



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/SE (O)/NETeST/2020/ **572-609**

Dated: April 12, 2022

To,

1. Managing Director, AEGCL, Bijuli Bhawan, Guwahati – 781 001
2. Managing Director, APDCL, Bijuli Bhawan, Guwahati – 781 001
3. Managing Director, APGCL, Bijuli Bhawan, Guwahati – 781 001
4. Director (Generation), Me. PGCL, Lumjingshai, Short Round Road, Shillong – 793 001
5. Director (Distribution), Me. ECL, Lumjingshai, Short Round Road, Shillong – 793 001
6. Director(Transmission), Me. PTCL, Lumjingshai, Short Round Road, Shillong – 793 001
7. Managing Director, MSPDCL, Secure Office Bldg. Complex, South Block, Imphal – 795 001
8. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
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 (EE Zone),Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
13. Chief Engineer (TP&MZ),Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
14. Engineer-in-Chief (P&E), Department of Power, Govt. of Mizoram, Aizawl – 796 001
15. Chief Engineer (P), Department of Power, Govt. of Nagaland, Kohima – 797 001
16. CGM, (LDC), SLDC Complex, AEGCL, Kahilipara, Guwahati-781 019
17. Group General Manager, NTPC, Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
18. ED, NERTS, PGCIL, Dongtich-Lower Nongrah, Lapalang, Shillong -793 006
19. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
20. ED (Commercial), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
21. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad,Haryana-121003
22. Vice President (Plant), OTPC, Badarghat Complex, Agartala, Tripura - 799014
23. GM, NERLDC, Dongtich, Lower Nongrah, Lapalang, Shillong -793 006
24. Member Secretary, ERPC, 14 Golf Club Road, Tollygunge, Kolkata-700033
25. Chief Engineer, GM Division, Central Electricity Authority, New Delhi – 110066
26. Chief Engineer (NPC), NRPC Complex, Katwaria Sarai, SJSS Marg., New Delhi - 110016

Sub: Minutes of 22nd NETeST Meeting.

Sir/Madam,

Please find enclosed herewith the minutes of 22nd NETeST Meeting held at “Hotel Nandan, Guwahati” on the **17th March, 2022** for your kind information and necessary action. The minute is also available on the website of NERPC, **www.nerpc.nic.in**.

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

Encl: As above

Yours faithfully,

S.Imam

Dy. Director

Copy to:

1. CGM, AEGCL, Bijuli Bhavan, Guwahati - 781001
2. CGM, APGCL, Bijuli Bhavan, Guwahati - 781001
3. CGM, DISCOM, Bijuli Bhavan, Guwahati - 781001
4. Head of SLDC, Me.ECL, Lumjingshai, Short Round Road, Umjarain, Shillong – 793 022
5. Head of SLDC, Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
6. Head of SLDC, Department of Power, Dimapur, Nagaland
7. Head of SLDC, Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
8. Head of SLDC, Department of Power, Govt. of Mizoram, Aizawl – 796 001
9. Head of SLDC, TSECL, Agartala – 799 001
10. Chief Engineer(Elect), Loktak HEP, Vidyut Vihar, Kom Keirap, Manipur- 795124
11. Addl. GM (EED), NTPC Ltd., Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
12. DGM (C&M), OTPC, 6th Floor, A-Wing, IFCI Tower -61, Nehru Place, New Delhi – 110019.



S.Imam

Dy. Director

North Eastern Regional Power Committee

MINUTES OF THE 22nd NER Telecommunication, SCADA & Telemetry

(NE-TeST) COORDINATION

SUB-COMMITTEE MEETING OF NERPC

Date : 17/03/2022 (Thursday)
Time : 10:00 hrs
Venue : “Hotel Nandan”, Guwahati.

The List of Participants in the 22nd NETeST Meeting is attached at **Annexure-I**.

Member Secretary NERPC welcomed the participants to the 22nd NETeST meeting of NERPC. He stated that most of the Communication Projects in NER are in advanced stage, however significant improvement in telemetry has not been observed. Thus, monthly status of the projects will be reviewed. Further in view of the growing complexity in the Communication system he stated that the agendas from here on would be arranged in the following categories:

- a. Control Center Related Items
- b. Station level reporting
- c. Communication Medium Related items

Thereafter Member Secretary NERPC requested Deputy Director, NERPC to take up the agenda items for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF THE 21st MEETING OF “NORTH EASTERN TELECOMMUNICATION, SCADA & TELEMETRY (NETeST)” SUB COMMITTEE OF NERPC.

Deputy Director, NERPC informed that minutes of the 21st NETeST Meeting held on 25th November, 2021 at Guwahati were circulated by NERPC vide letter No. NERPC/SE(O)/TeST/2021/1577-1614 dated 23rd December, 2021.

The Sub-committee confirmed the minutes of the 21st NETeST Meeting of NERPC as no comments/observations were received from the constituents.

A.1 Upgradation Activities of SCADA-EMS systems at Regional/State level in North Eastern Region:

An MoU related to free-of-cost consultancy with a detailed responsibility matrix was circulated in 19th and 21st NETeST meeting under which it was proposed that all SLDCs and NERLDC can upgrade in a unified manner to get benefits of seamless integration, joint capacity building and economies of scale in terms of cost implications. It was agreed in-principle to sign the draft MoU and corresponding funding through PSDF by routing the DPR through TCC/NERPC meeting. As present the status of signing of MoUs is mentioned in table below.

S N	States	Remarks
1.	Arunachal Pradesh	Under administrative approval process in Secretariat office.
2.	Assam	Signed on 06th January 2022.
3.	Manipur	Under consideration process in MD office. Getting slightly delayed because of restrictions due to ongoing state-elections.
4.	Meghalaya	Signed on 28th October 2021.
5.	Mizoram	Signed on 01st November 2021.
6.	Nagaland	Signed on 01st March 2022.
7.	Tripura	Under administrative approval process in MD office.

All SLDCs are requested to put up the matter of MoU signing on priority so that other technical activities can be started at the earliest.

Meanwhile a meeting was held in Ministry of Power, Delhi on 07th February 2022 in which review by Honourable Minister for Power Sh. R.K. Singh was done on the various aspects of grid management. As per one of the discussion points, POSOCO-NLDC was asked to submit detailed notes on some of the identified key areas with inputs pertaining to SCADA & REMC as mentioned below.

SCADA/EMS System:

Status of upgradation of SCADA/EMS system SLDC wise. Proposed plan of upgradation.

Discussion points:

- a. Status of funding for the proposed upgradation of SCADA/EMS system SLDC wise – self or through-loan (mode of loan).
- b. Various utilization of Data / SCADA System. Major communication issues if any being faced.
- c. REMC System:
Usages of REMC System at RLDC/ SLDCs. Constraints faced in REMC system. – Requirement of additional data type for better utilization. Integration status of RE plants in REMC system.
- d. Status of forecasting and scheduling of generation?
- e. Various outputs and reports generated after processing the data may be elaborated.

Suitable reply as per the discussions in the previous NETeST forums related to financial constraints, PSDF funding, communication issues, etc. in NER has been submitted to NLDC for subsequently submitting it to MoP for kind consideration.

Deliberation in the meeting

NERLDC mentioned that MoUs with Meghalaya, Mizoram, Assam and Nagaland have been signed till date and draft Technical Specifications prepared by Corporate Engineering Dept. of POSOCO have been shared for inputs. It was requested to Tripura SLDC, Manipur SLDC and Arunachal Pradesh SLDC to sign the MoU at the earliest to begin with necessary activities related to Upgradation process. It was also specified that financial issues related to funding of SCADA-EMS upgradation projects by SLDCs has been highlighted to Ministry of Power by NLDC on 07th February 2022 during a meeting related to Grid Operation and corresponding write-up will also be submitted by NLDC to MoP within April 2022.

TSECL, DoP-Nagaland and DoP-Arunachal Pradesh raised the issue of high cost of AMC referring to the Budgetary quotation included in Detailed Project Report as compared to the present AMC cost being paid to GE. NERLDC informed the forum that cost of AMC is high due to consideration of backup SLDCs, replacement of hardware and software during AMC in-case required for cyber security, etc.; however, the price will come down in the tender considering Open-Tender Competitive Bidding followed by Reverse Auctioning to be done by POSOCO. NERLDC also submitted that a considerable amount of project cost i.e. at least 30% of Supply/Services price has been kept under AMC portion so that vendors are not able to front-load the prices and provide good

services during Comprehensive-AMC period also. NERLDC further submitted that clause specifying that AMC cost will be 30% of project cost will be removed from contract at the time of tendering, if required by the states.

States requested to include the AMC cost in the PSDF funded portion itself as similar things were done in some of the earlier tenders by NERPC in which AMC had been an inbuilt part of Capex but its corresponding payment is being done in a staggered manner over the period of time. It was deliberated that due to poor financial position of state-utilities, it is advisable to include the AMC price also under PSDF funding by Govt. of India. The forum agreed that the DPR may be suitably modified and put forward as an agenda on behalf of state-utilities in the next TCC & NERPC Board meeting scheduled on 26th March 2022 and 28th March 2022 respectively for 100% PSDF funding.

The Sub-Committee noted as above.

Action: All State Utilities, NERLDC & NERPC.

A.2 Establishment of VSAT Communication in selected remote locations for state-utilities in North-Eastern region:

As per deliberations against Agenda Item B.6 in MoM of 17th NETeST meeting it was mentioned that NERPC and NERLDC will sit together for cost analysis and explore the possibility of PSDF funding. After successful pilot projects in Tezu (Arunachal Pradesh) and Killing (Meghalaya), it was proved that the VSAT will function in extreme climatic conditions and hilly terrain areas of NER if Extended-C band is used.

In view of above, a draft Detailed Project Report (DPR) was prepared and circulated amongst all state-utilities and necessary inputs were taken and incorporated in it; subsequently a budgetary quotation was collected for 129 nos. of remote locations in NER and 7 SLDCs.

Meanwhile a meeting was held in Ministry of Power, Delhi on 07th February 2022 in which review by Honourable Minister for Power Sh. R.K. Singh was done on the various aspects of grid management. As per one of the discussion points, POSOCO-NLDC was asked to submit detailed notes on some of the identified key areas with inputs pertaining to SCADA & REMC. Suitable reply as per the discussions in the previous NETeST forums related to financial constraints, PSDF funding, communication issues, etc. in NER has been submitted to NLDC for subsequently submitting it to MoP for kind consideration.

Deliberation in the meeting

NERLDC mentioned that financial issues related to funding of VSAT Communication project by SLDCs has been highlighted to Ministry of Power by NLDC on 07th February 2022 during a meeting related to Grid Operation and corresponding write-up will also be submitted by NLDC to MoP within April 2022.

Arunachal Pradesh requested that some of its stations being constructed under Comprehensive Arunachal scheme also needs to be included in VSAT project along with list of stations from other states of NER. The forum agreed that such stations may please be submitted to NERLDC for completing the DPR so that it can be put forward as an agenda on behalf of state-utilities in next TCC & NERPC Board meeting scheduled on 26th March 2022 and 28th March 2022 respectively for 100% PSDF funding.

The Sub-Committee noted as above.

Action: All State Utilities, NERLDC & NERPC.

A.3 Deployment of new Remote Terminal Units (RTUs) in selected substations of NER.

On request of state-utilities related to RTUs, a draft DPR with technical specifications was prepared by NERLDC and submitted in 21st NETeST meeting which may be put up for PSDF funding after taking certain station-specific inputs from SLDCs. A total of 112 locations were identified by state-utilities for it with break-up as mentioned below.

- Meghalaya: 5 stations (incl. 2 spares).
- - Manipur: 3 stations
- - Mizoram: 14 stations
- - Arunachal Pradesh: 15 stations.
- - Nagaland: 42 stations.
- - Assam: 33 stations.
- - Tripura: Nil.

SLDCs were requested to provide inputs such as requirements of MDEM, OLTC Transducers, Analog/Digital Cards, Multifunction transducers, Time Synchronization Units, DC to Ac Convertors, etc. so that the quantity in BoQ can be finalized and budgetary quotation can be taken based on it. A template for populating these inputs was shared with SLDCs on 24th February 2022. All state-utilities are requested to populate the data in the shared template so that BoQ and Cost-Estimate can be prepared for the DPR.

An email dated 24/02/2022 was sent to all state utilities along with a template to fill the station-wise details required for RTUs. The template is attached as **Annexure-A.3**. Further, it is requested from all state to fill up details in coordination with Station In-Charges.

Deliberation in the meeting

Arunachal Pradesh requested that some of its stations being constructed under Comprehensive Arunachal scheme also needs to be included in RTUs project along with list of stations from other states of NER. Tripura SLDC mentioned that currently it has no requirement of RTUs to be funded from PSDF under the proposed DPR being prepared for NER state-utilities. Meghalaya-SLDC requested that its DPR for procurement of DI Cards is not likely to get considered for PSDF funding and the corresponding RTUs are quite old and hence the same may also be included in this project.

The forum agreed that such stations of DoP-AP and MePTCL may please be submitted to NERLDC for completing the DPR so that it can be put forward as an agenda on behalf of state-utilities in next TCC & NERPC Board meeting scheduled on 26th March 2022 and 28th March 2022 respectively for 100% PSDF funding.

The Sub-Committee noted as above.

Action: All State Utilities, NERLDC & NERPC.

A.4 Cyber Security aspects in SCADA/IT systems at Load Despatch Centres in North-Eastern region:

State-Utilities may update the status with respect to CII Status by NCIIPC, ISO 27001:2013 implementation, VA-PT twice a year, Cyber Crisis Management Plan (CCMP), Cyber Management Team (CMT), patching of vulnerabilities and virus alerts from CERT-In/CERT-GO, etc, participation in various trainings and workshops on Cyber Security being conducted by CEA, Ministry of Power and POSOCO, etc.

A summary of the present status of each SLDC is attached in as **Annexure-A.4**.

Deliberation in the meeting

NERLDC presented the status of cyber security work-progress and mitigation activities of all state-utilities based on inputs collected from respective CISOs. It was also mentioned that a committee has been constituted by MD-TSECL considering several alerts getting raised by CERT-In and Cyber Swachhta Kendra (CSK) related to its IT infrastructure.

The Sub-Committee noted as above.

Action: All State Utilities.

A.5 Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS):

Please find the copy of Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS) approved by Ministry of Power for information and necessary action please. Annexure A.5a and Annexure A.5b.

Deliberation in the meeting

NERLDC mentioned that under Category B projects which needs to be discussed in RPC forum, it has been assigned only a time frame of 45 days to give inputs, if any; however, the NETeST meeting is being scheduled every 90 days. So, there is a possibility that the inputs may not be put up in NETeST forum for discussion.

NERPC mentioned that these are guidelines issued by MoP which needs to be complied by all utilities in NER and some special meetings can be scheduled for it, if required.

The Sub-Committee noted as above.

Action: All State Utilities.

A.6 Feasibility to connect Lekhi substation over Fiber-Optic network:

In the 21st NETeST meeting, NERTS requested the forum to divert the material of 132kV Surjamani Nagar (TSECL) - Monarchak (NEEPCO) or 132kV Rokhia (GBPP) - Surjamani Nagar (TSECL) to Lekhi S/S, but NERPC informed that proposal may be kept on hold as NERPC will take up the matter with TSECL for completion of the above-mentioned links.

Deliberation in the meeting

It was deliberated among the forum and subsequently decided that due to delay in line construction of 132kV SM Nagar-Rokhia D/C and 132kV SM Nagar – Monarchak, the OPGW laying activities will be deleted from NER-FO Expansion project scope and will be included in NER Reliable communication scheme after getting request-in-writing from TSECL. Thus, end equipment (FOTE) of 132kV Rokhia station (TSECL) will be diverted to 132kV Lekhi S/s for terminating the fiber-optic at 132kV Lekhi station subject to confirmation of NERPSIP as equipment are under its ownership.

The Sub-Committee noted as above.

Action: PGCIL & TSECL.

A.7 Feasibility to connect Sterlite owned OPGW with ULDC network:

Under NER Strengthening scheme, Sterlite has constructed following lines along with OPGW:

1. 132 kV R C Nagar – PK Bari (TSECL) D/c: Will provide additional path between Agartala and PK Bari
2. 400 kV Silchar – Misa D/c: Will provide additional link between south NER and North NER.
3. 132 kV BNC-Chimpu D/c: Will provide additional path between Arunachal Pradesh and rest of NER.
4. 132 kV PK Bari (TSECL) - PK Bari (IGT): Will provide secondary path for Indigrid Stations.

Feasibility to connect the above links with existing ULDC network may be explored.

In the 21st NETeST meeting, NERTS informed that after fibers are provided by M/s INDIGRID patching will be done at the terminal equipments. Subsequently the links can be integrated with NMS and the availability may be confirmed by NERLDC. The forum requested NERTS, M/s INDIGRID to take necessary action at the earliest.

Deliberation in the meeting

The summary of deliberations is mentioned in table below.

SN.	Description	Deliberation
1.	132 kV RC Nagar – PK Bari (TSECL)	Indigrid will hand-over six (06) nos. of fibers to NERTS-ULDC to be used till FODB at both ends. NERTS-ULDC will integrate the fibers with existing SDH/PDH of ULDC.
2.	400 kV Silchar- Misa D/C	Indigrid will hand-over six (06) number of fibers to NERTS-ULDC till FODB at both ends. NERTS-ULDC will integrate the fibers with existing SDH/PDH of ULDC. Further, NERTS will use amplifier as the link length is 178 kms; for which Amplifier will be provided & installed by NERTS.
3.	132 kV BNC – Chimpu D/C	Indigrid will hand-over six (06) number of fibers to NERTS-ULDC till FODB at both ends. NERTS will integrate the fibers with existing SDH/PDH of ULDC.

4.	132 kV PK Bari (TSECL) - PK Bari (IGT)	As submitted in forum, the fiber as well as the end equipment of the said link belongs to TSECL. NERLDC requested Indigrid and TSECL to submit the feasibility to establish a connection over the said link which was agreed by the respective utilities.
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The Sub-Committee noted as above.

Action: NERTS & INDIGRID.

A.8 Establishment of second communication channel to telemeter data and voice from Indigrid stations to NERLDC Shillong.

During the project commissioning phase of 400 kV SM Nagar and 400 kV PK Bari S/s, second communication channel was provided by M/s Sterlite Ltd. over Airtel MPLS point to point link. But in November 2021, the said link was discontinued resulting in only one communication link catering Voice communication, SCADA data and PMU data to NERLDC.

Indigrid needs to establish second communication channel on priority preferably on ULDC network.

Deliberation in the meeting

Indigrid submitted to the forum that second communication channel to telemeter data and voice from Indigrid stations will be provided using Powertel network. NERLDC requested Indigrid to install firewall at all ends (including NERLDC) for the Powertel link. Indigrid agreed for it.

The Sub-Committee noted as above.

Action: INDIGRID.

A.9 OPGW network planning for ISTS Drawal Points and NER states drawal point:

It is desired that all the ISTS drawal points and states drawal point must be connected through OPGW. In this regard the requirement for installation OPGW in the missing link to connect all the drawal points to SLDCs and RLDCs needs to be deliberated.

Deliberation in the meeting

DD, NERPC cited the CEA (Technical Standards for Communication System in Power System Operation) Regulations, 2022:

Reg.4.(2) The communication system shall be capable to provide integration with supervisory control and data acquisition system, video conferencing, wide area

measurement system, video conferencing system, automatic meter reading, electronic private automatic branch exchange, voice over internet protocol and tele-protection.

Further he stated that the following Metering/AMR projects are under planning/implementation stage and the communication infrastructure has to be improved to comply with CEA Regulations:

- a. 5 min Meter, AMR project for ISTS – Under planning stage.
- b. SAMAST for Intra-state – Under implementation

After detailed deliberation the forum decided that since SAMAST project is under implementation communication infrastructure has to be upgraded immediately and requested all the state utilities to modify the DPR for reliable communication and place to TCC and NERPC forum for further approval. Regarding upgradation of communication infrastructure for 5 min Meter, AMR project it was decided to take up in the next NETeST meeting.

The Sub-Committee noted as above.

Action: all state utilities, NERLDC, NERPC.

A.10 Issues of SLDCs in SCADA AMC:

1. State Estimator value of non-reporting RTUs in SLDCs

The following issues faced by Assam SLDCs in SCADA AMC.

2. Integration of SLL in the web server of SCADA: Looking from the cyber security prospective SSL certificate has been procured and forwarded the same to M/S GE T&D Ind. Ltd. for incorporation of the same in the web server. Though SLDC, AEGCL is continuously requesting to M/S GE T&D Ind. Ltd., the same is yet to be implemented.
3. Support to run EMS feature of SCADA: M/S GE T&D Ind. Ltd. Has configured the EMS functionalities with simulated data. Support needed from M/S GE T&D Ind. Ltd to Prepare Database and Run EMS.
4. The performance of battery bank of UPS-1 in SLDC was not found to be satisfactory during the last preventive maintenance of the UPS which was performed on 09/02/2022. Therefore, AEGCL requested GE to do the needful for replacement of the said battery bank looking at the importance of the matter as SCADA servers requires uninterrupted power supply.

Deliberation in the meeting

The summary of deliberations is as follows:

1. GE informed the forum that NET Model database which is not working properly is the responsibility of SLDCs to maintain. GE requested to SLDCs, to do the necessary modifications in NET Model for smoothly running STATE Estimator (RTNET). Any assistance required will be provided by GE.
2. AEGCL informed the forum that they have procured SSL certificate which is registered by other organization due to miscommunication from GE. GE informed the forum that SSL certificate procurement and configuration is not part of existing contract. But based on their long business partnership with M/s AEGCL, they agreed to execute (Only configuration part) it one time activity as exception. It is requested to AEGCL to register a domain against procured public IP for e-terra reports site and same for SSL certificate. The forum requested GE to implement the same by April, 2022.
3. AEGCL requested for GE support to run EMS feature of SCADA. GE agreed for remote support and request AEGCL to please share the schedule. AEGCL requested GE to depute Mr. Tamal for two weeks for rectification of RTNRT database and implementation of EMS feature. GE responded that database preparation is prime responsibility of customer. GE will provide assistance since constituent are facing problem. GE will provide remote support for NETMODEL database rectification and will depute Mr. Tamal at the time of implementing EMS to Assam SLDC.
4. Various dialog exchange among GE, NERPC & SLDC's. Discussion continued to keep it under the liability of GE for whole AMC period. GE denied and shown its inability to replace Battery Bank due to unclear guidelines in contract to replace battery cells below 1.75V and also at few sites it has been notified regarding violation of contractual condition of maintaining environmental condition at site.

After detailed deliberation the forum is of the view that the contract has well defined consumable items to be excluded from contract. The forum requested GE to maintain Battery Bank till the completion AMC period as per contract.

The Sub-Committee noted as above.

Action: DoP AP & M/s Devi Energies.

A.11 Provisioning of E1 interfacing to create secondary channel for carrier inter tripping for 400 KV Mirza- Silchar and 400 KV Mirza-Bongaigaon line:

At present the protection coupler for carrier inter tripping for 400 KV Mirza- Silchar and 400 KV Mirza-Bongaigaon line runs only over PLCC and there is no provision for E1 interfacing to create secondary channel which is extremely necessary for reliability.

Deliberation in the meeting

OPGW link is not available in this line. The agenda item is referred to OCC forum for further discussion.

The Sub-Committee noted as above.

Action: Referred to OCC forum.

A.12 Request for 4Mbps Ethernet Link between Agia -Kahilipara:

MePTCL request AEGCL for 4Mbps Ethernet Link between Agia -Kahilipara.

Deliberation in the meeting

Assam is ready to provide the link but requested 2 no. of interfacing cards. The forum requested NERTS to provide the interfacing card.

The Sub-Committee noted as above.

Action: NERTS, AEGCL & MePTCL.

B. ITEMS FOR STATUS
B.1 Status of FO works under different projects:

Latest status of various FO Project in NER:

Project		No. of Links/Nodes	Status
Additional Communication Scheme		8	8 Pending
Reliable Communication Scheme		13+9	All links pending.
NER FO Expansion	Central Sector	16	12 Completed. 4 Pending
	Manipur	11	10 Completed. 1 Pending
	Meghalaya	4	3 Completed. 1 Pending
	Tripura	12	10 Completed. 2 Pending

The status of NER FO Expansion project as given in 21st NETeST meeting:

States	Current Status	Comments/ Issues
Central Sector	400kV Bongaigaon (PG) - 220kV Salakati - 220kV BTPS	Target date: March, 2022.
	400kV Mirza (Azara) - Byrnihat	

	400kV Silchar – Palatana	Stringing for 150 out of 204km completed. Target date is January, 2022.
	132kV Pare – Chimpur	Target date for completion of link is February-2022.
Manipur	132kV Imphal (State) – Karong	MSPCL informed that diversion work is not completed due to RoW issue in the line. MSPCL requested NERTS to lay the OPGW on the existing line and gave permission to carry out the work. Target date for completion of link is March-2022.
Meghalaya	132kV NEHU – NEIGRIHMS	Target: December-2021.
Tripura	132kV Rokhia – Surjamani Nagar	NERTS requested for short closure of the project as it cannot be delayed indefinitely. MS, NERPC requested NERTS to wait till March, 2022 for the construction of the line. It will be reviewed in the next NETeST meeting
	132kV Surjamani Nagar – Monarchak (NEEPCO)	

Deliberation in the meeting

The status of NER FO Expansion project as given in 22nd NETeST meeting:

States	Current Status	Comments/ Issues
Central Sector	400kV Bongaigaon (PG) – 220kV Salakati – 220kV BTPS	Delayed due to RoW. Target date: June, 2022.
	400kV Mirza (Azara) – Byrnihat	
	400kV Silchar – Palatana	Stringing for 178 out of 248km completed. Target date is June, 2022.
	132kV Pare – Chimpur	Work for stringing has initiated on 17th March 2022 and expected date for completion of link is May 2022.

Manipur	132kV Imphal (State) – Karong	MSPCL informed that diversion work is not completed due to RoW issue in the line. MSPCL requested NERTS to lay the OPGW on the existing line and gave permission to carry out the work. Target date for completion of link is June-2022 .
Meghalaya	132kV NEHU - NEIGRIMHS	Stringing of OPGW is completed in February 2022. Laying of approach cable is pending which will be completed by March 2022 .
Tripura	132kV Rokhia - Surjamani Nagar	Due to delay in line construction of 132 kV SM Nagar-Rokhia D/C and 132 kV SM Nagar – Monarchak the OPGW laying will be deleted from NERFO Expansion scope and will be proposed in NER Reliable communication.
	132kV Surjamani Nagar - Monarchak (NEEPCO)	

The Sub-Committee noted as above.

Action: NERTS.

B.2 Status and details of Fiber Optic projects approved in 17th TCC/RPC meeting:

Status as per 21st NETeST meeting

a) Additional Communication Scheme:

SN	Lines	Target Date	OPGW Stringing	Equipment Installation
1	132 kV Silchar - Hailakandi (Part of line)	December, 2021.	Under progress	Material Delivered
2	132 kV Roing – Pasighat	December, 2021.		Material Delivered
3	132 kV Roing – Tezu	December, 2021.		Material Delivered
4	132 kV Tezu – Namsai	December, 2021.		Material Delivered

5	132 kV Tuirial – Kolasib	December, 2021.		Material Delivered
6	400 kV Balipara – Kameng	December, 2021.	Completed	Installed. DC supply Pending.
7	400 kV Bongaigoan – Killing (Brynihat)	December, 2021.		Material Delivered
8	400 kV Silchar – Killing (Brynihat)	December, 2021.		Material Delivered

Detailed status is attached in Annexure B.2a.

b) Reliable Communication Scheme: POWERGRID-NERTS has informed that there is total twenty-two (13+9) links which are coming under this project and status is attached in Annexure – B.2b. Members requested that few additional links be included in the Scheme viz. 132kV Longlak-Mokokchung, 132kV Umiam Stg-III to Umiam Stg-IV, 132kV Khliehriat –Mustem and two other lines

NERTS agreed to the same.

Deliberation in the meeting

a) Additional Communication Scheme: status as per 22nd NETeST meeting.

SN	Lines	Target Date	OPGW Stringing	Equipment Installation
1	132 kV Silchar - Hailakandi (Part of line)	December, 2021.	Stringing Completed. Approach cable laying pending.	Material Delivered
2	132 kV Roing – Pasighat	December, 2021.		Material Delivered
3	132 kV Roing – Tezu	December, 2021.	Stringing 27/73 km	Material Delivered
4	132 kV Tezu – Namsai	December, 2021.	Stringing 82/96 km	Material Delivered
5	132 kV Tuirial – Kolasib	December, 2021.		Material Delivered

6	400 kV Balipara – Kameng	December, 2021.	Completed	Installed. DC supply Pending.
7	400 kV Bongaigoan – Killing (Byrnihat)	December, 2021.	Stringing 198/202 km. Remaining 4km after diversion work.	Material Delivered
8	400 kV Silchar – Killing (Byrnihat)	December, 2021.	Stringing 43.3/216 km	Material Delivered

b) Reliable Communication Scheme: POWERGRID has informed that addition of 132kV Longlak-Mokokchung, 132kV Umiam Stg-I –Stg-II, 132kV Umiam Stg-III to Umiam Stg-IV, 132kV Khliehriat –Mustem, 132kV NEHU- Mawlyndep and 132kV EPIP – Killing will be put up in 22nd NERPC/TCC agenda for approval.

The Sub-Committee noted as above.

Action: NERTS.

B.3 Status of implementation of U-NMS in NER:

In the 21st NETeST meeting, NERTS informed the forum that the package has been awarded to M/s Sterlite Technologies Ltd on 09/08/2021. Technical Documents is under approval. Party has completed survey in (7/7) SLDC's and at NERTS, Shillong and Guwahati.

AGM, AEGCL raised the query that whether the existing state communication network and upcoming network having NMS will be integrated with the UNMS.

Sr. GM, NERTS informed the forum that the Scope of the project included integration of existing and new NMS during the implementation and AMC Period.

Deliberation in the meeting

NERTS informed the forum that the Prototype PDS server has been supplied in Shillong for developing UNMS system. It will be installed by 22.03.2022.

The Sub-Committee noted as above.

Action: NERTS

B.4 Status of URTDSM

The status on various issues related to URTDSM and other PMU related matters needs to be updated to the forum as listed below:

ASSAM: Assam requested NERTS to send GE team to rectify as link is ok but data is not reporting correctly. NERTS agreed to send GE T&D team to investigate the issue.

NERTS: NERTS informed that Analytical application software under URTDSM has been upgraded with new features along with installation of 6th module at all RLDCS, NLDC & Backup NLDC.

Deliberation in the meeting

PMU data in Agia is reporting. The agenda **item may be dropped**.

The Sub-Committee noted as above.

Action: The agenda item may be dropped.

B.5 Automatic Generation Control (AGC) in Indian Grid:

NERLDC informed the forum that as per the CERC order on AGC, all the ISTS stations need to get connected with NLDC for receiving AGC signals. The status is as follows:

Sl. No.	Station Name	Status as in 21st NETeST
1.	BgTPP (Unit #2)	Letter of Award has been issued to M/s Siemens but material is yet to be delivered at site.
2.	AGBPP	NEEPCO informed the forum that OEM (Joint-Venture of GE and BHEL) has quoted very huge amount for necessary modifications in the plant's controllers. Thus, NEEPCO is planning for negotiation with OEM and will be able to update in next NETeST meeting regarding it.
3.	Kopili	NEEPCO may update the status
4.	Kopili II	NEEPCO may update the status
5.	Doyang	NEEPCO may update the status
6.	Khandong	NEEPCO may update the status

Deliberation in the meeting

The status is as follows:

Sl. No.	Station Name	Status as in 22nd NETeST
1.	BgTPP (Unit #2)	NTPC representative absent.
2.	AGBPP	NEEPCO informed the forum that OEMs, GE-BHEL and Mitsubishi, submitted the quotation for necessary works. Thus, NEEPCO is planning for negotiation with OEM and will be able to update the status in the next NETeST meeting.
3.	Kopili	Plant is under R&M, and AGC package is considered under R&M also which is expected to be completed by 2023.
4.	Kopili II	Since plant has not completed the life cycle, the whole DCS will need to be replaced with new DCS along with AGC system. The R&M of Kopili II is pending in 2040, which is quite longer duration. Thus, forum requested NEEPCO to go ahead with AGC implementation without waiting further. As AGC implementation is a necessary as per CERC order.
5.	Doyang	Since plant has not completed the life cycle, the whole DCS will needed to be replaced with new DCS along with AGC system. The R&M of Doyang is pending in 2040, which is quite longer duration. Thus, forum requested NEEPCO to go ahead with AGC implementation without waiting further. As AGC implementation is a necessary as per CERC order.
6.	Khandong	Plant will undergo R&M in 2024, and AGC package is considered under R&M also which is expected to be completed by 2024.

The Sub-Committee noted as above.

Action: NTPC & NEEPCO

B.6 Status of RGMO to the Load Dispatch Centers:

The status is as follows:

SN	Station Name	RGMO / FGMO Status
1.	Khandong (2 units)	Completed.
2.	Kopili Extension (1 unit)	Target date: March, 2021.
3.	Ranganadi (3 units)	GE to visit for site-survey so that target date can be finalized.
4.	DHEP	Letter of Award has been placed but OEM is not able to visit site due to COVID-19 pandemic situations.
6.	OTPC (4 units)	Target date: October, 2021. (Delay due to COVID-19)
7.	BgTPP (3 units)	Completed.

The NERLDC will share Input-Output (I/O) list related to RGMO and FGMO points to all power as and when the utilities are ready to provide the status.

Deliberation in the meeting

The status is as follows:

	Station Name	RGMO / FGMO Status
1.	Khandong (2 units)	Completed.
2.	Kopili Extension (1 unit)	LoA placed on 28th February 2022, work is expected to start by April 2022.
3.	Ranganadi (3 units)	NEEPCO said OEM will be visiting the plant in March 2022 and associate works will be completed by April 2022.
4.	DHEP	NEEPCO informed that all materials have reached the site and work is expected to be complete by April 2022.
6.	OTPC (4 units)	OTPC intimated that all works will be completed by June'2022.
7.	BgTPP (3 units)	Completed.

The Sub-Committee noted as above.

Action: OTPC & NEEPCO.

B.7 Project status of NERPSIP and Arunachal Pradesh Comprehensive Scheme being implemented by PGCIL.

POWERGRID is implementing two numbers of projects namely:

a. Northeastern Region Power System Improvement Project (NERPSIP) for Six (6) States (Assam, Manipur, Meghalaya, Mizoram, Tripura, and Nagaland) for strengthening of the Intra-State Transmission and Distribution Systems. Detailed status is given in **Annexure B.7a**

The status of OPGW in existing line is as follows:

SN	Lines	OPGW Stringing	Equipment Installation	Target	SLDC
1	220kV Sonabil-Balipara	Completed	Pending	January, 2022.	ASSAM
2	132kV Rangia-Rowta			March, 2022	
3	132kV Rupai-Tinsukia			March, 2022	
4	132kV Dhemaji-N. Lakhimpur	Completed	Pending	January, 2022.	
5	132kV N. Lakhimpur-Gohpur	Completed	Pending	January, 2022.	
6	132kV Bokajan-Golaghat			March, 2022	
7	132kV Golaghat-Mariani			March, 2022	
8	132kV Mariani-Jorhat			March, 2022	
9	132kV Jorhat-Nazira			March, 2022	
10	132kV Sankardev Nagar-Samaguri	Under progress		March, 2022	

11	LILO of 132 kV Rangia-Kahilipara at Kamakhya			March, 2022	
12	LILO of 132 kV Rangia-Kahilipara at Kamalpur			March, 2022	
13	132 kV Ampati- Rongkhon	Completed	Pending	January, 2022	MEGHALAYA
14	132 kV Rongkhon-Nangalbira	Completed	Pending	February, 2022	
15	132 kV Nangalbira-Nongstoin			March, 2022	
16	132 kV Nongstoin-Mawngap			March, 2022	
17	132 kV Mawngap-Sumer Stage-I			March, 2022	
18	132 kV Shillong (Mawlai)-NEHU (WB)			March, 2022	
19	132kV Mawngap-Shillong (Mawlai)			March, 2022	
20	Rengpang - Jiribam	Completed	Pending	January, 2022	MANIPUR
21	Churachandpur - Thanlon			March, 2022	
22	Thoubal - Moreh			March, 2022	
23	Elangkhangpokpi LILO (in Churachandpur - Kakching TL)			March, 2022	
24	Tipaimukh LILO (Jiribam PG-Aizwal PG)			March, 2022	
25	132 kV W. Phaileng-Zembawak			March, 2022	MIZORAM

26	132 kV Lunglei-Lungen			March, 2022	
27	132kV Zunagtui - Saitul			March, 2022	
28	132kV Saitul - Khawzawl			March, 2022	
29	66 kV Mokokchung-Tuensung	Completed	Pending	January, 2022	NAGALAND
30	132 kV Meluri (Khipire)-Kohima (WB)	Completed	Pending	January, 2022	
31	132 kV PK Bari-Kailashar	Completed	Pending	January, 2022	TRIPURA
32	132 kV PK Bari-Kamalpur	Completed	Pending	January, 2022	
33	132 kV Kamalpur-Dhalabil	Completed	Pending	January, 2022	
34	132 kV Rabindranagar-Monarchak	Completed	Pending	January, 2022	
35	132 kV PK Bari-Ambasa	Completed	Pending	January, 2022	
36	LILO of 132 kV Agartala-Teliamura at Baramura	Completed	Pending	January, 2022	
37	132kV 79 Tilla Agartala - Rokhia			March, 2022	
38	132kV PK Bari - Mission Tilla			March, 2022	
39	132kV PK Bari - Kumarghat (PG)			March, 2022	

With reference to CEA (Technical standards for Communication system in Power System Operation) Regulation, 2020, in the special meeting with NERPSIP in December, 2021 the following points were decided:

1. State utilities to confirm the fulfillment of scalability to cater to the future requirements viz AMR. with joint FAT
2. Immediate installation of end equipments and integration with NMS. Existing links also to be integrated in NMS.
3. Demonstration of data reporting to SLDCs for OPGW over existing lines by Feb, 22.
4. Completion of all links by March, 22.

b. Comprehensive Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh

Detailed status is given in **Annexure B.7b**.

The status of OPGW in existing line is as follows:

SN	Lines	Target	OPGW Stringing	Equipment Installation
ARUNACHAL PRADESH				
1	220kV Tinsukia-Kathalguri		Completed	Pending
2	220kV Kathalguri-Deomali		Completed	Pending
3	132kV Along-Pasighat old	Dec'22	Yet to start	
4	132kV Daporijo-Along	Dec'22	Yet to start	
5	132kV Ziro-Daporijo	Dec'22	Yet to start	
6	132kV Balipara-Nechipu	Dec'22	Completed	Pending
7	132kV Khupi-Nechipu	Dec'22	Under progress	

In continuation of the special meeting with Comprehensive Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh in January, 2022 the following points are proposed:

1. For the existing lines at Daporizo, Along, Pasighat, Nechipu, Khupi, Deomali stations are having RTUs. Integration and reporting of the above stations over FO to be done by March, 22.
2. FAT by February, 22 in presence of DoP, AP.
3. All installation to be completed by March, 22.

4. NERTS has applied for stringing of OPGW on 132kV Pasighat-Roing, 132kV Roing-Tezu, 132kV Tezu-Namsai from 01.03.2022 to 31.03.2022. In the meeting on 18.02.2022 it was agreed by PGCIL Comprehensive team to immediately apply for matching with other lines in the corridor.

Deliberation in the meeting

- a. Status of Northeastern Region Power System Improvement Project (NERPSIP) for Six (6) States is as follows:

SN	Lines	OPGW Stringing	Equipment Installation	Target	SLDC
1	220kV Sonabil-Balipara	Completed	Pending	April, 2022	ASSAM
2	132kV Rangia-Rowta	Pending	Pending	May, 2022	
3	132kV Rupai-Tinsukia	Pending	Pending	May, 2022	
4	132kV Dhemaji-N. Lakhimpur	Completed	Completed	Completed	
5	132kV N. Lakhimpur-Gohpur	Completed	Completed	Completed	
6	132kV Bokajan-Golaghat	Pending	Pending	May, 2022	
7	132kV Golaghat-Mariani	Pending	Pending	May, 2022	
8	132kV Mariani-Jorhat	Pending	Pending	May, 2022	
9	132kV Jorhat-Nazira	Completed	Pending	April, 2022	
10	132kV Sankardev Nagar-Samaguri	Completed	Pending	April, 2022	
11	LILO of 132 kV Rangia-Kahilipara at Kamakhya	Pending	Pending	May, 2022	
12	LILO of 132 kV Rangia-Kahilipara at Kamalpur	Pending	Pending	May, 2022	
13	132 kV Ampati- Rongkhon	Completed	Pending	April, 2022	MEGHA LAYA
14	132 kV Rongkhon-Nangalbira	Completed	Pending	April, 2022	
15	132 kV Nangalbira-Nongstoin	Completed	Pending	April, 2022	
16	132 kV Mawngap-Sumer	Completed	Pending	April, 2022	

	Stage-I				
17	132 kV Nongstoin-Mawngap	For some parts of the lines, two separate lines are carried over common D/C towers and 24FO OPGW already exists for one of the lines. Confirmation is required for loading of additional 24F OPGW clamped to existing 24F OPGW on existing towers of Meghalaya.			
18	132 kV Shillong (Mawlai)-NEHU (WB)				
19	132kV Mawngap-Shillong (Mawlai)				
20	Rengpang - Jiribam	Completed	Pending	April, 2022	MANIPUR
21	Churachandpur - Thanlon	Pending	Pending	June, 2022	
22	Thoubal - Moreh	Pending	Pending	June, 2022	
23	Elangkhangpokpi LILO (in Churachandpur - Kakching TL)	Pending	Pending	June, 2022	
24	Tipaimukh LILO (Jiribam PG-Aizwal PG)	Pending	Pending	June, 2022	
25	132 kV W. Phaileng-Zembawak	Pending	Pending	June, 2022	MIZORAM
26	132 kV Lunglei-Lungen	Pending	Pending	June, 2022	
27	132kV Zunagtui - Saitul	Pending	Pending	June, 2022	
28	132kV Saitul - Khawzawl	Pending	Pending	June, 2022	
29	66 kV Mokokchung-Tuensung	Completed	Pending	April, 2022	NAGALAND
30	132 kV Meluri (Khipire)-Kohima (WB)	Completed	Pending	April, 2022	
31	132 kV PK Bari-Kailashar	Completed	Pending	April, 2022	TRIPURA
32	132 kV PK Bari-Kamalpur	Completed	Pending	April, 2022	
33	132 kV Kamalpur-Dhalabil	Completed	Pending	April, 2022	
34	132 kV Rabindranagar-Monarchak	Completed	Pending	April, 2022	
35	132 kV PK Bari-Ambasa	Completed	Pending	April, 2022	
36	LILO of 132 kV Agartala-Teliamura at Baramura	Completed	Pending	April, 2022	

37	132kV 79 Tilla Agartala - Rokhia	Pending	Pending	May, 2022	
38	132kV PK Bari - Mission Tilla	Pending	Pending	May, 2022	
39	132kV PK Bari - Kumarghat (PG)	Pending	Pending	May, 2022	

MS, NERPC suggested to form a task force consisting of Members from NERPC, NERLDC, NERPSIP and members from states utilities to discuss and resolve all the pending issues.

GM, NERPSIP informed the forum that Supply of NMS software, PC, Printers for Assam state will be in the month of March 2022 and installation will be done in April 2022.

b. Comprehensive Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh:

Representative of Comprehensive Scheme for AP were absent.

The Sub-Committee noted as above.

Action: NERPSIP(PGCIL) & Comp. Sch. Of AP(PGCIL).

B.8 Status of Connectivity of OPGW from 132kV Badarpur Kumarghat LILO point to Karimganj Substation.

In the MoM of 19th NETeST it was decided that under the scope of AEGCL OPGW laying LILO point to Karimganj along with necessary SDH and Drop Insert Mux. for OPGW communication was required. This is an important ULDC link and data via PLCC from Karimganj is not reliable.

Deliberation in the meeting

AEGCL informed the forum that worked has been awarded. Completion by June, 2022.

The Sub-Committee noted as above.

Action: APGCL & AEGCL

B.9 Selected cases of sub-stations for rectification of corresponding data/communication related issues:

Utility	Station	Latest Status/ Issues
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NEEPCO	Ranganadi-2nd channel	It was decided that second channel for Ranganadi will be provided once 132kV Pare-Chimpu Fiber-Optic link is completed.
NEEPCO	Doyang	NERLDC submitted to forum that CT upgradation and corresponding changes in RTU should have been carried out simultaneously. Also, Unit side (LV of GT) data needs to be telemetered from site. NEEPCO informed that LOA for correction of RTU and MFTs database has been placed but OEM is not able to visit due to COVID-19 pandemic situations.
OTPC	Palatana	Unit side (LV of GT) data needs to be telemetered. Was to be done in sync with RGMO/FGMO target deadline of April 2022.

Deliberation in the meeting

Utility	Station	Latest Status/ Issues
NEEPCO	Ranganadi-2nd channel	It was decided that second channel for Ranganadi will be provided once 132kV Pare-Chimpu Fiber-Optic link is completed; which is expected to be completed by May-2020. For Unit side (LV of GT) data NEEPCO informed that OEM will be visiting the plant in March 2022 and associated works will be completed by April 2022.
NEEPCO	Doyang (RTU Data)	NEEPCO informed that OEM will be visiting the plant in March 2022 and associated works will be completed by April 2022.
OTPC	Palatana	OTPC intimated that all works will be completed by June'2022.

The Sub-Committee noted as above.

Action: NEEPCO & OTPC.

B.10 VSAT For Roing Tezu Namsai:

The present status of data availability from above mentioned stations is stated in table below.

Sl. No.	Name of Station	Communication link	Telemetry status
1	Roing	Healthy	Intermittent due to gateway issue at site.
2	Tezu	Healthy	Healthy
3	Namsai	Healthy	Intermittent due to SCADA Gateway software issues at site.

Deliberation in the meeting

The status as given in 22nd NETeST meeting:

Sl. No	Name of Station	Communication link	Telemetry status
1	Roing	Healthy	Intermittent due to gateway issue at site. NERTS along with OEM of SCADA system will visit site in March 2022.
2	Tezu	Healthy	Healthy
3	Namsai	Healthy	Intermittent due to SCADA Gateway software issues at site. NERTS along with OEM of SCADA system will visit site in March 2022.

The Sub-Committee noted as above.

Action: NERTS.

B.11 Status of RTUs reporting in NER:

The latest status is as follows:

Central Sector	No. of RTUs Installed	RTUs Reporting		State Estimator value of non-Reporting RTUs	Comments/ Non reporting RTUs
		No.	%		

NEEPCO	7	7	100%		
NHPC	1	1	100%		
NTPC	1	1	100%		
OTPC	1	1	100%		
PGCIL	23	23	100%		
KMTL	1	1	100%		
INDIGRID	2	2	100%		
State Sector					
Arunachal Pradesh	9	2	22.2%	Highly Inaccurate	Along, Daporijo, Deomali, Khupi, Lekhi, Pasighat & Dikshi.
Assam	70	55	78.6%	Highly Inaccurate	Agia, Bordubi, Ghoramari, Gauripur, Haflong, Hailakandi North Lakhimpur, Khaloigaon, Majuli, Margherita, Sonabil, Sonari, Srikona, Teok Umrangshu.
Manipur	13	11	84.6%	Highly Inaccurate	Hundung, Tipaimukh
Mizoram	5	3	60%	Highly Inaccurate	Lungmual, Sihhmui,
Meghalaya	26	24	92.3%	Highly Inaccurate	Cherapunjee, Mawngap
Nagaland	13	4	30.8%	Highly Inaccurate	Ganeshnagar, Kiphire LHEP, Meluri, Mon, Nagnimora, Power house, Tizit, Tuensang.

Tripura	17	6	35.3%	Highly Inaccurate	Amarpur, Ambassa, Badharghat, Belonia, Boxanagar, Budhjungnagar, Dhalabill, Gamaitila, Gournagar, Sabroom Satchand.
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Deliberation in the meeting

All the SLDCs were requested to calculate data availability and RTU availability as per 17th & 18th NETeST meeting decisions. The SLDCs were requested to submit the same every month to NERLDC/NERPC.

The Sub-Committee noted as above.

Action: All State Utilities.

B.12 Non-Reporting RTUs of State Utilities of NER (which are installed):

The presentation on telemetry status for the month of February-2022 is attached as **Annexure-B.12.**

The utility-wise discussion is tabulated below:

SN	Utility	Stations Not Reporting	Latest Status/ Issues
1	Assam	SAS upgradation	AEGCL informed that the project is expected to be completed by September 2022.
2	Tripura	Dhalabil,	TSECL representative was not present in the meeting.
		Ambassa	
		Sabroom, Satchand	
		13 station not covered by NERFO expansion project	

3	Meghalaya	Procurement of DI card from PSDF.	MePTCL informed the forum that it is waiting for reply form PSDF committee for approval.
4	Manipur	Churachandpur, Kongba and Kakching	MSPCL will place LoA to M/s GE T&D to integrate the new bays in the existing RTUs.
6	Mizoram	Zuangtui	FO link has been completed, however RTU data is reporting partially.
		Luangmual	PE&D, Mizoram will look into the matter for restoration of GPRS connectivity.
		Kolasib	RTU is reporting partially.
7	Ar. Pradesh	VSAT installation	DoP, Arunachal Pradesh will take up the matter with OEM to expedite the project within a month.

Deliberation in the meeting

The utility-wise discussion is tabulated below:

SN	Utility	Stations Not Reporting	Latest Status/ Issues
1	Assam	SAS upgradation	AEGCL informed that the project is expected to be completed by September 2022.
2	Tripura	Dhalabil,	Dhalabil FO is under diversion due to LILO works. Ambassa will be restored over GPRS. Sabroom and Satchand will be restored over GPRS.
		Ambassa	
		Sabroom, Satchand	
		13 station not covered by NERFO expansion project	
3	Meghalaya	Procurement of DI card from PSDF.	MePTCL will propose procurement of new RTUs under DPR referred in Agenda A.3.

4	Manipur	Churachandpur, Kongba and Kakching	Cable laying and other works are in progress at site. Once completed LoA to M/s GE will be placed for database work.
		Elangkhangpokpi, Thanlon, 132kV Thoubal	MSPCL informed that RTUs are being proposed under DPR prepared by NERPC for the project of deployment of new RTUs in NER.
6	Mizoram	Zuangtui	FO link has been completed, however RTU data is reporting partially. Isolators cannot report due to non-availability of marshalling box and auxiliary contacts. Isolators are manually operated.
		Luangmual	PE&D, Mizoram will investigate the matter for restoration of GPRS connectivity. The issue is due to static IP to be provided by M/s BSNL at SLDC end.
		Kolasib	Communication link is completed and RTU is reporting partially. Isolators cannot report due to non-availability of marshalling box and auxiliary contacts. Isolators are manually operated.
7	Ar. Pradesh	VSAT installation	Commissioning of VSAT Communication will be commencing in March 2022. Forum submitted that DoP-AR should take M/s GE in loop along with VSAT communication to telemeter the data at SLDC.

The Sub-Committee noted as above.

Action: All state utilities.

B.13 Wrong status of Isolators and CB status at 132 kV SM Nagar S/s:

TSECL requested NERTS to rectify the issue of CMR for the 132 kV SM Nagar – Comilla Line 1 and 2; 132 kV Palatana – SM Nagar line in SM Nagar station as the above lines

are maintained by NERTS itself. TSECL will rectify the issue of all other bays in coordination with GE. A summary is tabulated below:

Sl. No.	Name of the bay	Status
1.	Comilla Bay - 1	Line Isolator status is wrong.
2.	Comilla Bay - 2	Line Isolator status is wrong.
3.	Palatana Line	Line Isolator status is wrong.
4.	Bus Coupler	CB and Isolator status is reporting wrong value.
5.	SM Nagar (Indigrig) Line	CB and Isolator status is reporting wrong value.
6.	BJ Nagar Line	CB and Isolator status is reporting wrong value.
7.	Agartala Line-1	CB and Isolator status is reporting wrong value.
8.	Agartala Line-2	CB and Isolator status is reporting wrong value.
9.	132/33 kV ICT - 1	CB and Isolator status is not reporting.
10.	132/33 kV ICT - 1	CB and Isolator status is not reporting.

Deliberation in the meeting

TSECL requested NERTS to rectify the issue of CMR for the 132 kV SM Nagar – Comilla Line 1 and 2; 132 kV Palatana – SM Nagar line in SM Nagar station as the above lines are maintained by NERTS itself. TSECL will rectify the issue of all other bays in coordination with GE.

The Sub-Committee noted as above.

Action: TSECL & NERTS.

B.14 Non-reporting of telemetry data of APGCL owned generating stations

The status of telemetry data of generating stations owned by Assam Power Generation Corporation Limited is summarised in the table given below:

Sl. No.	Name of Generating Station	Status of Telemetry data
1.	LRPP (Lakwa Replacement Power Project)	<ul style="list-style-type: none"> All digital data are reporting wrong. 132/11 ICT 1 and 2 LV side

		data re not reporting. <ul style="list-style-type: none"> Unit 2 data is not reporting.
2.	LTPS (Lakwa Thermal Power Station)	<ul style="list-style-type: none"> All CB are reporting wrong status. All Isolators are not reporting. All HV side data of GTs are not reporting.
3.	NRPP (Namrup Replacement Power Project)	All digital and analog data are reporting.
4.	NTPS (Namrup Thermal Power Station)	<ul style="list-style-type: none"> CB of unit 3 is reporting wrong status. All Isolators are not reporting. Analog data if Unit 6 is not reporting.
5.	Langi Hydro Station	<ul style="list-style-type: none"> All digital data associated with units are not reporting. Analog data of transmission lines are not reporting.

Deliberation in the meeting

The forum requested officials from APGCL to attend the meeting for discussion. SLDC Assam informed that APGCL is restoring the analog data in phase -1 and will restore digital data in next phase.

The Sub-Committee noted as above.

Action: APGCL & AEGCL.

B.15 Integration of Dikshi HEP real time data and pending Voice communication:

NERPC informed the forum that M/s Devi Energies has committed via mail that they will complete the work sby January, 2022. Further, the forum decided that if M/s Devi Energies are not able to complete the work by January, 2022, DoP, Arunachal Paresh should take strong action against M/s Devi Energies which may include restricting their generation till work is completed.

Deliberation in the meeting

M/s Devi Energies intimated to the forum through mail that all associated works will be completed by June 2022.

The Sub-Committee noted as above.

Action: DoP AP & M/s Devi Energies.

B.16 Connectivity of 132 kV Khupi S/s with ULDC network:

Deliberation in the meeting

It was deliberated and decided by the forum that OPGW as well as its associated end-equipment will be laid by NERPSIP, which will be integrated with ULDC network at Kameng end before the charging of 132 kV Khupi – Kameng line.

The Sub-Committee noted as above.

Action: NERPSIP(PGCIL).

Date & Venue of next NETeST meeting

It is proposed to hold the 23rd NETeST meeting of NERPC in second week of June, 2022. However, the exact date and venue will be intimated in due course.

The meeting ended with thanks to the Chair.

Annexure-I**List of Participants in the 22nd NETeST Meeting held on 17.03.2022**

SN	Name & Designation	Organization	Contact No.
1	Sh. N. Perme, SE (E)	Ar. Pradesh	09436288643
2	Sh. Pranab Saha, AGM (SLDC)	Assam	09707854367
3	Sh. Ashutosh Bhattacharya, DGM	Assam	09954106916
4	Sh. Devenjyoti, DGM	Assam	09435591968
5	Sh. Abdul Kassim, AM	Assam	09435547537
6	Sh. Rupjyoti Das, DM	Assam	09435097009
7	Smt. Laishram Ritu, DGM(SLDC),	Manipur (online)	-
8	Sh. N. Romeo Singh, DM, SLDC	Manipur (Online)	-
9	Sh. D.J. Lyngdoh, EE (SM)	Meghalaya	09863063375
10	Sh. Y. Iakai, AEE, SLDC	Meghalaya	09402133552
11	Sh. S.W. Khyriem, AEE (CSD)	Meghalaya	08787346704
12	Sh. C.W. Chen, AEE (C&C)	Meghalaya	09863093311
13	Sh. H. Lalruatkima, Sr. E.E, SLDC	Mizoram	09862925462
14	Sh. H. Lalnunsanga, EE (Comml.)	Mizoram	08415852013
15	Sh. Nitovi Wotsa, SE (E), SLDC	Nagaland	08974035404
16	Sh. S.I. Asangba Tikhir, EE (T)	Nagaland	07085508502
17	Sh. Rokobeito Iralu, SDO (T)	Nagaland	09436832020
18	Sh. P. Tiakaba Yinchunger, JE, SLDC	Nagaland	08974020151
19	Sh. Anil Debbarma, DGM (SLDC)	Tripura	09612589250
20	Smti. Shampa Sen, SM (SLDC), TC	Tripura	09436120263
21	Sh. Joypal Roy, GM (E/M)	NEEPCO	08837200069
22	Sh. N. Roy, ED	NERLDC	09869080265
23	Sh. Akhil Singhal, Ch. Manager	NERLDC	09650598187
24	Sh. S.P. Barnwal, GM	NERLDC	09433041812
25	Sh. Sakal Deep, Engineer	NERLDC	09774528218
26	Sh. U. Kataki, CGM (AM)	PGCIL	09435505418
27	Sh. Rajendra Dubey, Sr.GM (ULDC)	PGCIL	08275039218
28	Sh. Kamlesh Baishya, Asst.Mgr. (ULDC)	PGCIL	09859723132
29	Sh. A.K. Sharma, GM (Engg.)	PGCIL	09436335241
30	Sh. Raktim Konwar, Dy. Mgr. (P&M)	PGCIL	09678682358
31	Sh. Abhilash AA, Engr.	PGCIL	09600160276
32	Sh. P. Johnny Singh, Engr.	PGCIL	09435303572

33	Sh. Soubhik Choudhury, Manager(O)	OTPC	08837008091
34	Sh. Anil R. Sah, DGM	NETC	09999055047
35	Sh. Ratan Singh Basnet, Dy. Manager	NETC	07002809257
36	Sh. Abhishek Varshney, Project Mgr.	GE	08800394840
37	Sh. Tamal Bhattacharya, Service Spec.	GE	08436062436
38	Sh. Chinmaya Parhi, Manager (SCADA)	INDIGRID	08603242299
39	Sh. Vivek Kathikeyan, Sr. Mgr.	INDIGRID	08966903034
40	Sh. B. Lyngkhai, Member Secretary	NERPC	09436163419
41	Sh. S. Mukherjee, Dy. Director	NERPC	08794277306
42	Sh. Sadiq Imam, Dy. Director	NERPC	07004133772

CYBER SECURITY MEASURES IMPLEMENTATION STATUS FOR NER SLDCs (AS ON 10.02.22)

SN	Cyber Security Measures	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
1	Preparation and approval of Cyber Crisis Management Plan (CCMP) for SLDCs	Draft CCMP submitted to CERT-GO on 20.07.21. Revised CCMP after incorporation of comments from CERT-GO and based on new template is under process.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.	Final CCMP approved by CERT-In with comments for incorporation.
2	Implementation status of Information Security Management System (ISMS) i.e., ISO 27001 and certification audit for ISO-27001	Under Process	Tender has been floated and tender evaluation is under process.	LOA issued to CDAC, Hyderabad on 3rd Nov'21 for Implementation of ISMS (ISO-27001). Work is going on for implementation of ISMS	LOA issued to Prime Infoserv for ISO-27001 (ISMS) certification. Compliance procedures in progress.	Budgetary offers from various CERT-IN empanelled vendors have been received and are being processed for approval of Management.	Approval received for award of contract to M/s AKS (against quotations received from 3 vendors). But kept on hold at present due to issues with finalization of source of funding.	Offer received from CDAC, Kolkata for ISMS and VAPT combined; which is in the process of approval by Management.
3	Status of VA-PT on OT systems	Done for FY 20-21.	Done for FY 20-21 as part of the AMC of SCADA/EMS project awarded to M/s GE T&D India Ltd. SLDC will be going for ISMS and VA-PT jointly for AEGCL. VA-PT of SCADA for the FY 21-22 has been done during 11/01/2022 - 17/01/2022. Final report of the VA-Pt is yet to be submitted by M/S GE T&D India Ltd.	Phase -1 of VAPT Audit for IT and OT systems of SLDC, Manipur was conducted by CDAC-Hyderabad from 21.12.2021 to 24.12.2021. Phase-1 of VAPT for OT systems of SLDC by ASK Technology Services (part of GE Scada) from 12-15 Jan 2022	Cyber Audit by GE to be conducted after NERLDC visit on 18.01.2022. Phase -1 of Cyber Security Audit by C-DAC between February and March 2022.	Done once for FY-21-22	Done for FY 20-21.	Done once for FY-21-22
i	Date of Last VA-PT (OT):	Done on 13th, 15th & 16th March, 2021	Last VAPT was conducted during 11/01/2022- 17/01/2022.	Audit by CDAC-Hyderabad on 21, 22,23 Dec 2021 Audit by ASK Services, Noida on 12-15 Jan 2022	Done on 10th March 2021	3rd April 2021	Done on 18th -22nd March 2021.	7th April 2021
iii	Due date for Next Audit / Plan for next audit within 6 months	08.09.2021		20.09.2021/ Contacted C-DAC	30.09.2021	30.09.2021	17.09.2021	04.10.2021

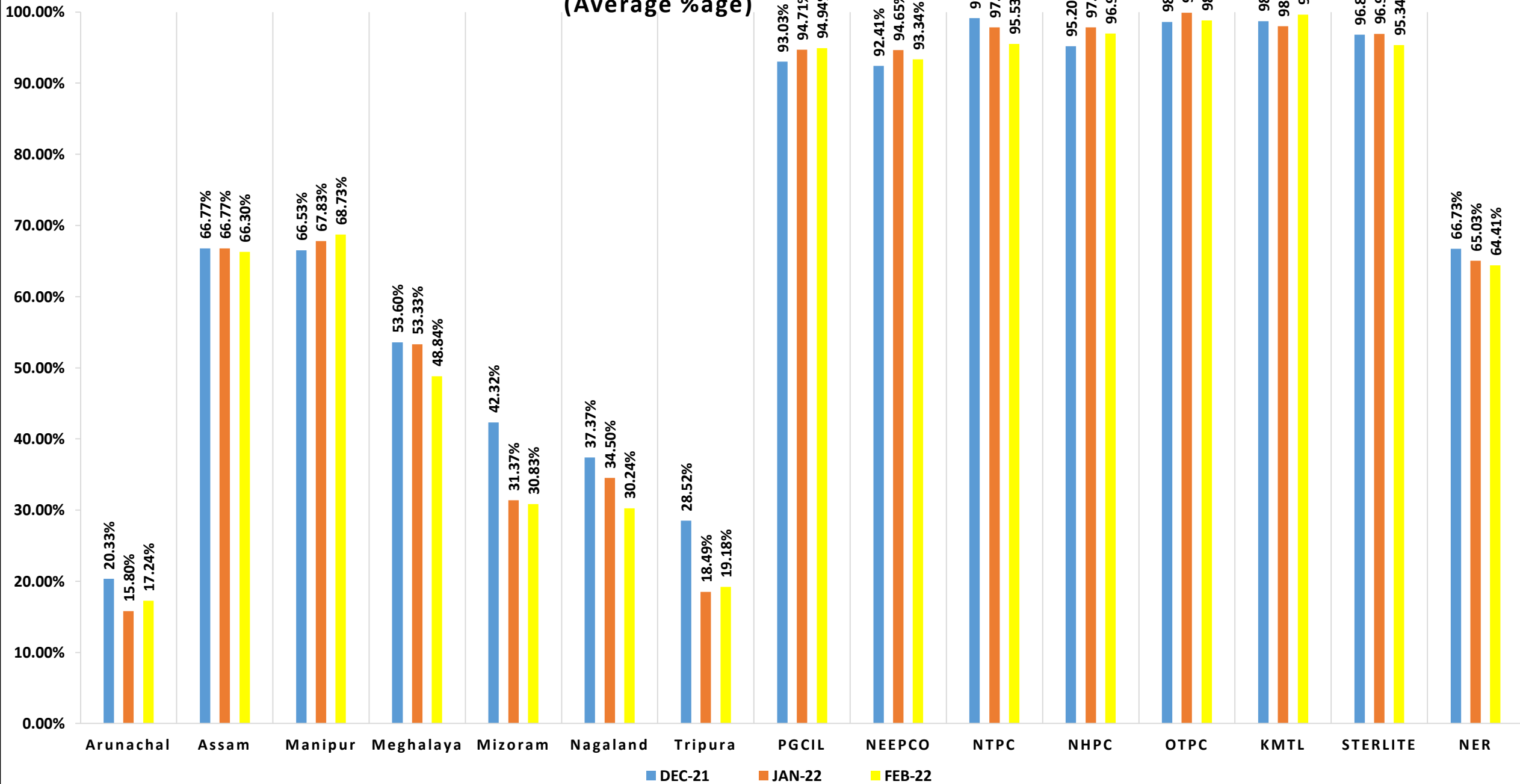
SN	Cyber Security Measures	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
4	Status of VA-PT on IT systems	Under Process	Tender has been floated and tender evaluation is under process.	Phase -1 of Cyber Security Audit for IT systems of SLDC, Manipur was conducted from 21.12.2021 to 24.12.2021 by CDAC-Hyderabad.	LOA issued to CDAC. Phase -1 of Cyber Security Audit by C-DAC between February and March 2022.	Budgetary offers from various CERT-IN empanelled vendors have been received and are being processed for approval of Management.	Approval received for award of contract to M/s AKS (against quotations received from 3 vendors). But kept on hold at present due to issues with finalization of source of funding.	Offer received from CDAC, Kolkata for ISMS and VAPT combined; which is in the process of approval by Management.
5	Notification of IT & OT systems at SLDCs as Critical Information Infrastructure (CII)	Not done yet.	STU, AEGCL has already sent template for CII in December, 2020 considering SLDC, SCADA system. However, a separate draft template for CII was prepared considering only the CII's present at SLDC. Preliminary CII Identification and Assessment Report was submitted to NCIIPC at email id <coord.power@nciipc.gov.in> on 25/06/2021. (Copy of forwarding letter received). Latest review meeting with East Zone held on 23/08/21. No pending submission. Approval awaited. A meeting was held with Dir. EZ, NCIIPC on 30/12/2021, in which a consolidated template for CII Assessment of SLDC and AEGCL was provided. Modifications to the same has been incorporated as per organizational requirement and forwarded to Dir. EZ, NCIIPC on 18/08/21.	CII documents submitted to NCIIPC on 18/08/21. 1st review meeting with East Zone was held on 24.08.21. Modified assessment report after incorporating Review comments along with Part-II document is yet to be submitted.	Identified Systems of SLDC, Meghalaya have been declared as CII by NCIIPC. Notification of CII as Protected Systems shall be issued by State Govt.	CII documents submitted to NCIIPC for review on 09.11.21 email id coord.power@nciipc.gov.in. Email forwarded to us for record.	Identified Systems of SLDC, Nagaland have been declared as CII by NCIIPC. Notification of CII as Protected Systems shall be issued by State Govt.	CII is already identified and sent to advisory@nciipc.gov.in on 6th April 2021 (29 nos of Windows Servers and 3 Nos of Linux Servers). Has been resent to the email id coord.power@nciipc.gov.in on 19.07.21. First round of Review Meetings was carried out on 11th & 12th Aug'21.
	Updated Completion Timeline by SLDC**:							
6	Compliance of advisories from CERT-In, NCIIPC & other statutory agencies.		Being complied	Being complied	Being complied	Being complied	Being complied	Being complied
i	To be updated in Portal for monthly compliance by 10th of every month.	Not updated in the portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal
ii	For CERT-In weekly advisories to be complied within 5 days: To be uploaded in the portal after completion.	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal	Being Updated in Portal

SN	Cyber Security Measures	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
iii	Compliance of advisories from Cyber Swachhata Kendra (CSK)	Being Resolved. Clarification sent to CERT-In; but alerts are being received again.	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Being Resolved. No new alerts.	Alerts are being received.
7	Status of Nomination of CISO:	Done	Done	Done	Done	Done	Done	Existing for TS

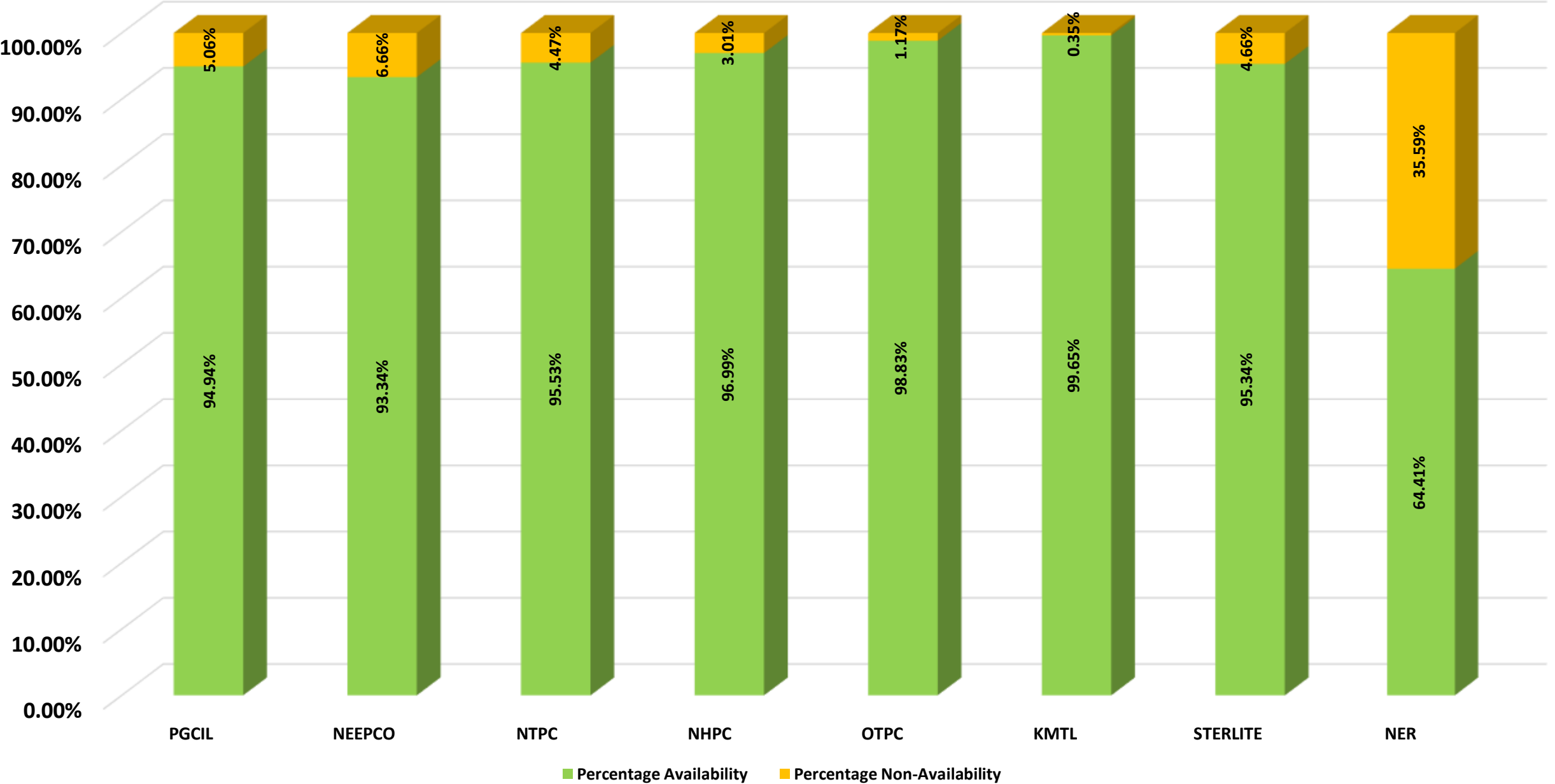
Status of OPGW Installation in 220/132kV EHV lines under Comp. T & D Scheme in Arunachal Pradesh											
No of Packages	Pkg Name	Agency	Name of Line	NOA DATE	Target date of Completion	Line Length (KM)	Total Tower Location	No of Foundations	No of Tower Erection	Kcm of Stringing	OPGW INSTALLATION WORKKK
1	ARP-SS-1B	M/s Tata Project	132/33kV Ziro (PG)-Ziro(New)	28.02.2018	Dec'22	12.29	42	0	0	0	Yet to start
2			LILO 132/33 kV Daporijo-Along at Basar		March,22	2.5	12	11	10	0	Yet to start
3	TW-01	M/s. Angelique International Ltd	132kV Likabali-Niglok TL	18.05.2017	March,22	66.052	226	67	36		Yet to start
4	TW-02	M/s. Angelique International Ltd	132kV S/C Pasighat (old) - Mariang	18.05.2017	Dec'22	51.36	185	9	4		Yet to start
5	TW-03	M/s. Angelique International Ltd	132kV S/C Niglok- Pasighat New	05.06.2017	March,22	20.49	72	68	58		Yet to start
6			132kV S/C Pasighat New (Napit) – Pasighat old		March,22	13.149	46	30	9		Yet to start
7	TW-05	M/s. PLR Project Ltd	132kV Seppa - Rilo Line (56 Kms.)	11.09.2017	Dec'22	45.685	130	0	0		Yet to start
8	TW-06	M/s Mohan Energy Ltd	132kV Rilo to Seijosa Line (60 Kms.)	31.03.2017	Dec'22	44.015	176				Yet to start
9	TW-08	M/s Vishal System Pvt Ltd	132kV Sagali -Naharlagun S/C Line on D/C Towers	15.06.2017	Dec'22	32.95	106	0	0	0	Yet to start
10	TW-09	M/s Kec International lto	132kV Chimpu to Holongi line	18.05.2017	Dec'22	14.712	57	0	0	0	Yet to start
11			132kV Naharlagun- Banderdewa		Dec'22	14.951	32	0	0	0	Yet to start
12	TW-10	M/s KEC International Ltd	132kV Rilo – Sagalee	18.05.2017	Dec'22	33.165	141	0	0	0	Yet to start
13	TW-11	M/s. PLR Project Ltd	132 kV Gerukamukh-Likabali TL	21.09.2017	Dec'22	52.274	178	12	0	0	Yet to start
14	TW-12	M/s JV of AsterTamachi	132kV Naharlagun-Gerukamukh	21.09.2017	Dec'22	85.35	305				Yet to start
15	TW-13	M/s Tata projects Limited	132kV S/C on D/C Ziro-Palin	22.05.2021	March,23	43	99	0	0	0	Yet to start
16			132kV S/C on D/C Palin-koloriang		March,23	34	91	0	0	0	Yet to start
17			132kV S/C on D/C Daporijo-Nacho		March,23	70	1234	0	0	0	Yet to start
18	TW-19	M/s Hi-tech & Aster	Jairampur - Miao (132KV S/C Line)	23.10.2017	Dec'22	34.26	121	0	0	0	Yet to start
19	TW-21	Unitech Power Transmission Ltd	132kV S/C on D/C Roing-Dambuk	22.05.2021	March,23	35.95		0	0	0	Yet to start
20			132kV S/C on D/C Roing-Anini		March,23	78		0	0	0	Yet to start
21			132kV S/C on D/C Tezu-Haliapani		March,23	92		0	0	0	Yet to start
22	TW-24	KEC international limited	132 KV S/C Khupi - Seppa	28.09.2018	Dec'22	29.591	147	0	0	0	Yet to start
23			132 KV Seppa-Bumong		Dec'22	48.46	118	0	0	0	Yet to start
24			132 KV Tawang - Luma		Dec'22	26.73	99	0	0	0	Yet to start
25	TW-26	M/s Larsen & Toubro Limited.	132kV S/C on D/C Along-Kambang	01.04.2021	Oct'23	35.37	152	0	0	0	Yet to start
26			132kV S/C on D/C Along-Yingkiong		Oct'23	95.1	199	0	0	0	Yet to start
27			132kV S/C on D/C Yingkiong-Tuting		Oct'23	81.4	0	0	0	0	Yet to start
28			132kV S/C on D/C Kambang-Mechuka		Oct'23	93.5	315	0	0	0	Yet to start
29	TW-29B	Vikran engineering & EXIM pvt ltd	Deomali-Khonsa (132 KV S/C Line) (40 Kms.) Actual line length: 29.528 Kms.	09.03.2021	March,23	29.528	88	0	0	0	Yet to start
30			Khonsa- Changlang (132 KV S/C Line)		March,23	26.005	155	0	0	0	Yet to start
31			Khonsa-Longding (132 S/C on D/C Line)		March,23	24.312	86	0	0	0	Yet to start
32	TW-30B	Vikran engineering & EXIM pvt ltd	Jairampur-Changlang (132KV S/C Line)	26.02.2021	March,23	50.54	205	0	0	0	Yet to start
33			Miao-Namsai (132KV S/C on D/c Line)		March,23	41.045	138	0	0	0	Yet to start
34	TW-31	M/s Salasar Techno Engineer Limited.	132kV S/C on D/C Bomdila-Kalaktang		May'23	53.29	0	0	0	0	Yet to start
			Sub Total (A)			1511.024	4955	197	117		
35	Ten dot	AEGCL (Existing line)	220kV Tinsukia-Kathalguri			25					Installed
36		DoPAP (Existing line)	220kV Kathalguri-Deomali			25					Installed
37		DoPAP (Existing line)	132kV Along-Pasighat old		Dec'22	76					Yet to start
38		DoPAP (Existing line)	132kV Daporijo-Along		Dec'22	80					Yet to start
39		DoPAP (Existing line)	132kV Ziro-Daporijo		Dec'22	90					Yet to start
40		NEEPCO (Existing line)	132kV Balipara-Nechipu		Dec'22	27					Installed
41		NEEPCO (Existing line)	132kV Khupi-Nechipu		Dec'22	40					Under progress
42		DoPAP (U/constrn)	132kV S/C on D/C khupi- Bomdila		May'23	44.86					Yet to start
43		DoPAP (U/constrn)	132kV S/C on D/C Bomdila-Tawang		May'23	69.096					Yet to start
			Sub Total (B)			476.956					
			Total length (A+B)			1987.98					
			Status of Supply of OPGW with H/W			459.932					77

Telemetry Statistics for the Month of February 2022						
Sl. No.	Utility	Average Analog Percentage	Average Digital Percentage	Average Total Percentage	Average RTU Availability	Instantaneous Maximum of Total percentage
1	PGCIL	94.97	94.92	94.94	93.13	98.87
2	NEEPCO	88.03	96.75	93.34	96.75	96.48
3	NTPC	95.50	95.54	95.53	95.42	100.00
4	NHPC	96.99	96.99	96.99	96.99	100.00
5	OTPC	98.83	98.82	98.83	98.78	100.00
6	KMTL	99.68	99.64	99.65	99.91	100.00
7	IndiGrid	94.93	95.51	95.34	99.89	100.00
8	Arunachal Pradesh	25.28	12.17	17.24	32.67	28.40
9	Assam	71.16	63.15	66.30	80.31	72.19
10	Manipur	73.28	66.01	68.73	81.29	70.31
11	Meghalaya	68.35	34.16	48.84	75.65	58.44
12	Mizoram	40.67	22.67	30.83	52.12	36.02
13	Nagaland	23.99	35.10	30.24	23.81	33.13
14	Tripura	24.90	15.08	19.18	30.39	30.02
	NER	66.78	62.93	64.41	68.24	68.37

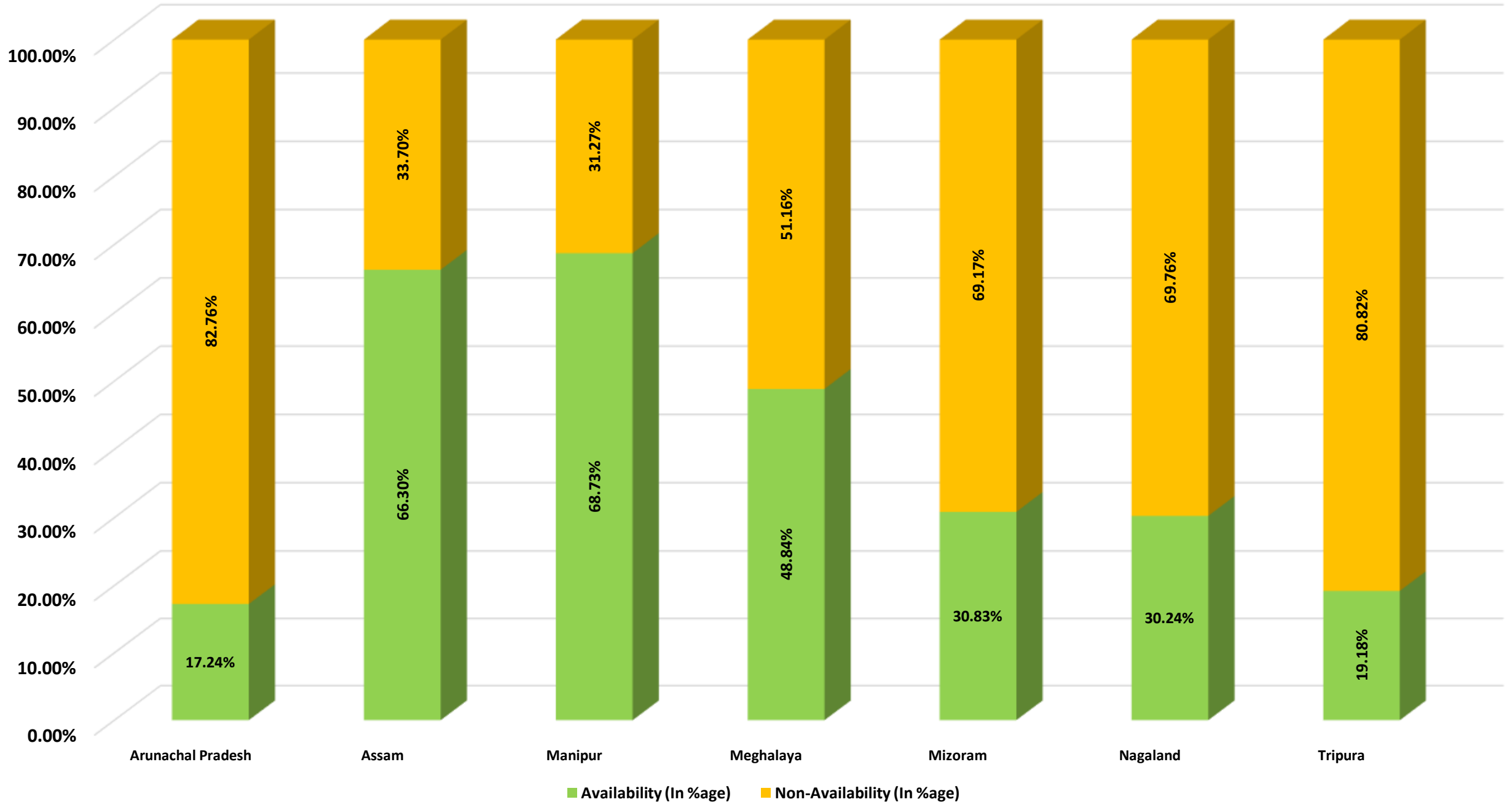
**Comparsion of Telemetry Availabilty Statistics
(Average %age)**



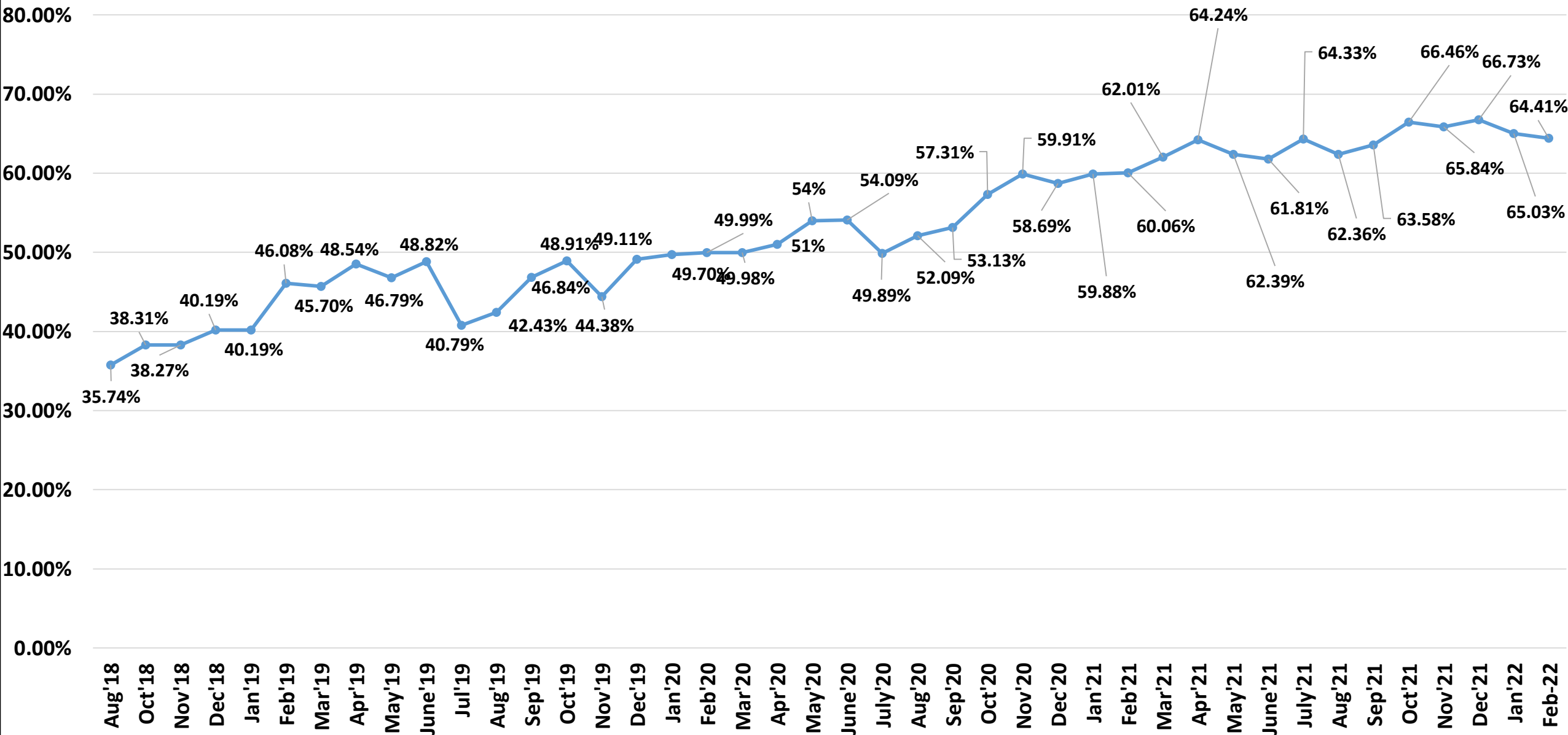
Telemetry Statistics for Central Sector of NER (Average availability of data for the Month of February'22)



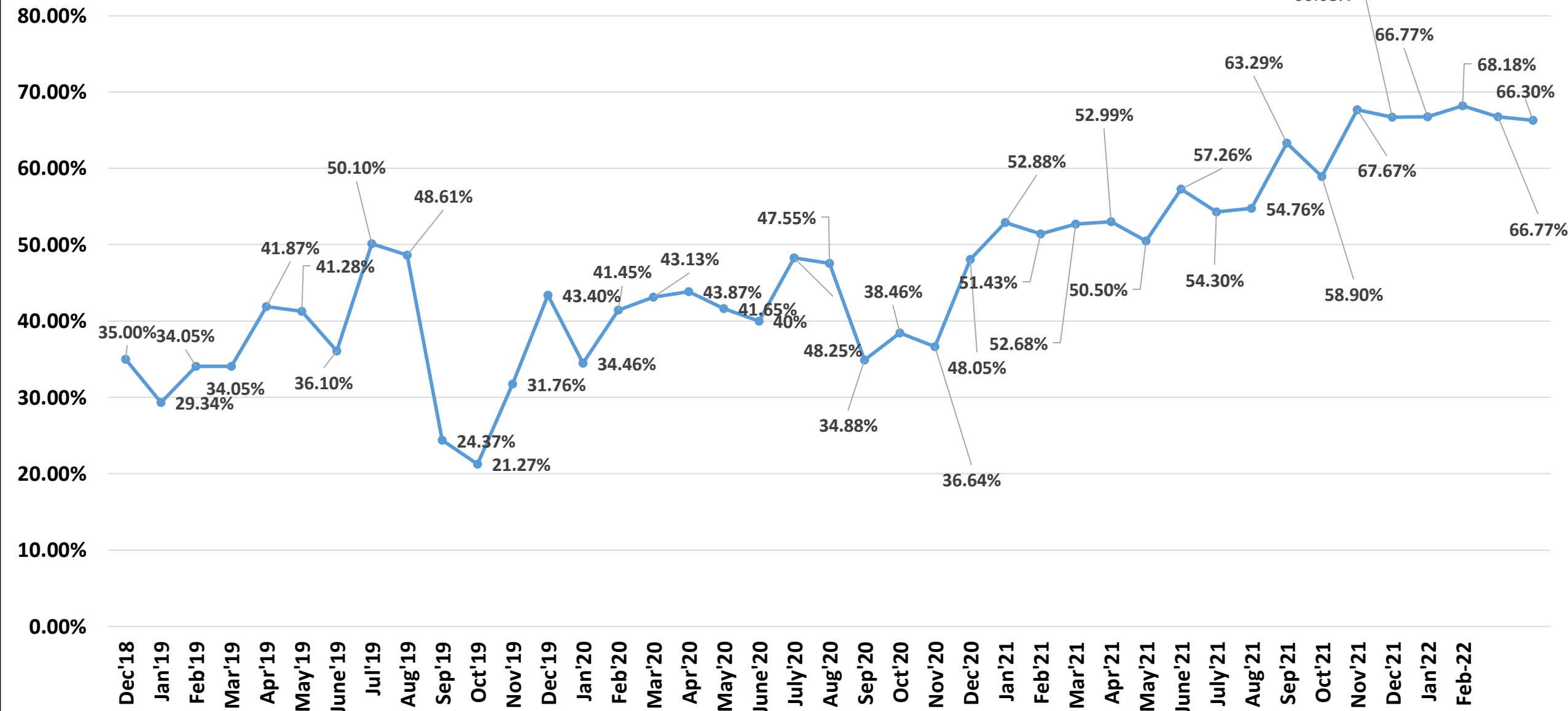
Telemetry Statistics for NER States (Average availability of data for the Month of February'22)



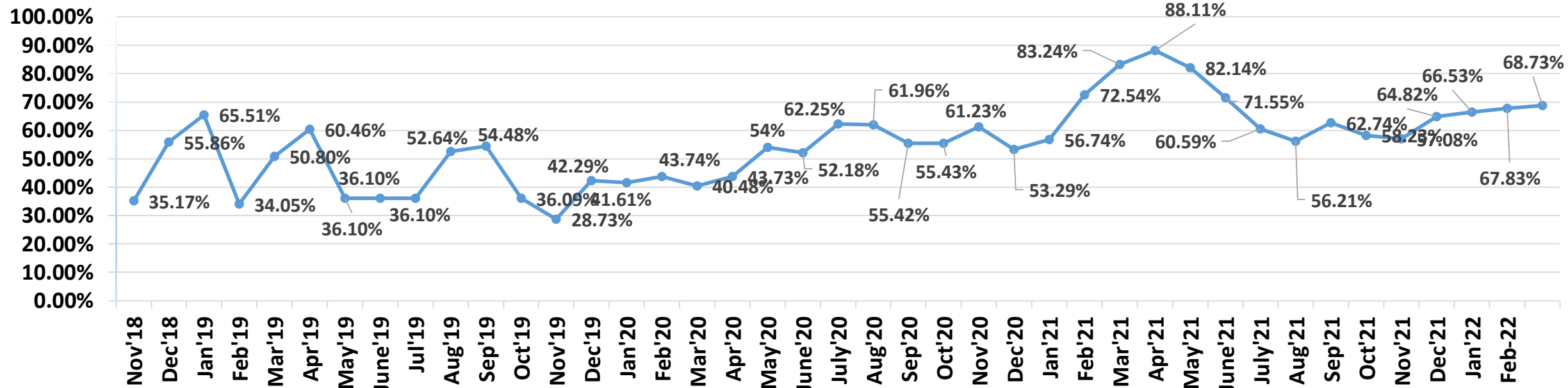
Real Time Data Availability of NER (In Percentage)



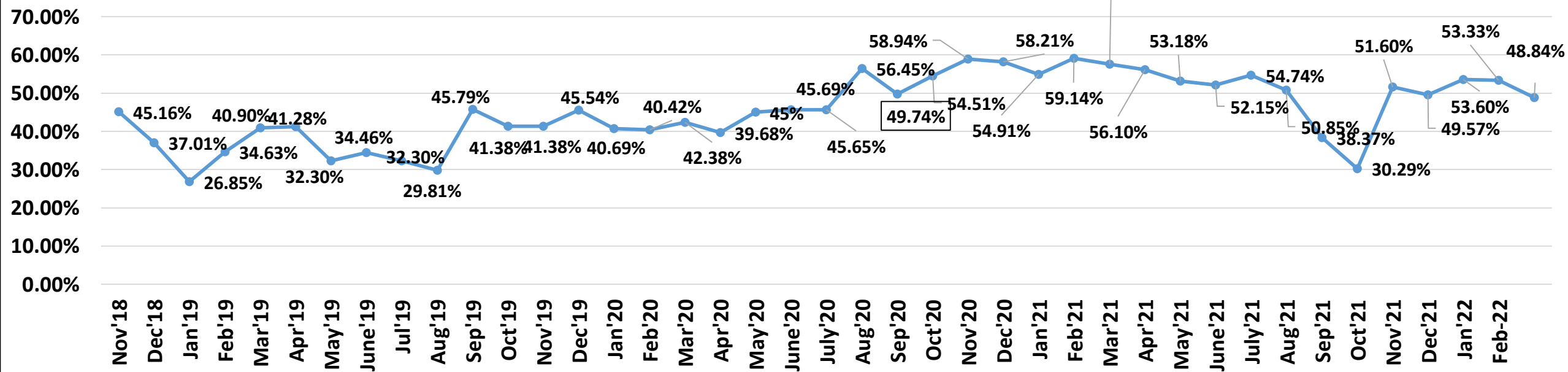
Real Time Data Availability of Assam State (In Percentage)



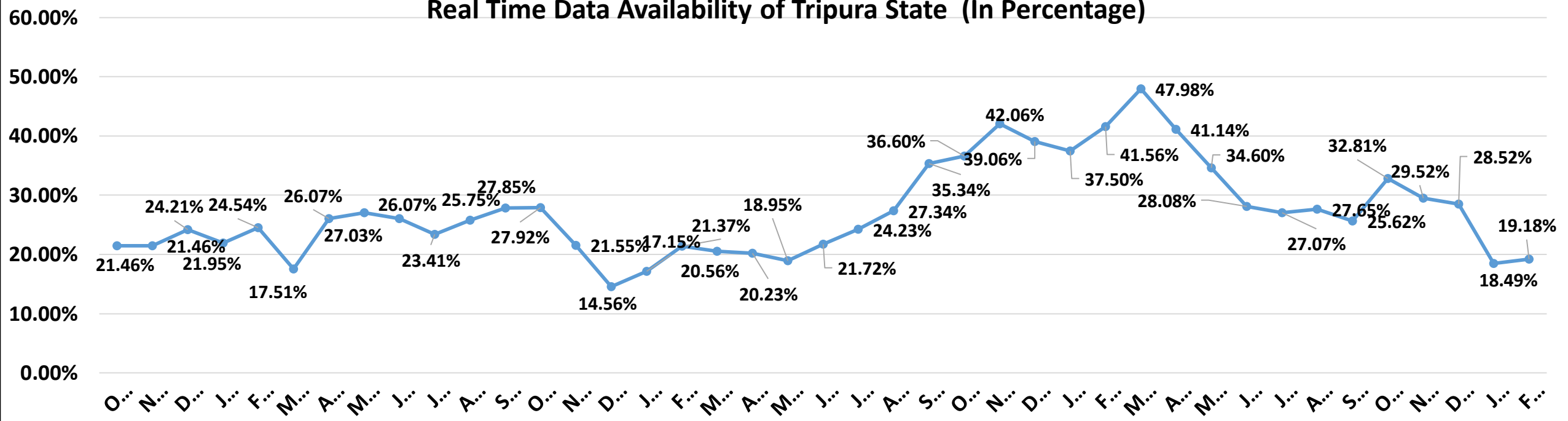
Real Time Data Availability of Manipur State (In %)



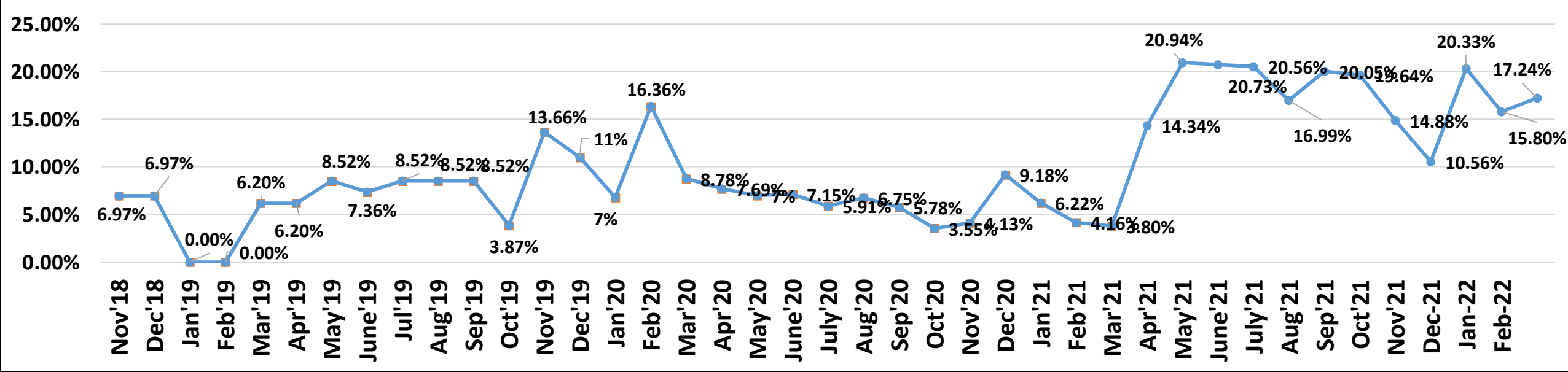
Real Time Data Availability of Meghalaya State (In Percentage)



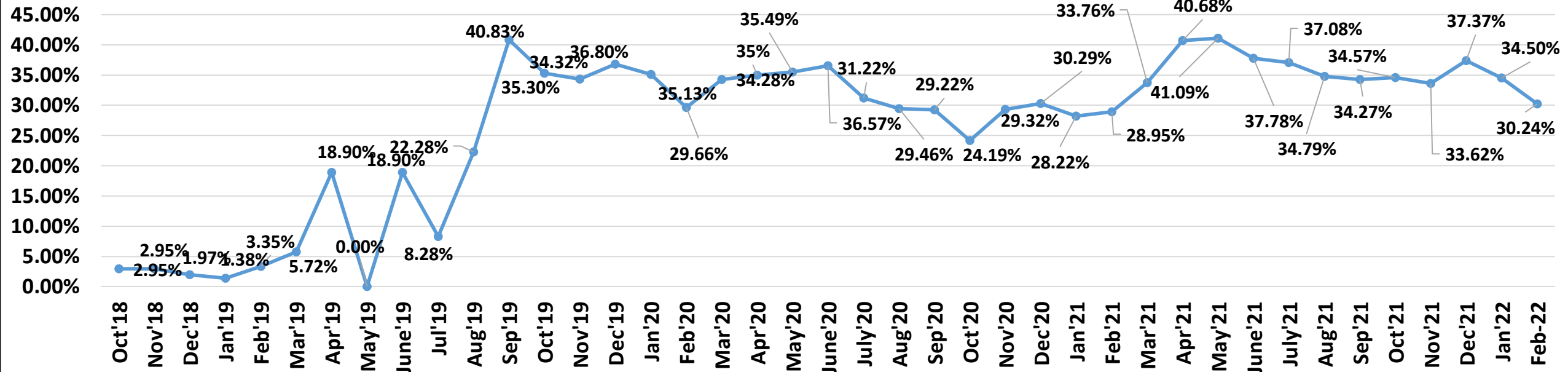
Real Time Data Availability of Tripura State (In Percentage)



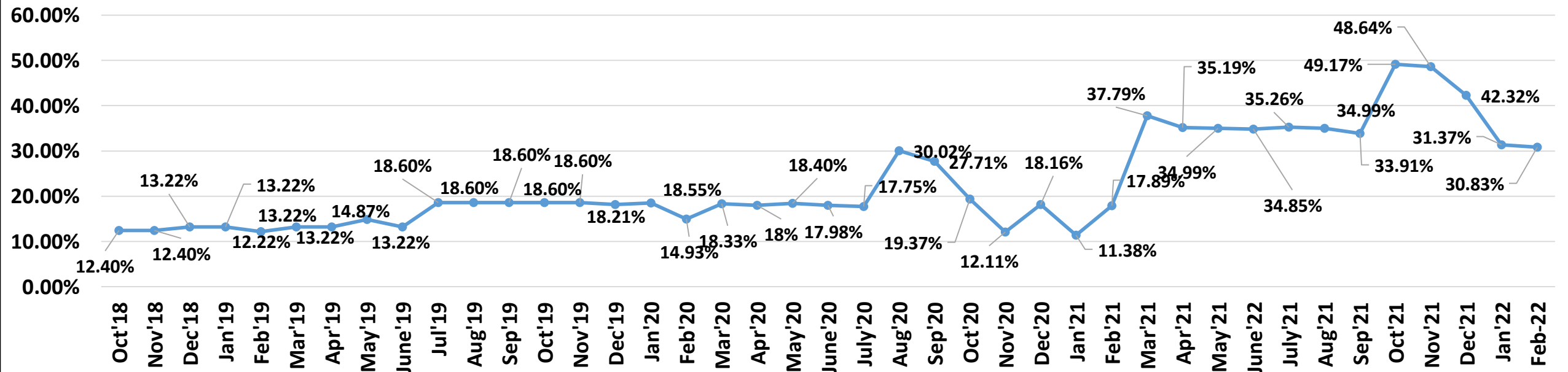
Real Time Data Availability of Arunachal Pradesh State (In Percentage)



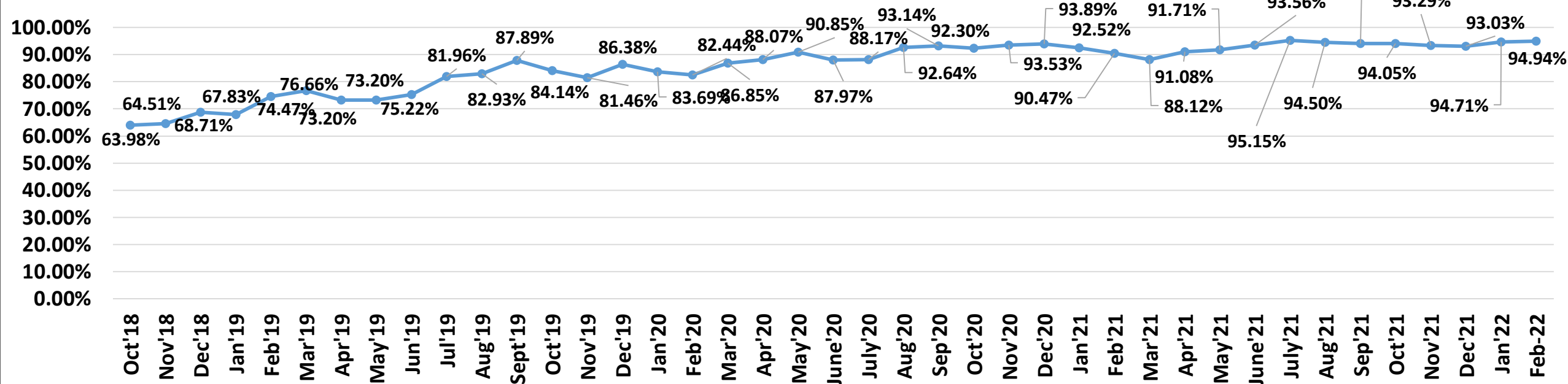
Real Time Data Availability of Nagaland State (In Percentage)



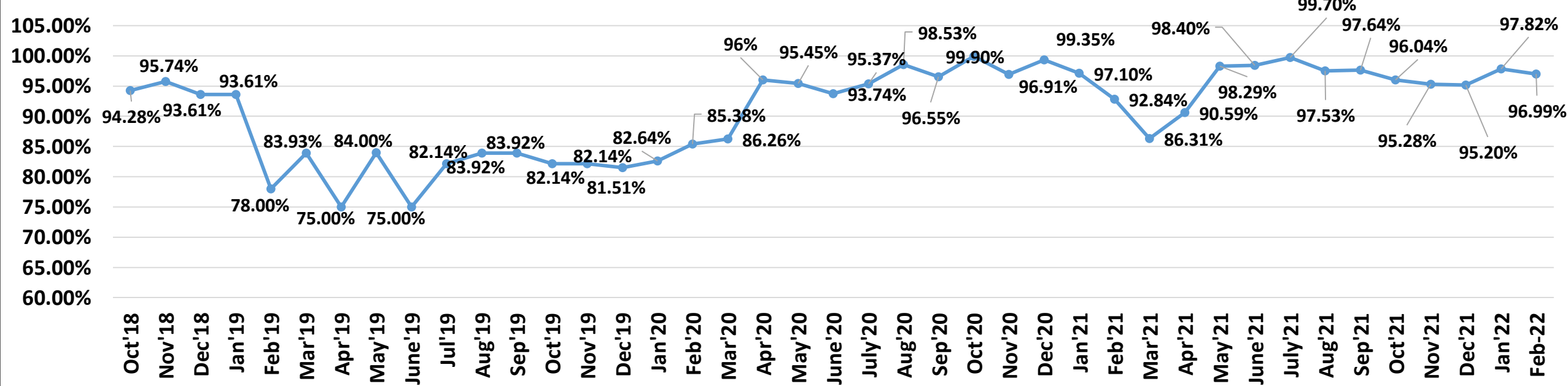
Real Time Data Availability of Mizoram State (In Percentage)



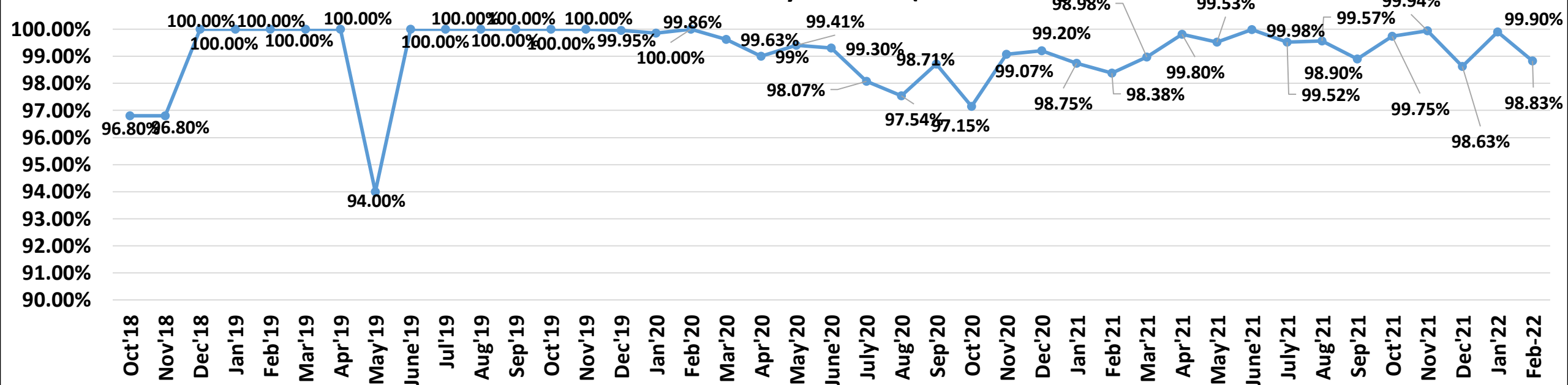
Real Time Data Availability of PGCIL(In Percentage)



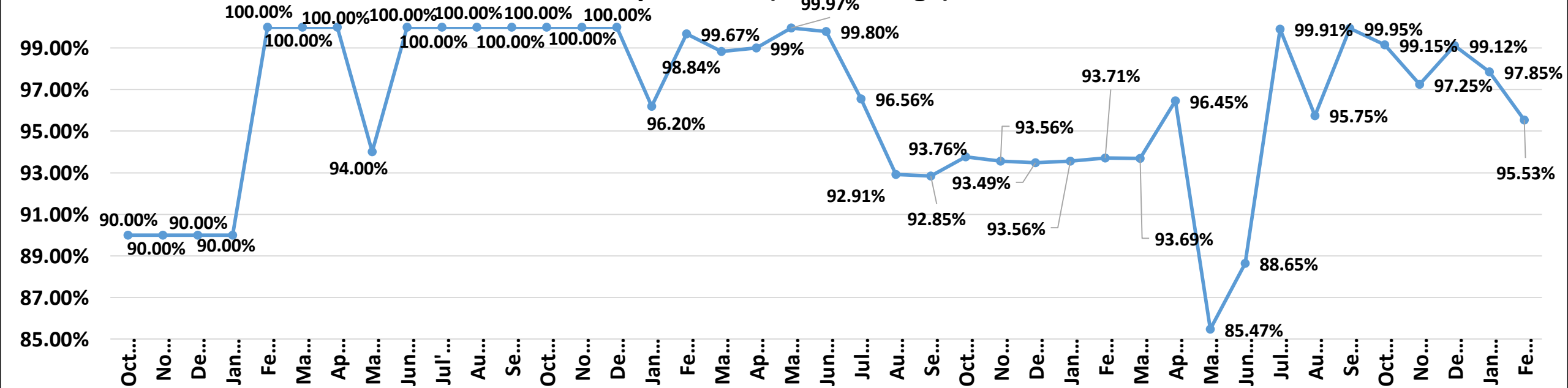
Real Time Data Availability of NHPC (In Percentage)



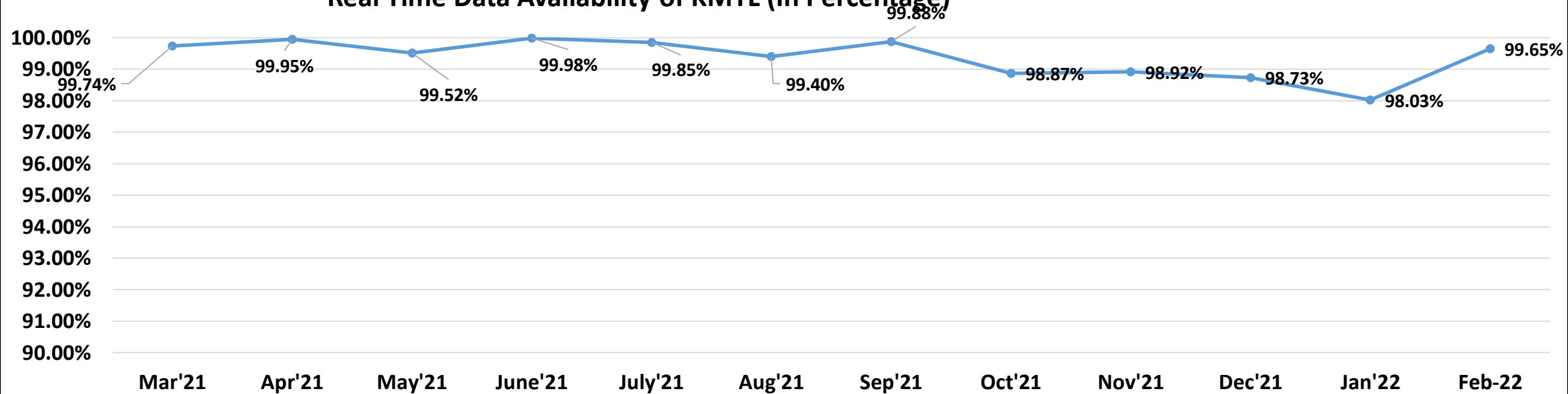
Real Time Data Availability of OTPC (In Percentage)



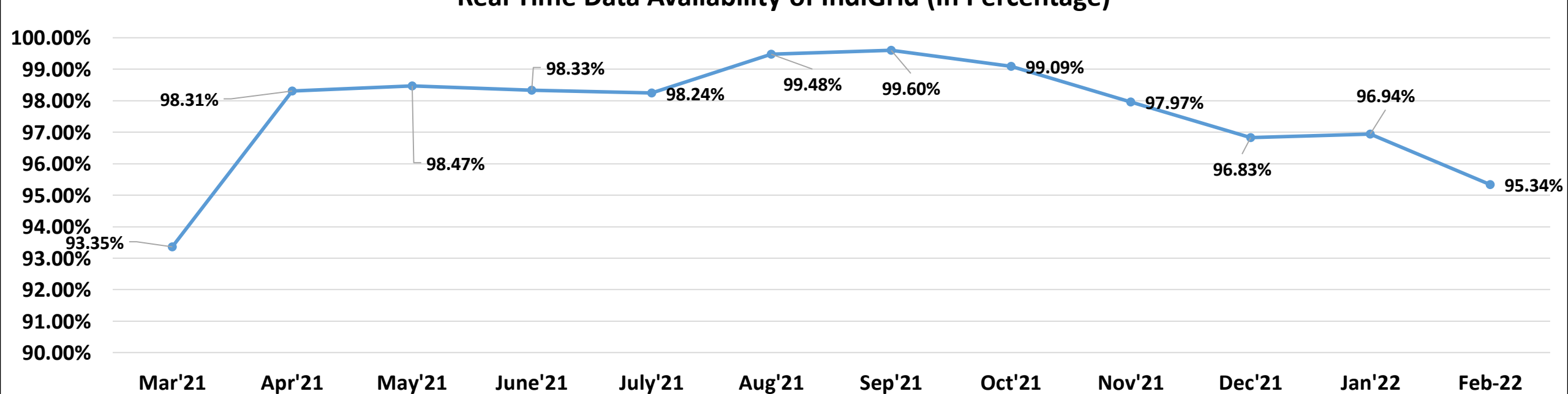
Real Time Data Availability of NTPC (In Percentage)



Real Time Data Availability of KMTL (In Percentage)



Real Time Data Availability of IndiGrid (In Percentage)



Real Time Data Availability of NEEPCO (In Percentage)

