd, Udaipur, Kakraban Road, South Tripura-799116
11. Sr. Manager (Elect) O/o E.D (O&M), NEEPCO Ltd, Lower New Colony, Shillong-793001
12. AGM (O&M), NTPC Ltd, P.O SALAKATI, Dist.: KOKRAJHAR, Assam-783369.
13. Dy. General Manager (Upper Assam T & C circle), AEGCL, Kadamoni, Dibrugarh-786612, Assam.
14. Vice President, Asset Management, STERLITE Power, Bhopal-462020.
15. CEO, KMTL, Chandan Nagar, Beltola, Guwahati-781028.

विषय/Sub: सप्ताह (28.07.2025-03.08.2025) के लिए डेटा/वॉयस संचार लिंक और एनालॉग/डिजिटल स्थिति के प्रदर्शन के साथ साप्ताहिक टेलीमेट्री स्थिति/ Weekly Telemetry status with performance of Data/Voice Communication links and Analog/Digital Status for the week (28.07.2025-03.08.2025).

महोदया / महोदय / Madam/Sir,

कृपया अपनी जानकारी और आवश्यक कार्रवाई के लिए विषय वस्तु पर रिपोर्ट संलग्न प्राप्त करें / Please find enclosed herewith the report on the subject matter for your kind information and necessary action.

Encl: as above.

Yours Sincerely
सौगातों मंडल/ Saugato Mondal
महाप्रबंधक **(एस एल) General Manager(SL)**

प्रति /CC (through email for kind information):

1. Member Secretary, NERPC, Adj. POWERGRID Complex, Lapalang, Shillong-793006.
2. Executive Director, NERTS, POWERGRID, Lapalang, Shillong-793006.
3. Superintending Engineer (SLDC) MePTCL NEHU S/S, Umjarain, Shillong-793022.
4. Engineer in Chief (Power), Dept. of P&E, Govt. of Mizoram, Aizawl-796001.
5. Chief Engineer (West), Dept. Of Power, Govt. of Ar. Pradesh, Itanagar-791111.
6. Chief Engineer (Power), Dept. Of Power, Govt. of Nagaland, Kohima-797001.
7. General Manager (Plant), OTPC Ltd, Udaipur, Kakraban Road, South Tripura-799116.
8. Addl. General Manager, (C& SO), Banamalipur, Agartala-799001.
9. Chief. General Manager (SLDC), AEGCL, Kahilipara, Guwahati-781019.Assam.
10. Executive Director, NERLDC, GRID-INDIA, Shillong-793006.

ULDC Scheme; Summary sheet (Week ending on 04.08.2025)

A. Urgent/Important Issues of North Eastern Region :

1. Doyang to NERLDC Guwahati Communication Link is down.
2. Kopili to NERLDC Guwahati Communication Link is down.
3. New Kohima to NERLDC Shillong via Imphal link is down since June 2024.

B. Status of upcoming projects

Name of new element	Owner	Rating	Expected date of commissioning	Status of voice communication and telemetry data
Subansiri	**NHPC**	**2000 MW**	**July-2025**	**Yet to Establish**

C. Voice communication Status / Failure

a. **Voice Communication**: ULDC phones are not working at the following location.
   1. Doyang: 23640219

D. Kind attention :

Sl No.	संघटक / Utilities	Total No.of RTU	No. of RTU reporting last week	No.of RTU reporting	Other remarks
1.	एन ई आर टी एस, पावर ग्रिड/ NERTS, POWERGRID	23	22	23	**Note:** Refer ***Annexure-I*** for details
2.	नीपको/NEEPCO	09	09	09	• Dedicated Standby data Channel yet to be established for Pare HEP. **Note:** Refer ***Annexure-I*** for details
3.	एनटीपीसी/NTPC	01	01	01	**Note:** Refer ***Annexure-I*** for details
4.	एनएचपीसी/NHPC	01	01	01	**Note:** Refer ***Annexure-I*** for details
5.	ओ टी पी सी/OTPC	01	01	01	**Note:** Refer ***Annexure-I*** for details
6.	के एम टी एल/ KMTL	01	01	01	**Note:** Refer ***Annexure-I*** for details
7.	इंडीग्रिड/Indigrid	02	02	02	**Note:** Refer ***Annexure-I*** for details
8.	स्टरलाइट/STERLITE	01	01	01	**Note:** Refer ***Annexure-I*** for details
9.	असम/ASSAM	89	75	69	**Note:** Refer ***Annexure-II*** for details
10.	मेघालय/MEGHALAYA	32	29	31	• Digital Input status in majority of the stations not telemetered. • Tap position status in majority of the stations not telemetered. • Redundant communication path not available in majority of the stations. **Note:** Refer ***Annexure-III*** for details

Sl No.	संघटक / Utilities	Total No.of RTU	No. of RTU reporting last week	No.of RTU reporting	Other remarks
11.	त्रिपुरा/TRIPURA	27	11	13	• Data of majority of the stations not available. • Non availability of communication in several stations resulting in non-reporting of RTU. **Note:** Refer ***Annexure-IV*** for details
12.	मणिपुर/MANIPUR	17	05	04	**Note:** Refer ***Annexure-V*** for details
13.	मिज़ोरम/MIZORAM	14	06	03	• RTUs at the following grid connected stations are not yet installed: i) 132kV Melriat (State). ii) 132kV Bairabi. iii) 132kV Vankal. iv) Serlui HEP (3x4 MW) **Note:** Refer ***Annexure-VI*** for details
14.	नागालैंड'/NAGALAND	19	11	10	• Multiple RTUs are not reporting due to non-availability of communication system. • RTUs at the following grid connected stations are not yet installed: i) 132kV Meluri. ii) 66kV Nagnimora. iii) 66kV Tizit. **Note:** Refer ***Annexure-VII*** for details
15.	अरुणाचल प्रदेश/ARUNACHAL PRADESH	17	10	10	• Installation and integration activities of VSAT at 132kV Daparizo Station is pending. **Note:** Refer ***Annexure-VIII*** for details

All Constituents (POWERGRID-NERTS/ NEEPCO/ NTPC/ NHPC/ OTPC/ KMTL/ STERLITE/Indigrid/ MePTCL/ AEGCL/ TSECL/ MSPCL/ P&ED Mizoram/ DoP-Nagaland/ DoP-Arunachal Pradesh) may please see relevant annexures enclosed.

Prepared By:
सुबल दास/ Subal Das
अभियंता (एस एल)/Engineer(SL)

Reviewed By:
सौगातों मंडल/ Saugato Mondal
महाप्रबंधक **(एस एल)** General Manager(SL)

ANNEXURE-I

अनैलॉग और डिजिटल स्टेटस आई एस ज़ी एस / आई एस टी एस के / **ANALOG AND DIGITAL STATUS OF ISGS/ISTS (as dated 04.08.2025,)**

RTUs of ISGS/ISTS:

Sl. No.	आर टी यू / RTU	स्वामित्व / OWNER	Time	अनैलॉग/ ANALOG	डिजिटल / DIGITAL
1.	आइज़ोल /**AIZAWL**	PG	10:34	All analog data are available.	Following digital data not available: • Master trip relay 86A/B of 20 MVAR Reactor.
2.	बदरपुर /**BADARPUR**	PG	10:35	All analog data are available.	Following digital data not available: • Master trip relay 86A/B of Silchar-1 & 2.
3.	बालीपारा /**BALIPARA**	PG	10:37	Following analog data not available: • Tap position of 220/132 KV 160 MVA T1.	Following digital data not available: • FSC isolators of Bongaigaon-3 & 4 are suspected & CB is in between status. • BNC 1 Tie Bay Isolators & CB are showing replaced. • 400/220/33Kv ICT-2 Main bay CB replaced status. • 220/132 KV T2 line isolator on LV side showing replaced. • Bus -2 isolator of Kameng-1 showing replaced. • Line isolator of BNC 3 showing replaced. • 400/220 KV ICT-1 Tertiary side isolators showing replaced. • Bongaigaon-1, 2 & 3 reactor side isolators showing replaced. • 125 MVAR Bus-1 Reactor isolators. • Master trip relay 86A/B of 220/132 KV T1 & T2.
4.	बोंगाईगांव/**BONGAIGAON**	PG	10:39	Following analog data not available: • Tap position of all ICTs. • MVAR of Reactor B_02_BR.	Following digital data not available: • Isolator 80 MVAR BR-4 showing replaced. • Bus-1 & line Isolator of Balipara-3 PG replaced. • Bus-2 & line Isolators of 400Kv Alipurduar-1 line replaced. • Reactor side isolators showing replaced & CB showing in between status.

Sl. No.	आर टी यू / RTU	स्वामित्व / OWNER	Time	अनैलॉग/ ANALOG	डिजिटल / DIGITAL
					• Line isolator for Balipara-4 is suspect.
5.	बीटीपीएस/ **BGTPP (BTPS)**	NTPC	10:40	Following analog data not available: • Bus-3 Hz.	Following digital data not available: • Unit-2 AVR is suspect.
6.	बिस्वानाथ चरियाली **/BISWANATH CHARIALI (HVDC)**	PG	10:41	Following analog data not available: • Tap position of Pole converter Transformer 1 & 2.	Following digital data not available: • Master Trip Relay of 86A/86B Ranganadi 1 & 2, Balipara 1, 2, 3 & 4 Line. • Main CB Subansiri-2. • Master Trip Relay of BNC (AS) -1&2. • Pole-1 line isolator.
7.	दीमापुर **/DIMAPUR**	PG	10:42	All analog data are available.	All digital data are available.
8.	दोयांग **/DOYANG**	NEEPCO	10:43	Following analog data not available: • Tap position of ICT-1.	Following digital data not available: • Master trip relay 86A/86B is suspected of all bays & Generating Unit. • Line isolator of Mokokchung is replaced.
9.	हाफलोंग **/HAFLONG**	PG	10:43	All analog data are available.	All digital data are available.
10.	इम्फ़ाल **/IMPHAL**	PG	11:05	Following analog data not available: • 132 KV AIS Bus-1 Hz.	Following digital data not available: • Thoubal-1 Main Isolator. • 132 KV bus coupler isolator D_04_B2 is suspect.
11.	इटानगर **/ITANAGAR**	PG	10:44	All analog data are available.	Following digital data not available: • Master trip relay 86A or 86B is suspected for 132kV Lekhi Line. • Master trip relay 86A or 86B is suspected for Load side of 132/33 kV ICT-1.
12.	जिरीबाम **/JIRIBAM**	PG	10:44	All analog data are available.	Following digital data not available: • Master trip relay 86A/86B of Tipaimukh.
13.	कुमारघाट **/KUMARGHAT**	PG	10:45	Following analog data not available: • Tap position of ICT-1. • 132/33 kV ICT-1 LV side MW and MVAR.	All digital data are available.
14.	ख्लीहरियट **/KHLEIHRIAT**	PG	10:45	All analog data are available.	All digital data are available.

Sl. No.	आर टी यू / RTU	स्वामित्व / OWNER	Time	अनैलॉग/ ANALOG	डिजिटल / DIGITAL
15.	खांडोंग /**KHANDONG**	NEEPCO	10:46	All analog data are available.	Following digital data not available: • Master trip relay 86A or 86B of Kopli Stage-II. • Kopili St-2 Unit AGC Loc/Remote is suspect.
16. `	कोपिली/**KOPILI**	NEEPCO/ PG	10:46	All analog data are available.	All digital data are available.
17.	कठलगुरी /**KATHALGURI**	NEEPCO	10:47	Following analog data not available: • Tap position of all ICT-1 and ICT-2.	All digital data are available.
18.	लोकटक /**LOKTAK**	NHPC	10:48	Following analog data is incorrect: •Weather data reporting is incorrect.	Following digital data is incorrect: • Imphal PG Bus isolators
19.	मरियानी /**MARIANI**	PG	10:48	All analog data are available.	All digital data are reporting.
20.	मिसा /**MISA**	PG	10:50	Following analog data not available: • Tap Position of all ICTs.	Following digital data not available: • Silchar(PG) -2 line Reactor CB showing In Between Status. • 220kV Kopili line-2 Bus isolator. • Main CB of ICT-1 (400/220/132 KV) shows in between status.
21.	मेलरियट /**MELRIAT**	PG	10:50	All analog data are available.	All digital data are available.
22.	मोकोकचुंग/ **MOKOKCHUNG**	PG	10:51	Following analog data not available: • Tap Position of all ICTs.	All digital data are available.
23.	नमसाई /**NAMSAI**	PG	10:52	Following analog data not available: • Tap Position of all 132/33 KV ICTs. • Weather parameters	Following digital data not available: • Master trip relay 86A/86B of Kathalguri-1.
24.	पलाटना /**PALATANA**	OTPC	10:53	Following analog data not available: • UDAIP_TE MW replaced.	All digital data are available.
25.	पारे /**PARE**	NEEPCO	10:54	Following analog data not available: • Tap position of all ICT-1.	All digital data are available.
26.	पनयोर (रंगानदी)/**PANYOR (RANGANADI)**	NEEPCO	10:54	Following analog data not available: • Tap position of all ICTs.	Following digital data not available:

Sl. No.	आर टी यू / RTU	स्वामित्व / OWNER	Time	अनैलॉग/ ANALOG	डिजिटल / DIGITAL
				• 400 KV Bus-1 Hz.	• Reactor Isolator data of 400kV 80MVAR BR showing replaced.
27.	आर सी नगर (एजीटीसीसीपीपी) /**RC NAGAR (AGTCCPP)**	NEEPCO	10:55	Following analog data not available: • Tap position of ICTs.	Following digital data not available: • 89 L for 132kV Agartala -1, 132kV Agartala-2, 132kV Kumarghat line Isolators showing replaced. • Isolator data of HV side of ICT-1 & 2 showing replaced.
28.	रोइंग /**ROING**	PG	10:55	Following analog data not available: • Tap position of ICTs.	All digital data are available.
29.	सालाकाटी /**SALAKATI**	PG	10:55	Following analog data not available: • Tap position of 220/132 kV ICT-3.	All digital data are available.
30.	सिलचर /**SILCHAR**	PG	10:56	Following analog data not available: • Tap position of ICT-1.	Following digital data are not available: • Master trip relay of ICTs. • Master trip relay of Melriat-1. • Master trip relay of Hailakandi D/C.
31.	तेज़ू /**TEZU**	PG	10:57	All analog data are available.	Following digital data not available: Master trip relay 86A/86B of Roing & Namsai.
32.	ज़ीरो /**ZIRO**	PG	10:59	All analog data are available.	Following digital data are not available: • Main isolator of Yachu-1 showing replaced.
33.	कामेंग /**KAMENG**	NEEPCO	10:59	All analog data are available.	All digital data are available.
34.	न्यू कोहिमा /**NEW KOHIMA**	KMTL	11:00	All analog data are available.	All digital data are available.
35.	पी के बारी /**PK BARI**	Indigrid	11:01	Following analog data not available: • Tap position of ICTs.	Following digital data not available: • Master Trip relay status for Ambassa line. • Tie Bay isolators of Silchar-1 are suspect.
36.	सूरजमनी नगर /**SM NAGAR**	Indigrid	11:01	Following analog data not available: • ICT-1 tap position.	All digital data are available.

Sl. No.	आर टी यू / RTU	स्वामित्व / OWNER	Time	अनैलॉग/ ANALOG	डिजिटल / DIGITAL
37.	**नांगलबिबरा** / NANGAlBIBRA	STERLITE	11:02	Following analog data not available: • Transfer Bus KV & Hz.	All analog data are available.

Kind Attn: POWERGRID/NEEPCO/NHPC/KMTL/STERLITE/OTPC/NTPC/NEEPCO:

- ❖ Due to technical constraint, tap position status of Generating unit transformer is excluded.
- ❖ ***Changes from last week are highlighted in red color*.**

ANNEXURE-II

अनैलॉग और डिजिटल स्टेटस असम राज्य के स्टेशन का / **ANALOG AND DIGITAL DATA STATUS OF ASSAM STATE --Status checked on (on 04.08.2025)**

Sl. No.	आर टी यू स्टेशन / RTU STATION	TIME	अनैलॉग डेटा / ANALOG DATA	डिजिटल डेटा / DIGITAL DATA
1.	अगिया /**Agia**	11:15	Following analog data are not available: • Tap position of all ICTs. • 132 kV Main Bus kV and Hz.	Following digital data are not available: • 132 kV Bus Coupler Bay all digital data. • 89B, 89L of 132 kV Mendipather line. • Transfer bus isolator of 132 kV NANGLABIBRA line showing replaced. • 220/132 kV ICT-3 HV side 89B2 & LV side 89B and 89 L isolators.
2.	एम्स /**AIIMS**	11:16	All analog data are available.	Following digital data are not available: • CB status of Kahilipara is incorrect.
3.	अमीनगाँव /**Amingaon**	11:16	Following analog data are not available: • 132 kV Main Bus-2 Hz. • 220 kV Main Bus-2 Hz.	All digital data are reporting.
4.	ए पी एम /**APM**	11:18	Following analog data are not available: • Tap position of all ICT-1. • MW & MVAR of ICT-1 on both HV & LV side. • Bus-1 KV & Hz.	Following digital data are not available: Digital data for ICT-1 are suspect.
5.	अजारा /**Azara**	11:19	Following analog data are not available. • MVAR of Mirza line 1.	Following digital data are not available: • All digital data of Mirza line-1.
6.	मिर्ज़ा /**Mirza**	11:19	Following analog data are not available:	Following digital data are not available:

			• Tap position of all ICTs.	• Bongaigoan Main Bay digital data. • 400/220 kV ICT-1 Main Bay digital data.
7.	बदरपुर/ **Panchgram**	11:20	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available: • Bus-1 isolator of Srikona showing replaced. • ICT-3 LV side isolator showing replaced.
8.	बरपेटा **/Barpeta**	11:20	Following analog data are not available: • Tap position of all T1 &T2.	Following digital data are not available: • LV side CB & Isolator of 132/33kV T1 & T2.
9.	बेहियाटिंग **/Behiating**	11:21	Following analog data are not available: • Tap position of 132/33 kV ICT- 2. • All analog data of 220 KV side.	Following digital data are not available: • LV side CB & Isolator of 220/132kV ICT- 1 & ICT-2. • 132/33 KV Bus coupler digital data. • All digital data of 220 KV side.
10.	बिस्वानाथ चरियाली **/Biswanath chariali**	11:21	Following analog data are not available: • Tap position of 132/33 kV ICT-1. • Bus-1 KV & Hz.	All digital data are reporting.
11.	बोकाजन **/Bokajan**	11:21	Following analog data are not available. • Tap Positions of ICT-1 & 2 are showing negative values.	All digital data are available.
12.	बोकाखाट **/Bokakhat**	11:22	Following analog data are not available. • Tap Positions of ICT-1 & 2 are suspect.	Following digital data are not available: • Bus coupler digital data. • 132kV ICT-1 Main Isolator showing replaced.
13.	बोको **/Boko**	11:22	Following analog data are not available. • Tap Positions of ICTs. • Bus-1 KV & Hz.	Following digital data are not available: • 132 KV Bus coupler digital data. • LV side Bus-1 Isolator of 220/132 KV ICT-2.
14.	बोंगाईगाँव **/Bongaigaon**	11:22	Following analog data are not available. • Tap Positions of both ICT-1.	Following digital data are not available: • Line Isolator of Kokrajhar-2 showing replaced.
15.	बोरदुबी **/Bordubi**	11:23	Following analog data are not available • Tap position of ICT-2. • Railway MW & MVAR.	Following digital data are not available: • 89T isolator of ICT-2.
16.	बोरनगर **/Bornagar**	11:23	All analog data are not available.	All digital data are not available.
17.	चंद्रपुर **/Chandrapur**	11:24	Following analog data are not available:	All digital data are available.

			• ICT-1 Tap position.	
18.	चपाखोवा **/Chapakhowa**	11:24	All analog data are not available.	All digital data are not reporting.
19.	दीपोता (तेज़पुर)/**Depota (Tezpur)**	11:25	Following analog data are not available: • ICTs Tap position. • Main Bus-2 KV & Hz.	Following digital data are not available: • Bus-1 Isolators of ICT-1 & Ghomari are showing replaced. • Bus-2 Isolators of ICT-3 & Dhekiajuli are showing replaced. • LV side isolator of ICT-3 showing replaced. • Isolator D_1_BS is suspect.
20.	ढालीगाँव **/Dhaligaon**	11:25	Following analog data are not available: • Tap position of all ICTs.	All digital data are reporting.
21.	धेमाजी **/Dhemaji**	11:26	Following analog data are not available: • Tap position of all ICT-3. • ICT-3 MW & MVAR on both HV & LV side.	Following digital data are not available: • Bus coupler digital data. • Line & Bus-1 isolators for Lakhi_AS. • ICT-3 all bay digital data. • Line & Bus-2 isolators for ICT-2
22.	डिब्रुगढ़ **/Dibrugarh**	11:27	Following analog data are not available: • Tap position of all ICT-1 shows negative value. • ICT-1 MW & MVAR on both LV & HV side.	Following digital data are not available: • ICT-1 all bay digital data on HV side. • ICTs LV side isolator showing replaced. • Isolator D_03_B1 is suspect. • Bus-1 Isolator for Tinsukia.
23.	दिफू **/Diphu**	11:29	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available: • Bus coupler digital data. • Bus-1 & line isolator for ICT-1 are showing replaced. • Line isolator for Lanka showing replaced.
24.	दिसपुर **/Dispur**	11:29	All analog data are not available.	All digital data are not reporting.
25.	ढेकियाजुली **/Dhekiajuli**	11:30	All analog data are not available.	All digital data are not reporting.
26.	दुल्लव्चेरा **/Dullavchera**	11:30	Following analog data are not available: • Tap position of all ICT-2.	Following digital data are not available: • ICT-2 LV side isolator & CB.
27.	गौरीपुर **/Gauripur**	11:31	All analog data are not available.	All digital data are not available.

28.	गोहपुर **/Gohpur**	11:32	Following analog data not available: • Tap position of ICTs shows negative value.	Following digital data are not available: • ICT-2 HV side bus isolator showing replaced. • North Lakhimpur-1 89B and 89L. • Isolator D_1_BS.
29.	घोरामारी **/Ghoramari**	11:32	All analog data are not available.	All digital data are not reporting.
30.	गोलाघाट **/Golaghat**	11:33	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available: • All isolator status for 132kV Mariani, 132kV Sarupathar.
31.	गोसाईगाँव **/Gossaigaon**	11:33	Following analog data are not available: • Tap position of ICT-1. • Capacitor(05 MVAR) MVAR data.	Following digital data are not available: • All digital data of Capacitor.
32.	हाफलोंग **/Haflong**	11:33	Following analog data are not available: • Tap position of ICTs.	All digital data are reporting.
33.	हैलाकांडी **/Hailakandi**	11:34	All analog data are not available.	All digital data are not reporting.
34.	जागीरोड **/Jagiroad**	11:34	All analog data are available.	Following digital data are not available: • Main CBs of Chandrapur & Sonapur-1 are showing replaced. • Bus-1 isolator for ICT-2 & HPC(Load). • Line isolator for Sonapur-1. • Isolator D_1_BS.
35.	जवाहरनगर **/Jawharnagar**	11:35	Following analog data are not available: • Tap position of ICTs. • MW & MVAR of ICTs on LV side. • Bus-1 KV & Hz.	Following digital data are not available: • Bus coupler digital data.
36.	जोरहाट **/Jorhat (Garmur)**	11:35	Following analog data are not available: • Tap position of ICTs.	All digital data are available.
37.	जोरहाट(पश्चिम)**/ Jorhat (West)**	11:36	All analog data are not available.	All digital data are not reporting.
38.	(काहिलीपारा) **/ Kahelipara**	11:37	All analog data are not available.	All digital data are not reporting.
39.	कमलपुर**/Kamalpur**	11:37	Following analog data are not available: • Tap position of ICTs. • ICTs MW & MVAR on both LV & HV side. • MVAR of Amingoan-1 & 2. • Bus-1 KV & Hz.	Following digital data are not available: • ICTs LV side isolator & CB are suspect.

40.	उत्तर लखीमपुर/ **North Lakhimpur**	11:38	Following analog data are not available: • Tap position of ICT-2 shows negative value.	Following digital data are not available: • Bus-1 & Line isolator for ICTs. • Line isolator for Majuli. • Bus-1 isolator for Dhemaji. • ICT-1 LV side isolator is suspect.
41.	लकवा/ **Lakwa**	11:40	Following analog data are not available: • Tap position of all ICTs. • Units 7MW & MVAR on HV side. • 132/3.3 KV ICT-2 MW & MVAR on HV side. • Transfer Bus KV & Hz. • 132/11 KV ICT-1 MW & MVAR on LV side. • Unit 8 MW.	Digital data of most of the bays is either suspect or reporting incorrect status.
42.	कार्बी लंगपी / **Karbi Langpi**	11:41	Following analog data are not available: • Tap position of all ICT-1. • MW of Unit-1 on both LV & HV side.	Following digital data not available: • Bus coupler digital data.
43.	करीमगंज / **Karimganj**	11:42	Following analog data are not available: • Tap position of all ICTs.	All digital data are reporting.
44.	लंका/ **Lanka**	11:45	Following analog data are not available: • Tap position of ICTs shows negative value.	Following digital data not available: • Bus coupler CB shows in between status. • 89B for ICT-1 showing replaced. • 89B & 89T for ICT-2 showing replaced
45.	माजुली / **Majuli**	11:46	Following analog data are not available: • Tap position of all ICT-1.	All digital data are reporting.
46.	मार्घेरिता/ **Margherita**	11:46	Following analog data are not available: • Tap position of all ICTs.	Following digital data not available: • 89B of Tinsukia line.
47.	मरियानी/ **Mariani**	11:47	Following analog data are not available: • Tap position of all ICTs. • Samaguri & NTPS MW & MVAR. • Loknak MW & MVAR.	Following digital data not available: • 220 KV bus coupler bus-1 isolator. • ICT-1 and ICT-2 bay HV and LV side. • 89B1 of Jorhat and 89B2 of Jorhat-2 line.
48.	मोरान / **Moran**	11:47	Following analog data are not available: • Tap position of ICTs shows negative values.	Following digital data not available: • Bus-1 isolator of Lakwa.

49.	मिन्तृयांग 1 / **Myntriang I**	11:47	All analog data are not available.	All digital data are not available.
50.	मिन्तृयांग 2/ **Myntriang II**	11:48	All analog data are not available.	All digital data are not available.
51.	खलोईगाँव/ **Khaloigaon**	11:48	Following analog data are not available: • All ICTs Tap position. • MW & MVAR on LV side of ICT-2. • MVAR of Samaguri-2.	Following digital data are not available: • Bus coupler digital data.
52.	नलबारी / **Nalbari**	11:48	All analog data are not available.	All digital data are not reporting.
53.	एनटीपीएस (नामरुप) / **NTPS (Namrup)**	11:50	Following analog data are not available: • Tap position of all 132 KV ICTs. • Generator-6 HV side MW & MVAR. • 220 KV transfer bus KV & Hz.	Following digital data are not available: • Generator 2, 3, 6 (HV side) CBs. • 132/66 KV ICT-2 CB is suspect. • 220 KV bus coupler CB shows in between status.
54.	नारंगी / **Narangi**	11:51	All analog data are not available.	All digital data are not reporting.
55.	नाज़िरा / **Nazira**	11:51	Following analog data are not available: • Capacitor 1 MVAR.	Following digital data not available: • All 33 kV Capacitor Bank CBs and isolators are suspect & showing replaced. • 89B1 of Lakwa line, 89B1 of ICT-1 bay.
56.	पैलापूल / **Pailapool**	11:52	Following analog data are not available: • Jiribam MVAR.	Following digital data not available: • Jiribam all bay digital data. • 89T of ICT-3.
57.	रंगिया / **Rangia**	11:54	Following analog data are not available: • ICT-2 Tap position shows negative value.	Following digital data not available: • All isolator data for MTNGA(Load). • Isolator D_T2_B2 & LV side digital data for ICT-2.
58.	रंगीया 220 केवी/ **Rangia 220 kV**	11:55	Following analog data are not available: • ICTs Tap position. • MVAR of Amingaon-1 & 2.	Following digital data are not available: • Amingaon-1 & 2 all bay digital data are suspect.
59.	रौता / **Rowta**	11:56	Following analog data are not available: • ICT-1 Tap position show negative value. • Depota MVAR	Following digital data are not available: • Depota all bay digital data. • Dhekhiajuli bay • 89L of Tanga bay • 89B of ICTs.
60.	रुपाई / **Rupai**	11:56	All analog data are available.	All digital data are reporting.

61.	समागुरी / **Samaguri**	11:57	Following analog data are not available: • Tap position of all ICTs. • ICT-2 & 3 (220/132) kV both sides HV & LV MW and MVAR. • ICT-4 (132/33) kV LV and HV MW and MVAR.	Following digital data are not available: • ICTs LV and HV side digital data. • 89B of Lanka-2 line. • All bay digital data on the Load side.
62.	सरुपाथर / **Sarupathar**	11:57	All analog data are available.	All digital data are reporting.
63.	सरूसजाइ / **Sarusajai**	11:59	Following analog data are not available: • Tap position of all ICTs. • 220/132 KV ICT-3 HV side MW & MVAR.	Following digital data are not available: • 220/132 KV ICT-3 LV side Isolators data & HV side digital data. • 132 KV bus coupler digital data. • 89B isolator of 132/33 KV ICT-3 is not reporting.
64.	सिबसागर / **Sibsagar**	12:00	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available: • 89T isolator of ICT-2 is not reporting.
65.	सीपाझार / **Sipajhar**	12:00	Following analog data are not available: • Tap position of all ICTs.	All digital data are reporting.
66.	शिशुग्राम/ **Sishugram**	12:01	Following analog data are not available: • Tap position of ICT-3 shows negative values.	All isolators' data are not available.
67.	सोनाबिल / **Sonabil**	12:01	Following analog data are not available: • Tap position of ICT-1 & 2.	All digital data are available.
68.	सोनारी / **Sonari**	12:02	Following analog data are not available: • Tap position of ICT-1.	Following digital data are not available: • Lakwa main CB is suspect.
69.	सिलचर / **Silchar**	12:02	Following analog data are not available: • Tap position of all ICT-2 shows negative value.	Following digital data are not available: • All isolators data for Silchar-1 are suspect. • 89L & 89B isolator for Silchar-2.
70.	टंगला / **Tangla**	12:02	Following analog data are not available: • Tap position of ICT-1.	All digital data are available.
71.	टीओक / **Teok**	12:03	Following analog data are not available: • Tap position of ICT-2.	All digital data are reporting.
72.	तेज़पुर / **Tezpur**	12:03	All analog data are not available.	All digital data are not reporting.
73.	तिनसुकिया/ **Tinsukia**	12:04	Following analog data are not available: • Tap position of all 220/132 kV ICTs. • Tap status of 132/33 kV ICT-2.	Following digital data are not available: • 220/132 KV ICT-1 LV side Bus-1 isolator. • Kathalguri-1 Bus-2 isolator showing replaced.

			• 220 KV Bus-1 KV & Hz • Rupai MVAR.	• Behiating-1 & 2 all isolators status showing suspect. • Kathalguri-2 line isolator. • 220 KV bus coupler digital data. • Rupai all bay digital data.
74.	बिलसीपारा/ **Bilasipara**	12:04	Following analog data are not available: • Bus-1 KV & Hz.	Following digital data are not available: • 132 KV Bus coupler (03) CB and Isolator. • Kokrajhar-2 line isolator showing replaced.
75.	कामाख्या/ **Kamakhya**	12:05	All analog data are not available.	All digital data are not reporting.
76.	कोकराझार /**Kokrajhar**	12:06	All analog data are available.	Following digital data are not available: • Bongaigoan-2bay isolators. • Balispara-2 line & bus-2 isolators. • Balispara-1 line isolator.
77.	मटिया / **Matia**	12:06	All analog data are not available.	All digital data are not available.
78.	एनआरपीपी (नामरुप) / **NRPP (Namrup)**	12:06	All analog data are not available.	All digital data are not available.
79.	सोनापुर / **Sonapur**	12:07	Following analog data are not available. • Tap Position of all ICTs.	Following digital data not available: • ICT-2 (132/33 KV) HV side bus isolators showing replaced.
80.	रौता सोलर प्लांट / **Rowta (Azure Solar Plant)**	12:07	All analog data are not available.	All digital data are not reporting.
81.	समागुरी सोलर प्लांट / **Samaguri (Azure Solar Plant)**	12:08	All analog data are not available.	All digital data are not reporting.
82.	बोको सोलर प्लांट / **BOKO (Azure Solar Plant)**	12:08	All analog data are not available.	All digital data are not reporting.
83.	पैलापूल सोलर प्लांट / **Pailapool (Azure Solar Plant)**	12:08	Following analog data are not available. • Tap Position of all ICTs. • 33KV Bus Hz.	Following digital data not available: • All CB status is in between.
84.	पतंजलि सोलर प्लांट / **Patanjali (RE Solar)**	12:09	All analog data are not available.	All digital data are not reporting.
85.	जैकसन सोलर प्लांट / **Jackson (RE Solar)**	12:10	Following analog data are not available: • MW of T4, T5, T7, T8, T9, T10.	Following digital data are not available: • CB A_25 & A_26 are in between status. • Bus isolators for T8 & T6 are showing garbage.

86.	महेश्वरी सोलर प्लांट / **Maheswari (RE Solar)**	12:11	Following analog data are not available: • Tap position of ICT. • Weather parameters.	All digital data are reporting.
87.	**Star Cement SNPR**	12:11	Following analog data are not available: • Tap position of ICT.	All digital data are reporting.
88.	**Umrangsho**	12:12	Following analog data are not available: • Tap position of ICT-1.	Following digital data are not available: • LV side isolators of ICTs.

❖ ***Changes from last week are highlighted in red color.***

ANNEXURE-III

अनैलॉग और डिजिटल स्टेटस मेघालय राज्य के स्टेशन का / **ANALOG AND DIGITAL DATA STATUS OF MEGHALAYA STATE Status checked on (04.08.2025)**

Sl. No.	आर टी यू स्टेशन / RTU STATION	TIME	अनैलॉग डेटा / ANALOG DATA	डिजिटल डेटा / DIGITAL DATA
1.	अंपाती / **AMPATI**	15:41	Following analog data are not available: • Tap position of all ICTs. • 132 kV Main Bus & Transfer Bus Hz & KV.	All digital data are available.
2.	अमृत / **AMRIT**	15:42	All analog data are not available.	All digital data are not reporting.
3.	चेरापुंजी / **CHERA_ME**	15:42	Following analog data are not available: • Tap position of ICT-1.	All digital data are available.
4.	एपिप 1 / **EPIP1**	15:43	Following analog data are not available: • Tap position of ICT-1.	Following digital data are not available. • Main CB of EPIP-2 CKT.2 shows in between status.
5.	एपिप 2 / **EPIP2**	15:43	Following analog data are not available: • Tap position of ICT-1.	Following digital data are not available. • New Umtru main bus isolator is suspect. • Umtru-1 & 2 line & bus Isolator are suspect. • Umtru-2 main CB shows in between status. • EPIP-2 CKT.2 line & bus isolators showing replaced. • Bus isolator of ICT-1 showing replaced.
6.	गानोल / **GANOL**	15:44	All analog data are available.	All digital data are available.
7.	आईआईएम / **IIM**	15:44	Following analog data are not available: • Tap position of ICT-1.	Following digital data are not available. • Neighrims Main CB showing in between status. • ICT-1 HV side isolator showing replaced.
8.	ख्लेहरियत / **KHIEHRIAT**	15:45	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available. • Kheliriat-1 CB and 89 L status. • Kheliriat-2 Bay isolator status.
9.	किल्लिंग / **KILLING**	15:48	Following analog data are not available: • 400/220 KV ICTs Tap position. • 400 KV bus-2 KV & Hz. • Reactor MVAR.	Following digital data are not available. • Reactor isolator F_04_R is suspect.

			• 132 kV Main Bus KV. • 132 kV Transfer Bus KV & Hz. • 220/132 KV ICT-2 MVAR. • 220 KV Transfer Bus-1 KV & Hz.	• E_10_B1 & E_10_B3 isolator of Mawngap-2 showing replaced. • E_04_B3 isolator for Misa-1 showing replaced.
10.	लेस्का / **LESKA**	15:50	Following analog data are not available: • Tap position of ICT-1. • Mynkre-1 MVAR. • Unit-1 MVAR.	Following digital data are not available. • Isolator D_04_B1 & D_07_T showing replaced.
11.	लुम्श्नोंग / **LUMSHNONG**	15:50	Following analog data are not available: • JUD Load MW & MVAR.	All digital data are reporting.
12.	मावलाई / **MAWLAI**	15:51	Following analog data are not available: • Tap position of ICTs.	Most of the isolators data are showing replaced & suspect.
13.	मव्ङ्गाप / **MAWNGAP**	15:51	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available: • Transfer Bus isolator of Nongstoin showing replaced. • ICTs (132/33 KV) line isolators showing replaced.
14.	मेंडिपाथर / **MENDIPATHAR**	15:52	Following analog data are not available: • Tap position of all ICTs.	All digital data are available.
15.	मूस टेम / **MUSTEM**	15:53	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available: • CBs of all bay are showing replaced.
16.	मव्ल्यंडेप / **Mawlyndep**	15:53	Following analog data are not available: • Tap position of all ICTs.	All digital data are available.
17.	नंगलबिबरा / **NANGALBIBRA**	15:54	Following analog data are not available: • 132KV main Bus KV & Hz. • Tap position of ICT-1. • MW of ICT-1 on both LV & HV side showing replaced.	Following digital data are not available: • Main CB of ICT-1 is showing in between status. • Tie CB of Nongstoin & Mendipathar are showing in between status.
18.	नेहू / **NEHU**	15:55	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available: • Isolator D_03_B2 is suspect. • Mawlyndep main CB show in between status. • ICTs line Isolators showing replaced.
19.	नि ग्रीम्स / **NEIGRIHMS**	15:55	Following analog data are not available: • Tap position of all ICTs.	All digital data are available.
20.	नोंग्सटोन / **NONGSTOIN**	15:56	Following analog data are not available: • Tap position of all ICTs.	Following digital data are not available. • Isolator D_1_IS.
21.	रोंग्खोन / **RONGKHON**	15:57	Following analog data are not available: • Tap position of all ICTs. • MW & MVAR of ICT-4 on both HV & LV side.	Following digital data are not available. • ICT-4 all bay digital data.
22.	ऊमीयम / **UMIAM_ME**	15:58	Following analog data are not available: • Tap position of all ICTs.	All digital data are available.
23.	ऊमीयम 1 / **UMIAM 1**	15:59	All analog data are available.	Following digital data are not available: • Bus coupler CB shows in between status. • Unit-4 CB shows in between status.

				• Umiam main CB shows in between status.
24.	ऊमीयम 2 / **UMIAM 2**	16:00	Following analog data are not available: • 132 KV Main Bus KV.	Following digital data are not available: • Isolator D_51_BY & D51_L are suspect.
25.	ऊमीयम 3 / **UMIAM 3**	16:00	Following analog data are not available: • Tap position of ICT-1. • Unit-1 MW & MVAR.	Following digital data are not available: • Bus coupler CB shows in between status.
26.	ऊमीयम 4 / **UMIAM 4**	16:01	All analog data are available.	Following digital data are not available: • Bus coupler CB & Umtru-1 CB shows in between status.
27.	उमत्रु / **UMTRU**	16:02	All analog data are available.	Most of the digital data are showing replaced & suspect.
28.	न्यू उमत्रु / **NEW UMTRU**	16:03	All analog data are available.	Following digital data are not available: • Main CB of EPIP2 shows in between status.
29.	**GOLDSTONE**	16:04	All analog data are available.	Following digital data are not available: • Unit-1 HV side Isolator is suspect.
30.	**माइनक्रे / Mynkre**	16:04	Following analog data are not available: • Tap position of ICTs.	Following digital data are not available: • Main Bus & line isolators of ICT-1 showing replaced.
31.	**न्यू शिलांग / New Shillong**	16:05	Following analog data are not available: • Tap position of 220/132 KV T1 & T2.	All digital data are available.
32.	**फुलवारी / Phulbari**	16:05	All analog data are available.	All digital data are reporting.

- ***Changes from last week is highlighted in red color.***

ANNEXURE-IV

अनैलॉग और डिजिटल स्टेटस त्रिपुरा राज्य के स्टेशन का / **ANALOG AND DIGITAL DATA STATUS OF TRIPURA STATE**

Status checked on (04.08.2025)

Sl. No.	आर टी यू स्टेशन / RTU STATION	Time	अनैलॉग डेटा / ANALOG DATA	डिजिटल डेटा / DIGITAL DATA
1.	अगरतला / **AGARTALA**	16:12	Following analog data not available: • Tap position of all ICTs.	Following digital data not available: • Agartala-2, Surajmani Nagar-2 & ICT-6 main CB is showing replaced. • Bus coupler digital data.
2.	अमर पुर / **AMARPUR**	16:13	All analog data are not available.	All digital data are not available.
3.	अंबस्सा / **AMBASSA**	16:13	All analog data are not available.	Most of the digital data are suspect & showing replaced.
4.	बदरघाट / **BADARGHAT**	16:14	Following analog data not available: • Tap position of all ICTs. • Rokhia line MW and MVAR. • 33 kV Bus-1 kV & Hz.	Following digital data not available: • 33 KV all digital data.
5.	बरमुरा / **BARMURA**	16:14	Following analog data not available: • Tap position of all ICTs. • 132 KV Bus-1 Hz.	Most of the digital data are showing replaced & in between status.
6.	बेलोनिया / **BELONIA**	16:15	All analog data are not available.	All digital data are not available.
7.	बोगफा / **BOGAFA**	16:15	All analog data are not available.	All digital data are not available.
8.	बोक्सानगर / **BOXANAGAR**	16:15	All analog data are not available.	All digital data are not available.
9.	बुद्ध्जंगनगर / **BUDHJUNG NAGAR**	16:16	Following analog data not available: • Tap position of all ICTs. • ICT-2 HV & LV side MW and MVAR.	Following digital data not available: • All bay isolator data of ICT-2 are showing replaced & main CB is suspect.
10.	ढालबिल / **DHALABILL**	16:16	Following analog data not available: • Tap position of all ICTs. • ICT-1 HV & LV side MW and MVAR.	Following digital data not available: • Kamalpur & Gamaitilla CBs data are showing replaced. • ICT-2 Main CB sows in between status.
11.	धरमनगर / **DHARMA NAGAR**	16:17	All analog data are not available.	All digital data are not available.
12.	गमाइतिल्ला / **GAMAITILA**	16:17	All analog data are not available.	All digital data are not available.
13	गोकुलनगर/**GOKULNAGAR**	16:17	All analog data are not available.	All digital data are not available.
14.	गौरनगर / **GOURNAGAR**	16:17	All analog data are not available.	All digital data are not available.
15.	गुमटी / **GUMTI**	16:18	All analog data are not available.	All digital data are not available.

16.	जिरनिया / **JIRANIA**	16:18	All analog data are not available.	All digital data are not available.
17.	कमलपुर / **KAMALPUR**	16:18	All analog data are not available.	All digital data are not available.
18.	मोहनपुर / **MOHANPUR**	16:19	Following analog data not available: • Tap position of all ICTs.	Following digital data not available: • Agartala line isolator showing replaced.
19.	मोनारचक / **MONARCHAK**	16:20	Following analog data not available: • Surjamaninagar-1 & Surjamaninagar-2 MW & MVAR.	Following digital data not available: • Surjamaninagar-1 & Surjamaninagar -2 main CBs. • Surjamaninagar-1 & Surjamaninagar -2 isolators are showing replaced.
20.	ओमपी / **OMPI**	16:20	All analog data are not available.	All digital data are not available.
21.	पी के बारी / **PK BARI**	16:20	Following analog data not available: • Tap position of all ICTs.	Following digital data not available: • Line isolator of ICT-1, Dharmanagar & Gournagar are showing replaced.
22.	रबीन्द्र नगर / **RABINDRNAGAR**	16:21	All analog data are not available.	All digital data are not available.
23.	रोखिया / **ROKHIA**	16:22	Following analog data not available • Tap position of all ICT-1 & 2. • All analog data of 66kV side. • 132 KV Main Bus KV & Hz. • Unit-8 MW & MVAR.	Most of the digital data are not available.
24.	सबरूम / **SABROOM**	16:22	All analog data are not available.	All digital data are not available.
25.	सतचंद / **SATCHAND**	16:22	All analog data are not available.	All digital data are not available.
26.	सुरजमानी नगर / **SURAJMANI NAGAR**	16:23	Following analog data not available • Tap position of all ICTs.	Following digital data not available: • ICT-2 Bus-1 Isolator showing replaced. • Transfer bus isolator of Budhjungnagar showing replaced. • Line & Transfer bus isolator of Agartala-1 & Agartala-2 showing replaced. • Main Isolator of Palatana showing replaced. • Line Isolators of both ICTs showing replaced.
27.	उदयपुर / **UDAIPUR**	16:24	Following analog data not available: • Tap position of all ICTs. • MW & MVAR of 132/11 KV ICTs.	Most of the digital data not available.

❖ ***Changes from last week is highlighted in red color.***

ANNEXURE-V

अनैलॉग और डिजिटल स्टेटस मणिपुर राज्य के स्टेशन का / **ANALOG AND DIGITAL DATA STATUS OF MANIPUR STATE (Status checked on (05.08.2025))**

Sl. No.	आर टी यू स्टेशन / RTU STATION	Time	अनैलॉग डेटा / ANALOG DATA	डिजिटल डेटा / DIGITAL DATA
1.	चंदेल / **CHANDEL**	10:26	All analog data are not available.	All digital data are not available.
2.	चूरचंदपुर / **CHURACHANDPUR**	10:27	All analog data are not available.	All digital data are not available.
3	एलान कांग पोकपी / **ELANGKANGPOKPI**	10:27	All analog data are not available.	All digital data are not available.
4.	हुंडूंग / **HUNDUNG**	10:28	All analog data are not available.	All digital data are not available.
5.	इम्फ़ाल / **IMPHAL**	10:31	All analog data are not available.	All digital data are not available.
6.	जिरीबाम / **JIRIBAM**	10:32	All analog data are not available.	All digital data are not available.
7.	काकचिंग / **KAKCHING**	10:32	Following analog data not available: • Tap position of all ICTs. • Elangkangpokpi, 132kV Thoubal, 132kV Moreh MW & MVAR.	Following digital data not available: • Elangkangpokpi, 132kV Thoubal, 132kV Moreh all bay digital data are suspect.
8.	करोंग / **KARONG**	10:33	All analog data are not available.	All digital data are not available.
9.	कोंग्बा / **KONGBA**	10:33	All analog data are not available.	All digital data are not available.
10.	मोरेह / **MOREH**	10:33	All analog data are not available.	All digital data are not available.
11.	निंग थौ खोंग / **NINGTHOUKHONG**	10:34	Following analog data not available: • Tap position of ICT-2 & ICT-3. • ICT-2 & ICT-3 MW & MVAR of both HV & LV sides.	Following digital data not available: • Imphal-1 all bay isolators are showing replaced. • Imphal-3 & 2 Main Bus & line isolators showing replaced. • ICT-2 main CB shows in between status. • Churachadpur-1 bay isolators showing replaced.
12.	रेंग पाँग / **RENGPANG**	10:34	All analog data are not available.	All digital data are not available.
13.	थान लोन / **THANLON**	10:34	All analog data are not available.	All digital data are not available.
14.	400केवी थौबल / **400 kV THOUBAL**	10:35	Following analog data not available: • Tap position of ICT-1.	Following digital data not available: • ICT-1 Isolator on HV & LV side showing replaced.
15.	थौबल ओल्ड / **THOUBAL OLD**	10:35	All analog data are not available.	All digital data are not available.
16.	तिपाइमुख / **TIPAIMUKH**	10:35	All analog data are not available.	All digital data are not available.
17.	यियांग कांग पोकपी / **YIANGANGPOKPI**	10:36	Following analog data not available: • Tap position of ICTs show negative values. • Kongba-2 MW & MVAR.	Following digital data not available: • Kongba-2 all bay digital data. • Hundung, ICT-1 & ICT-2 CBs shows in between status.

❖ ***Changes from last week is highlighted in red color.***

ANNEXURE-VI

अनैलॉग और डिजिटल स्टेटस मिज़ोरम राज्य के स्टेशन का / **ANALOG AND DIGITAL DATA STATUS OF MIZORAM STATE**

Status checked on (05.08.2025)

Sl. No.	आर टी यू स्टेशन / RTU STATION	Time	अनैलॉग डेटा / ANALOG DATA	डिजिटल डेटा / DIGITAL DATA
1.	**बैराबी / BAIRABI**	10:37	All analog data are not available.	All digital data are not available.
2.	चंफई / **CHAMPHAI**	10:37	All analog data are not available.	All digital data are not available.
3.	इंडूर / **INDOOR**	10:38	All analog data are not available except Zuangtui-1 MW & MVAR.	Following digital data not available: • Zuangtui-1 & ICT-1 main CBs shows in between status. • CB B_1 show in between status.
4.	खव्ज़ वाल / **KHAWZAWL**	10:38	All analog data are not available.	All digital data are not available.
5.	लुंग लेई / **LUNGLEI**	10:38	All analog data are not available.	All digital data are not available.
6.	लुंग मुयल/ **LUANGMUAL**	10:39	All analog data are not available.	All digital data are not available.
7.	सेरचिप / **SERCHHIP**	10:39	All analog data are not available.	All digital data are not available.
8.	**MELRIAT**	10:39	All analog data are not available.	All digital data are not available.
9.	साइतुयाल / **SAITUAL**	10:40	All analog data are not available.	All digital data are not available.
10.	सिहहमुई / **SIHHMUI**	10:41	All analog data are not available.	All digital data are not available.
11.	**वांकल/VANKAL**	10:41	All analog data are not available.	All digital data are not available.
12.	ज़ुयांग तुइ / **ZUANGTUI**	10:42	All analog data are not available.	All digital data are not available.
13.	कोलासिब / **KOLASIB**	10:42	Following analog data not available: • Tap position of all ICT-1.	Following digital data not available: • Bus coupler digital data.
14.	वंकल सोलर / **Vankal Solar**	10:43	Following analog data not available: • Air Pressure, GHI & GTI parameters. • 33 KV bus-2 & 3 Hz.	All digital data are available.

Note:

1) RTUs at the following grid connected stations are not yet installed:

i) 132kV Melriat (State).
ii) 132kV Bairabi.
iii) 132 kV Vankal.
iv) Serlui HEP (3x4 MW)

❖ ***Changes from last week is highlighted in red color.***

ANNEXURE-VII

अनैलॉग और डिजिटल स्टेटस नागालैंड राज्य के स्टेशन का / ANALOG AND DIGITAL DATA STATUS OF NAGALAND STATE

Status checked on (05.08.2025)

Sl. No	आर टी यू स्टेशन / RTU STATION	Time	अनैलॉग डेटा / ANALOG DATA	डिजिटल डेटा / DIGITAL DATA
1.	चेफोबोज़ौ / CHEPHOBOZOU	10:45	All analog data are not available.	All digital data are not available.
2.	दिमापुर / DIMAPUR	10:46	Following analog data not available: • Tap position of all ICTs. • 66 KV main bus KV & Hz.	Most of the digital data are not available.
3.	गणेश नगर / GANESH NAGAR	10:46	All analog data are not available.	All digital data are not available.
4.	किफिरे / KIPHIRE	10:47	Following analog data not available: • Tap position of all ICTs. • 66 KV main bus KV & Hz. • 132 KV Main Bus KV & Hz.	Most of the isolator's data are showing replaced.
5.	कोहिमा / KOHIMA	10:47	Following analog data not available: • Tap position of all ICTs. • 132/33 KV ICT-3 MW & MVAR on both side. • Karong MW.	Following digital data not available: • ICT-3 main CB showing suspect. • Most of the isolators are showing replaced.
6.	एल एच ई पी / LHEP	10:47	All analog data are not available.	All digital data are not available.
7.	लॉन्ग नाक / LONGNAK	10:48	All analog data are not available.	All digital data are not available
8.	मेलुरी / MELURI	10:48	All analog data are not available.	All digital data are not available.
9.	मोकोक चुँग / MOKOKCHUNG	10:48	Following analog data not available: • Tap position of all ICTs except 132/66 KV ICT-1.	All digital data are available.
10.	मोन / MON	10:49	Following analog data not available: • Tap position of all ICT-1. • 66 KV Main Bus KV & Hz.	All digital data are available.
11.	नगनी मोरा / NAGNIMORA	10:49	All analog data are not available.	All digital data are not available.
12.	New Secretariate	10:49	All analog data are not available.	All digital data are not available.
13.	पावर हाउस / POWER HOUSE	10:50	All analog data are not available.	All digital data are not available.
14.	सनिस / SANIS	10:50	Following analog data not available: • Tap position of all ICT-1.	All digital data are available.
15.	टीजीट / TIZIT	10:50	All analog data are not available.	All digital data are not available.
16.	तुएन सांग / TUENSANG	10:51	Following analog data not available: • Tap position of ICT-1. • 66 KV main bus KV & Hz.	Following digital data not available: • All CBs shows in between status.

			• Mokokchung MW & MVAR.	
17.	तुली / **TULI**	10:51	Following analog data not available: • Tap position of all ICTs. • ICT-1 MW & MVAR. • 66 KV main bus KV & Hz. • Mokokchung MW & MVAR.	Following digital data not available: • CBs of Mokokchung, ICT-2 & Bus coupler shows in between status.
18.	वोखा / **WOKHA**	10:52	Following analog data not available: • Tap position of ICT-1. • 132 KV Main Bus KV & Hz.	Following digital data not available: • Most of the isolators data are showing replaced.
19.	जुहेन बोटों / **ZUHENEBOTO**	10:52	All analog data are not available.	All digital data are not available.

Note:

1) RTUs at the following grid connected stations are not yet installed:

i) 132kV Meluri.
ii) 66kV Tizit.
iii) 66kV Nagnimora.
iv) 132 kV Chiephobozou.

❖ ***Changes from last week is highlighted in red color.***

ANNEXURE-VIII

अनैलॉग और डिजिटल स्टेटस अरुणाचल प्रदेश राज्य के स्टेशन का / **ANALOG AND DIGITAL DATA STATUS OF ARUNCHAL PRADESH STATE**

Status checked on (05.08.2025)

Sl. No.	आर टी यू स्टेशन / RTU STATION	Time	अनैलॉग डेटा / ANALOG DATA	डिजिटल डेटा / DIGITAL DATA
1.	अलोंग / **ALONG**	10:55	All analog data are not available.	All digital data are not available.
2.	बसर / **BASAR**	10:56	Following analog data not available: • Tap position of all ICT-2. • Main Bus Hz.	All digital data are available.
3.	भालूकोंग / **BHALUKONG**	10:56	All analog data are not available.	All digital data are not available.
4.	डपोरीज़ों / **DAPORIJO**	10:57	Following analog data not available: • Tap position of all ICTs. • ICTs MW & MVAR on both HV & LV side. • Main Bus Hz. • Ziro MW & MVAR.	Following digital data not available: • Main CB of Ziro & ICT-2 are showing replaced. • Main CB of ICT-1 shows in between status.
5.	देओमाली / **DEOMALI**	10:57	Following analog data not available: • Tap position of all 132/33 KV ICTs.	Following digital data not available: • 220 Bus coupler CB showing replaced.
6.	चिंपू / **CHIMPU**	10:58	Following analog data not available: • Tap position of all ICTs. • Halongi, & Lekhi MW & MVAR. • Panyor/ RHEP & Pare-1 MVAR.	Following digital data not available: • Panyor & Pare-1 bay digital data.
7.	जयराम पुर / **JAIRAMPUR**	10:58	All analog data are not available.	All digital data are not available.
8.	खुपी / **KHUPI**	10:58	Following analog data not available: • Tap position of all 132/33 KV ICT-1.	All digital data are available.
9.	लेखी / **LEKHI**	11:00	Following analog data not available: • Tap position of all 132/33 KV ICTs. • Itanagar MW & MVAR.	Following digital data not available: • Nirjuli & Bus coupler CB showing replaced.
10.	पासी घाट /**PASIGHAT**	11:00	All analog data are not available.	All digital data are not available.
11.	दीक्षी / **DIKSHI**	11:01	All analog data are available.	All digital data are available.
12.	टेंगा / **TENGA**	11:01	Following analog data not available: • MW & MVAR of all 132/33 KV ICTs on both HV & LV side.	Following digital data not available: • All bay digital data are suspect for ICTs.
13.	होलोंगी/ **HOLONGI**	11:02	All analog data are not available.	All digital data are not available.
14.	नापित/ **NAPIT**	11:02	All analog data are not available.	All digital data are not available.
16.	निगलोक/**NIGLOK**	11:02	All analog data are not available.	All digital data are not available.
17.	सेप्पा/ **SEPPA**	11:03	Following analog data not available: • Tap position of ICT-1 shows negative value.	All digital data are available.

Note:

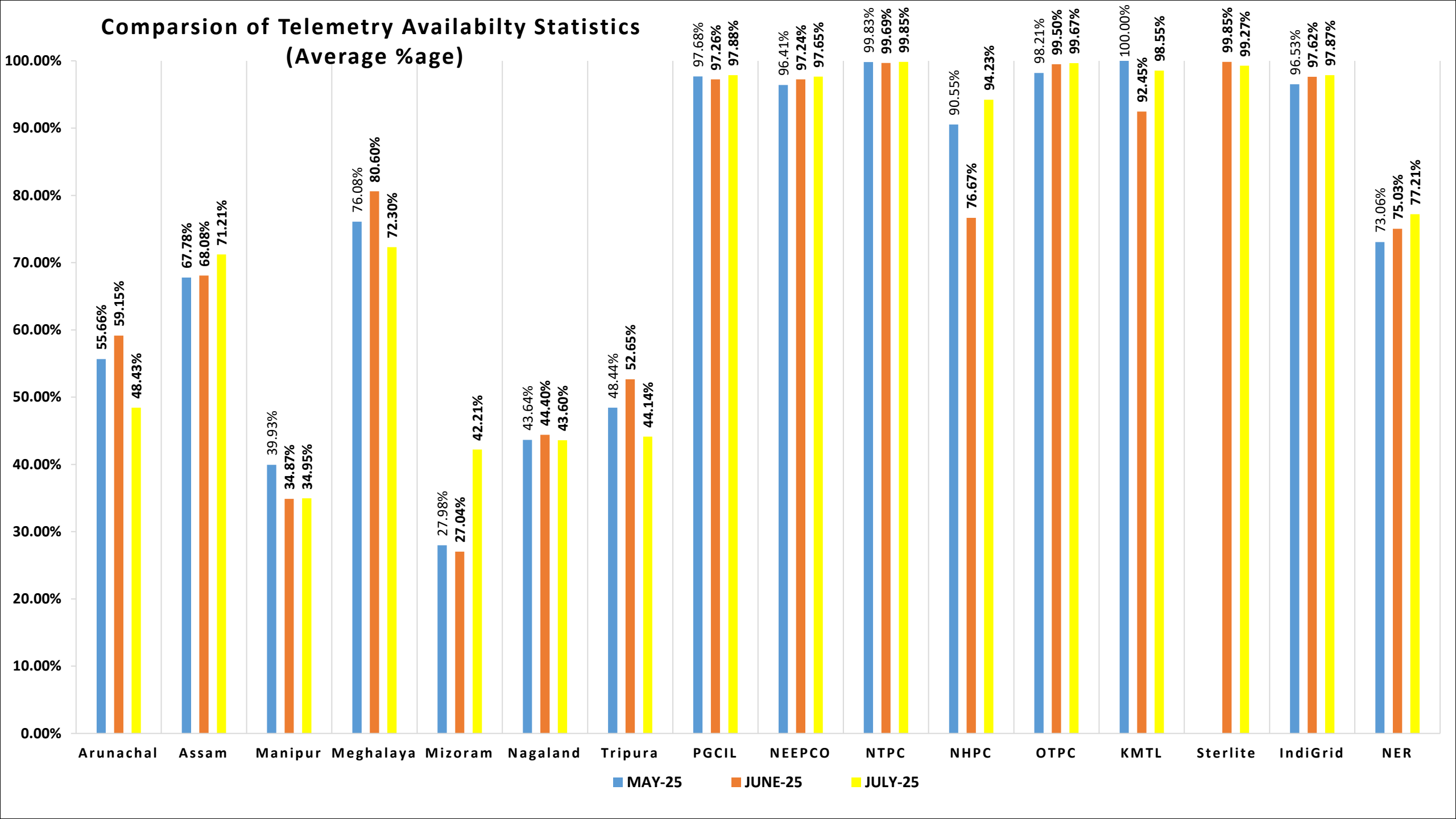
1) Jairampur is a 33kV interstate connecting substation.

❖ ***Changes from last week are highlighted in red color.***

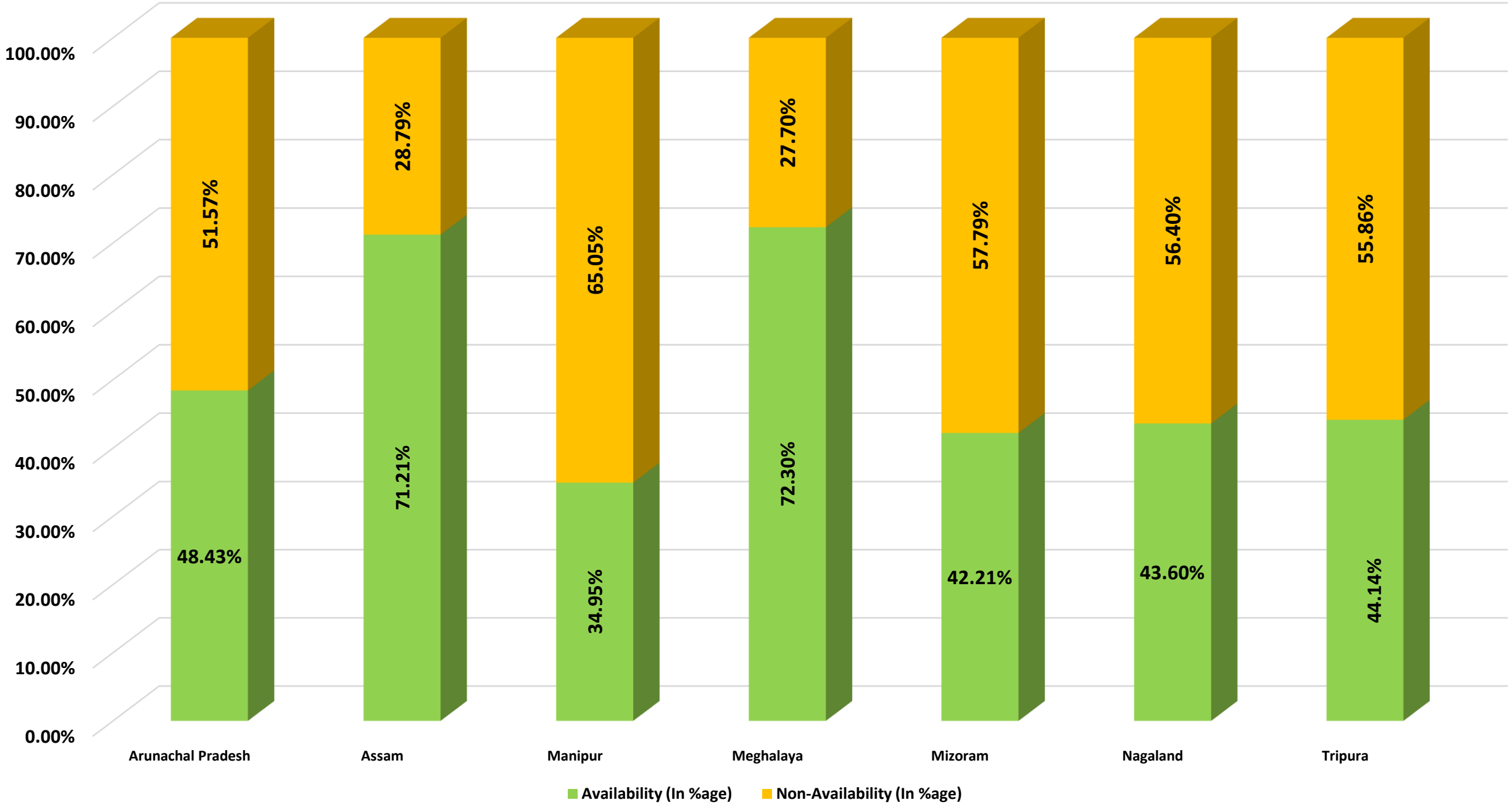
Telemetry Statistics for the month of July 2025

Annexure C 3.15

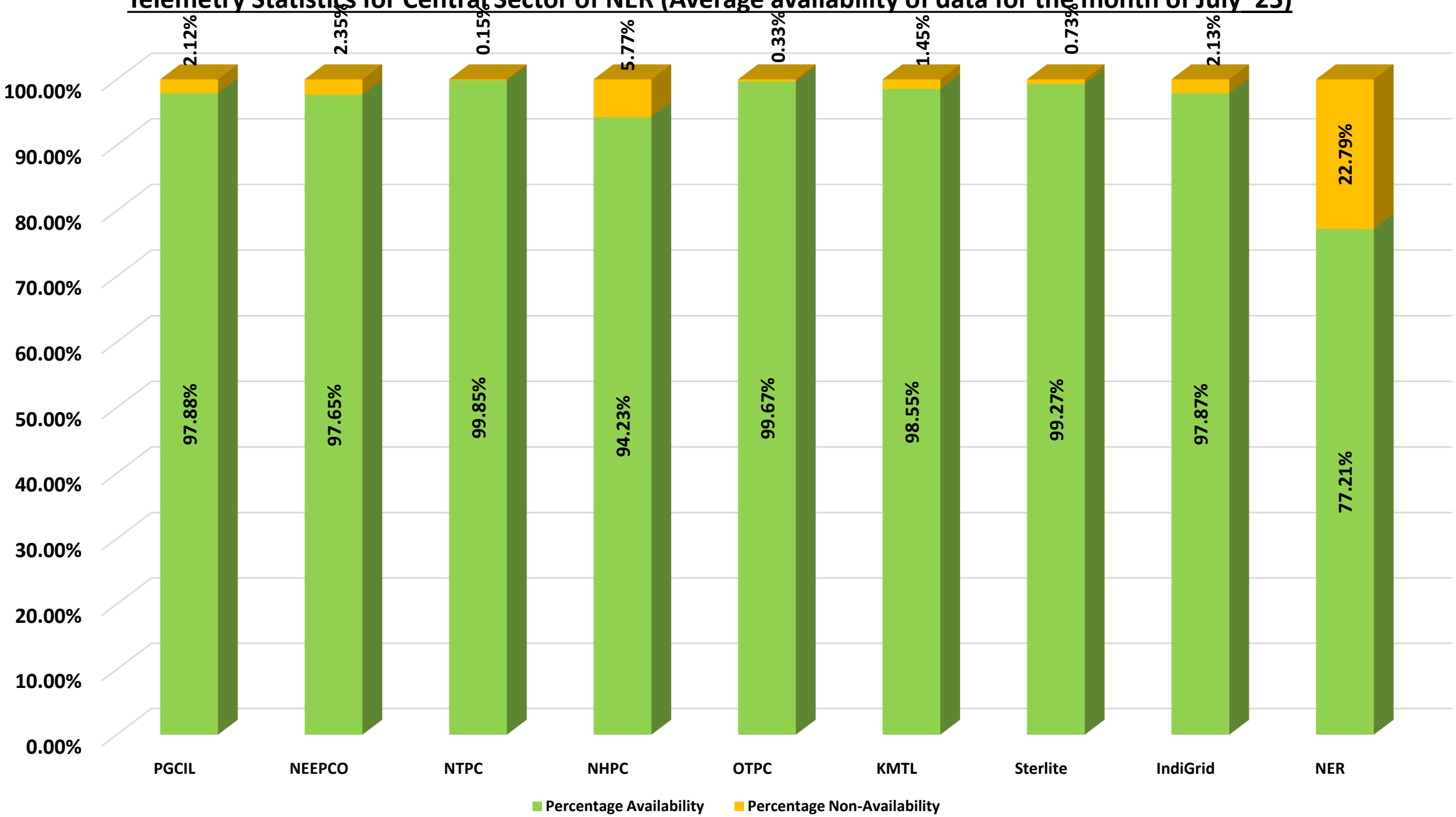
Sl. No.	Utility	Average Total Percentage	Average Analog Percentage	Average Digital Availability	Average RTU Availability	Target as per 30th NeTEST MOM
1	PGCIL	97.88	97.3	98.16	98.14	
2	NEEPCO	97.65	97.43	97.79	99.2	
3	NTPC	99.85	99.93	99.8	99.95	
4	NHPC	94.23	96.2	93.18	98.94	
5	OTPC	99.67	98.97	100	99.99	
6	KMTL	98.55	98.57	98.54	99.95	
7	Sterlite	99.27	99.25	99.28	99.25	
8	Indigrid	97.87	96.06	98.62	99.99	
9	Arunachal Pradesh	48.43	48.98	48.08	47.78	85
10	Assam	71.21	72.4	70.34	78.23	85
11	Manipur	34.95	38.73	32.7	40.65	70
12	Meghalaya	72.3	82.73	64.49	88.5	80
13	Mizoram	42.21	50.48	35.85	73.75	60
14	Nagaland	43.6	41.99	44.58	55.69	70
15	Tripura	44.14	48.27	41.46	50.87	80

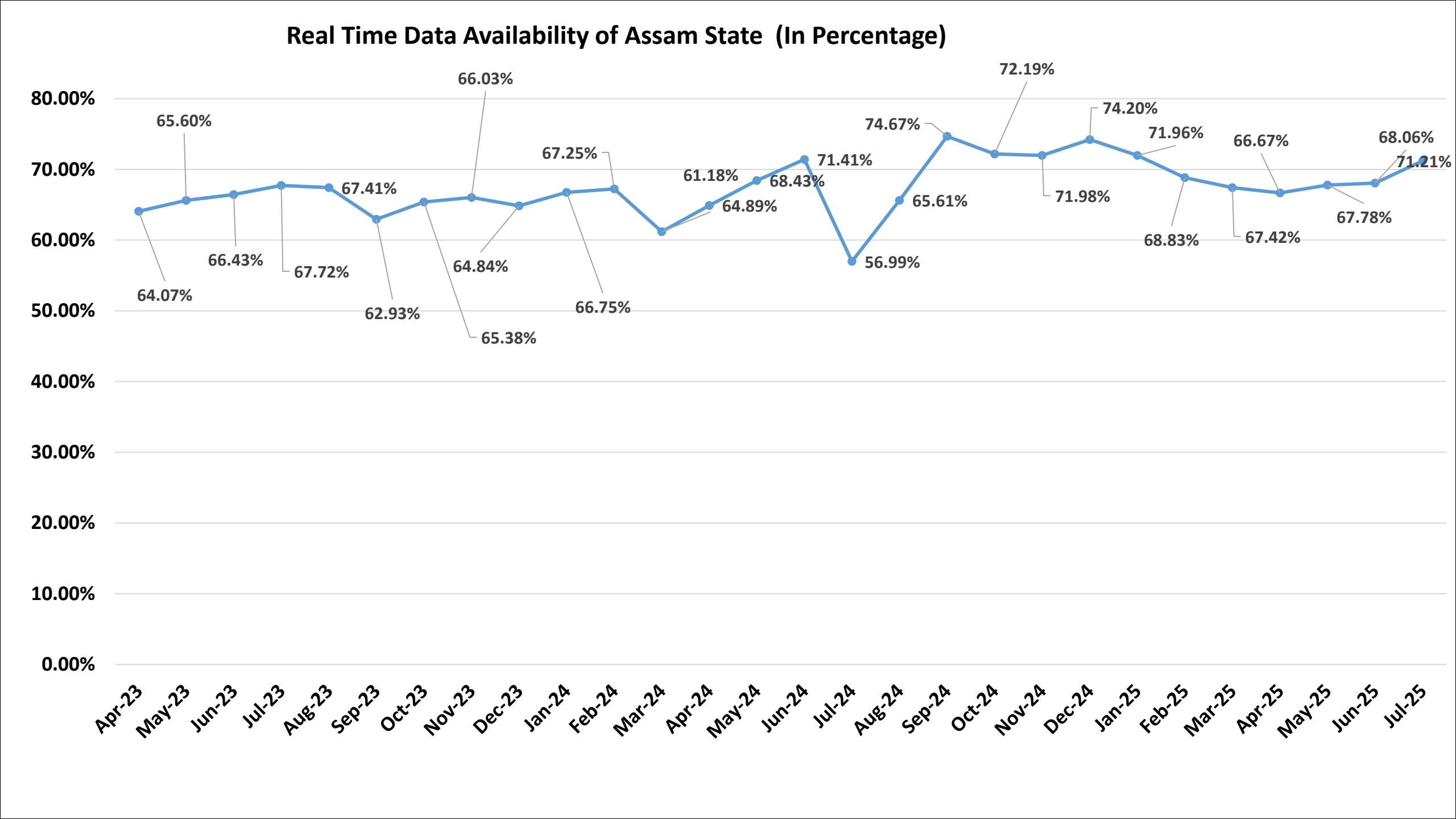

Comparsion of Telemetry Availabilty Statistics
(Average %age)
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
55.66%
59.15%
48.43%
67.78%
68.08%
71.21%
39.93%
34.87%
34.95%
76.08%
80.60%
72.30%
27.98%
27.04%
42.21%
43.64%
44.40%
43.60%
48.44%
52.65%
44.14%
97.68%
97.26%
97.88%
96.41%
97.24%
97.65%
99.83%
99.69%
99.85%
90.55%
76.67%
94.23%
98.21%
99.50%
99.67%
100.00%
92.45%
98.55%
99.85%
99.27%
96.53%
97.62%
97.87%
73.06%
75.03%
77.21%
Arunachal
Assam
Manipur
Meghalaya
Mizoram
Nagaland
Tripura
PGCIL
NEEPCO
NTPC
NHPC
OTPC
KMTL
Sterlite
IndiGrid
NER
MAY-25
JUNE-25
JULY-25

Telemetry Statistics for NER States(Average availability of data for the month of July '25)



Telemetry Statistics for Central Sector of NER (Average availability of data for the month of July '25)




Real Time Data Availability of Assam State (In Percentage)
80.00%
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60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
64.07%
65.60%
66.43%
67.72%
67.41%
62.93%
65.38%
64.84%
66.03%
67.25%
66.75%
61.18%
64.89%
68.43%
71.41%
56.99%
65.61%
74.67%
72.19%
71.98%
74.20%
68.83%
71.96%
67.42%
66.67%
67.78%
68.06%
71.21%
Apr-23
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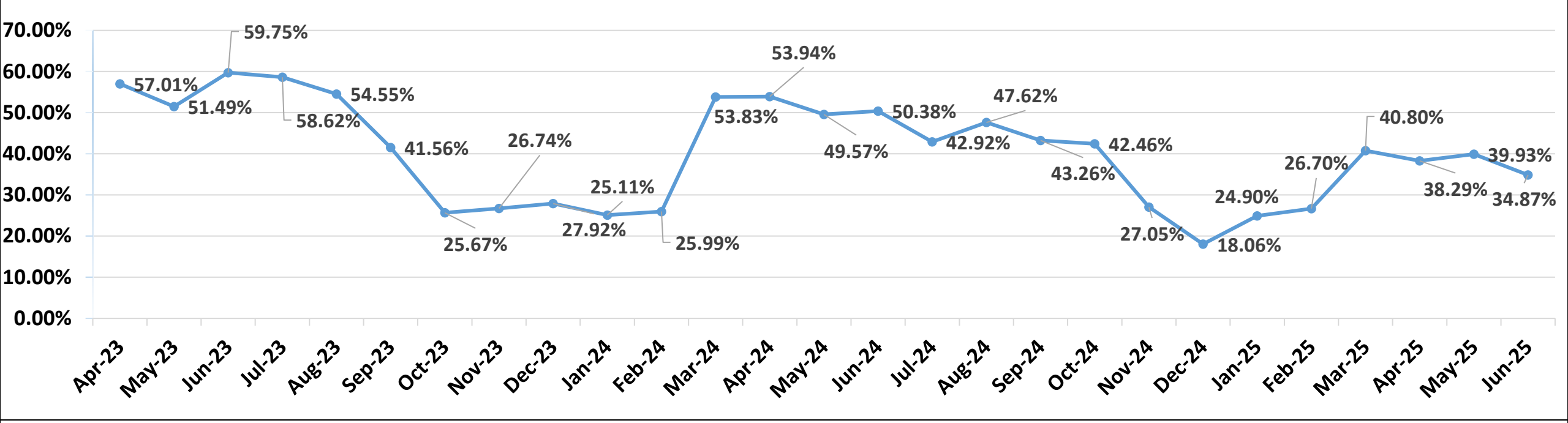
Jun-25
Jul-25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60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
57.01%
51.49%
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58.62%
54.55%
41.56%
25.67%
26.74%
27.92%
25.11%
25.99%
53.83%
53.94%
49.57%
50.38%
42.92%
47.62%
43.26%
42.46%
27.05%
18.06%
24.90%
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39.93%
34.87%
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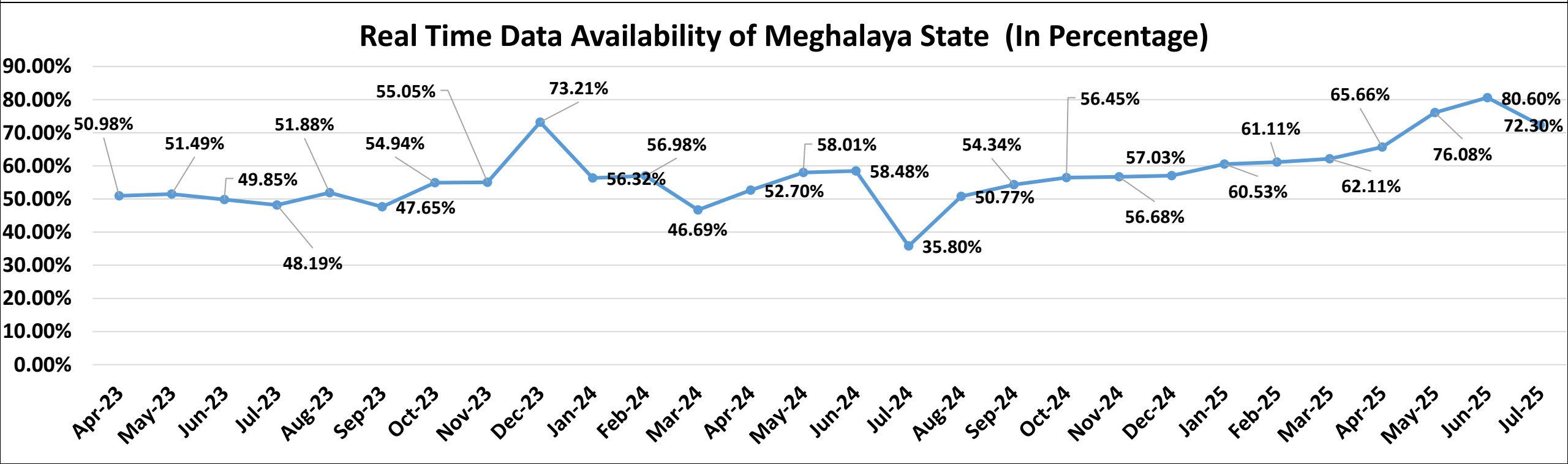
Jun-25


Real Time Data Availability of Meghalaya State (In Percentage)
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70.00%
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50.00%
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10.00%
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50.98%
51.49%
49.85%
48.19%
51.88%
47.65%
54.94%
55.05%
73.21%
56.32%
56.98%
46.69%
52.70%
58.01%
58.48%
35.80%
54.34%
50.77%
56.45%
56.68%
57.03%
60.53%
61.11%
62.11%
65.66%
76.08%
80.60%
72.30%
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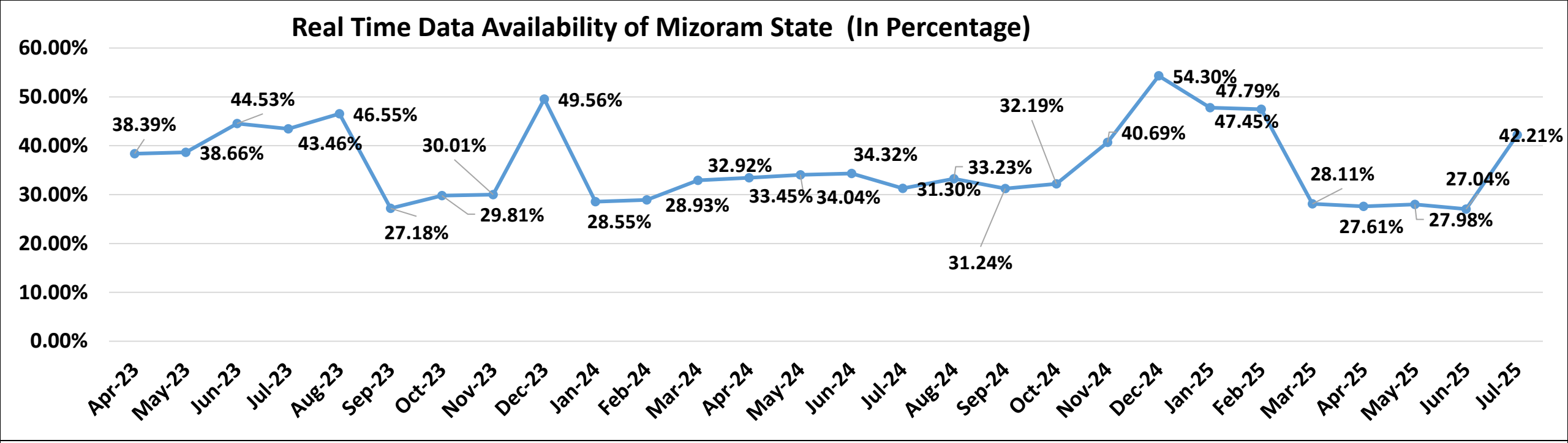
Real Time Data Availability of Mizoram State (In Percentage)
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
38.39%
38.66%
44.53%
43.46%
46.55%
27.18%
30.01%
29.81%
49.56%
28.55%
28.93%
32.92%
33.45%
34.04%
34.32%
31.30%
33.23%
31.24%
32.19%
40.69%
54.30%
47.45%
47.79%
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27.98%
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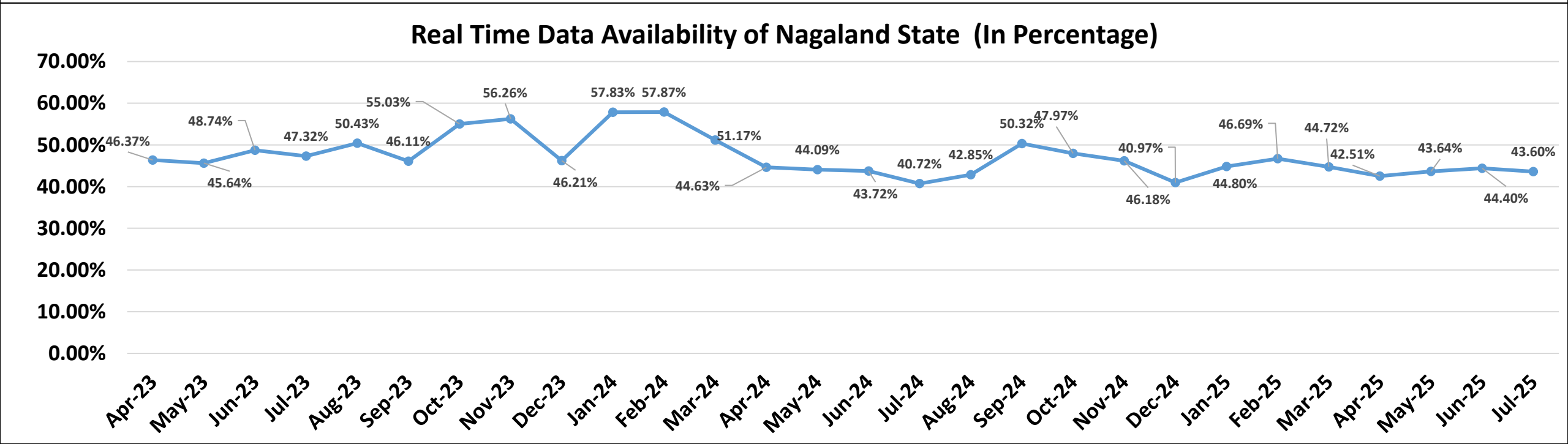
Real Time Data Availability of Nagaland State (In Percentage)
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45.64%
48.74%
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46.21%
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40.97%
46.18%
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46.69%
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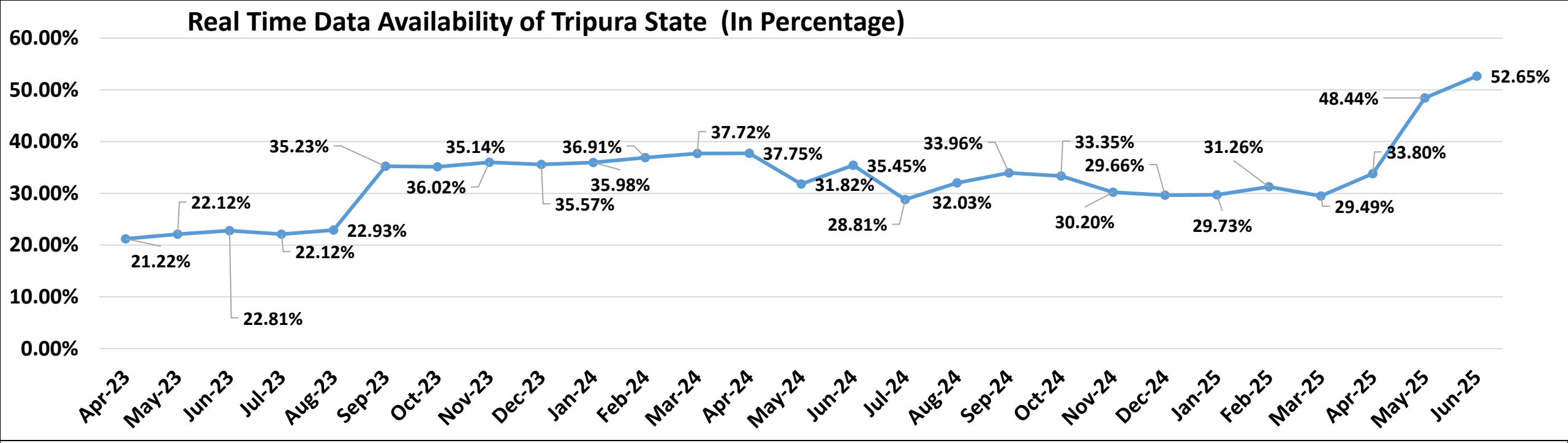
Real Time Data Availability of Tripura State (In Percentage)
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22.12%
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36.91%
35.98%
37.72%
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31.82%
35.45%
28.81%
32.03%
33.96%
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33.35%
29.66%
29.73%
31.26%
29.49%
33.80%
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52.65%
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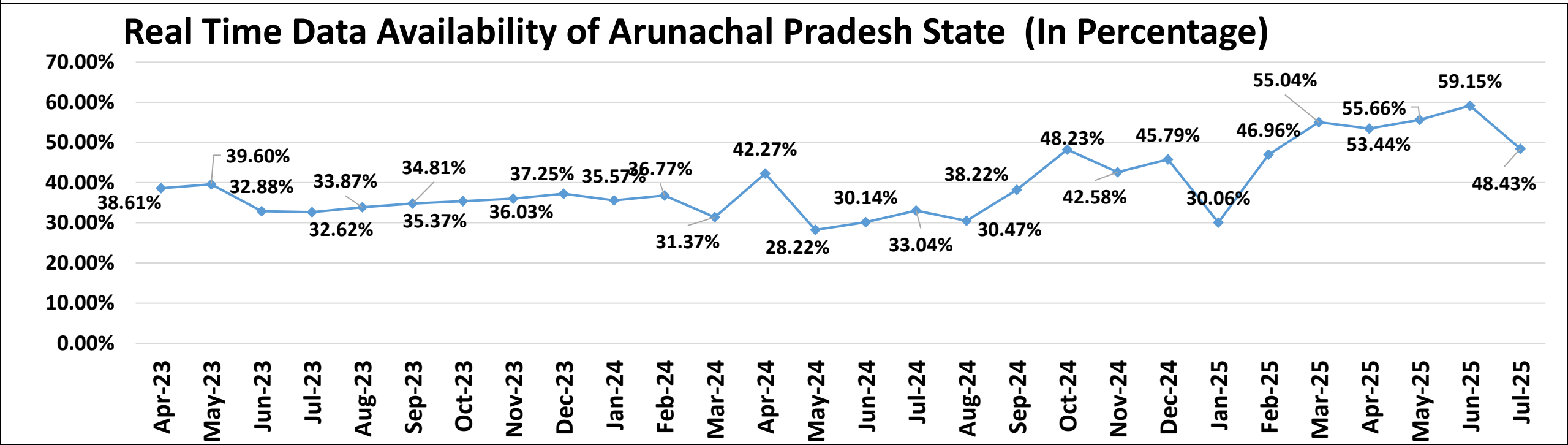
Real Time Data Availability of Arunachal Pradesh State (In Percentage)
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40.00%
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20.00%
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0.00%
38.61%
39.60%
32.88%
32.62%
33.87%
34.81%
35.37%
37.25%
36.03%
35.57%
36.77%
31.37%
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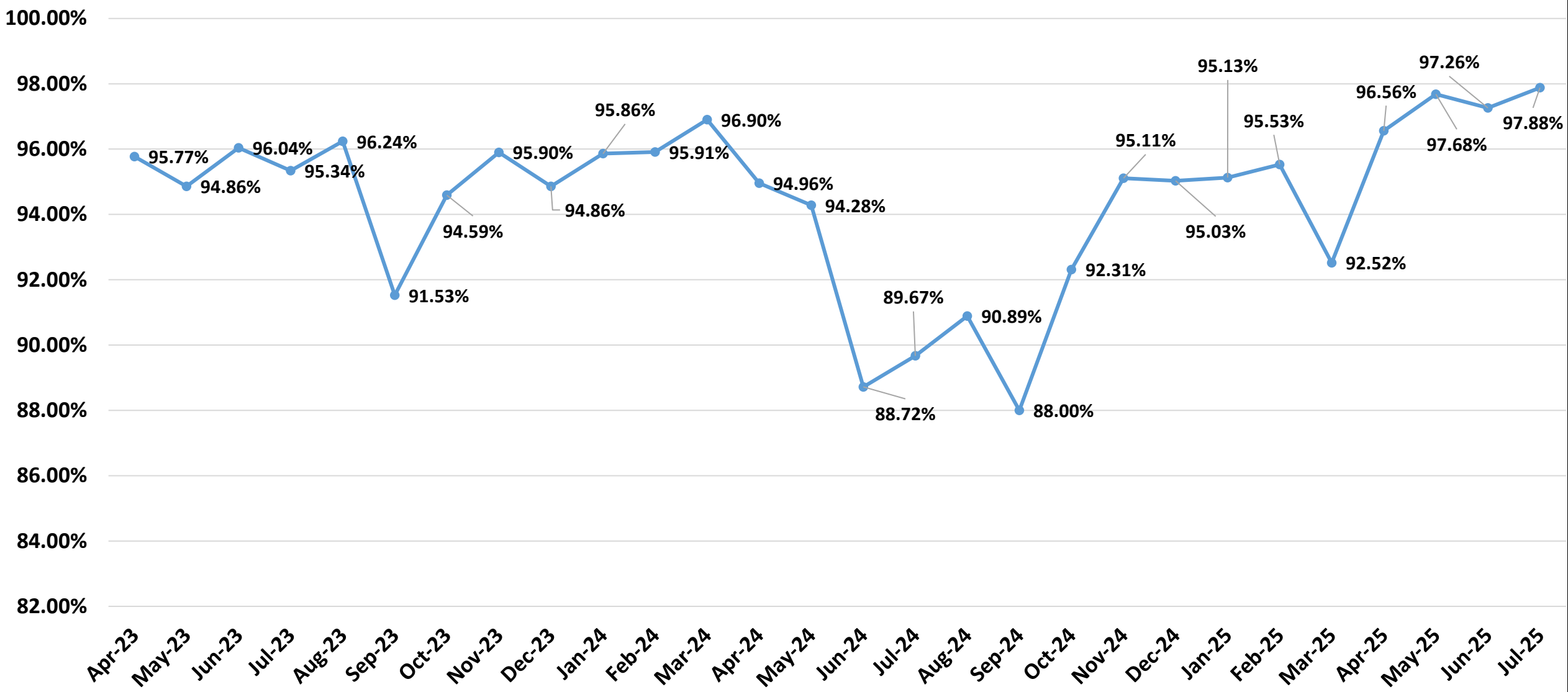
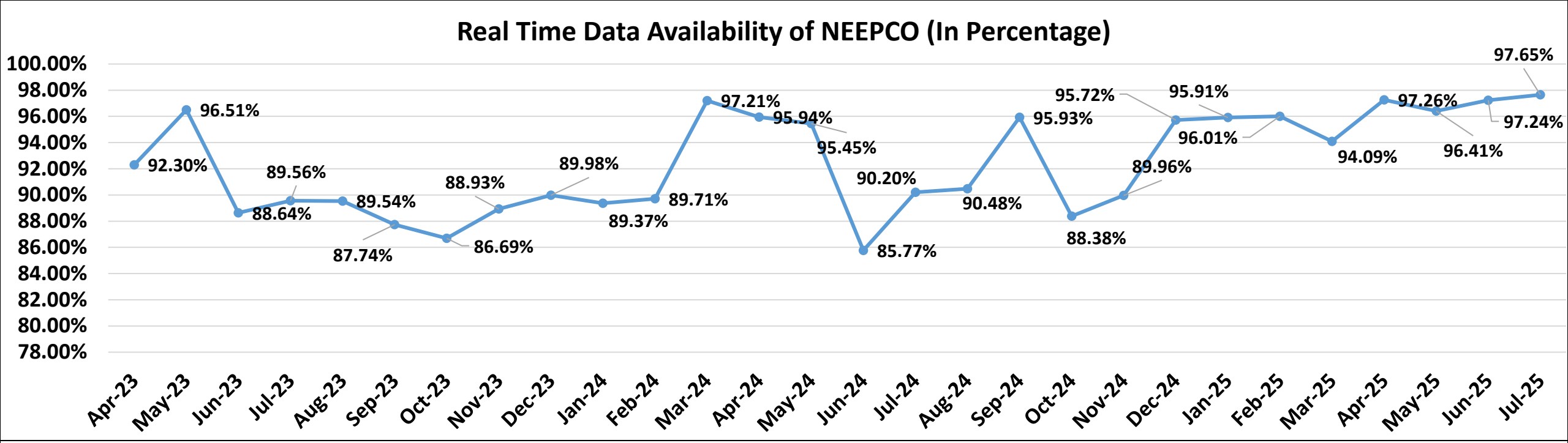
Real Time Data Availability of PGCIL(In Percentage)




Real Time Data Availability of NEEPCO (In Percentage)
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94.00%
92.00%
90.00%
88.00%
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89.56%
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86.69%
88.93%
89.98%
89.37%
89.71%
97.21%
95.94%
95.45%
85.77%
90.20%
90.48%
95.93%
88.38%
95.72%
89.96%
95.91%
96.01%
94.09%
97.26%
96.41%
97.65%
97.24%
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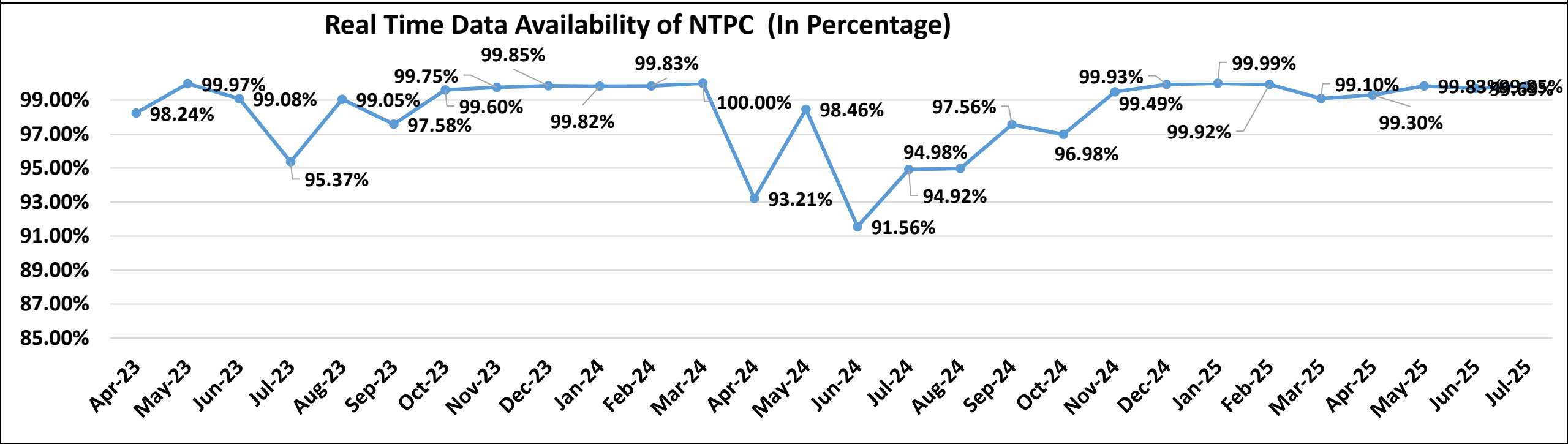
Real Time Data Availability of NTPC (In Percentage)
99.00%
97.00%
95.00%
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89.00%
87.00%
85.00%
98.24%
99.97%
99.08%
95.37%
99.05%
97.58%
99.75%
99.60%
99.85%
99.82%
99.83%
100.00%
93.21%
98.46%
91.56%
94.98%
94.92%
97.56%
96.98%
99.93%
99.49%
99.92%
99.99%
99.10%
99.30%
99.83%
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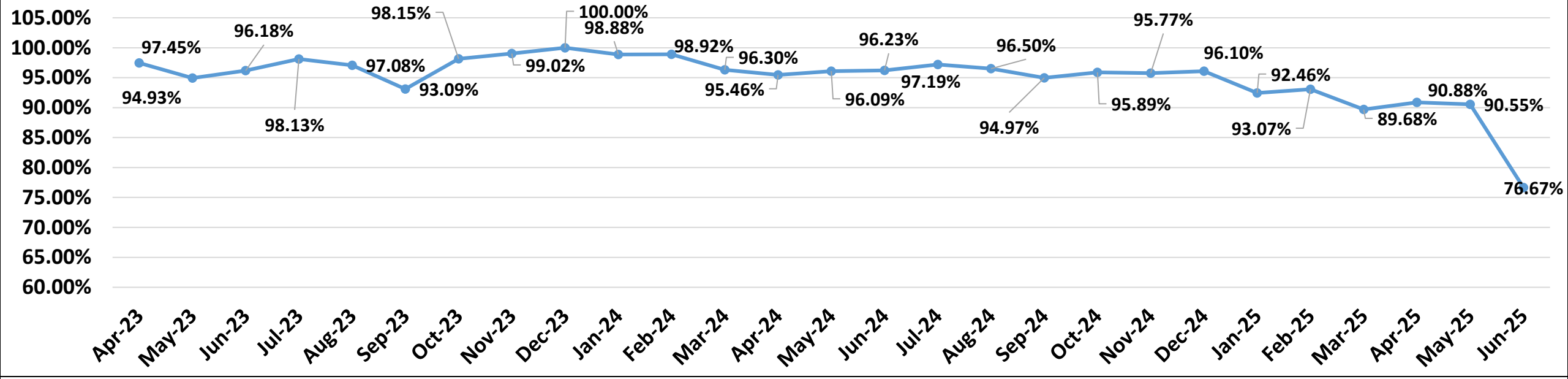
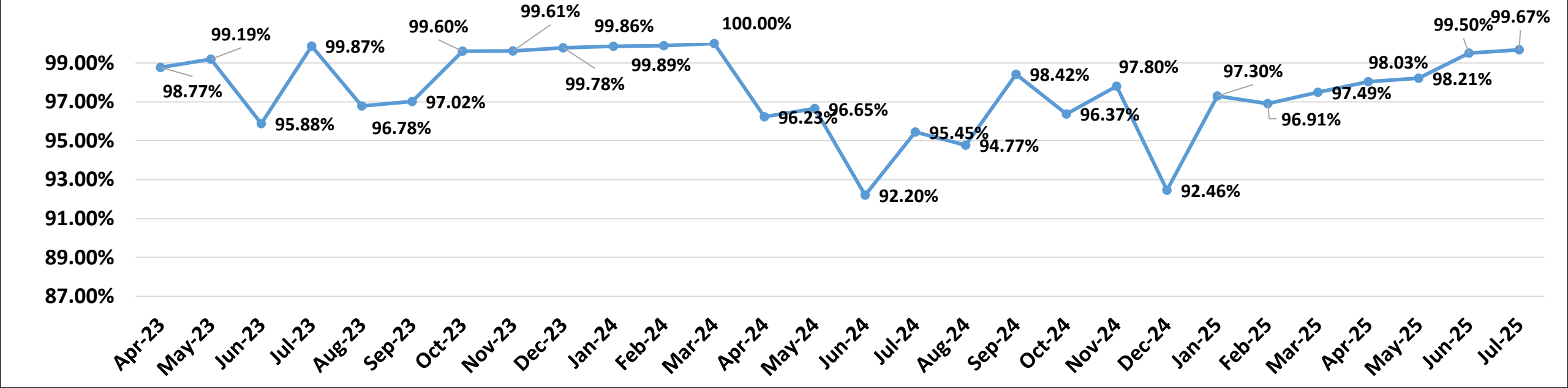
Jul-25

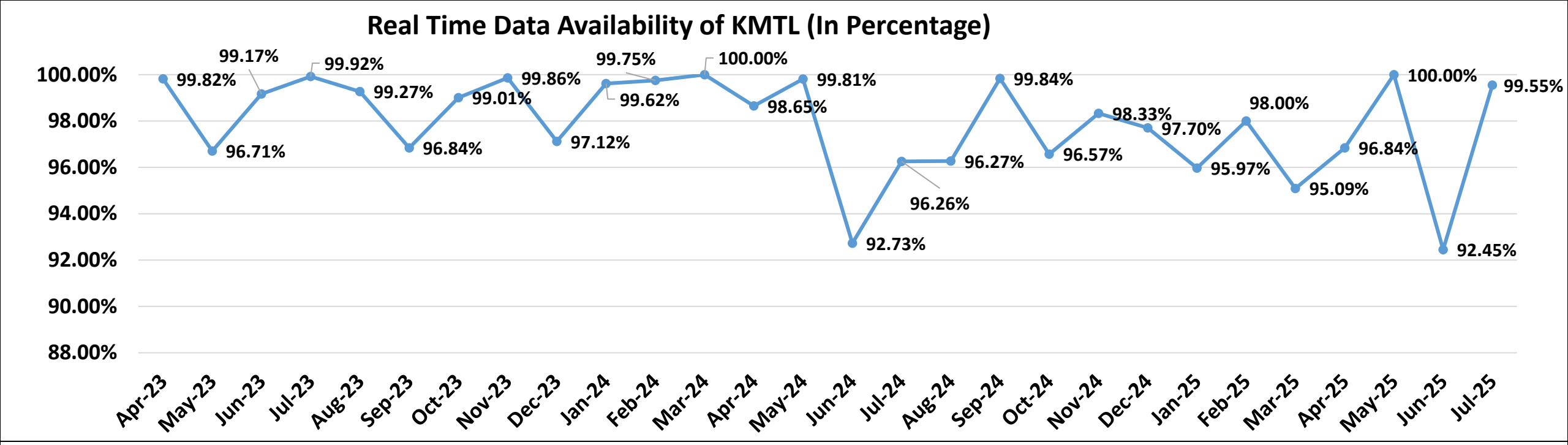
Real Time Data Availability of NHPC (In Percentage)



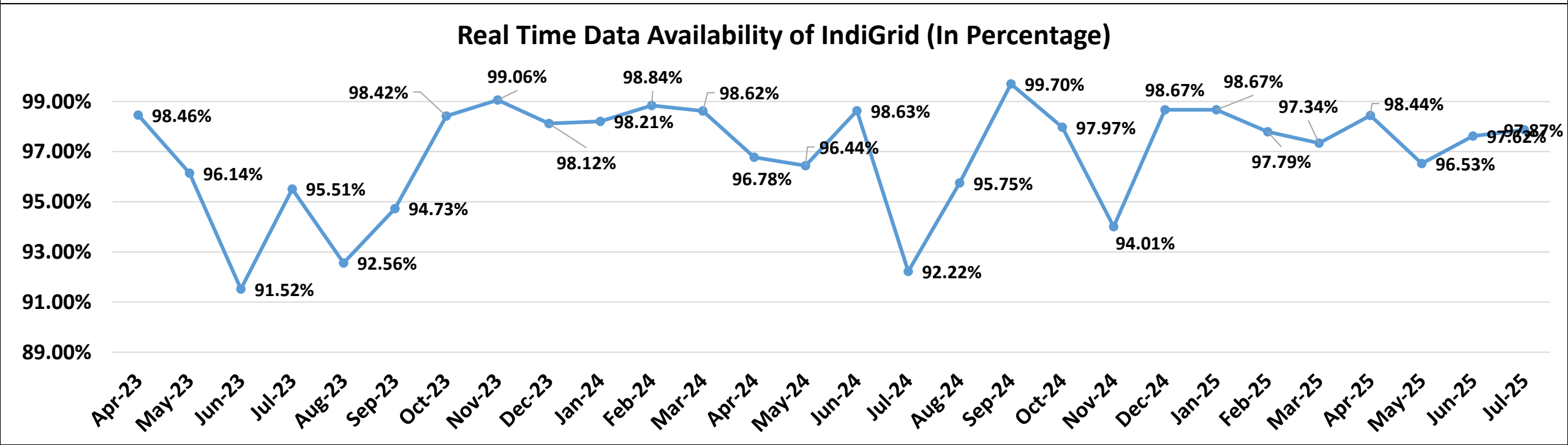
Real Time Data Availability of OTPC (In Percentage)



Real Time Data Availability of KMTL (In Percentage)



Real Time Data Availability of IndiGrid (In Percentage)



Annexure C 3.26a

Additional Communication Scheme (by ULDC-NERTS) approved in 17th TCC/RPC													
				Status as in 32nd NETeST Meeting									
Name of the link	From (A-end)	To (B-end)	Length of OPGW	OPGW Status	Approach cable between Gantry and FODB status (A-end)	FOTE Status (A-end)	DCPS Status (A-end)	Interpatching with existing FOTE A-end (If any)	Approach cable between Gantry and FODB status (B-end)	FOTE Status (B-end)	DCPS Status (B-end)	Interpatching with existing FOTE B-end (If any)	Remarks
132 kV Silchar - Hailakandi (Part of line)	Silchar	Hailakandi	17 KM	01 KMs pending	Pending	Pending	Pending	Pending	Material Delivered	Material Delivered	Material Delivered	Pending	Works to re-start from 02nd week of Sept'25. Issue with M/s SDGI resloved.
132 kV Roing – Pasighat	Roing	Pasighat	103 KM	Completed	Completed	Completed	Completed	Done	Completed	Completed	Completed	Done	
132 kV Roing – Tezu	Roing	Tezu	73 KM	Completed	Completed	Completed	Completed	Done	Completed	Completed	Completed	Done	
132 kV Tezu – Namsai	Tezu	Namsai	96 KM	Completed	Completed	Completed	Completed	Done	Completed	Completed	Completed	Done	
132 kV Tuirial – Kolasib	Tuirial	Kolasib	44 kM	Material Delivered, Stringing pending (0/44)	Material Delivered	Material Delivered	Material Delivered	Pending	Material Delivered	Material Delivered	Material Delivered	Pending	Works to re-start from 02nd week of Sept'25. Issue with M/s SDGI resloved.
400 kV Balipara – Kameng	Balipara	Kameng	75 KM	Completed	Completed	Completed	Completed	Done	Completed	Completed	Completed	Done	
400 kV Bongaigoan – Killing (Brynihat)	Bongaigoan	Killing	200 KM	Completed	Completed	Not in Scope	Completed	Not in scope	Completed	Installed. Commissioning Pending	Completed	Pending	
400 kV Silchar – Killing (Brynihat)	Silchar	Killing	217 KM	126/217 kM completed	Material Delivered	Material Delivered	Material Delivered	Pending	Material Delivered	Material Delivered	Material Delivered	Pending	Works to re-start from 02nd week of Sept'25. Issue with M/s SDGI resloved.

Annexure C 3.26b

List of Links to be implemented for replacement of old FO under Reliable Communication Scheme in NER region

SN	Name of Link	FROM	TO	KM	32nd NETeST								
		A -end	B- end		OPGW Status	Approach cable between Gantry and FODB (A-end)	FOTE Status at A end	DCPS Status at A end	Interpatching with existing FOTE at A end (if any)	Approach cable between Gantry and FODB (B-end)	FOTE Status at B end	DCPS Status at B end	Interpatching with existing FOTE at B end (if any)
1	NEHU-Shillong UNDER GROUND FO	NEHU	Shillong UNDER GROUND FO	6.23	UGFO laying completed. Jointing at T-23 and UGFO dressing pending at JB location (T-23).	NA	Completed	Not in scope of project	WIP	NA	Completed	Not in scope of project	Pending
2	Khliehriat(MESEB)-Khliehriat(PGCIL)	Khliehriat(MESEB)	Khliehriat(PGCIL)	7.791	Completed	Completed	Completed	Not in scope of project	WIP	Completed	Completed	Supplied. To be installed.	Pending
3	Khliehriat-Khandong(PGCIL)	Khliehriat	Khandong(PGCIL)	40.99	Completed	Completed	Completed	Supplied. To be installed.	WIP	Completed	Completed	Supplied. To be installed.	Pending
4	Khandong(PGCIL)-Koplili(PGCIL)	Khandong(PGCIL)	Koplili(PGCIL)	11.191	Completed	Completed	Completed	Supplied. To be installed.	WIP	Completed	Completed	Supplied. To be installed.	Pending
5	Misa(PGCIL)-Koplili(PGCIL)	Misa(PGCIL)	Koplili(PGCIL)	73.186	Completed	Completed	Completed	Not in scope of project	WIP	Completed	Completed	Supplied. To be installed.	Pending
6	Misa(PGCIL)-Balipara(PGCIL)	Misa(PGCIL)	Balipara(PGCIL)	94.046	Completed	Completed	Completed	Not in scope of project	WIP	Completed	Completed	Not in scope of project	Pending
7	Misa(PGCIL)-Dimapur(PGCIL)	Misa(PGCIL)	Dimapur(PGCIL)	119.192	Completed	Completed	Completed	Not in scope of project	WIP	Completed	Completed	Not in scope of project	Pending
8	Badarpur(PGCIL)-Khliehriat(PGCIL)	Badarpur(PGCIL)	Khliehriat(PGCIL)	73.183	Completed	Completed	Completed	Supplied. To be installed.	WIP	Completed	Completed	Supplied. To be installed.	Pending
9	Badarpur(PGCIL)-Kumarghat(PGCIL)	Badarpur(PGCIL)	Kumarghat(PGCIL)	117.519	Completed	Completed	Completed	Supplied. To be installed.	WIP	Completed	Completed	Not in scope of project	Pending
10	Agartala Gas(PGCIL)-Kumarghat(PGCIL)	Agartala Gas(PGCIL)	Kumarghat(PGCIL)	99.817	Completed.	Completed.	Completed. Existing SDH	Not in scope of project	WIP	Completed.	Completed. Existing SDH	Not in scope of project	WIP
11	Agartala(PGCIL)-Agartala Gas(PGCIL)	Agartala(PGCIL)	Agartala Gas(PGCIL)	7.416	Already installed under NER FO Expansion Scheme. Scope deleted.								
12	Dimapur (PGCIL)-Kohima(PGCIL)	Dimapur (PGCIL)	Kohima(PGCIL)	59.8	Completed	WIP	WIP	Not in scope of project	WIP	WIP	Completed at Dimapur.	Not in scope of project	WIP
13	Kohima(NAG)-Imphal(PGCIL)	Kohima(NAG)	Imphal(PGCIL)	105.64	(93/105) kM completed.	WIP	WIP	WIP	WIP	WIP	WIP	WIP	WIP
14	132 kV NEHU-NEIGRIMS-Kheliriat (Approved in 27th NPC)	NEHU	Kheliriat	73	Survey commenced.								
15	132kV Kahilipara-Umiam Stg. III-Umiam Stg. I - Umiam - NEHU	Kahilipara	NEHU	129.26	Survey commenced.								
16	132kV Sarusajai -Umtru	Sarusajai	Umtru		Survey commenced.								

List of Links to be implemented new under Reliable Communication Scheme in NER region													
S No	Name of Link	From	To	Length in 18th TCC/29th NCT*	32nd NETeST								
		End A	End B		OPGW Status	Approach cable between Gantry and FODB (A-end)	FOTE Status at A end	DCPS Status at A end	Interpatching with existing FOTE at A end (if any)	Approach cable between Gantry and FODB (B-end)	FOTE Status at B end	DCPS Status at B end	Interpatching with existing FOTE at B end (if any)
1	Mariani (new)- Misa II	Mariani (new)	Misa	223	Completed.	Complete	Completed	Not in scope of project	WIP	Completed	Completed	Not in scope of project	Completed
2	Bongaigaon III (quad)-Balipara	Bongaigaon	Balipara	309	Completed	Completed	Completed	Not in scope of project	WIP	Completed	Completed	Not in scope of project	WIP
4	Misa - Kopli	Misa	kopli	73	Completed	Completed	Completed	Not in scope of project	WIP	Completed	Completed	Supplied. To be installed.	WIP
5	Jiribam - Haflong	Jiribam	Haflong	101	Completed	Completed	Completed	Supplied. To be installed.	Completed	Completed	Completed	Supplied. To be installed.	Completed
6	Biswanath Chariali - Biswanath Chariali(Pavoi)	Biswanath Chariali	Pavoi	13	Completed	Completed	Completed	Not in scope of project	WIP	Completed	Completed	Not in scope of project	WIP
7	Kopili Khandong-other circuit	kopili	khandong	12	Completed	Completed	Completed	Supplied. To be installed.	WIP	Completed	Completed	Supplied. To be installed.	WIP
8	Khandong Khliehriat other circuit	khandong	khliehriat	43	Completed	Completed	Completed	Supplied. To be installed.	WIP	Completed	Completed	Supplied. To be installed.	WIP
9	Aizawl-Jiribam	Aizawl	Jiribam		WIP	WIP	WIP	WIP	WIP	WIP	WIP	WIP	WIP
10	UGFO from Tower 25 of 132kV Nehu-Mawlyndep line to NERLDC Shillong*	T25	NERLDC Shillong	3.5	Survey Commenced								
12	UGFO NERLDC Guwahati to Kahilipara*	NERLDC Guwahati	Kahilipara S.s	2	Survey Commenced								

Annexure C 3.32

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केंद्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली योजना एवं मूल्यांकन प्रभाग-II
Power System Planning & Appraisal Division-II

सेवामें/To,

CMD,
Nangalbibra Bongaigaon Transmission Limited (NBTL)
DLF Cyber City, Tower B, 9th Floor, Udyog Vihar
Phase-III, Sector 20,
Gurugram-122008, Haryana

विषय/Subject: Scope ratification request by NBTL to implement additional works (PMU & NGWF) required by NERLDC/CTUIL as system requirement.

महोदया (Madam) / महोदय (Sir)

This has reference to Nangalbibra Bongaigaon Transmission Limited (NBTL) letter dated 26.10.2023 regarding additional scope of works for providing Phasor Measurement Unit (PMU) and Next Generation Firewall (NGFW) at 220/132 kV Nangalbibra ISTS (Inter State Transmission System) substation. It was mentioned in the letter that during discussion of NBTL with CTUIL and NERLDC, it was brought out that, PMU has been mandated as per the guidelines of National Power Committee (NPC) for all 132 kV and above level feeders/buses in North-Eastern Region (NER). Further, NGFW is also required to be implemented.

The matter has been examined in consultation with CTU, Grid-India, NERPC and NBTL wherein following was observed:

1. NBTL is a special purpose vehicle (SPV) incorporated for the purposes of Establishment of New 220/132 kV substation at Nangalbibra to be implemented through TBCB route.
2. As per Transmission Service Agreement (TSA), implementation of PMUs and Next Generation Firewall (NGFW) is not a part of scope to be implemented by NBTL.

CEA's Comments:

1. Since installation of PMU and NGFW is not covered under the scope of TSA, NBTL may complete its scope of works as per the Transmission Service Agreement (TSA) and as per the schedule. CTUIL and Grid-India shall facilitate in charging of elements. Further, Northern Eastern Regional Power Committee (NERPC) shall provide all support in

signing of Connection agreement between NBTL and Interconnecting facilities of concerned utilities/ Organisations involving PGCIL, MePTCL, AEGCL and others, if any.

भवदीय/Yours faithfully,

17-01-2024

(बी.एस.बैरवा/ B.S. Bairwa)
निदेशक/ Director

Copy to:

1. MS, NERPC
2. COO, CTUIL
3. CMD, Grid India
4. ED, NERLDC

Nangalbibra Bongaigaon Transmission Limited
DLF Cyber City, Tower- B 9th Floor, Udyog Vihar
Phase III, Sector-20, Gurugram-122008, Haryana

Sterlite Power

Ref No. NBTL/PMU&NGFW/2023/CEA/01 **Date:26.10.2023**

To,
Member (Power System)
Central Electricity Authority
Sewa Bhawan, R. K. Puram
Sector -1, New Delhi-110066

Sub: Additional scope of works required by NERLDC and CTUIL for providing Phasor Measurement Unit (PMU) and Next Generation Firewall ("NGFW") at Nangalbibra ISTS substation.

Ref: As below.

1. RFP issued by BPC for NBTL in February 2021.
2. Amendment No 1 along with annexure issued by BPC for NBTL.
3. Transmission Service Agreement dated 06.07.2021 ("TSA") between Nangalbibra Bongaigaon Transmission Limited and Long-Term Transmission Customers ("LTTCs")
4. MOM dated 18.10.2023 for meeting called by CTUIL.

Dear Sir,

1. This is with reference to the captioned subject and documents referred above, it is submitted that Nangalbibra Bongaigaon Transmission Limited (NBTL), is a special purpose vehicle (SPV) incorporated for the purposes of establishing the transmission system for "Establishment of a New 220/132 kV substation at Nangalbibra" (Project) through tariff based competitive bidding process (TBCB process).

2. As per IEGC,2010 & amendment thereof and Transmission Service Agreement (TSA) entered by NBTL, it is mandatory to enter into connection agreement with CTUIL and interconnecting facilities before physical connection. Following the CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations 2009 and amendment thereof NBTL filed an application (CON-IV) through NSWS portal on 21.05.2023 to CTUIL providing all the requisite information required.

3. Based on the information/documentation provided by NBTL and subsequent clarifications sought, CTUIL provided draft CON-V to NBTL on 11.09.2023 (attached as Annexure-I) for verification before finalizing the scheme. After scrutinizing the draft CON-V scheme provided by CTUIL it was observed by NBTL that the conditions mentioned in *Annexure III-b* for providing the communication equipment details i.e. PMUs and Next Generation Firewall (NGFW) are not in line with the scope of work defined under RFP & TSA signed with LTTCs. Therefore, implementation of PMUs and Next Generation Firewall requirement is in deviation to the scope of work mentioned in RFP (issued on Feb-2021) for NBTL project & the requirement of NGFW sought as per CEA (Cyber Security in Power Sector) guidelines which was issued on 07/10/2021, is not applicable for NBTL project as the said

guidelines is issued after the cut-off date for NBTL. NBTL communicated the same to CTUIL via mail dated 25.09.2023 (Annexure-II).

4. Further to discuss the observations of NBTL on draft CON-V a meeting was called by CTUIL on 27.09.2023 in which NERLDC was also present. In the said meeting, NBTL again clarified that PMU was not under the scope of works mentioned under the RFP issued and TSA signed with LTTCs, also the guidelines for next cyber security in power sector mandating installation for Next Generation Firewall was issued in October 2021 which is issued after the bid cut-off date i.e. 11.08.2021 for NBTL project. CTUIL submitted that the requirement of PMU was mentioned in the original RFP issued for the project. NBTL clarified that BPC has further issued the amendment on 19-02-2021 and the requirement of PMU was removed. Amendment along with annexure-1 is attached as Annexure-III to this letter.

5. Further to that a meeting was called by CTUIL for discussion in this matter on 18.10.2023 with participation from CTUIL, NERLDC (Grid-India) and NBTL (M/s Sterlite Power Transmission Ltd.). During the said meeting, NERLDC stated that PMU has been mandated, as per the guidelines of NPC, for all 132kV and above level feeders/buses in NER. Also, as per the regulations and system requirements implementation of NGWF is also required to be carried out by NBTL. Minutes of the meeting are attached as Annexure-IV to this letter for ready reference.

6. After detailed deliberation, NBTL was directed to approach your good office for confirmation on additional scope of work for providing both PMU and NGFW. In this regard, brief scope of work as per RfP/TSA requirement and the additional requirement imposed by NERLDC/ CTUIL is tabulated below for your easy reference:

No.	Equipment	Original Scope as per TSA	Additional Scope required
1	Phasor Measurement Unit (PMU)	Nil	132 kV Amapati S/s – 02 Nos 132 kV Hatsinghmari S/s – 02 Nos 220 kV Bongaigaon S/s – 02 Nos 220 kV nangalbibra S/s -02 Nos 132 kV nangalbibra S/s – 02 Nos **Total – 10 Nos**
2	Firewall for Cyber security	One(1) without NGFW	One(1) with NGFW

7. NBTL has informed during meeting with CTUIL and NERLDC that after the confirmation of additional scope of work, the installation of these equipment will have its separate lead time for delivery, installation, and commissioning over existing SCoD dates in December 2023. NBTL also requested NERLDC that they should not hold First Time Charging (FTC) & Charging code for NBTL element. NBTL in this regard can provide undertaking after additional scope confirmation by CEA.

8. It is also pertinent to mention that as per Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022 ("CEA, Technical & Construction Standard, Regulations") regulation 48 (6) implies that PMU along with associated equipment's are to be installed at substations of 400 kV and above voltage level, switchyard of generating stations at 220 kV and above voltage level. In current scope of NBTL the lines and substation are to be operated in 132 & 220kV level, hence direction from NERLDC/CTUIL to implement PMU is also a deviation from the regulations formed by your good office.

9. Furthermore, NBTL again reiterates that the additional scope mentioned at Para 6 above if imposed on NBTL will burden NBTL with additional time and cost implication, as the capital expenditure has been estimated based on the scope provided under RFP and its amendments. Any additional scope of work requires additional time and capital expenditure for procurement of equipment besides an increase in the operational and maintenance costs. In such a scenario, any expansion of the scope of work without confirmation from CEA will adversely affect NBTL. Also, as per the TSA for NBTL project any additional work taken up by NBTL would also require concurrence from the lead LTTC of the project which in this case is Assam Power Distribution Company Limited (APDCL).

10. In view of the above, NBTL would request your good office to call a joint meeting with participation from CTUIL, NBTL, NERLDC, APDCL to discuss and confirm allowance of additional time and cost for the additional scope of works to NBTL.

Yours faithfully
For and on behalf of Nagalbibra Bongaigaon Transmission Limited

Nangalbibra Bongaigaon Transmission Limited

Balaji Sivan
Director – Policy, Regulatory and Business Development

Enclosures: -
1. Draft CON-V issued by CTUIL to NBTL on 11.09.2023.
2. Response/Observations of NBTL on the draft CON-V
3. NBTL project RFP amendment -1 and annexure-1 to the amendment issued.
4. MoM issued by CTUIL dated 18.10.2023.

Copy to: -
1. Shri. H S Kaushal, Senior General Manager, Central Transmission Utility of India, First Floor, Saudamini, Plot No.– 2, Sector– 29 Near IFFCO Chowk Metro Station Gurgaon – 122 001 Haryana.

2. Shri. S. P Burnwal, Senior General Manager, Grid Controller of India Limited (NERLDC) POWERGRID Complex, Lower Nongrah, Lapalang,P.O : RynjahShillong-793006(Meghalaya), India
3. Chief General Manager (Comm & EE), Assam Power Distribution Company Limited, Bijulee Bhawan, Paltan Bazar, Guwahati – 781001, Assam

Draft Minutes of the Meeting (Virtual mode) held on 18.10.2023 regarding communication pertaining observations of M/s Sterlite in draft CON-5 for Nangalbibra-Bongaigaon Transmission Ltd.

A meeting on the subject matter was held on 18.10.2023 with participants from CTUIL, NERLDC(Grid-India) and M/s Sterlite.

List of the participants is enclosed at **Annexure-I**.

At the outset, Sr. DGM (CTU) welcomed the participants and explained the agenda regarding placement of PMUs and NGFW(Next Generation Firewall) in Nangalbibra-Bongaigaon Transmission System to all the participants as under:

i)M/s Sterlite informed vide email dtd. 06.10.2023 that as per amendment to RfP issued by BPC,PMU is not in scope of RfP of NBTL.

ii)M/s Sterlite(NBTL) further informed that they have procured the firewall as per the CEA cyber security guidelines applicable on bid cut-off date and hence proposed NGFW based on CEA (Cyber Security in Power Sector) Guidelines, 2021 issued in October 2021 are not in scope of RfP. For M/s Sterlite (NBTL), to take any work beyond the scope of work defined under its TSA requires a ratification from CEA.

Deliberations:

M/s Sterlite stated that NBTL project RFP was released in February-2021 & bid cut-off date was in August-2021.The new cyber security guidelines with requirement of NGFW was released in October-2021. M/s Sterlite has procured the firewall as per the CEA cyber security guidelines applicable on bid cut-off date. It is not a NGFW as proposed by CTUIL based on CEA (Cyber Security in Power Sector) Guidelines, 2021,which were issued post RfP submission.

NERLDC stated that scope ratification proposal should have been raised by M/s Sterlite in the two year period (between Oct'21 to Oct'23) since issuance of new CEA (Cyber Security in Power Sector) Guidelines, 2021. NERLDC emphasized that as per regulations and system requirement, PMU and NGFW are required at Nangalbibra S/s and transmission lines, to be constructed, under the scope of RfP.

M/s Sterlite conveyed that they should be allowed to put the Router-Cum-Firewall which they have already procured with an undertaking that they will put NGFW in near future after scope ratification from CEA. Same request was made for PMUs as the earlier requirements were related to deployment of PMUs in 220kV Generating stations/400kV line . But, as now it has been mandated, as per guidelines of NPC, for all 132kV and above level feeders/buses in NER. Moreover, supply period of PMUs as conveyed by their vendor is around 5-6 months, so it is not possible to get it deployed till their charging target of Mar'24. NERLDC requested M/s Sterlite to approach multiple vendors and appropriately place order to vendor who can deliver the PMUs in least possible time.

NERLDC mentioned that all efforts should be made to put NGFW and requisite nos. of PMUs in the proposed projects and in case additional NGFW/PMUs are available in their Spares/Other Projects, then same may be diverted to NBTL, if feasible. M/s Sterlite conveyed that they will explore this possibility.

CTU clarified that before the CEA guidelines 2021, it was mandated that, the user has to comply with cyber security guidelines issued by the Central Government, from time to time.as per Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019.

Further, CTU also stated that CON-4 details proposal is being put up to CTU on verge of commissioning by NBTL. CTU stated that as per the CERC procedures, connectivity guidelines and IEGC the applicant shall submit the CON-4/connection details well in time to ensure a proper connectivity as per the prevailing regulations.
M/s Sterlite clarified that the data pertaining to Con-IV can only be submitted once M/s Sterlite finalised engineering.

M/s Sterlite reiterated that as CEA (Cyber Security in Power Sector) Guidelines, 2021 and PMU requirement is coming up post RfP submission hence they need scope change ratification from CEA for addition of PMU and NGFW in scope of existing RfP. Also, M/s Sterlite informed the forum that items to be installed via the ratified scope will have it's own lead time for delivery & installation and commissioning dates of assets under NBTL are in December 2023. So, concerned authority (NERLDC) should not hold First Time Charging (FTC) & Charging code for NBTL element. NBTL in this regard can provide declaration after additional scope ratification by CEA for installation of additional scope equipment's in time bound manner.

During deliberations, it was suggested that M/s Sterlite may approach CEA for the ratification of their scope as both NGFW and PMU is required by NERLDC as a system requirement and as per relevant regulations issued in this regard which was agreed by CTU and NERLDC .

Meeting ended with a vote of thanks.

Annexure-I

List of participants

- **CTUIL**

1. Sh. H.S Kaushal, Sr.GM
2. Sh. Shiv Kumar Gupta, Sr. DGM
3. Sh. Kaushal Suman, Manager

- **GRID- India**

1. Sh. S. P Burnwal, Sr.GM
2. Sh. Akhil Singhal, DGM
3. Sh. Sakaldeep, Mgr

- **M/s Sterlite Power**

1. Sh. Sandip Maity, VP(Engg.)
2. Sh. Prateek Rai, Ch. Mgr.
3. Sh. Bhuwanesh Joshi, VP(Projects)
4. Sh. Jayachandra Bendi, Ch. Mgr

List of Participants in 32nd NETeST meeting held on 29.08.2025 in NERPC Conference Hall, Shillong

S.No	Name	Designation	Organization	Email-Id	Contact No.	Signature
01	Shankhamalya Bhattacherjee	Dy. Manager	KMTL	shankhamalya.bhattacharjee@aptransco.com	8250799144	[signature]
02	P. Marconi Singh	Sr. Manager	NHPC	marconi@nhpc.nic.in	8257880208	[signature]
03	SHAMPA SEN	Sr. Manager	SLDC, Tripura.	smpsen@rediffmail.com	9436120263	[signature]
04.	MANAS PRATIM SHARMA	SR. Manager	NEEPCO	pratimanas@neepco.co.in	8729901871	[signature]
05.	SAUGATO MONDAL	GM	NERLDC	saugato@grid-india.in	9433041835	[signature]
06	Palash Jyoti Borah	CM	NERLDC	palash14.india@grid-india.in	8761093397	[signature]
07	Sakal Deep	DM	—"—	skldeep@grid-india.in	9774528218	[signature]
08	Suneel Kumar Patel	Engg.	Resonia (Sterlite)	suneel.patel@resonia.in	9109467509	[signature]
09	Chhunga	A.E	SLDC, Mizoram	sldc_mizoram@rediffmail.com	9774251677	[signature]
10	THANGLIANA	EE.	SLDC, Mizoram	thangliancke@gmail.com	9862812167	[signature]
11	MEKA KINIMI	SE	SLDC Nagaland	mekakinni@gmail.com	7630857499	[signature]
12	P. TIAKABA YINCHUNGER	J.E	SLDC NAGALAND	TIAQUNGER@GMAIL.COM	8974020151	[signature]
13	M.K. War	EE	SLDC Meghalaya	ee.sm.sldc@meghalaya.gov.in	9774012496	[signature]
14	Y. Iakai	AEE	SLDC Meghalaya	iakaiyomon@gmail.com	9402133552	[signature]
15	Purik Buchi	AE (E)	SLDC Arunachal	aesldc202@gmail.com	9366118384	[signature]
16	Himangshu Das	AGM (Reg)	APGCL	himangshu.das@apgcl.org	9435477862	[signature]
17	Amlan Jyoti Chakravorty	AGM	AEGCL	amlan.chakraborty@aegcl.co.in	8638905841	[signature]
18	ARUP SARMAH	AGM	AEGCL	agmcommunication.la@aegcl.co.in	9707854367	[signature]
19	Kaushal Suman	Ch. Mgr	CTUIL	k.suman@powergrid.in	7042396702	[signature]
20	KAMLESH BAISHYA	Dy. Mgr	PGCIL	kamlesh156@powergrid.in	9859723132	[signature]
21	Manish Kr. Tiwari	Sr. GM	POWERGRID	manish.tiwari@powergrid.in	8826896879	[signature]
22	SUGANDH PRASAD BARNWAL	CGM (SL)	NERLDC, Guwahati	spbarnwal@grid-india.in	9433041812	[signature]
23	Lenin.B	DD, NERPC	NERPC	lenin.cea@gov.in	8335905933	[signature]
27	SUPRIYO PAUL	R.M	MB CONTROL	SPAUL@MBCONTROL.COM	9811037172	[signature]
28	Richik Mondal	S.E	MB Control	r.mondal@mbcontrol.com	9147181004	[signature]
29	SANJAY KAUSHAL	CISO	Orbit	sanjay.kaushal@orbit	8860016111	[signature]
30	ANAND SHARMA	VP-SALES	ORBIT	anand.sharma@orbitindia.net	9811789300	[signature]
31	SAPTARSHI DEB	MANAGER	GENUS	saptarshi.deb@genus.in	8420472769	[signature]

P.T.O

List of Participants in 32nd NETeST meeting held on 29.08.2025 in NERPC Conference Hall, Shillong

S.No	Name	Designation	Organization	Email-Id	Contact No.	Signature
32	K.B Jagtap	MS	NERPC	-	-	
33	D.K Baruah	Director	NERPC	-	-	
34	Ashim Kumar Goswami	AD-II	NERPC	-	-	