

# **North Eastern Regional Power Committee**

## **Agenda**

### **For**

### **20<sup>th</sup> NETeST Sub-Committee Meeting**

**Time of meeting : 10:30 Hrs.**

**Date of meeting : 20<sup>th</sup> April, 2021 (Tuesday)**

**Venue : “NERPC”, Shillong.**

#### **A. CONFIRMATION OF MINUTES**

##### **CONFIRMATION OF MINUTES OF 19<sup>th</sup> NETeST Meeting held on 20.01.2021.**

The minutes of 19<sup>th</sup> NETeST Meeting held on 20<sup>th</sup> January, 2021 at Guwahati were circulated by NERPC vide letter No. NERPC/SE(O)/TeST/2020/4325-4362 dated 10<sup>th</sup> February, 2020.

***The Sub-committee may confirm the minutes of 19<sup>th</sup> NETeST meeting of NERPC as no comments/observations were received from the constituents.***

#### **ITEMS FOR DISCUSSION**

##### **A.1 Status of FO works under different projects:**

Latest status of various FO Project in NER:

<b>Project</b>		<b>No. of Links/Nodes</b>	<b>Status</b>
<b>ULDC Upgradation</b>		17	All nodes completed.
<b>MW Vacation</b>		12	All links completed.
<b>NER FO Expansion</b>	Central Sector	16	12 Completed. 4 Pending.
	Manipur	11	10 Completed. 1 Pending
	Meghalaya	4	3 Completed. 1 Pending
	Mizoram	1	1 Pending.
	Nagaland	3	2 Completed. 1 Pending
	Tripura	12	10 Completed. 2 Pending

The status of NER FO Expansion project as given in 19<sup>th</sup> NETeST meeting:

<b>States</b>	<b>Current Status</b>	<b>Comments/ Issues</b>
<b>Central Sector</b>	400kV Bongaigaon (PG) - 220kV Salakati - 220kV BTPS	Target completion is March/April 2021. Work started along Silchar-Palatana.
	400kV Mirza (Azara) – Byrnihat	
	400kV Silchar – Palatana	
	132kV Pare – Chimpu	
<b>Manipur</b>	132kV Imphal (State) – Karong	The line is under diversion by MSPCL. MSPCL will submit the tentative target of completion of diversion work by 29th January, 2021 to NERPC with a copy to NERLDC.
<b>Mizoram</b>	Aizawl – Zemabawk I	Stringing work is under progress. <b>Target: March 2021.</b>
<b>Meghalaya</b>	132kV Nehu - Neigreims	TCIL to start work soon. All necessary diversion of traffic may be taken care of while shutdown of the link. <b>Target: March 2021.</b>
<b>Nagaland</b>	132kV Doyang- Sanis Target: Feb/March 2021.	<b>Target: March 2021.</b> (OPGW) In addition, DoP, Nagaland has issued PO for PLCC installation to ABB.
<b>Tripura</b>	132kV Rokhia - Surjamani Nagar	Construction of Transmission Line and associated OPGW is still under progress. Tentative target for completion given by TSECL is <b>March 2021.</b>
	132kV Surjamani Nagar - Monarchak (NEEPCO)	

**Members may please discuss.**

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

Status as per 19<sup>th</sup> NETeST meeting

- a) **Additional Communication Scheme:** Approximate target completion/Closing date is Dec2021 as projected keeping in view various insurmountable constraints. Stringing has started in Balipara-Kameng line.
- b) **Reliable Communication Scheme:** NERTS informed the forum that first tender got cancelled due to no participation in bidding process by any vendor; hence, the Corporate Centre of POWERGRID will do re-tendering for the project.

**NERTS may please intimate the status.**

**A.3 Status of RTUs reporting in NER:**

The latest status is as follows:

Central Sector	No. of RTUs	RTUs Reporting		RTUs not Reporting	Comments/ reporting RTUs	Non
		No.	%			
<b>NEEPCO</b>	8	8	100%	0		
<b>NHPC</b>	1	1	10%	0		
<b>NTPC</b>	1	1	100%	0		
<b>OTPC</b>	1	1	100%	0		
<b>PGCIL</b>	23	21	91.3%	2	Tezu, Namsai	
<b>KMTL</b>	1	1	100%	0		
<b>Sterlite</b>	2	2	100%	0		
<b>State Sector</b>						
<b>Arunachal Pradesh</b>	9	3	33.3%	6	Along, Daporijo, Deomali, Khupi, Lekhi, Pasighat	
<b>Assam</b>	70	46	65.7%	24		
<b>Manipur</b>	12	12	100%	0		
<b>Mizoram</b>	5	1	20%	4	Lungmual, Sihmui, Zuangtui, Kolasib	
<b>Meghalaya</b>	26	20	76.9%	6	Ampati, Cherapunjee, Lumshnong, Nongston, Umiam 3 & 4	
<b>Nagaland</b>	17	7	41.2%	10	Ganesh Nagar, Lhep, Meluri, Mon, Nagnimora Power house, Singrijan Tizit, Tuensang, Zuheneboto	
<b>Tripura</b>	25	14	56%	11	Belonia, Boxanagar, Dhalabill, Gamaitila, Gournagar, Gumti, Kamalpur, Ompi, Rabindranagar, Sabroom, Satchand.	

**Members may please discuss.**

**A.4 Status of implementation of U-NMS in NER:**

U-NMS was approved in NER. U-NMS being a regulatory requirement. Its implementation needs to be expedited and utilities needs to co-ordinate for its smooth implementation.

***NERTS may please intimate the latest status.***

**A.5 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:

**NERTS :**

Installation of pending analytical application: NERTS informed the forum that IIT Bombay is working on the application and will deploy a prototype of it either in WRLDC or NLDC within two (02) months for monitoring and observations on its functionality; after which its further deployment in rest of associated LDCs will be done.

***NERTS may please intimate the latest status.***

**A.6 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 19 <sup>th</sup> NETeST
1.	BgTPP	For Unit #2 C&I works along with wiring to be done. By Nov'20. NTPC representative absent
2.	AGBPP	The forum requested NEEPCO to explore possibility of AGC implementation for BHEL/GE units and submit detailed plan to the forum.
3.	Loktak	Material has been received on site and associated Installation and commissioning activities will begin by February, 2021.

***All Constituents may please intimate the status.***

**A.7 Status of RGMO to the Load Dispatch Centers:**

The status is as follows:

	Station Name	RGMO Status	FGMO Status
1.	<b>Khandong (2 units)</b>	Target date: March, 2021	Target date: March, 2021
2.	<b>Kopili Extension (1 unit)</b>	Target date: March, 2021	Target date: March, 2021

3.	<b>Ranganadi (3 units)</b>	Target date: NEEPCO will submit the target dates to NERPC with a copy to NERLDC for information purposes.	Target date: NEEPCO will submit the target dates to NERPC with a copy to NERLDC for information purposes.
4.	<b>AGBPP (9 units)</b>		
5.	<b>AGTCCPP (6 units)</b>		
6.	<b>OTPC (4 units)</b>	Target date: May, 2021.	Target date: May, 2021.
7.	<b>BgTTP (3 units)</b>	NTPC may update the status.	NTPC may update the status.

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.

***Members may please discuss.***

**A.8 Status of FSC in stations of NER:**

NERLDC mentioned that the real-time ON-OFF status of FSCs in Balipara station is required for grid operation purposes.

In the 19th NETeST meeting, NERTS informed that the matter is still under discussion with M/s Siemens and M/s GE T&D India Limited for tendering process which may take another two (02) months. The target dates will be shared once the vendor is finalized.

***NERTS may please intimate the status.***

**B. NEW ITEMS**

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

The management of POSOCO has decided to provide consultancy at no-cost for the SLDCs to plan and execute the upgradation of SCADA/EMS systems which needs to be done in 2024 as per the expiry of seven (07) years life-cycle (as per CERC guidelines) of existing Software/Hardware systems at respective Control Centres.

The Corporate Engineering department has prepared a Memorandum of Understanding with detailed responsibility matrix and the same is attached as **Annexure-B.1** (along with relevant communications) for kind information and consideration by the SLDCs.

The draft MoU and agreement were shared and explained to 19th NERPC forum.

***Members may please discuss.***

**B.2 Upgradation and Strengthening of PLCC System by NER States:**

In 19<sup>th</sup> NETeST meeting Director, NERPC requested states to update the progress on strengthening of PLCC systems. The summary of discussion is mentioned below:

<b>S N</b>	<b>States</b>	<b>Status as per 19<sup>th</sup> NETeST meeting</b>
1.	Meghalaya	Digital PLCC project under PSDF completed. Voice integration of generating stations is pending, which will be taken by Meghalaya in coming days.
2.	Tripura	Tripura will submit the proposed scheme of PLCC by 29th January 2021 to NERPC via email or letter which will be discussed further in coming NETeST forum.
3.	Manipur	Approval for PLCC strengthening proposal is pending with higher authorities of MSPCL. Manipur will submit latest status of PLCC by 29th January 2021 to NERPC.
4.	Nagaland	<p>Nagaland informed the forum that PLCC at proposed station is already installed. But ABB is not visiting the state even after continuous persuasion of DoP, Nagaland. NERPC and NERTS decided to extend help to bring ABB to the state for early completion of the PLCC links.</p> <p>Forum requested Nagaland to submit the DPR of reliable communication scheme so that same can be studied and necessary modification can be suggested to DoP, Nagaland.</p> <p>NERPC also informed that since DoP, Nagaland is going for R&amp;U of 66 kV stations, they can think for inclusion of PLCC wherever PLCC is not present.</p> <p>DoP-Nagaland agreed to submit DPR to NERPC by 29th January 2021.</p>

***Members may please discuss.***

**B.3 Availability of Redundant Path for important nodes and Central Sector RTUs of NER:**

This agenda was differed due to delay in implementation of various FO projects in NER. The FO projects in NER are near completion. Thus the availability of redundant path for important nodes and Central sector RTUs can be explored.

***Members may please discuss.***

**B.4 Allocation of ULDC Fiber for State Utilities Protection Scheme:**

The existing fiber of ULDC scheme may be used by State utilities for implementation of protection scheme.

***Members may please discuss.***

**B.5 Cyber Security aspects in SCADA/IT systems at Load Despatch Centres in North-Eastern region:**

In reference to the 18th and 19th NETeST meetings, MoM chaired by Hon'ble MoP dated 4th March 2021, Minutes of Meeting held on 1st April 2021 on WebEx and letters by NERLDC, POSOCO (attached as **Annexure-B.5**), utilities are requested to take immediate actions for maintaining proper cyber security in the IT and SCADA infrastructure of SLDCs.

***Members may please discuss.***

**B.6 GPRS connectivity for substations in SLDC:**

NERLDC request all the SLDCs using GPRS or other cellular communication technologies to submit the compliance report of GPRS technology as per the Communication Standards before 20<sup>th</sup> NETeST meeting.

***All SLDCs may please intimate the status.***

**B.7 Selected cases of sub-stations for rectification of corresponding data/communication related issues:**

Utility	Station	Latest Status/ Issues
NEEPCO	Ranganadi-2 <sup>nd</sup> channel	Target: 15th February, 2021.
NEEPCO	Doyang	After changing/upgradation work of Current Transformer (CT) of all feeders, the real-time SCADA data is reporting wrong. The same modification is required in transducer of RTU.

***NEEPCO may please intimate the status.***

**B.8 Issues faced by SLDCs with M/s GE T&D India Limited regarding the AMC works of SCADA/EMS projects:**

Sl No.	SLDC	Issues
1.	Assam	1. Low backup from Battery Bank of one UPS. 2. RICH0 Afico SPC 730DN is not working.
2.	Meghalaya	1. Poor back up of both the battery banks of the 2X40KVA UPS units, the cells replaced in one of the battery bank are not original cells and these too in conjunction with other cells are not satisfactory in performance.

		<p>2. Unavailability of eDNA license for reporting tool in operator Console-3</p> <p>3. Robotic failure of Tape library of the system.</p>
3.	<b>Manipur</b>	<p>Since MSPCL is government own enterprise there are sometimes delay in the payment of AMC amount. Due to this delay GE sometimes stop the services i.e. the GE AMC engineers stop coming to office. We faced lot of hardship in day to day activities like report extraction, error rectification and other issues like SCADA integration of new substations, database updation etc.</p> <p>For Manipur GE has stopped the service from Manipur from 26/10/2020 till date. Earlier in the last financial year they stopped service from 20th Dec 2019 till April 2020.</p>
4.	<b>Nagaland</b>	<p>1. RICOH Aficio SP C730dn is not functioning properly.</p> <p>2. KVM adaptor faulty.</p> <p>3. Site Engineers are not well versed with the applications software of SCADA/EMS. Any issued faced is dealt by DJ System Site Engineer from Manipur Mr. Ngamba and Mr. Jackson and Mr. Tamal from Shillong, NERLDC.</p> <p>4. Site Engineers keep changing often.</p>
5.	<b>Tripura</b>	<p>1. There is often hesitation/delay to attend RTU site oriented maintenance work. Frequent request by site support for arrangement of vehicle from TSECL which is not possible/applicable each time causing further delay in many cases.</p> <p>2. GPS clock/ LDMS inverter is out of order at many RTU stations which are not being attended since long.</p> <p>3. There is non-reporting/ incorrect reporting of Breaker/Isolator status at many sub-stations which are not being corrected.</p>

***Members may please discuss.***

**B.9 VSAT For Roing Tezu Namsai:**

Voice and data integration for Roing and Tezu is completed using VSAT. Data integration of Namsai Station is pending.

***NERTS may please intimate the status.***

**B.10 Pending issues of State Utilities of NER:**

The presentation on telemetry status for the month of March-2021 is attached as **Annexure-B.10**.

The utility-wise discussion is tabulated below:



Agenda for 20<sup>th</sup> NETeST Meeting to be held on 20<sup>th</sup> January, 2021

<b>SN</b>	<b>Utility</b>	<b>Stations Not Reporting</b>	<b>Latest Status/ Issues</b>
1	<b>Assam</b>	SAS upgradation	AEGCL informed that the project is hampered as OEMs are not showing up at site for commissioning related activities. It was decided that NERPC will request Assam-SLDC to participate in the NETeST meetings.
2	<b>Tripura</b>	Dhalabil,	FO link completed. The RTU data is not reporting.
		Ambassa	PLCC link completed. The RTU data is not reporting.
		Sabroom, Satchand	Island FO link. Needs PLCC to bring data to WB location Udaipur.
		13 station not covered by NERFO expansion project	TSECL to submit action plan for remaining 13 stations, as NERPSIP project will take a longer duration to complete.  TSECL submitted to the forum that they will submit their proposed PLCC scheme and other modalities of making remaining stations by 29th January 2021 to NERPC with a copy to NERLDC but the same was not updated.
3	<b>Meghalaya</b>	Procurement of DI card from PSDF.	Amendment made to proposal. The amended proposal is still with higher authorities, after approval of the same the proposal will be submitted for PSDF again. Meghalaya to submit the target dates.
5	<b>Manipur</b>	Churachandpur, Kongba and Kakching	After integration of 400kV Thoubal S/s, the SCADA database of the mentioned stations are not yet updated.
		Elangkokpki, Thoubal	The mentioned stations are not yet integrated in SCADA database.
		400kV Thoubal	Due to unavailability of UPS supply to SCADA gateway at the site, the real-time data of 400kV Thoubal is not reporting consistently and interrupts in case of failure of main power supply.
6	<b>Nagaland</b>	Sanis	Reporting over PLCC.
		Melrui	Proposal for RTU pending with higher management. DoP, Nagaland to provide status of the Meluri RTU through e-mail/letter by January'21 to NERPC.
7	<b>Mizoram</b>	Zuangtui	FO link has been completed, however RTU data is reporting partially.

		Saitual, Khawzawl, Champai, Serchhip, Lunglei	Entire station not modelled at SLDC.
8	<b>Ar. Pradesh</b>	VSAT installation	Installation pending: Khupi, Tippi, Pasighat and Deomali. Commissioning pending: Chimpu, Daporizo, Along and Lekhi

***Members may please discuss.***

**B.11 Feasibility to connect Lekhi substation over Fiber-Optic network:**

In the 19<sup>th</sup> NETeST meeting, NERTS informed the forum that LoA for purchase of equipment is already placed but supply is hampered due to import restrictions imposed on China and as an interim arrangement, the spare equipment can be diverted to Lekhi which are expected to be delivered in a few weeks. Once spares arrive at site then necessary work will be carried out. The tentative target date for completion of works by NERTS is March 21.

***NERTS may please intimate the status.***

**B.12 Wrong status of Isolators and CB status at 132 kV SM Nagar S/s:**

The status of numerous isolators and CBs at 132 kV SM Nagar S/s is wrong. This leads to confusion in grid operation for operators. The station has experienced four numbers of disturbances in last three months. Moreover, station is connected to an international node.

NERLDC has requested TSECL to take necessary actions for rectification of the status of isolators and CBs via email dated 16/02/2021, 23/03/2021 and 31/03/2021 (attached as **Annexure-B.12**), yet there is no significant improvement.

***TSECL may provide the action plan for rectification of the issue.***

**B.13 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 Agaratala and PK Bari
2. 400 kV Silchar – Misa D/c: Will provide additional link between south NER and North NER.

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

***Members may please discuss.***

**B.14 Integration of Dikshi HEP real time data and pending Voice communication:**

Non-compliance of undertakings, discussions and various requests made from NERPC forum. NERPC is requested to intervene in the matter for early establishment of voice and PLCC for Tenga and Dikshi.

Further, it was deliberated that M/s Devi Energies should take proper maintenance of VSAT as irregularities in the link is being observed in last two (02) months. SIP phones are also not installed yet at Dikshi and Tenga even after continuous request made through NERPC forum.

As informed in the forum, NERPC will take up the matter with Devi Energies.

***DoP, AP and M/s Devi Energies Pvt. may please intimate the status.***

**Any other item:**

**Date and Venue of next NETeST:**

It is proposed to hold the 21<sup>st</sup> NETeST meeting of NERPC on second week of July 2021. The date & exact venue will be intimated in due course.

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पावर सिस्टम ऑपरेशन करपोरेशन लिमिटेड  
(भारत सरकार का उद्यम)  
POWER SYSTEM OPERATION CORPORATION LIMITED  
(A Government of India Enterprise)



उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र : लोअर नंगरा, लापालांग, शिलांग-793006, (मेघालय)  
North Eastern Regional Load Despatch Centre: Lower Nongrah, Lapalang, Shillong - 793006, (Meghalaya)  
Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerldc.org, Email - nerldc@posoco.in, CIN : U40105DL2009GOI188682

संदर्भ/Ref: NERLDC/SL/SCADA/Arunachal/Mar'21/1059

दिनांक/Date: 12<sup>th</sup> March 2021

सेवा में/To,

Executive Engineer  
SLDC Itanagar, DoP  
132kV Chimpu Substation  
Itanagar, Arunachal Pradesh – 791111  
INDIA

संदर्भ/Ref.: a) Minutes of 19<sup>th</sup> NETeST Meeting vide ref. NERPC/SE (O)/NETeST/2020/4325-4362 dated 10<sup>th</sup> February 2021  
b) Letter from NERLDC ref. NERLDC/SL/SCADA/Arunachal/Jan'21/616 dated 13<sup>th</sup> January 2021

विषय/Subject: पूर्वोक्त क्षेत्र के राज्य भार प्रेषण केंद्रों में पर्याप्त साइबर सुरक्षा संबंधी पहलुओं को सुनिश्चित करने संबंधित/ Ensuring adequate Cyber Security related aspects in State Load Despatch Centres of North Eastern Region – reg.

महोदय/Sir,

This is in reference to the deliberations against Agenda Item B.15 in the Minutes of Meeting of 19<sup>th</sup> NETeST held on 20<sup>th</sup> January 2021 at Guwahati related to Cyber Security aspects in SCADA/IT systems at Load Despatch Centres in North-Eastern region. As the SLDCs and NERLDC are performing the mission critical functions of grid operation activities in North-Eastern region to ensure the smooth and reliable operation of the power system network, hence the SCADA/EMS and IT systems deployed in the SLDCs are prone to cyber-attacks from various internal and external agencies incl. state-sponsored attacks.

In a recent advisory from CERT-In which is strongly being monitored at Central Ministry of Power also is related to a state-sponsored attack from China with a malware "Shadowpad". Possibility of similar attacks in future cannot be denied and all necessary precautions need to be taken for cyber security of systems in Load Despatch Centres.

As the SCADA and IT systems of SLDCs and NERLDC are working in an inter-connected manner in terms of various data/file exchanges related to real-time SCADA data, Web-scheduling, information dissemination through web-sites, intranet portals, etc.; hence, it is advisable to ensure that at least following checks and measures are in place from SLDCs side for cyber security purposes in the SCADA/IT System –

- Deployment of Firewalls with stringent policies along with necessary latest firmware/OS/signatures deployment
- End-point security solutions for all devices
- Vulnerability Assessment and Penetration Tests (VAPT) and its compliance on yearly basis
- Patch Management for all software and devices incl. Operating Systems
- Replacement of End-of-support products
- SSL certificates for all web-hosted applications
- Whether the "Extended Security Update Subscription Support" from Microsoft has been taken for Windows Server 2008 R2 and Windows Server 2012 or not. Please refer the links below -

पीठे पर/PTO

<https://docs.microsoft.com/en-us/windows-server/get-started/extended-security-updates>  
<https://docs.microsoft.com/en-us/lifecycle/products/windows-server-2012>

- Compiled list and measures to be taken for all the recommendations in VAPT which has not been fixed by GE due to multiple issues such as Application Dependency, etc.
- Stringent password policies for all systems.
- Blocking of USB ports through Active Directory Server to stop access through pen-drive/other external storage devices.
- Analysis of Firewall and other logs on daily basis to analyse unwanted intrusion activity or suspected traffic, if any.

Being a matter of cyber security, it may be treated as most urgent.

यह आपकी जानकारी एवं अतिरिक्त कार्यवाही हेतु प्रस्तुत है This is for information and necessary action at your end.

आभार प्रकट/ Thanking you.

भावदीया/ Yours faithfully,

शेख शद्रुद्दीन/ Sheikh Shadrudin

महाप्रबंधक (सिस्टम लॉजिस्टिक्स) एवं सी.आई.एस.ओ./ GM (System Logistics) & CISO

उ.पू.क्षे.भा.पे.के., पोसोको/ NERLDC, POSOCO

शिलांग/ Shillong

प्रति/Copy (ई-मेल द्वारा/ by e-mail):

- चीफ इंजीनियर (पावर), वेस्टर्न इलेक्ट्रिकल जोन, सी.ओ.पी. अरुणाचल, अगर्ता/ Chief Engineer (Power), Western Electrical Zone, DoP Arunachal Pradesh, Agartala
- सदस्य सचिव, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Member Secretary, NERPC, Shillong
- निदेशक, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Director(O), NERPC, Shillong
- निदेशक (सिस्टम ऑपरेशन), पोसोको, नई दिल्ली/ Director (System Operation), POSOCO, New Delhi
- कार्यपालक निदेशक (उ.पू.क्षे.भा.पे.के.), नई दिल्ली/ Executive Director, NLDC, New Delhi
- मुख्य महाप्रबंधक, प्रभारी (उ.पू.क्षे.भा.पे.के.), शिलांग/ Chief General Manager (I/c), NERLDC, Shillong
- केंद्रीय सी.आई.एस.ओ., के.एम., पोसोको, नई दिल्ली/ Corporate CISO, POSOCO, New Delhi

पावर सिस्टम ऑपरेशन कर्पोरेशन लिमिटेड  
(भारत सरकार का उद्यम)  
POWER SYSTEM OPERATION CORPORATION LIMITED  
(A Government of India Enterprise)



उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र : लोअर नंगरा, लापालांग, शिलांग-793006, (मेघालय)  
North Eastern Regional Load Despatch Centre: Lower Nongrah, Lapalang, Shillong - 793006, (Meghalaya)  
Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerldc.org, Email - nerldc@posoco.in, CIN : U40105DL2009GOI188682

संदर्भ/Ref: NERLDC/SL/SCADA/Assam/Mar'21/1052

दिनांक/Date: 12<sup>th</sup> March 2021

सेवा में/To,  
Chief General Manager  
State Load Despatch Centre  
Assam Electricity Grid Corporation Ltd.  
ASEB Colony, Powerhouse  
Kahilipara, Guwahati-781019

संदर्भ/Ref.: a) Minutes of 19<sup>th</sup> NETeST Meeting vide ref. NERPC/SE (O)/NETeST/2020/4325-4362 dated 10<sup>th</sup> February 2021  
b) Letter from NERLDC ref. NERLDC/SL/SCADA/Arunachal/Jan'21/618 dated 13<sup>th</sup> January 2021

विषय/Subject: पूर्वोक्त क्षेत्र के राज्य भार प्रेषण केंद्रों में पर्याप्त साइबर सुरक्षा संबंधी पहलुओं को सुनिश्चित करने संबंधित/ Ensuring adequate Cyber Security related aspects in State Load Despatch Centres of North Eastern Region – reg.

महोदय/Sir,

This is in reference to the deliberations against Agenda Item 8.15 in the Minutes of Meeting of 19<sup>th</sup> NETeST held on 20<sup>th</sup> January 2021 at Guwahati related to Cyber Security aspects in SCADA/IT systems at Load Despatch Centres in North-Eastern region. As the SLDCs and NERLDC are performing the mission critical functions of grid operation activities in North-Eastern region to ensure the smooth and reliable operation of the power system network, hence the SCADA/EMS and IT systems deployed in the SLDCs are prone to cyber-attacks from various internal and external agencies incl. state-sponsored attacks.

In a recent advisory from CERT-In which is strongly being monitored at Central Ministry of Power also is related to a state-sponsored attack from China with a malware "Shadowpad". Possibility of similar attacks in future cannot be denied and all necessary precautions need to be taken for cyber security of systems in Load Despatch Centres.

As the SCADA and IT systems of SLDCs and NERLDC are working in an inter-connected manner in terms of various data/file exchanges related to real-time SCADA data, Web-scheduling, information dissemination through web-sites, intranet portals, etc.; hence, it is advisable to ensure that at least following checks and measures are in place from SLDCs side for cyber security purposes in the SCADA/IT System –

- Deployment of Firewalls with stringent policies along with necessary latest firmware/OS/signatures deployment
- End-point security solutions for all devices
- Vulnerability Assessment and Penetration Tests (VAPT) and its compliance on yearly basis
- Patch Management for all software and devices incl. Operating Systems
- Replacement of End-of-support products
- SSL certificates for all web-hosted applications
- Whether the "Extended Security Update Subscription Support" from Microsoft has been taken for Windows Server 2008 R2 and Windows Server 2012 or not. Please refer the links below -

पीछे पत्र/PTO

<https://docs.microsoft.com/en-us/windows-server/get-started/extended-security-updates>  
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- Compiled list and measures to be taken for all the recommendations in VAPT which has not been fixed by GE due to multiple issues such as Application Dependency, etc.
- Stringent password policies for all systems.
- Blocking of USB ports through Active Directory Server to stop access through pen-drive/other external storage devices.
- Analysis of Firewall and other logs on daily basis to analyse unwanted intrusion activity or suspected traffic, if any.

Being a matter of cyber security, it may be treated as most urgent.

यह आपकी जानकारी एवं अग्रिम कार्यवाही हेतु प्रस्तुत है। This is for information and necessary action at your end.

सादर धन्यवाद/ Thanking you.

आपकीया/ Yours faithfully,

शेख शद्रुद्दीन/ Sheikh Shadrudin

महाप्रबंधक (सिस्टम लॉजिस्टिक्स) एवं सी.आई.एस.ओ./ GM (System Logistics) & CISO

उ.पू.क्षे.आ.पे.के., पोसोको/ NERLDC, POSOCO

शिलांग/ Shillong

प्रति/Copy (ई-मेल द्वारा/ by e-mail):

- प्रबंध निदेशक, ए.ई.जी.सी.एल., गुवाहाटी/ Managing Director, AEGCL, Guwahati
- सदस्य सचिव, उदार पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Member Secretary, NERPC, Shillong
- निदेशक, उदार पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Director(O), NERPC, Shillong
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North Eastern Regional Load Despatch Centre: Lower Nongrah, Lapalang, Shillong - 793006, (Meghalaya)  
Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerldc.org, Email - nerldc@posoco.in, CIN : U40105DL2009GOI188682

संदर्भ/Ref: NERLDC/SL/SCADA/Manipur/Mar'21/1053

दिनांक/Date: 12<sup>th</sup> March 2021

सेवा में/To,  
General Manager  
State Load Despatch Centre  
Yurembam Power House  
Imphal West-795004  
Manipur, INDIA

संदर्भ/Ref.: a) Minutes of 19<sup>th</sup> NETeST Meeting vide ref. NERPC/SE (O)/NETeST/2020/4325-4362 dated 10<sup>th</sup> February 2021  
b) Letter from NERLDC ref. NERLDC/SL/SCADA/Arunachal/Jan'21/617 dated 13<sup>th</sup> January 2021

विषय/Subject: पूर्वोक्त क्षेत्र के राज्य भार प्रेषण केंद्रों में पर्याप्त साइबर सुरक्षा संबंधी पहलुओं को सुनिश्चित करने संबंधित/ Ensuring adequate Cyber Security related aspects in State Load Despatch Centres of North Eastern Region – reg.

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पीछे पलटें/PFO



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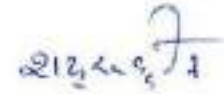
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सादर धन्यवाद/ Thanking you.

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शेख शद्रुद्दीन/Sheikh Shadruddin

महाप्रबंधक (सिस्टम लॉजिस्टिक्स) एवं सी.आई.एस.ओ./GM (System Logistics) & CISO

उ.पू.क्षे.भा.पे.के, पोसोको/ NERLDC, POSOCO

शिलांग/ Shillong

प्रति/Copy (ई-मेल द्वारा/ by e-mail):

- प्रबंध निदेशक, एन.एस.पी.सी.एल., इम्फाल/MD, MSPCL, Imphal
- सदस्य सचिव, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Member Secretary, NERPC, Shillong
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Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerldc.org, Email - nerldc@posoco.in, CIN : U40105DL2009GOI188682

संदर्भ/Ref: NERLDC/SL/SCADA/Meghalaya/Mar'21/1054

दिनांक/Date: 12<sup>th</sup> March 2021

सेवा में/To,  
Superintending Engineer  
State Load Despatch Centre  
Meghalaya Power Transmission Corp. Ltd.  
Umjarain Mawkynroh, NEHU Campus  
Shillong-793022, Meghalaya

संदर्भ/Ref.: a) Minutes of 19<sup>th</sup> NETeST Meeting vide ref. NERPC/SE (O)/NETeST/2020/4325-4362 dated 10<sup>th</sup> February 2021  
b) Letter from NERLDC ref. NERLDC/SL/SCADA/Arunachal/Jan'21/615 dated 13<sup>th</sup> January 2021

विषय/Subject: पूर्वोक्त क्षेत्र के राज्य भार प्रेषण केंद्रों में पर्याप्त साइबर सुरक्षा संबंधी पहलुओं को सुनिश्चित करने संबंधित। Ensuring adequate Cyber Security related aspects in State Load Despatch Centres of North Eastern Region – reg.

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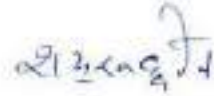
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सादर धन्यवाद/ Thanking you.

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शेख शद्रुद्दीन/Sheikh Shadrudin  
महाप्रबंधक (सिस्टम लॉजिस्टिक्स) एवं सी.आई.एस.ओ./GM (System Logistics) & CISO  
उ.पू.क्षे.भा.प्रे.के., पोसोको/ NERLDC, POSOCO  
शिलांग/ Shillong

प्रति/Copy (ई-मेल द्वारा/ by e-mail):

- अध्यक्ष एवं प्रबंध निदेशक, एम.ई.पी.टी.सी.एल./CMD, MePTCL, Shillong
- सदस्य सचिव, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Member Secretary, NERPC, Shillong
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- निदेशक (सिस्टम ऑपरेशन), पोसोको, नई दिल्ली/ Director (System Operation), POSOCO, New Delhi
- कार्यपालक निदेशक (स.भा.प्रे.के.), नई दिल्ली/ Executive Director, NLDC, New Delhi
- मुख्य महाप्रबंधक, प्रभारी (उ.पू.क्षे.भा.प्रे.के.), शिलांग/ Chief General Manager (I/c), NERLDC, Shillong
- केंद्रीय सी.आई.एस.ओ., कै.का., पोसोको, नई दिल्ली/ Corporate CISO, POSOCO, New Delhi

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Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerlhc.org, Email - nerlhc@posoco.in, CIN : U40105DL2009GOI188682

संदर्भ/Ref: NERLDC/SL/SCADA/Mizoram/Mar'21/1055

दिनांक/Date: 12<sup>th</sup> March 2021

सेवा में/To,

Sr. Executive Engineer  
State Load Despatch Centre Division  
P&E Office Complex, North Block (III Floor)  
Electric Veng, Aizawl- 796001  
Mizoram, INDIA

संदर्भ/Ref.: a) Minutes of 19<sup>th</sup> NETeST Meeting vide ref. NERPC/SE (O)/NETeST/2020/4325-4362 dated 10<sup>th</sup> February 2021  
b) Letter from NERLDC ref. NERLDC/SL/SCADA/Arunachal/Jan'21/613 dated 13<sup>th</sup> January 2021

विषय/Subject: पूर्वोक्त क्षेत्र के राज्य भार प्रेषण केंद्रों में पर्याप्त साइबर सुरक्षा संबंधी पहलुओं को सुनिश्चित करने संबंधित/ Ensuring adequate Cyber Security related aspects in State Load Despatch Centres of North Eastern Region – reg.

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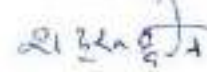
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उ.पू.शे.भा.पे.के, पोसोको/ NERLDC, POSOCO

शिलांग/ Shillong

प्रति/Copy (ई-मेल द्वारा/ by e-mail):

- इंजीनियर इन चीफ (पी.एच.डी. मिज़ोरम), चेन्नैयाल/ Engineer-in-chief, P&ED Mizoram, Aizawl
- सदस्य सचिव, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Member Secretary, NERPC, Shillong
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- सुपेरीटेंडिंग अभियंता, एच.एल.डी.सी. सर्किल, चेन्नैयाल/ Superintending Engineer, SLDC Circle, Aizawl

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उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र : लोअर नैगरा, लापालांग, शिलांग-793006, (मेघालय)  
North Eastern Regional Load Despatch Centre: Lower Nongrah, Lapalang, Shillong - 793006, (Meghalaya)  
Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerlhc.org, Email - nerlhc@posoco.in, CIN : U40105DL2009GOI188682

संदर्भ/Ref: NERLDC/SL/SCADA/Tripura/Mar'21/1058

दिनांक/Date: 12<sup>th</sup> March 2021

सेवा में/To,

Dy. General Manager (System Operation)  
State Load Despatch Centre  
TSECL, 79-Tilla, Agartala  
Tripura (West) – 799006, INDIA

संदर्भ/Ref.: a) Minutes of 19<sup>th</sup> NETeST Meeting vide ref. NERPC/SE (O)/NETeST/2020/4325-4362 dated 10<sup>th</sup> February 2021  
b) Letter from NERLDC ref. NERLDC/SL/SCADA/Arunachal/Jan'21/611 dated 13<sup>th</sup> January 2021

विषय/Subject: पूर्वोक्त क्षेत्र के राज्य भार प्रेषण केंद्रों में पर्याप्त साइबर सुरक्षा संबंधी पहलुओं को सुनिश्चित करने संबंधित/ Ensuring adequate Cyber Security related aspects in State Load Despatch Centres of North Eastern Region – reg.

महोदय/Sir,

This is in reference to the deliberations against Agenda Item B.15 in the Minutes of Meeting of 19<sup>th</sup> NETeST held on 20<sup>th</sup> January 2021 at Guwahati related to Cyber Security aspects in SCADA/IT systems at Load Despatch Centres in North-Eastern region. As the SLDCs and NERLDC are performing the mission critical functions of grid operation activities in North-Eastern region to ensure the smooth and reliable operation of the power system network, hence the SCADA/EMS and IT systems deployed in the SLDCs are prone to cyber-attacks from various internal and external agencies incl. state-sponsored attacks.

In a recent advisory from CERT-In which is strongly being monitored at Central Ministry of Power also is related to a state-sponsored attack from China with a malware "Shadowpad". Possibility of similar attacks in future cannot be denied and all necessary precautions need to be taken for cyber security of systems in Load Despatch Centres.

As the SCADA and IT systems of SLDCs and NERLDC are working in an inter-connected manner in terms of various data/file exchanges related to real-time SCADA data, Web-scheduling, information dissemination through web-sites, intranet portals, etc.; hence, it is advisable to ensure that at least following checks and measures are in place from SLDCs side for cyber security purposes in the SCADA/IT System –

- Deployment of Firewalls with stringent policies along with necessary latest firmware/OS/signatures deployment
- End-point security solutions for all devices
- Vulnerability Assessment and Penetration Tests (VAPT) and its compliance on yearly basis
- Patch Management for all software and devices incl. Operating Systems
- Replacement of End-of-support products
- SSL certificates for all web-hosted applications
- Whether the "Extended Security Update Subscription Support" from Microsoft has been taken for Windows Server 2008 R2 and Windows Server 2012 or not. Please refer the links below -

पीछे पलटें/PTO

<https://docs.microsoft.com/en-us/windows-server/get-started/extended-security-updates>  
<https://docs.microsoft.com/en-us/lifecycle/products/windows-server-2012>

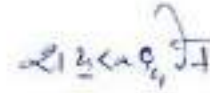
- Compiled list and measures to be taken for all the recommendations in VAPT which has not been fixed by GE due to multiple issues such as Application Dependency, etc.
- Stringent password policies for all systems.
- Blocking of USB ports through Active Directory Server to stop access through pen-drive/other external storage devices.
- Analysis of Firewall and other logs on daily basis to analyse unwanted intrusion activity or suspected traffic, if any.

Being a matter of cyber security, it may be treated as most urgent.

वह आपकी जानकारी एवं अग्रिम कार्यवाही हेतु प्रस्तुत है/This is for information and necessary action at your end.

सादर धन्यवाद/ Thanking you.

भवदीय/ Yours faithfully,



शेख शद्रुद्दीन/Sheikh Shadrudin  
महाप्रबंधक (सिस्टम लॉजिस्टिक्स) एवं सी.आई.एस.ओ./GM (System Logistics) & CISO  
उ.पू.क्षे.भा.पे.के, पोसोको/ NERLDC, POSOCO  
शिलांग/ Shillong

प्रति/Copy (ई-मेल द्वारा/ by e-mail):

- प्रबंध निदेशक, टी.एस.ई.सी.एल., अगस्तला/ Managing Director, TSECL, Agartala
- सदस्य सचिव, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Member Secretary, NERPC, Shillong
- निदेशक, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Director(O), NERPC, Shillong
- निदेशक (सिस्टम ऑपरेशन), पोसोको, नई दिल्ली/ Director (System Operation), POSOCO, New Delhi
- कार्यपालक निदेशक (उ.पू.क्षे.भा.पे.के.), नई दिल्ली/ Executive Director, NLDC, New Delhi
- मुख्य महाप्रबंधक, प्रभासी (उ.पू.क्षे.भा.पे.के.), शिलांग/ Chief General Manager (I/c), NERLDC, Shillong
- केंद्रीय सी.आई.एस.ओ., के.एम., पोसोको, नई दिल्ली/ Corporate CISO, POSOCO, New Delhi

पावर सिस्टम ऑपरेशन कर्पोरेशन लिमिटेड  
(भारत सरकार का उद्यम)  
POWER SYSTEM OPERATION CORPORATION LIMITED  
(A Government of India Enterprise)



उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र : लोअर नैगरा, लापालांग, शिलांग-793006, (मेघालय)  
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Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerlhc.org, Email - nerlhc@posoco.in, CIN : U40105DL2009GOI188882

संदर्भ/Ref: NERLDC/SL/SCADA/Nagaland/Mar'21/1057

दिनांक/Date: 12<sup>th</sup> March 2021

सेवा में/To,

Executive Engineer  
State Load Despatch Centre  
Full Nagarjan, Dimapur  
Nagaland - 797112  
INDIA

संदर्भ/Ref.: a) Minutes of 19<sup>th</sup> NETeST Meeting vide ref. NERPC/SE (O)/NETeST/2020/4325-4362 dated 10<sup>th</sup> February 2021  
b) Letter from NERLDC ref. NERLDC/SL/SCADA/Arunachal/Jan'21/612 dated 13<sup>th</sup> January 2021

विषय/Subject: पूर्वोक्त क्षेत्र के राज्य भार प्रेषण केंद्रों में पर्याप्त साइबर सुरक्षा संबंधी पहलुओं को सुनिश्चित करने संबंधित/ Ensuring adequate Cyber Security related aspects in State Load Despatch Centres of North Eastern Region - reg.

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पीठे पत्र/PTO



<https://docs.microsoft.com/en-us/windows-server/get-started/extended-security-updates>  
<https://docs.microsoft.com/en-us/lifecycle/products/windows-server-2012>

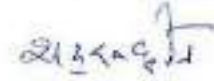
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यह आपकी जानकारी एवं अग्रिम कार्यवाही हेतु प्रस्तुत है/This is for information and necessary action at your end.

सादर धन्यवाद/ Thanking you.

भवदीय/ Yours faithfully,



शेख शद्रुदीन/Sheikh Shadrudin

महाप्रबंधक (सिस्टम लॉजिस्टिक्स) एवं सी.आई.एम.ओ./GM (System Logistics) & CISO

उ.पू.क्षे.भा.प्रे.के, पोसोको/ NERLDC, POSOCO

शिलांग/ Shillong

प्रति/Copy (ई-मेल द्वारा/ by e-mail):

- इंजीनियर इन चीफ, डी.ओ.पी.-नागालैंड, कोहिमा/ Engineer-In-chief, DoP Nagaland, Kohima
- सदस्य सचिव, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Member Secretary, NERPC, Shillong
- निदेशक, उत्तर पूर्वी क्षेत्रीय विद्युत समिति, शिलांग/ Director(O), NERPC, Shillong
- निदेशक (सिस्टम ऑपरेशन), पोसोको, नई दिल्ली/ Director (System Operation), POSOCO, New Delhi
- कार्यपालक निदेशक (रा.भा.प्रे.के.), नई दिल्ली/ Executive Director, NLDC, New Delhi
- मुख्य महाप्रबंधक, प्रभावी (उ.पू.क्षे.भा.प्रे.के.), शिलांग/ Chief General Manager (I/c), NERLDC, Shillong
- केंद्रीय सी.आई.एम.ओ., के.का., पोसोको, नई दिल्ली/ Corporate CISO, POSOCO, New Delhi

## Sakal Deep (सकल दीप)

---

**From:** Sakal Deep (सकल दीप)  
**Sent:** 31 March 2021 09:26  
**To:** 'smpsen@rediffmail.com'; 'partha.acharya@gmail.com'; 'SLDC TRIPURA'  
**Cc:** 'directotech'; 'sod.tsecl@gmail.com'; N Roy (एन रॉय); Akhil Singhal (अखिल सिंघल);  
Paominal DOUNGEL; Royal Sutnga  
**Subject:** RE: Wrong status of all isolators at 132 kV SM Nagar (TSECL)  
**Importance:** High

Respected Ma'am/Sir,

Gentle reminder to rectify the issue at the earliest.  
Kindly revert.

Regards,

Sakal Deep (सकल दीप)

System Logistics

North Eastern Regional Load Despatch Centre, Shillong

Power System Operation Corporation Ltd./पावर सिस्टम आपरेशन कारपोरेशन लि.

(A Government of India Enterprise)

---

**From:** Sakal Deep (सकल दीप)

**Sent:** 23 March 2021 15:19

**To:** 'smpsen@rediffmail.com' <smpsen@rediffmail.com>; 'partha.acharya@gmail.com'  
<partha.acharya@gmail.com>; 'SLDC TRIPURA' <tsecl\_sldc@rediffmail.com>

**Cc:** directotech <directot.tech@gmail.com>; 'sod.tsecl@gmail.com' <sod.tsecl@gmail.com>; N Roy (एन रॉय)  
<nroy@posoco.in>; Akhil Singhal (अखिल सिंघल) <akhilsinghal@posoco.in>; Paominal DOUNGEL  
<paominal@posoco.in>; Royal Sutnga <royalsutnga@posoco.in>

**Subject:** RE: Wrong status of all isolators at 132 kV SM Nagar (TSECL)

Respected Ma'am/Sir,

The CB isolator status of numerous bays at the 132 kV SM Nagar (TSECL) station are reporting wrong status. Please refer the trailing mail, it is difficult to observe station connectivity during grid operation. Moreover, station is connected to international lines.

Please consider this mail as reminder mail to rectify the issue at the earliest.

Regards,

Sakal Deep (सकल दीप)

System Logistics

North Eastern Regional Load Despatch Centre, Shillong

Power System Operation Corporation Ltd./पावर सिस्टम आपरेशन कारपोरेशन लि.

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---

**From:** Sakal Deep (सकल दीप)

**Sent:** 16 February 2021 09:42

**To:** 'smpsen@rediffmail.com' <smpsen@rediffmail.com>; 'partha.acharya@gmail.com'  
<partha.acharya@gmail.com>; 'SLDC TRIPURA' <tsecl\_sldc@rediffmail.com>

**Cc:** [sod.tsecl@gmail.com](mailto:sod.tsecl@gmail.com); Akhil Singhal (अखिल सिंघल) <[akhilsinghal@posoco.in](mailto:akhilsinghal@posoco.in)>; Paominal DOUNGEL

<[paominlal@posoco.in](mailto:paominlal@posoco.in)>; Royal Sutnga <[royalsutnga@posoco.in](mailto:royalsutnga@posoco.in)>

**Subject:** Wrong status of all isolators at 132 kV SM Nagar (TSECL)

**Importance:** High

Respected Ma'am/Sir,

In a near miss incident on 14<sup>th</sup> February 2021, LBB was operated at SM Nagar station. However, it was experience in real time as well as post-dispatch that isolators at 132 kV SM Nagar are reporting wrong status.

This has led to incorrect information to operators while handling the situation. Further, study on the incident was also hampered.

132 kV SM Nagar is connected to Bangladesh directly any impact on the station causes load loss in Bangladesh. Considering the importance of the station it is requested to take necessary actions for correction of status of isolators at 132 kV SM Nagar.

Matter is urgent and serious in nature.

A snapshot is attached from the incident of 14<sup>th</sup> February 2021 for your reference.

Regards,

Sakal Deep (सकल दीप)

System Logistics

North Eastern Regional Load Despatch Centre, Shillong

Power System Operation Corporation Ltd./पावर सिस्टम आपरेशन कारपरेशन लि.

**(A Government of India Enterprise)**