North Eastern Regional Power Committee

Agenda For

152nd OCC Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 11th January, 2019 (Friday)

Venue : "Hotel Nandan", Guwahati.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 151st MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 151st meeting of Operation Sub-committee held on 14th December, 2018 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 26th December, 2018.

The Sub-committee may confirm the minutes of 151st OCCM of NERPC as no comments/observations were received from the constituents.

ITEMS FOR DISCUSSION

B.1. ACTION TAKEN:

1. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:

The status as informed in 151st OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Arunachal Pradesh	Pkg-I: Approved. Tender by Dec'18 Pkg-II: To be approved. Tender by Jan'19.	Revised DPR submitted	-	DPR submitted for Techno-Economic Appraisal.	-
Nagaland	Pack-A: Completed Pack-B: Dec'18 Pack-C: Dec'18 Pack-D: Completed.	Revised DPR yet to be submitted	To re-submit proposal to NERPC for Study.	DPR submitted for Techno-Economic Appraisal	Lines identified. Under DPR preparation stage.
Mizoram	Could not update due to absence of representatives				Lines not yet identified. To be taken up in

					Sub-group.
Manipur	LOAs issued. Completion by Nov'18.	Revised DPR submitted	Submitted to NERPC for Study before sending to NPC/NLDC.	DPR submitted for Techno-Economic Appraisal	Lines not yet identified. To be taken up in Sub-group.
Tripura	Tentative Completion by 31.12.2018	Revised DPR submitted	To submit proposal to NERPC for Study.	DPR submitted for Techno-Economic Appraisal	Lines not yet identified. To be taken up in Sub-group.
Assam	Substation auxiliary and diagnostics tools - Tendering in process. LOA by Dec'18.	Revised DPR submitted	-	DPR submitted for Techno-Economic Appraisal	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Balance items LOA by Oct'18 MePGCL – Erection complete by Mar'19	Revised DPR submitted. Query referred to DISCOM	-	DPR submitted for Techno-Economic Appraisal	Lines identified. Revised DPRs to be prepared.

The entities may also be advised to furnish status as per format by first week of every month on regular basis to Member Convener, PSDF Project Monitoring Group (AGM, NLDC, POSOCO) with a copy to NPC & NERPC. The LOAs of R&M Scheme are to be furnished to NERLDC/NERPC regularly.

States may please intimate the latest status.

2. <u>Long Outage of Important Grid Elements:</u>

Name of the Element	Name of Utility	Status as informed in 151st OCC	Latest Status
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	1st NERSCT MoM to be recorded. MePTCL may initiate preparation of bid documents etc for the tendering process.	
Outage of 420kV 80MVAR L/R for 400kV	NERTS	By January, 2019	

Bongaigaon-NSLG-I at Bongaigaon - (out since *04.07.18*)			
132kV Dimapur - Imphal (*out since 25.07.18*)	NERTS	By January, 2019	
63 MVAR B/R-4 at 400kV Biswanath-Chariali(*out since 27.04.18*)	NERTS	By December, 2018	
132 kV, 20MVAr Bus Reactor at Roing out of service since 08:00 Hrs of 16.08.18 (*Shutdown approved till 1600 Hrs of 31st August'18*)	NERTS	Winding failure. Sent to factory	
220kV Sonabil-Samaguri-I	AEGCL	By March, 2019	
420kV 80 MVAR Bus Reactor at 400 kV Imphal S/S(*out since 21:05 Hrs of 25.12.18)*	NERTS	-	

Utilities may please intimate the latest status.

3. DIFFERENCE IN ACTUALS VS LGBR:

Energy Requirement:

Name of State	Aug 18 (actual)	Aug 18 (LGBR)	Sep 18 (actual)	Sep 18 (LGBR)	Oct 18 (actual)	Oct 18 (LGBR)	Nov 18 (actual)	Nov 18 (LGBR)
Ar. Pradesh	76.34	77.02	74.16	71.19	70.06	77.25	67.34	77.97
Assam	1039.01	970.21	950.19	934.64	815.67	885.83	707.55	707.17
Manipur	70.53	76.98	69.88	69.64	75.80	75.56	81.80	78.59
Meghalaya	162.17	159.00	150.14	164.00	144.61	166.00	163.83	169.00
Mizoram	58.96	44.80	58.04	39.37	70.64	44.19	67.71	47.06
Nagaland	80.88	79.25	80.49	76.88	74.27	69.66	61.04	64.67
Tripura	179.61	127.98	192.00	125.18	187.38	132.09	164.71	98.49

Energy Availability:

Name of State	Aug 18 (actual)	Aug 18 (LGBR)	Sep 18 (actual)	Sep 18 (LGBR)	Oct 18 (actual)	Oct 18 (LGBR)	Nov 18 (actual)	Nov 18 (LGBR)
Ar. Pradesh	81.81	96.23	81.12	82.62	67.90	77.45	64.46	63.39
Assam	991.95	967.37	987.64	859.96	772.79	898.78	747.84	795.50
Manipur	109.25	126.69	177.79	110.48	105.39	117.42	85.54	106.01
Meghalaya	285.36	322.71	276.17	308.96	200.13	274.43	175.54	206.71
Mizoram	92.74	99.89	111.76	89.77	106.29	83.22	89.63	69.34
Nagaland	84.88	99.50	81.24	87.96	68.17	88.06	53.51	72.04
Tripura	312.05	294.40	309.44	268.15	342.04	300.01	332.36	272.69

Demand:

Name of State	Aug 18 (actual)	Aug 18 (LGBR)	Sep 18 (actual)	Sep 18 (LGBR)	Oct 18 (actual)	Oct 18 (LGBR)	Nov 18 (actual)	Nov 18 (LGBR)

Ar. Pradesh	135.88	148	131.92	143	129.08	146.00	127.77	145.00
Assam	1833.85	1752.66	1865.26	1787.60	1785.42	1840.56	1546.54	1558.56
Manipur	177.32	173.10	184.39	168.04	187.28	175.61	189.23	182.53
Meghalaya	325.43	314.92	317.42	328.18	336.23	320.58	352.42	342.37
Mizoram	99.09	92.62	95.47	95.23	99.18	96.76	102.12	104.38
Nagaland	134.32	139.63	142.07	148.77	133.77	138.05	139.00	133.50
Tripura	291.86	327.32	296.01	359.46	269.32	312.39	258.54	278.62

B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING DECEMBER, 2018

NERLDC may please present the grid performance parameters for Dec'18.

C. OLD ITEMS

1. Status of Generating Units, Transmission Lines in NER:

During 151st OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 151st OCC Meeting		Status as given in 151st OCC Meeting	
		Timeline for completion	Furnishing of detail parameters	Timeline for completion	Furnishing of detail parameters
a. New Elements					
1	400/220kV, 315 MVA ICT-1 of NTPC at Bongaigaon	By Jan'19	To be submitted to NERLDC.		
2	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	To be reviewed	Already submitted.		
3	132kV Monarchak – Surjamaninagar D/C of TSECL	by Jun'19	To be submitted to NERLDC.		
4	400/220 kV 315 MVA ICT-II at Bongaigaon	HV side charged, LV side by Mar'19	LV side separate application to be submitted		
5	220/132 kV, 160MVA ICT-II	ICT damaged in transit. Uncertain.	To be submitted to		

	at Balipara		NERLDC.		
6	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	March 2019 (Delay in Supply)	To be submitted to NERLDC.		
7	33kV bay at 220kV Mariani(AS) S/Sn	APDCL has submitted estimate. Payment expected by Dec'19	Not applicable.		
8	33kV bay for 132kV Badarpur(PG) S/Sn	To be expedited by APDCL. Latest status to be submitted ASAP.	Not applicable.		
9	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	SLDC Meghalaya to co-ordinate.	Not applicable.		
10	Replacement of 2x315 MVA ICTs with 2x500 MVA ICTs at Misa (PG)	ICT-I : May'19 ICT-II: Jun'19 Tertiary re-arrangement approved in 1st NERSCT.	To be submitted to NERLDC.		
b. Elements under breakdown/upgradation					
11	Up-gradation of 132 kV Lumshnong-Panchgram line	Queries/ revised study to be submitted by SLDC.	Not applicable.		
12	Switchable line Reactors at 400 kV Balipara & Bongaigoan Ckt # 1 & 2	Reactors charged. CSD tuning to be done. By Dec'18	Not applicable		
13	PLCC Panels at Loktak end of Loktak – Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	PLCC panels at Rengpang & Ningthoukong end completed. Loktak end by Dec'18	Not applicable.		
14	Upgradation of 132 kV Silchar-	One circuit upgradation by Dec'18.	To be submitted to NERLDC		

	Imphal to 400 kV				
15	Replacement of CTs and installation of Bus Bar Protection at 220 kV Misa	• CT Replaced • Relay Replacement by January 2019	Not applicable		
16	Upgradation of 132 kV Bus Bar at Umiam Stg-III to ACSR Zebra	MePGCL to send proposal to NLDC/NPC.	Not applicable		
17	Integration of existing bays with C264 RTU at RHEP by NEEPCO	By Jan'19	Not applicable	By Jan'19	Not applicable
18	220/132 kV 30 MVA ICT at Mokokchung	Mar'19(LOA date)	To be submitted to NERLDC		

Concerned constituents may kindly intimate the status.

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

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

Plants	Reservoirs level in meter as on 31-10-18	MU content	Present DC (in MU)	No of days as per current generation
Khandong + Kopili stg II			0.162	
Kopili			1.104	
Doyang			0.184	
Loktak			1.097	

The outage of other generating stations may be approved considering the present water levels in reservoirs.

The Committee may discuss and approve the proposed shutdown by Generating Stations as given in Annexure – D.2 which is available in NERPC website.

D.2 Outage Planning Transmission elements

It was agreed in the 99th OCC meeting that shutdown will be availed only after approval is given by the OCC forum. It was also agreed that deferment/revision of outages elements other than already approved in OCC will be henceforth put/displayed in the website of NERPC (**under Operational Activities/OCC Approved shutdown**) as per CERC regulations/ CEA guidelines etc for ensuring smooth & secure grid operation.

Furnishing request of shut down of the element, which was approved by NERPC, by Indenting Agency (ISTS licensees/STUs/Generating Companies) to NERLDC: Planned shutdown approved by NERPC shall be considered for implementation by NERLDC on D-3 basis. If an outage is to be availed on say 10th of the month, the shutdown availing agency would reconfirm to NERLDC on 7th of the month by 10:00 Hr. This practice is necessary to ensure optimal capacity utilization and the time required for associated system study/coordination by/amongst RLDC/NLDC.

The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for January, 2018-February,2018 which is available in the website of NERPC.

D.3 Estimated Transmission Availability Certificate (TAC) for the month of September, 2018 - November, 2018:

NETC and POWERGRID have submitted the outage data for the month of September, 2018 - November, 2018. So the attributability of outage of the said elements may please be finalized.

Members may please discuss.

D.4 Assessment of Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) by SLDC on respective Inter-State Transmission Corridor

Updated PSS/E Base Cases have been mailed to all the SLDCs on 02.01.19. All SLDCs are requested to assess the Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) for the month of February 2019 using these cases and submit the study cases and results to NERLDC by 20.01.19.

Members may discuss.

D.5. Update on Real Time Energy Assessment for Effective Grid Management:

NERTS has been advised to complete installation/replacement of SEMs as mentioned during 151' OCCM. It is requested to confirm the commissioning schedule of the SEMs.

Installation of SEMs in Manipur has been completed in last week of Dec'18.

The schedule for installation in Tripura, Meghalaya and Assam would be done in January' 19. Cooperation for installation in Tripura, Meghalaya and Assam is required.

NERPC/CDAC may please update the status.

D.6. Recording of operational instructions over VOIP in RLDC:

In 150th OCCM NERTS informed that the device has been installed but switch problem remains. The same would be rectified by December, 2018.

NERTS may please intimate the latest status.

D.7. Ensuring proper functioning of Under Frequency Relays(UFR) & df/dt Relays:

In 7th NPC meeting held on 08.09.17 it was agreed that mock test is good enough to test the healthiness of the UFR & df/dt relays. The frequency of site inspection was proposed to be upto six months. RPC may carry out periodic inspection, in line with provisions of IEGC and furnish inspection reports to NPC.

Discussions as per previous meetings:-

- Inspection for Mawphlang completed.
- Inspection for Baghjap, Sankardevnagar and Sipajhar under Assam would be tentatively done on 1st/2nd week of Jan'19.

NERPC may please intimate the latest status.

D.8. Extended C Band VSAT for power system communications in NER:

As per discussion in previous meetings:

- Leased Line Connectivity has been explored by NERTS for Roing, Tezu & Namsai with recurring expenditure amounting to INR 28 lakhs.
- VSAT Pilot project to be executed at Byrnihat station. The data would be transmitted from Byrnihat to KPTCL (via satellite) to SRLDC to NLDC to NERLDC. This would be kept in monitoring mode in the interim.
- NERPC to take up with proper authorities for funding of VSAT in NER from suitable sources.
- A visit to KPTCL would be done on the 10th of December, 2018 with members from NERLDC, AEGCL and NEEPCO to assess the technical feasibility.

Members of the group which visited Bangalore on 10.12.18 updated the forum of the technical aspects of the visit:

- Extended C Band Technology is being used by KPTCL. Same technology has to be replicated for NER.
- Minimum hardware is required at the remote stations and easy to install with only 3 units (modem, switch and antenna).
- Delay in receipt of data & voice is minimum and negligible.
- Voice communication is reliable and clear.

The team has confirmed that they are convinced about the performance of VSAT Communication Technology and that it is more suitable for NER Region.

NERPC/NERLDC may please intimate the status.

D.9. DIMAPUR_PG Voice communication and telemetry out since Feb'18.

In 151st OCCM NERTS informed that Dimapur communication would be restored by Feb'19.

NERTS may please intimate the status.

D.10 Update on PDMS:

In 151st OCCM M/s PRDC informed the following status:

- Data has been collected from 30 locations of Assam.
- For 12 out of 30 locations relay setting has been obtained.

- Network modelling in PSCT has been initiated.
- Server is to be installed. In the interim data would be backed in PC based Server.
- Operational load flow date may be fixed.

After detailed deliberation it was decided that the date for operational load flow would be 19.12.2018(at 19:00 hrs). The forum requested all the utilities to submit the following data:

- MW and MVAR flows for all station incomers and outgoing lines, transformers, reactors, cap banks and load points till 132 kV or 66 kV. SCADA snapshot for that particular time stamp from NERLDC and state wise SLDCs.
- Voltage at all buses or nodes.
- Transformer tap positions.

It was decided that PRDC along with the help of NERPC & NERLDC would circulate formats to the respective utilities by 17.12.18.

NERPC may please deliberate.

D.11 Non- reporting of RTU at RHEP:

Decision as per deliberation(s) in previous meetings:

- The bays on S900 RTU at RHEP have to be transferred to the existing C264 RTUs for 132kV RHEP-Chimpu D/C. For this MFTs are to be procured by NEEPCO. Target- Dec'18
- NEEPCO to extend data upto the nearest wideband location through PLCC. ABB would visit RHEP by 21.11.2018 and the work would be completed by Dec'18.
- Scheme for connecting RHEP via BNC has been proposed to NEEPCO by POWERGRID, NEEPCO may review and take up.

NEEPCO/NERTS may please intimate the status.

D.12 Telemetry Availability Status at NERLDC from Constituents (as on 02-01-2019):

Telemetry status as on 02.01.2019 is attached in **Annexure- D.12**

NERLDC may please deliberate.

D.13 Utilization Certificate for Deposit Work of Construction of 33kV Transmission Line and Associated Bay from 220kV Mariani S/S(ASEB) to 220kV New Mariani S/S of POWERGRID

An amount of Rs.100,34,749.00 was deposited to ASEB (vide DD N.o. 059528 Dated 04.08.2015 of Rs.7,81,032.00 + DD No. 914008 Dated 06.01.2014 for Rs.92,53,717.00 both Axis Bank) for the deposit work. As on date POWERGRID have received provisional utilization of Rs.59,34,884.00 as detailed below:

i) Rs. 45, 47,620.00 from DGM, APDCL.
ii) Rs.13, 87,264.00 from AGM, 22kV Gid S/S AEGCL.

Balance utilization to be Received : Rs.40,99,865.00

The above work has been completed long back, but final utilization certificate has not

been issued till date inspite of repeated requests by POWERGRID. ASEB to resolve the issue at the earliest for issue of final utilization certificate.

In 151st OCCM NERTS informed that APDCL has submitted the utilization certificate but AEGCL has yet to submit. The forum requested AEGCL to expedite.

APDCL may please intimate the status.

D.14 Submission of Load Forecast Data on (D-2)th day by constituents

Study of Optimization of Generation Despatch of ISGS of NER is being carried out by NERLDC on daily basis using GAMS (General Algebraic Modeling System). The study results have been found to be helpful for day-ahead scheduling.
In order to facilitate the study, the forecasted load data is required to be received at NERLDC on (D-2)th day, D being the day for which the study is being conducted. It is therefore, requested to send the load forecast data 2 days ahead instead of 1 day ahead that is being followed till date.
In 151st OCCM NERLDC informed the forum that Study of Optimization of Generation Despatch of ISGS of NER is being carried out by NERLDC on daily basis using GAMS. The study results have been found to be helpful for day-ahead scheduling. In order to facilitate the study, the forecasted load data is required to be received at NERLDC on (D-2)th day, D being the day for which the study is being conducted.

NERLDC informed that Arunachal Pradesh, Manipur, Meghalaya & Tripura are submitting the data. Assam, Nagaland & Mizoram was requested to send the data. After detailed deliberation, all SLDCs agreed to submit the load forecast data on D-2 basis.

NERLDC may please inform the latest status.

D.15. Submission of the Annual Load Generation Balance Report (LGBR) for Peak as well as Off-peak scenarios and the Annual outage plan for 2019-20 by 31.12.18 as per IEGC

As per IEGC, each SLDC shall submit LGBR for its control area, for peak as well as off-peak scenario, by 31st December for the next financial year, to respective RPC Secretariat. The annual plans for managing deficits/surpluses in respective control areas shall clearly be indicated in the LGBR submitted by SLDCs.

As per IEGC, all SEBs/STUs, Transmission Licensees, CTU, ISGS, IPPs, MPPs and other generating stations shall provide to the respective RPC Secretariat their proposed outage plan in writing for the next financial year by 31st October of each year. These shall contain identification of each generating unit/transmission line/ICT etc., the preferred date for each outage and its duration and where there is flexibility, the earliest start date and latest finishing date.

The 151st OCC forum requested all the utilities to submit the data by 24.12.2018.

NERLDC may please deliberate.

D.16 Problems in synchronisation of lines in Ar.Pradesh system:

In 151st OCCM SE(SO&PSC), DoP Ar. Pradesh informed that after shutdown/tripping of 132kV RHEP-Chimpu and 132kV Pare-Lekhi-Nirjuli synchronization problems are arising due to absence of check sync facility at Lekhi/Chimpu. He requested that:

- RHEP may please put in sync check facility at RHEP end for 132kV RHEP-Chimpu

direct line.

- For 132kV Pare-Lekhi-Nirjuli sync may please be carried out at Nirjuli S/S instead of Lekhi for normalisation after shutdown.

NERTS confirmed that check sync is available at Nirjuli(PG). NEEPCO informed that check sync facility would be enabled by Dec'18.

NERLDC requested NEEPCO to do check sync facility for all the feeders from Ranganadi at the earliest.

NEEPCO may please inform the status.

AGENDA ITEM FROM NERTS

D.17 Up gradation of 132kv Silchar – Imphal circuit # 1 to 400kV level

The up-gradation of 132kV Silchar – Imphal Circuit # 2 to 400kV level has already been done on 25.12.2018 and power flow in circuit # 2 at 400kV level is almost 8 to 9 times compared to Circuit # 1 at 132kV Level. With the up-gradation of Circuit # 2, 400kV System first time entered in Manipur and the power scenario has improved considerably.

Now, up gradation of 132kV Silchar – Imphal Circuit # 1 to 400kV Level is proposed to be carried out by availing continuous Shut Down w.e.f., 14.01.19 to 17.01.19. The various activities involved for up-gradation is as below:

AT IMPHAL (PG)

1. Conversion of 132kV Silchar # 1 bay to 400/132kV, ICT # 1 LV side bay
2. Dismantling of 132kV Silchar # 1 line LAs and CVTs
3. Idle charging of 400/132kV, ICT # 1 for 24 Hours as per the practice
4. Stringing of 132kV Silchar – Imphal # 1 from 132kV Yard to 400kV Yard.
5. Dismantling of ERS from 132kV Silchar – Imphal # 1 used for entry at 132kV side

AT SILCHAR (PG)

1. Dismantling of ERS from 132kV Silchar – Imphal # 1
2. Stringing of 132kV Silchar – Imphal # 1 from 132kV Yard to 400kV Yard.

NOTE: All the ERS towers utilised in 132kV Silchar – Imphal Line # 1 to be made free for utilization in Railway Diversion portion of 132kV Silchar – Imphal (PG) Line # 1 & 2 at Imphal so that, MSPCL can complete the construction of 400kV D/C Imphal (PG) – Thoubal (S) Line.

NERTS may please deliberate.

AGENDA ITEMS FROM NETC

D.18 NETC-Palatana-Bongaigaon transmission system: protection work at 8 nos. locations of 400 kV D/C Palatana-Silchar line which became vulnerable due to massive land slide and soil erosion.

Palatana-Bongaigaon 400 kV D/C transmission system was developed for evacuation of power from 726.6 MW capacity, Gas Based Combined Cycle Power Plant (GBCCPP) of ONGC Tripura Power Company (OTPC) situated at Palatana, Tripura. The length of

transmission system is 663 Km. 5 assets of the transmission system were commissioned in phases from 2012 to 2015.

Palatana-Silchar 400 kV D/C transmission line was commissioned in the month of July 2012 and is passing through 73 KMs of forest stretch in the state of Tripura. During construction, hill cutting was minimised by using uneven leg extensions for better stability.

During last year, the state of Tripura experienced unprecedented heavy monsoon with incessant rains in the month of June. The intensity of rain was so severe that within a time span of 7 – 10 days the free flowing rain water caused very heavy landslides in the entire hilly stretch of Tripura resulting no. of road blockages in the Inter-State National Highway which is the lifeline of Tripura including in some arterial roads. During the same time, the subject transmission line corridor also got affected.

Due to foregoing, 8 (eight) tower locations of 400 kV D/C Palatana-Silchar transmission line were badly affected which was beyond the control of NETC. Immediately after that, temporary measures for providing minimum protection were taken in those vulnerable locations by POWERGRID who is the Project Management Consultant for this project. These measures taken were most temporary for protecting the locations during that difficult time and hence shall not serve the purpose in the long run. Therefore, it is proposed to take immediate steps to provide permanent protection e.g.: RRM wall etc in those 8 (Eight) tower locations before the onset of ensuing monsoon.

The details of locations with site photographs is given below:

The estimated expenditure of Rs. 154.00 Lakhs has been worked out by POWERGRID.

Location wise estimated expenditure:

1. Locn. 211 ---------- Rs. 16.52 Lakhs
2. Locn. 218 ---------- Rs. 9.44 Lakhs
3. Locn. 264 ---------- Rs. 21.94 lakhs
4. Locn. 267 ---------- Rs. 5.77 lakhs
5. Locn. 271 ---------- Rs. 44.95 lakhs
6. Locn. 279 ---------- Rs. 34.16 lakhs
7. Locn. 364 ---------- Rs. 14.55 lakhs
8. Locn. 428 ---------- Rs. 5.9 Lakhs

Total: Rs. 153.23 Lakhs

NETC being a very small Organization, it will be difficult on its part to bear such heavy expenditure. Therefore, it is proposed that the booking of such heavy expenditure be met through PoC mechanism.

NETC may please deliberate.

AGENDA ITEMS FROM NTPC:

D.19 Full schedule for PG Test:

It is required to conduct PG test of C&I system of our plant NTPC BgTPP. Full schedule is required for atleast 12 hours per day for 2 to 3 days in order to conduct the PG Test.

NTPC may please deliberate.

AGENDA ITEMS FROM NEEPCO:

D.20 Permission for 1st time charging of 400/132 KV Switchyard of kameng Hydro Electric Project, NEEPCO

OBJECTIVE : To check permission for 1st time charging of of 400/132 KV Switchyard of Kameng Hydro Electric Project, NEEPCO with one Data Channel from Powegrid's Balipara Sub-Station to with NERLDC Shillong

BACKGROUND:

I. NEEPCO's 4X150 MW Kameng HE Project was scheduled for commissioning in Mar-April 2018. However, during pre-commissioning stage on Mar 2018, leakages in penstock have been witnessed. The rectification works are presently on progress and it is anticipated that two units shall be ready for commissioning within March 2019.

II. In the meantime, NEEPCO has sought from NERLDC on 10/12/2018 for 1st time charging 400/132 KV Switchyard of the Project.

III. It is to be mentioned that the data telemetry with NERLDC, Shillong has been established subsequently and the data validations for all elements of the switchyard have since been completed.

IV. For data communication, dual PLCC channel till wideband location i.e Balipara has been established. However, from Balipara to NERLDC Shillong, only one channel is presently made available.

V. For voice communication, dedicated Telephone (landline) has been provided and also alternative dedicated Voice Communication over PLCC has been established.

VI. It has also been certified that the alternative channel through OPGW shall be available after completion of additional communication scheme by NERTS as approved in 18th NERPC meeting (item A.7).

VII. NERLDC, however, desires that complete alternate two channels from Kameng HEP via Balipara to NERLDC shall be provided.

VIII. As per Connection Agreement drawn between NEEPCO and Powergrid, establishment of communication system from Balipara to NERLDC is in the

scope of CTU i.e. Powergrid, however its cost shall be borne by NEEPCO. NEEPCO accordingly has taken up with Powergrid to provide the two channels from Balipara. Powergrid, however, informed that at present there is no additional spare channel readily available from Balipara to NERLDC and additional one channel shall be made available between Balipara to NERLDC by 2 months with installation of new equipment/cards at Balipara. Powergrid has been requested vide letter dated 03/01/2019 (copy enclosed at **Annexure D.20**) for urgent action to make necessary arrangement to provide complete alternative two channels.

IX. All NEEPCO's contractors viz. BHEL & Techno-Electric and its sub-contractors/vendors engaged in construction of NEEPCO's Switchyard and Power Station are waiting for clearances from NERLDC to charge and commissioning the Switchyard since last week of December 2018.

PROPOSAL:
With the above background and as establishment of the alternative channel from Balipara to NERLDC is beyond the control of NEEPCO, it is solicited that NERLDC may consider granting of provisional clearance to NEEPCO for charging of the Switchyard of Kameng HEP based on the Powergrid's assurance that the additional channel shall be made available in next 2 months time.

NEEPCO may please deliberate.

AGENDA ITEMS FROM NERLDC:

D.21 Violation messages issued by NERLDC

Details are attached in **Annexure-D.21**.

NERLDC may please deliberate.

D.22 High percentage of non-OCC approved shutdown request

Details are attached in **Annexure-D.22**.

NERLDC may please deliberate.

D.23 Delayed returning of shutdown of important elements:

Details are attached in **Annexure-D.23**.

NERLDC may please deliberate.

D.24 Ensuring thorough Patrolling (sag checking, tightening etc.) before seeking consent for commissioning of new elements to avoid multiple tripping incidents during first time charging.

Details are attached in **Annexure-D.24**.

NERLDC may please deliberate.

D.25 Non-availability/ Non-functioning of synchronization facility at the following stations

a) Kumarghat (PG)
b) Mariani (AS)
c) Lekhi (AP)
d) Itanagar/Chimpu (AP)
e) Nirjuli (PG)
f) Gohpur (AS)

NERLDC may please deliberate.

D.26 Consideration of outage of bus as N-1 Contingency for Bus Outages

Presently Outage of Bus is not being considered as a credible N-1 contingency during outage of Buses in North Eastern Region. On 15/12/18, 400 kV Bus II at Silchar S/s was under shutdown and all the 400 kV Lines emanating from Silchar S/s and other elements were connected to 400 kV Bus I of Silchar S/s. Under this condition, Bus I tripped leading to zero power flow in 400 kV Palatana — Silchar I and 400 kV Silchar — Killing S/C as both these lines share dias with Bus Reactors at Silchar S/s. This led to problems of reliable generation evacuation of Palatana and overloading of 400/132 kV ICT II at Silchar.

Therefore, it is proposed that Outage of Bus may be considered as a credible N-1 Contingency in all the substations in NER.

NERLDC may please deliberate.

D.27 Near Miss Incident in NER Grid on 15.12.18 & 18.12.18 and Manipur Blackout incident on 26.12.18

Two numbers of near miss incident occurred in NER Grid on 15.12.18 & 18.12.18 and a major grid disturbance occurred in Manipur Power System on 26.12.18.

a) Tripping of 400 kV Bus 1 at Silchar (PG) at 10:29 Hrs on 15.12.18 leading to 150 % of loading of 400/132 kV, 200 MVA ICT -2 at Silchar for 50 min endangering the system security. *Non- furnishing of FIR, DR and other details sought by NELDC for detailed analysis.*

b) Tripping of 400 kV Bus 2 at Balipara (PG) at 22:22 Hrs on 18.12.18. *No details received for detailed analysis.*

c) Multiple element tripping on 26.12.18 leading to Blackout at Manipur Power System with a load loss of about 168 MW.

Communication from NERLDC has been forwarded to NERTS for furnishing detailed analysis of the above-mentioned events (Annexure-D.27). Reply from NERTS is awaited.

NERLDC may please deliberate.

D.28 Organizing PCC Meeting on Monthly basis

NER grid is growing very fast and new elements have been added to the grid recently and many are planned to be commissioned in the next few months. It is very much essential to resolve the issues pertaining to protection system as quickly as possible.

Recent Grid events which occurred on 15.12.18, 18.12.18 and 26.12.18 are a matter of concern and are yet to be discussed in the subgroup/ PCC meeting.

During 2018, there were 211 Nos. of Grid Disturbances in NER Power System. To reduce the number of GDs it is essential to identify the root cause of the events and take remedial actions at the earliest.

It is thus proposed that PCC meeting may be organized on monthly basis so as to address the protection issues at the earliest.

NERLDC may please deliberate.

D.29 Circuit Breaker between Air Insulated Substation (AIS) and Gas Insulated Substation (GIS)

Recently GIS has been commissioned at 400 kV Silchar Substation. In order to integrate the AIS and GIS, the shutdown of AIS was required. Also, during coordination of protection setting between AIS and GIS, AIS bus tripped leading to near miss incident on 15/12/18.

It is suggested to install circuit breaker between AIS and GIS so that integration of GIS with AIS and maintenance of AIS bus could be done without taking the shutdown of the GIS and vice-versa in all the hybrid substations of NER

NERLDC may please deliberate.

D.30 Expedite Commissioning of 400 kV Transfer Bus

Details is attached in **Annexure-D.30.**

NERLDC may please deliberate.

D.31 Publishing of Reactive Power Management Manual for NER Region-2018

The 10th edition of Reactive Power Management Manual for NER Region for the year 2018 has been published in the NERLDC website.

NERLDC may please deliberate.

D.32 Updation of Restoration Procedures of NER 2019:

Draft of Restoration procedure of NER Grid 2019 has been circulated to all the constituents after incorporating all the necessary changes. All concerned are requested to please go through the Draft Restoration Procedure 2018 and give comments, if any, within 22nd January'19. The document will be finalized by 25th January'19.

NERLDC may please deliberate.

D.33 Furnishing Technical and Commercial data for computation of PoC Charges and Losses for April to June'19 (Q1 of 2019-20):

All the power utilities are requested to furnish Technical and Commercial data for computation of PoC Charges and Losses for April to June'19 (Q1 of 2019-20) by 15th January'19.

NERLDC may please deliberate.

METERING RELATED ITEMS

D.34. Status review of the following items:

a) Software Procurement of Laptops
b) Procurement of DCD
c) Furnishing of Time drift in SEMs (Annexure-D.33)
d) Non-receipt of SEM data

Status and progress may be discussed.

D.35. Rectifying the errors observed in meter readings:

Details is attached in Annexure-D.34

NERLDC may please deliberate.

D.36 Replacement of SEMs.

Si. No	*Location*	*Feeder Name*
1	BNC	BNC END OF PAVOI-I
2	BNC	BNC END OF PAVOI-II
3	BNC	PAVOI END OF BNC-I

Status and progress may be discussed.

D.37 Spare Meters

DPR has been submitted by NER States for SAMAST implementation. Techno Economic Group (TESG) of PSDF after scrutinizing the DPRs have asked to justify the reason of 10% spare meters as envisaged in the DPRs. While preparing the DPRs for NER States, the figure of 10% as considered for NER ISTS Metering was taken into account.
OCC may formally agree and record that 10% spare meter is being considered in NER ISTS and same is being followed by POWERGRID while procurement. In case of SAMAST also, same would be taken into account and TESG would be informed accordingly.

NERLDC may please deliberate.

Any other item:

Date and Venue of next OCC

It is proposed to hold the 153rd OCC meeting of NERPC on second week of February, 2019. The date & exact venue will be intimated in due course.

*****

Annexure-E

Telemetry Availa□ility □tatus at NERLDC □rom Constituents □as on 02-01-2019□□

Sl. □o.	□ame of the Constituents	Total □nalogue Data points	Total Digital Data points	Total Data Points	□nalogue Data points □eporting	Digital Data Points □eporting	Total □eporting	Total Percentage of data □vailability
1	**Arunachal Pradesh**	**10□**	**152**	**258**	**0**	**0**	**0**	**0□**
2	**Assam**	**121□**	**1□31**	**2948**	**492**	**512**	**1004**	**34□05□**
3	Manipur	180	255	435	106	17□	285	65.51□
4	**Meghalaya**	**409**	**388**	**□9□**	**220**	**5□**	**2□□**	**34□□2□**
5	**Mizoram**	**□1**	**50**	**121**	**9**	**□**	**1□**	**13□22□**
□	**Nagaland**	**23□**	**2□0**	**50□**	**5**	**2**	**□**	**1□38□**
□	**Tripura**	**524**	**□15**	**1239**	**138**	**134**	**2□2**	**21□95□**
8	P□CI□	628	1082	1710	3□6	764	1160	67.83□
□	**□□□PCO**	202	286	488	125	157	282	57.78□
10	□TPC	31	4□	80	23	4□	72	□0□
11	OTPC	42	85	127	42	85	127	100□
12	□HPC	18	2□	47	17	27	44	□3.61□
	NER	**3□4□**	**50□3**	**8□10**	**155□**	**1945**	**3501**	**40□19□**

ISO 9001 & 14001
OHSAS 18001

नॉर्थ ईस्टर्न इलेक्ट्रिक पावर कॉर्पोरेशन लि.
(भारत सरकार का उद्यम)
NORTH EASTERN ELECTRIC POWER CORPORATION LTD.
(A GOVT. OF INDIA ENTERPRISE)
OFFICE OF THE DIRECTOR (TECHNICAL)

No. NEEPCO/D (T)/KaHEP-8/2018-19/ 467 Dated: 03.01.2019

To

The Executive Director,
NERTS, Powergrid Corporation of India Ltd.,
Lapalang, Shillong-793006

Sub: 600 MW Kameng HEP. Reg. Data Communication with NERLDC via Balipara.

Dear Sir,

We would like to inform that we have recently planned to charge the 400/132 kV Switchyard of our 600 MW Kameng HE Project and accordingly, we have approached NERLDC, Shillong on 10/12/2018 to grant clearance of 1st time charging of the switchyard.

You are aware that the pre-requisite for the getting clearance is the establishment of the data telemetry and voice communication between Power House of the Project and NERLDC, Shillong. With the co-operation and assistance from Powergrid, we could establish data telemetry and voice communication with NERLDC Shillong via Powergrid's Balipara Sub-station.

It is to be mentioned that for data telemetry, dual PLCC channel have been configured upto Balipara, whereas from Balipara to NERLDC, only one channel is made available. NERLDC has made the observation to provide complete alternate two channels from Kameng HEP via Balipara to NERLDC.

We understand that at present, there is no spare port available in Telecom panel at Balipara to make the alternative channel available upto NERLDC and in order to meet the requirement as observed by NERLDC, new equipment/cards or upgradation of the telecom panel at Balipara are required.

NERLDC is not granting the clearance to charge our switchyard without fulfilment of above requirement. It is to be mentioned that as per Connection Agreement between NEEPCO & Powergrid, providing communication from Balipara up to NERLDC is in the scope of Powergrid.

You may appreciate that all our contractors/vendors engaged in construction of our Switchyard and Power Station are waiting for clearances to charge and commission the Switchyard. We, therefore, request your intervention on the matter for urgent action to make necessary arrangement to provide complete alternate two channels to NERLDC.

Thanking you

Yours faithfully,

03/01/19

(V. K. Singh)
Director (Technical)

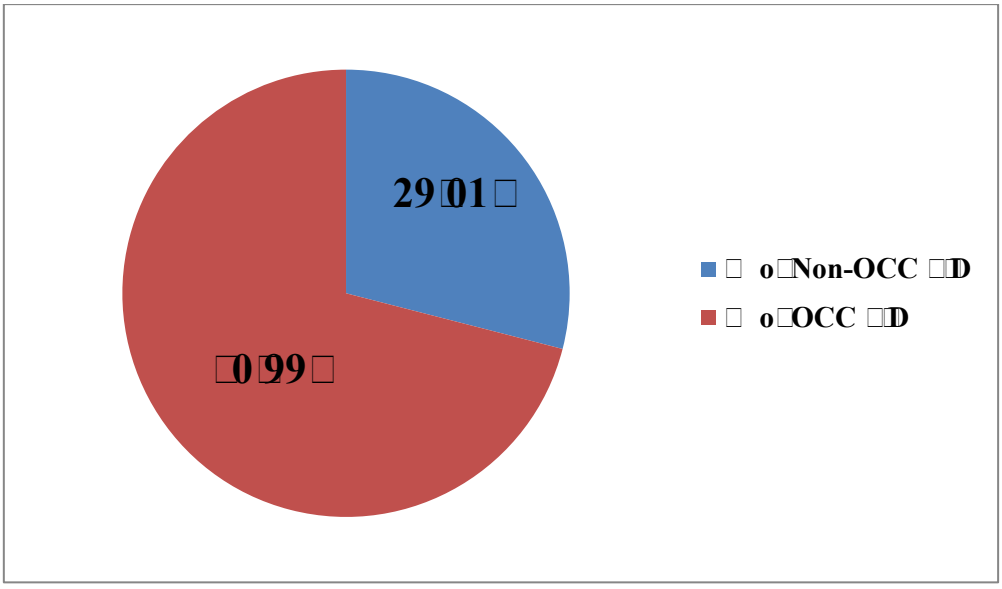
Annexure-A

Violation Message Summary issued during December 2018.

Constituents	Deviation Violation Message			Zero crossing Violation Message			Frequency Violation Message		
	Alert	Emergency	Total	Alert	Emergency	Total	Alert	Emergency	Total
AP	0	0	**0**	1	3	**4**	33	1	**34**
Assam	8	0	**8**	1	0	**1**	35	0	**35**
Manipur	0	0	**0**	0	2	**2**	34	0	**34**
Meghalaya	0	0	**0**	0	1	**1**	□	0	**9**
Mizoram	0	0	**0**	1	3	**4**	22	1	**23**
Nagaland	1	0	**1**	0	1	**1**	34	1	**35**
Tripura	3	0	**3**	4	4	**8**	23	0	**23**
AGBPP	0	0	**0**	0	0	**0**	0	0	**0**
AGTCCPP	0	0	**0**	0	0	**0**	0	0	**0**
RHEP	0	0	**0**	0	0	**0**	0	0	**0**
KOPILI	0	0	**0**	0	0	**0**	0	0	**0**
KHANDONG	0	0	**0**	0	0	**0**	0	0	**0**
KOPILI –II	0	0	**0**	0	0	**0**	0	0	**0**
DHEP	0	0	**0**	0	0	**0**	0	0	**0**
LOKTAK	0	0	**0**	0	0	**0**	0	0	**0**
BgTPP	0	0	**0**	0	0	**0**	0	0	**0**
PALATANA	0	0	**0**	0	0	**0**	0	0	**0**
PARE	0	0	**0**	0	0	**0**	0	0	**0**

Annexure-B

Pie Chart □epresenting Percentage □on-OCC Vs OCC □pproved Shutdown



Annexure-C

Details o□Inordinate Delay

□I□No□	Line Name	O□ner	Date	Inordinate Delay
1	□/- 800 kV HVDC □iswanath Chariali - □gra Pole 1	PO□ □□□□ID	01-Dec-2018	02:12
2	400 kV □ongaigaon - □us □eactor 2	PO□ □□□□ID	07-Dec-2018	12:40
3	132 kV □ekhi - Pare 1	□P □ PO□ □□□□ID	0□-Dec-2018	02:05
4	400 kV □alipara - □ongaigaon 2	PO□ □□□□ID	10-Dec-2018	03:18
5	132 kV □i□awl - □olasib	PO□ □□□□ID	12-Dec-2018	01:34
6	400 kV □iswanath Chariali - □anganadi 2	PO□ □□□□ID	15-Dec-2018	01:40
7	132 kV Imphal - Silchar 1	PO□ □□□□ID	15-Dec-2018	01:07
8	132 kV Imphal - Silchar 1	PO□ □□□□ID	16-Dec-2018	01:06
9	**132 □V □ilchar - Melriat 1**	**PO□ ERGRID**	**18-Dec-2018**	**51□33**
10	400 kV □alipara - □iswanath Chariali 1	PO□ □□□□ID	18-Dec-2018	04:02
11	**132 □V □ilchar - Melriat 2**	**PO□ ERGRID**	**18-Dec-2018**	**53□04**
12	400 kV □alipara - □iswanath Chariali 2	PO□ □□□□ID	18-Dec-2018	06:51
13	400 kV □alipara - □iswanath Chariali 4	PO□ □□□□ID	1□-Dec-2018	02:58
14	**132 □V Imphal - □ilchar 2**	**PO□ ERGRID**	**19-Dec-2018**	**49□51**
15	400 kV □□ara - □ongaigaon	□□TC□	1□-Dec-2018	05:0□
16	400 kV □alipara - Misa 1	PO□ □□□□ID	20-Dec-2018	02:0□
17	400 kV □ongaigaon - □ew Siliguri □□inaguri□1	PO□ □□□□ID	20-Dec-2018	02:06
18	400 kV □ongaigaon - □ew Siliguri □□inaguri□1	PO□ □□□□ID	21-Dec-2018	01:36
1□	132 kV Imphal - Silchar 1	PO□ □□□□ID	22-Dec-2018	04:55
20	400 kV □ongaigaon - □us □eactor 2	PO□ □□□□ID	22-Dec-2018	04:10
21	132 kV □gartala - □□TPP 2	PO□ □□□□ID	23-Dec-2018	01:11
22	1220 kV Salakati - □lipurduar	PO□ □□□□ID	26-Dec-2018	04:41
23	220 kV Salakati - □lipurduar 2	PO□ □□□□ID	26-Dec-2018	04:43
24	132 kV □gartala - □□TPP 2	PO□ □□□□ID	26-Dec-2018	01:24
25	400 kV Silchar - Imphal 2	PO□ □□□□ID	26-Dec-2018	05:44
26	220 kV Salakati - □lipurduar 1	PO□ □□□□ID	27-Dec-2018	03:3□
27	220 kV Salakati - □lipurduar 2	PO□ □□□□ID	27-Dec-2018	03:40
28	400 kV □iswanath Chariali - □anganadi 1	PO□ □□□□ID	27-Dec-2018	01:30
2□	132 kV □gartala - □□TPP 2	PO□ □□□□ID	27-Dec-2018	01:05
30	400/220 kV Misa - Transformer 2	PO□ □□□□ID	27-Dec-2018	02:44
31	132 kV □i□awl - Tipaimukh 1	PO□ □□□□ID	28-Dec-2018	01:25
32	132 kV □anganadi - □iro 1	PO□ □□□□ID	28-Dec-2018	01:34

Annexure-D

132 kV Silchar – Imphal II was successfully charged at 400 kV level on 25.12.18 at 1651 Hrs. Prior to successfully charging of 400 kV Silchar – Imphal II line, the line tripped three times as mentioned below:

i. Tripped immediately after charging at 1354 Hrs on 23.12.18
ii. Tripped on DP, Y-ph, 41.7 km at 1541 Hrs on 23.12.18
iii. Tripped on SOTF at 2212 Hrs on 23.12.18
iv. Hand Tripped after successfully charging upto 58.3 km from Silchar end

400 kV Silchar- Imphal D/C lines are very critical lines for Manipur Power System. Tripping of important lines prior to first time charging poses a great threat to the system.

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

उत्तर पुर्वी क्षेत्रीय भार प्रेषण केंन्द्र : लोअर नँगरा, 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 : उपूक्षेभाप्रेके/एस.ओ-II/ 2194 *दिनांक/Date: 20.12.18*

Ref : NERLDC/SOII/ 2194

सेवा में/To:

Senior General Manager,
NERTS, POWERGRID
Shillong -793006

विषय/Sub: Special meeting for analyzing tripping related to operation of Bus Bar protection during December 2018

महोदय,

It has been observed that POWERGRD is making best efforts for maintaining reliable protection system in NER Grid. However, there were two instances of operation of Bus-Bar Protection in NER in the month of December 2018 leading to tripping of multiple elements. It is suspected that the events had occurred due to mis-operation of Bus Bar protection in POWERGRID Substations. These events pose a threat to the security and reliability of NER Grid since the 400 kV Sub-stations are very critical for NER power system. The details of the events are listed below:

Sl. No	Description	Date and Time	Remarks	Impact
1	400 kV Bus 1 at Silchar (PG)	15.12.18 at 10:29 Hrs	400 kV Bus 2 was under shutdown	400 kV Silchar – Palatana I and II Lines, 400 kV Silchar – Azara Line and 400 kV Silchar – Byrnihat Line were connected directly to Bus 1 through Main bay. It is a near miss incident which could have otherwise resulted in disturbance in Southern Part of NER Grid
2	400 kV Bus 2 at Balipara (PG)	18.12.18 at 22:22 Hrs	400 kV Balipara – BNC ckt 2 and 400 kV Balipara – Bongaigaon ckt 3 tripped (Tie bay was not in service). Other elements connected to Bus 2 were in service through tie bay	Mis-operation of Bus Bar Protection at critical 400 kV nodes could lead to major Disturbance in NER Grid

1. **<u>Tripping of 400 kV Bus 1 at Silchar(PG) at 10:29 Hrs on 15.12.18</u>**

It was informed by POWERGRID vide email dated 15.12.18 that the 400 kV Bus II shut down was availed on. 15.12.2018 w.e.f. 10:09 Hrs for bus jumpering work between 400 kV AIS Bus bar and 400 kV GIS Bus Bar and for integration of Bus Bar Protection of 400 kV new GIS bays for Bus -2. All the 400 kV Feeders were fed through Main & Tie CBs through Bus -1 only. During the course of integration of Bus Bar protection with new GIS Bays at around 10:29 Hrs , all the main Circuit Breakers connected to Bus -1 tripped.

Observations/Remarks

- As per nearby PMU's to Silchar, there was no voltage dip as observed in fault situations. There is need to check the reason which has initiated bus bar protection signal to Bus-I.
- 400/132 kV ,200 MVA ICT 2 at Silchar have a capacity of 200 MVA. After tripping of Bus-I, it was observed that the flow on ICT 2 had reached 384 MW. Ideally, over-current relay should have picked on 150 % loading. However, ICT 2 remained in service for about 50 minutes which reflects that the setting of overcurrent relay of 400/132 kV, 200 MVA ICT-2 needs to be checked.
- In post incident, flow on 132 kV Agartala – Dhalabil line, 132 kV Badapur – Khliehriat line,132 kV AGTPP - Kumarghat line and 132 kV Palatana – Surjamaninagar line was near to its thermal limit. Any further tripping could have affected the reliability and security of Tripura Power system.
- As observed from SoE, Bus-I at Silchar was charged at 11:16:53.460 Hrs by closing 400 kV Silchar – Palatana II Main Bay. Also, 400/132 kV, 315 MVA kV ICT -3 connected to Bus I was charged at 11:17:17.690 Hrs. However, it was observed that 400 kV Silchar – Palatana II Main Bay and 400/132 kV, 315 MVA kV ICT -3 tripped at 11:17:37.259 and 11:17:37.260 Hrs respectively. Finally at 11:19:06.729, 400 kV Bus-I was charged by closing CB of 400 kV Silchar - Palatana 2 Main Bay at Silchar. The reason for tripping of Bus-I again at 11:17 Hrs is to be intimated.
- HV and LV side data of 400/132 kV, 200 MVA ICT 1 and 2 at Silchar was not visible after tripping of Bus-1 at Silchar. It is requested to intimate reason for non-reporting SCADA data at NERLDC after the incident.
- DR output for the event is not yet received.
- The root cause for the operation of Bus Bar protection resulting in tripping of all main CBs has not been received as well. If the root cause has been identified, actions taken are to be intimated.
- The safety measures that were taken to avoid mis-operation during integration work of Bus Bar Protection of 400 kV new GIS bays for Bus -2 is to be intimated by POWERGRID.
- POWERGRID may intimate if any protection related work in elements connected to Bus 1 was carried online at the time of the event. Also, if any work was carried out in switchyard of Bus 1, the details may be provided.

2. **Tripping of 400 kV Bus 2 at Balipara (PG) at 22:22 Hrs on 18.12.18**

As informed verbally by RTAMC, 400 kV Balipara – BNC ckt 2 and 400 kV Balipara – Bongaigaon ckt 3 tripped due to operation of Bus Bar Protection of Bus 2 as Tie bay was not in service. All the other elements connected to Bus 2 was in service through tie bay.

Observations/remarks:

- DR output, EL output and FIR have not been received yet for the event.
- ***The status of dia of all the elements at the time of Bus Bar operation is to be intimated. Also, the root cause of operation of Bus Bar protection is to be intimated. Actions, if any taken in this regard is to be intimated as well.***

As per section 5.2(r) of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010, all the Users, STU/SLDC and CTU shall send information/data including disturbance recorder/sequential event recorder output to RLDC within 24 hours for purpose of analysis of any grid disturbance/event. No User, SLDC/ STU or CTU shall block any data/information required by the RLDC and RPC for maintaining reliability and security of the grid and for analysis of an event.

Also, as per section 5.9.6(a) of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010, in the case of an event which was initially reported by a User, STU, CTU or a SLDC to RLDC orally, the User, STU, CTU, SLDC will give a written report to RLDC in accordance with this section. RLDC in turn give a report to NLDC.

Due to unavailability of the above mentioned data, proper analysis is not done yet to identify the root cause for taking necessary actions. This, in turn poses threat to the security and reliability of the Grid. Hence, it is requested to furnish the data mentioned above within 2 days, i.e., 22.12.18.

Ready reckoner of list of tripping of elements due to relay mis-operation, LBB and Bus Bar protection since Jan'18 is enclosed.

धन्यवाद एवं सादर सहित।

भवदीय /Yours sincerely

अमरेश 20.12.18

(Amaresh Mallick)

महाप्रबंधक(SO-II)

प्रतिलिपि/Copy to:

1. Member Secretary, NERPC: With request for arranging special meeting to discuss these issues at the earliest.
2. Executive Director, NERLDC
3. Chief General Manager, NLDC
4. Chief General Manager, NERLDC

Tripping due to Relay Mal-operation

Annexure-F

Sl.No	Name of tripping element (End A - End B)	मालिक / Owner of the element	Data to be furnished by		Date & Time of Event	Date & Time of Restoration	Relay indications	
			End A	End B			End A	End B
1	132 kV Khandong - Khliehriat 2 Line	POWERGRID	NEEPCO	POWERGRID	12-01-2018 10:52:00	12-01-2018 11:13:00	Direct Trip received	Maloperation during line changeover from main to Transfer Bus
2	400 kV Balipara - Bongaigaon 3 Line	POWERGRID	POWERGRID	POWERGRID	26-07-2018 08:23:00	26-07-2018 08:32:00	Relay maloperation	Direct trip received
3	400 kV Balipara - Bongaigaon 1 Line	POWERGRID	POWERGRID	POWERGRID	07-08-2018 09:07:00	07-08-2018 09:27:00	Direct Trip received	No tripping
4	132 kV Dimapur - Doyang 2 Line	POWERGRID	POWERGRID	NEEPCO	18-08-2018 04:07:00	18-08-2018 04:24:00	DP, ZI, B-E	No tripping
5	400 kV Balipara - Bongaigaon 4 Line	POWERGRID	POWERGRID	POWERGRID	13-09-2018 21:04	13-09-2018 21:23:00	Maloperation of FSC protection	No tripping
6	420 kV Silchar - Azara Line Reactor 1	POWERGRID	POWERGRID		06-05-2018 13:11:00	06-05-2018 16:24:00	Bucholz relay optd	
7	400/220/33 kV, 315 MVA ICT at Bongaigaon	POWERGRID	POWERGRID		09-05-2018 08:56:00	09-05-2018 09:33:00	Buchholz Relay Mal-operation	
8	400/132/33 kV, 200 MVA ICT II at Silchar	POWERGRID	POWERGRID		10-05-2018 17:05:00	10-05-2018 19:37:00	Bucholz Operated	
9	400/132/33 kV, 200 MVA Silchar - ICT 2	POWERGRID	POWERGRID		16-06-2018 06:08:00	16-06-2018 08:00:00	PRD Trip	
10	400/132/33kV, ICT I at Silchar	POWERGRID	POWERGRID	POWERGRID	25-06-2018 14:58:00	25-06-2018 15:15:00	WTI Trip	
11	400/132/33kV, ICT I at Silchar	POWERGRID	POWERGRID	POWERGRID	25-06-2018 18:09:00	25-06-2018 18:58:00	OTI Trip	

Annexure-F

Tripping of elements due to LBB protection

Event ID	Name of tripping element (End A - End B)	मालिक / Owner of the element	Data to be furnished by		Date & Time of Event	Date & Time of Restoration	Relay indications	
			End A	End B			End A	End B
1	400 kV Balipara - Bongaigaon 2 Line	POWERGRID	POWERGRID	POWERGRID	18-04-2018 07:50:00	18-04-2018 08:50:00	LBB of Tie CB mal-operated	Direct Trip Received
2	132 kV Dimapur - Doyang 1 Line	POWERGRID	POWERGRID	NEEPCO	18-06-2018 01:39:00	18-06-2018 02:47:00	LBB operated	No tripping
	132 kV Dimapur - Doyang 2 Line	POWERGRID	POWERGRID	NEEPCO	18-06-2018 01:39:00	18-06-2018 02:52:00	LBB operated	No tripping
	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 Line	DoP, Nagaland	POWERGRID	DoP, Nagaland	18-06-2018 01:39:00	18-06-2018 02:47:00	LBB operated	No tripping
	132 kV Bokajan - Dimapur(PG) 1 Line	AEGCL	AEGCL	POWERGRID	18-06-2018 01:39:00	18-06-2018 02:52:00	No tripping	LBB operated
	132 kV Aizawl - Kumarghat 1 Line	POWERGRID	POWERGRID	POWERGRID	18-06-2018 01:39:00	12-07-2018 16:48:00	LBB operated	No tripping
	132 kV Aizawl - Tipaimukh 1 Line	POWERGRID	POWERGRID	MSPCL	18-06-2018 01:39:00	12-07-2018 16:48:00	LBB operated	No tripping

Tripping of elements due to LBB protection

Event ID	Name of tripping element (End A - End B)	मालिक / Owner of the element	Data to be furnished by		Date & Time of Event	Date & Time of Restoration	Relay indications	
			End A	End B			End A	End B
3	132 kV Aizawl - Kumarghat 1 Line	POWERGRID	POWERGRID	POWERGRID	12-07-2018 16:16	12-07-2018 16:48	LBB operated	No tripping
	132 kV Aizawl - Tipaimukh 1 Line	POWERGRID	POWERGRID	MSPCL	12-07-2018 16:16	12-07-2018 16:48	LBB operated	No tripping
4	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 2 Line	DoP Nagaland	POWERGRID	DoP Nagaland	19-09-2018 12:55	19-09-2018 13:34:00	LBB	No tripping
	132 kV Dimapur - Doyang 1 Line	POWERGRID	POWERGRID	NEEPCO	19-09-2018 12:55:00	19-09-2018 13:19:00	LBB	No tripping
	132 kV Dimapur - Doyang 2 Line	POWERGRID	POWERGRID	NEEPCO	19-09-2018 12:55:00	19-09-2018 13:20:00	LBB	No tripping
	100 MVA, 220/132 kV Dimapur Transformer 1	POWERGRID	POWERGRID	POWERGRID	19-09-2018 12:55:00	19-09-2018 13:13:00	LBB	
	100 MVA, 220/132 kV Dimapur Transformer 2	POWERGRID	POWERGRID	POWERGRID	19-09-2018 12:55:00	19-09-2018 13:14:00	LBB	
5	132 kV Ranganadi - Ziro Line	POWERGRID	NEEPCO	POWERGRID	21-11-2018 07:20:00	21-11-2018 08:05:00	No tripping	LBB operated

Tripping of elements due to Bus Bar protection

Event ID	Name of tripping element (End A - End B)	मालिक / Owner of the element	Data to be furnished by		Date & Time of Event	Date & Time of Restoration	Relay indications	
			End A	End B			End A	End B
1	220 kV Kopili - Misa 1 Line	POWERGRID	NEEPCO	POWERGRID	21-05-2018 15:31:00	21-05-2018 16:12:00	No Tripping, Z-2 Initiated	Bus Bar Protection, Zone-B
	220 kV Kopili - Misa 2 Line	POWERGRID	NEEPCO	POWERGRID	21-05-2018 15:31:00	21-05-2018 19:00:00	DP, Z-II, R-Y-B-E	No Tripping
	220 kV Kopili - Misa 3 Line	POWERGRID	NEEPCO	POWERGRID	21-05-2018 15:31:00	21-05-2018 17:32:00	DP, Z-II, R-Y-B-E	DP, Z-IV, R-Y-B-E
	220 kV Killing (Byrnihat) - Misa 1 Line	MePTCL	MePTCL	POWERGRID	21-05-2018 15:31:00	21-05-2018 17:55:00	Not Furnished	Not Furnished
	220 kV Killing (Byrnihat) - Misa 2 Line	MePTCL	MePTCL	POWERGRID	21-05-2018 15:31:00	21-05-2018 18:43:00	Not Furnished	Not Furnished
	220 kV Dimapur - Misa 1 Line	POWERGRID	POWERGRID	POWERGRID	21-05-2018 15:31:00	21-05-2018 18:51:00	DP, Z-II, Y-E	No Tripping
	220 kV Dimapur - Misa 2 Line	POWERGRID	POWERGRID	POWERGRID	21-05-2018 15:31:00	21-05-2018 18:52:00	No Tripping	Bus Bar Protection, Zone-B
	220 kV Misa - Samaguri 1 Line	POWERGRID	POWERGRID	AEGCL	21-05-2018 15:31:00	21-05-2018 18:01:00	Bus Bar Protection, Zone-B	DP, 45.7 Kms
	220 kV Misa - Samaguri 2 Line	POWERGRID	POWERGRID	AEGCL	21-05-2018 15:31:00	21-05-2018 19:02:00	Bus Bar Protection, Zone-B	DP, 45.7 Kms
	220 kV Mariani (PG) - Misa 1 Line	POWERGRID	POWERGRID	POWERGRID	21-05-2018 15:31:00	21-05-2018 18:37:00	DP, Z-II, Y-E, 186 Kms	Bus Bar Protection, Zone-B
	400/220 kV, 315 MVA ICT I at Misa	POWERGRID	POWERGRID		21-05-2018 15:31:00	21-05-2018 16:08:00	Bus Bar Protection, Zone-B	
	400/220 kV, 315 MVA ICT II at Misa	POWERGRID	POWERGRID		21-05-2018 15:31:00	21-05-2018 18:10:00	Bus Bar Protection, Zone-B	
	132 kV Khandong - Kopili 1 Line	POWERGRID	NEEPCO	NEEPCO	21-05-2018 15:31:00	21-05-2018 15:49:00	No Tripping	Backup Over Current
	132 kV Bus-Coupler of Khandong Substation	NEEPCO	NEEPCO		21-05-2018 15:31:00	21-05-2018 16:00:00	Over Current, Y-Phase	
	Kopili Unit 1	NEEPCO	NEEPCO		21-05-2018 15:31:00	21-05-2018 16:19:00	Over Speed	
	Kopili Unit 2	NEEPCO	NEEPCO		21-05-2018 15:31:00	21-05-2018 16:31:00	Generator Field Failure	
	Kopili Unit 3	NEEPCO	NEEPCO		21-05-2018 15:31:00	21-05-2018 19:33:00	Over Speed	
	Kopili Unit 4	NEEPCO	NEEPCO		21-05-2018 15:31:00	21-05-2018 18:52:00	Over Speed	
	Pare Unit 2	NEEPCO	NEEPCO		21-05-2018 15:31:00	21-05-2018 15:58:00	Under Excitation	
	Khandong Unit 1	NEEPCO	NEEPCO		21-05-2018 15:31:00	21-05-2018 16:44:00	Over Frequency	
	Khandong Unit 2	NEEPCO	NEEPCO		21-05-2018 15:31:00	21-05-2018 16:39:00	Over Frequency	

Tripping of elements due to Bus Bar protection

Event ID	Name of tripping element (End A - End B)	मालिक / Owner of the element	Data to be furnished by		Date & Time of Event	Date & Time of Restoration	Relay indications	
			End A	End B			End A	End B
2	400/220 kV, 315 MVA ICT I at Misa	POWERGRID	POWERGRID		21-05-2018 16:34:00	21-05-2018 17:18:00	Bus Bar Protection, Zone-B	
	220 kV Kopili - Misa 1 Line	POWERGRID	NEEPCO	POWERGRID	21-05-2018 16:34:00	21-05-2018 18:48:00	Bus Bar Protection, Zone-B	Bus Bar Protection, Zone-B
	220 kV Misa - Samaguri 1 Line	POWERGRID	POWERGRID	AEGCL	21-05-2018 16:34:00	21-05-2018 18:01:00	Pole Descrepancy operated	Bus Bar Protection, Zone-B
	220 kV Dimapur - Misa 2 Line	POWERGRID	POWERGRID	POWERGRID	21-05-2018 16:34:00	21-05-2018 18:52:00	No tripping	Bus Bar Protection, Zone-B
	220 kV Killing (Byrnihat) - Misa 2 Line	MePTCL	MePTCL	POWERGRID	21-05-2018 16:34:00	21-05-2018 18:43:00	DP, Z-II, B-E	No tripping

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

उत्तर पुर्वी क्षेत्रीय भार प्रेषण केंन्द्र : लोअर नँगरा, 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 : उपूक्षेभाप्रेके/एस.ओ-II/ 2210 *दिनांक/Date: 26.12.18*
Ref : NERLDC/SOII/ 2210

सेवा में/To:

Senior General Manager, NERTS (AM), POWERGRID, Shillong-793006

प्रतिलिपि/Copy to:

1. Member Secretary, NERPC, Shillong- 793006
2. Chief General Manager In charge, NERTS, Shillong-793006
3. Chief General Manager In charge, NLDC

विषय/Sub: Detailed Analysis & Furnishing Event information for disturbance occurred at 07:13 Hrs on 26.12.18.

महोदया / महोदय,

A Grid Disturbance of Category GD-1, occurred in Manipur Power System at 07:13 Hrs on 26.12.18. Brief description of the event is as follows:

Manipur Power System was connected with rest of NER Grid with 400 kV Silchar (PG)-Imphal (PG) Ckt-II, 132 kV Silchar (PG)-Imphal (PG) Ckt-I, 132kV Loktak -Imphal (PG) and 132 kV Loktak – Ningthoukhong (MSPCL) lines. 132 kV Dimapur (PG) – Imphal (PG) is under long outage and 132 kV Karong (MSPCL) – Kohima (DoP, Nagaland was kept open for system requirement.

At 07:13 hrs, 400 kV Silchar (PG)-Imphal (PG) Ckt-II **(at Silchar (PG)- D/P, Z-1, Y-ph, 89.7 km & 1.7 kA & Imphal (PG)- DEF)** tripped from both ends & 132 kV Silchar (PG) – Imphal (PG) Ckt- I **(at Silchar (PG) -Z-1,Y-ph, 156.6 km)** tripped at Silchar end only simultaneously. 132 kV Loktak - Imphal (PG) tripped at Loktak end only on **Z-3, RY-ph, 57.7km** and 132 kV Loktak- Ningthoukhong tripped only at Ningthoukhong end.

As a result, Manipur Power System got separated from NER Grid and collapsed subsequently. There was load loss of around 168 MW in Manipur Power System.

The following information/data are requested to be submitted:

A. In line with clause no 4.6.3 & 5.9.6.(c) of IEGC

a) Under clause No. 4.6.3 of IEGC (System Recording Instruments)

1. Data Acquisition System records
2. Disturbance Recorder Output
3. Event Logger Output
4. Fault Locator Output (including time synchronization equipment)

पंजीकृत कार्यालय: बी - 9, कुतब इंस्टिटयुशनल एरिया, कटवारिया सराय, नई दिल्ली - 110016, दूरभाष: 011-26560121, फैक्स: 26560039
Registered Office : B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi - 110016, Tel :26560121, Fax :011-26560039

b) Under clause No. 5.9.6.(c) of IEGC (Event Information)

1. Time and date of event
2. Location
3. Plant and/or Equipment directly involved
4. Description and cause of event
5. Antecedent conditions of load and generation, including frequency, voltage and the flows in the affected area at the time of tripping including Weather Condition prior to the event.
6. Duration of interruption and Demand and/or Generation (in MW and MWh) interrupted.
7. All Relevant system data including copies of records of all including Disturbance Recorder, Event Logger, and DAS etc.
8. Sequence of tripping with time.
9. Details of Relay Flags.
10. Remedial measures.

B. In line with Provisions of Grid Standards regulation

a) Any tripping of generating unit or transmission element, along with relay indications, shall be promptly reported by the respective Entity to the Appropriate Load Despatch Centre in the reporting formats as devised by the Appropriate Load Despatch Centre – **clause no 12(1)**

b) All operational data, including disturbance recorder and event logger reports, for analysing the grid incidents and grid disturbance and any other data which in its view can be of help for analyzing grid incident or grid disturbance shall be furnished by all the Entities within **twenty-four hours** to the Regional Load Despatch Centre and concerned Regional Power Committee – **clause no 15(3)**

In addition to the above, it is also requested to provide any major observations in respect of the event within 24 hrs for detailed analysis so as to avoid any such occurrence of event in near future.

It is requested to upload Disturbance Recorder (DR), Event Logger (EL) outputs for both ends of the lines mentioned above along with a First Information Report (FIR) in Tripping Portal (http://103.7.131.234/Trippingnew/Account/Login.aspx).

धन्यवाद एवं सादर सहित|

भवदीय / Yours sincerely,

अमरेश 26.12.18

(अ.मल्लिक / A. Mallick)

महाप्रबंधक (एस.ओ-2) G.M. (S.O.-II)

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

उत्तर पुर्वी क्षेत्रीय भार प्रेषण केंन्द्र : लोअर नँगरा, 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 : उपक्षेभाप्रके/एस.ओ-II/ 2319 *दिनांक/Date: 03.01.19*
Ref : NERLDC/SOII/ 2319

सेवा में/To:

Addl. General Manager (E.E),
NTPC Limited, Bongaigaon Thermal Power Project
PO: Salakati (P)
District: Kokrajhar (BTAD)
Assam, Pin Code: 783369

विषय/Sub: Expedite commissioning of 400 kV Transfer Bus at Bongaigaon Thermal Power Plant, NTPC.

महोदया / महोदय,

Switching scheme of Bongaigaon Thermal Power Plant (BgTPP), NTPC is Double Main and Transfer Bus as per the Single Line Diagram submitted by BgTPP, NTPC. However, during synchronization of Unit No. 3 at BgTPP it has been informed by BgTPP, NTPC that 400 kV Transfer Bus at BgTPP has not been commissioned yet.

This is for your information that shutdown of 400 kV Bus-II was availed on 02.01.19. During the shutdown period, all the elements connected to 400 kV BgTPP were shifted to Bus-I, thus reducing the reliability of the critical power station in North Eastern Region.

It is requested to kindly expedite the commissioning of 400 kV Transfer Bus at BgTPP, NTPC to enhance the reliability of BgTPP, NTPC.

धन्यवाद एवं सादर सहित|

भवदीय / Yours sincerely,

अमल्लिक 03.01.19
(अ.मल्लिक / A. Mallick)
महाप्रबंधक (एस.ओ-2) G.M. (S.O.-II)

Annexure-G

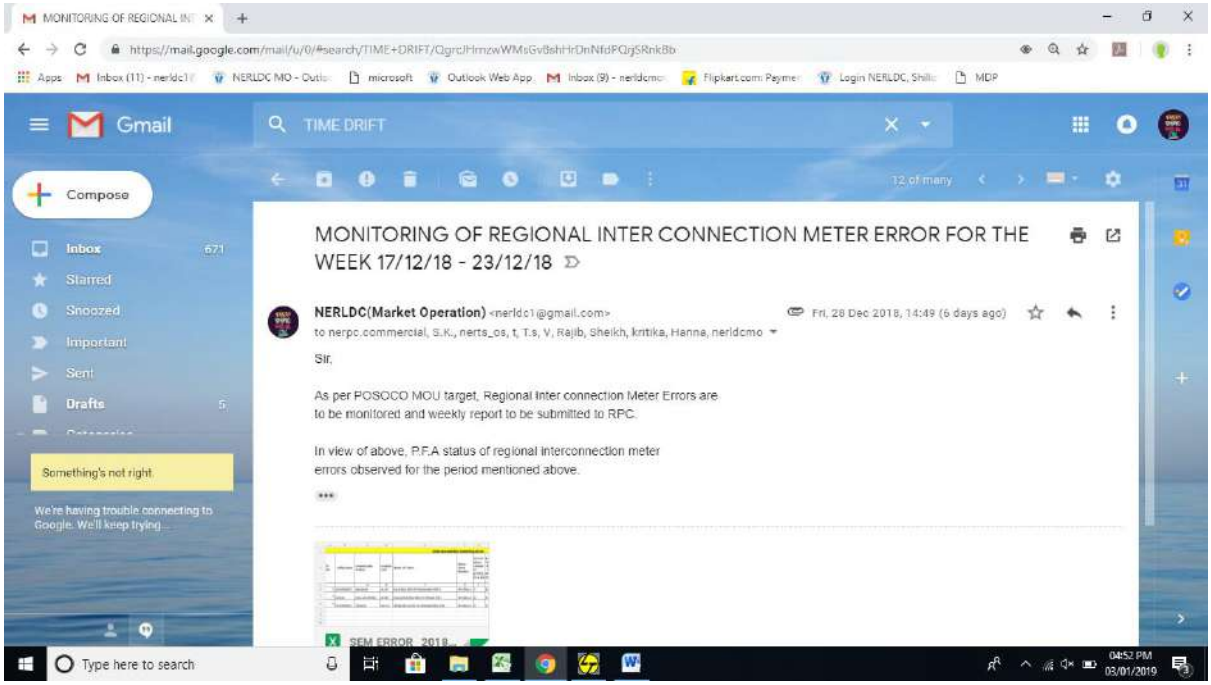
Furnishing o□Time Dri□t Report

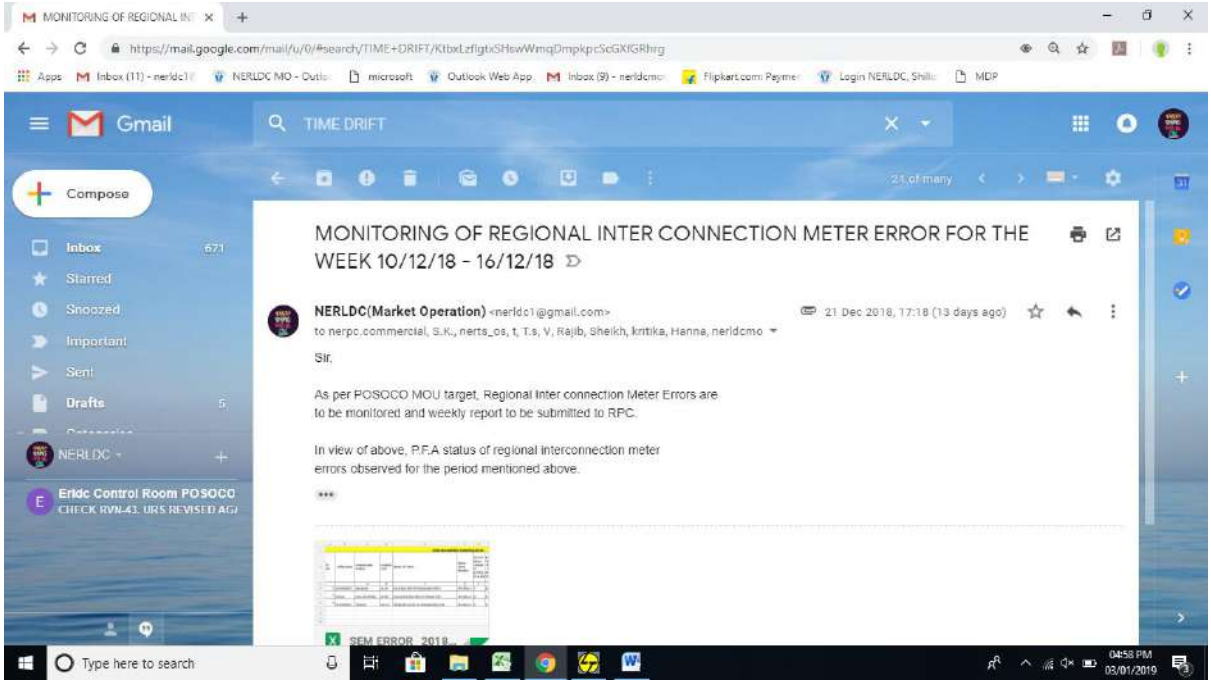
□I□No□	□TILIT□	LOCATION	□TAT□□OF REPORT
1	□SS□M	TI□SH□□I□	□OT □□C□IV□D
2		SO□□□I□	□OT □□C□IV□D
3		□□HI□IP□□□	□OT □□C□IV□D
4		□TPS □□S□	□OT □□C□IV□D
5		□M□□□□SOO	□OT □□C□IV□D
6		S□□□S□□□I	□OT □□C□IV□D
7		D□□□□VCH□□□	□OT □□C□IV□D
8		H□I□□□H□□DI	□OT □□C□IV□D
□		M□□I□□I	□OT □□C□IV□D
10	M□□H□□□Y□	□Y□□IH□T	□OT □□C□IV□D
11		□MT□□	□OT □□C□IV□D
12	□□□□□CH□□ P□□D□SH	CHIMP□	□OT □□C□IV□D
13	T□IP□□□	7□TI□□□	□OT □□C□IV□D
14		□D□IP□□	□OT □□C□IV□D
15		D□□□□□□	□OT □□C□IV□D
16		P□ □□□I	□OT □□C□IV□D
17	□□□□□□□D	□OHIM□	□OT □□C□IV□D
18	M□□IP□□	□□□ □OC□TIO□S	□OT □□C□IV□D
1□	MI□O□□M	□O□□SI□	□OT □□C□IV□D
20	PO□ □□□□ID	SI□CH□□	□OT □□C□IV□D
21		□□□□I□	□OT □□C□IV□D
22		□I□□□ □	□OT □□C□IV□D
23		DIM□P□□	□OT □□C□IV□D
24		□□D□□P□□	□OT □□C□IV□D
25		MIS□	□OT □□C□IV□D
26		□O□□□I□□O□	□OT □□C□IV□D
27		□I□I□□M	□OT □□C□IV□D
28		□□□IP□□□	□OT □□C□IV□D
2□		M□□I□□I	□OT □□C□IV□D
30		MO□□□CH□□□	□OT □□C□IV□D
31		□H□I□□I□T	□OT □□C□IV□D
32		H□F□O□□	□OT □□C□IV□D
33		□□C	□OT □□C□IV□D
34	□□□PCO	□□TH□□□□□I	□OT □□C□IV□D
35		P□□□	□OT □□C□IV□D
36		□H□□DO□□	□OT □□C□IV□D
37		□OPI□I	□OT □□C□IV□D
38		□OPI□I-2	□OT □□C□IV□D
3□		DOY□□□	□OT □□C□IV□D
40		□□□□□□□DI	□OT □□C□IV□D
41	OTPC	P□□□T□□□	□OT □□C□IV□D

Annexure-H

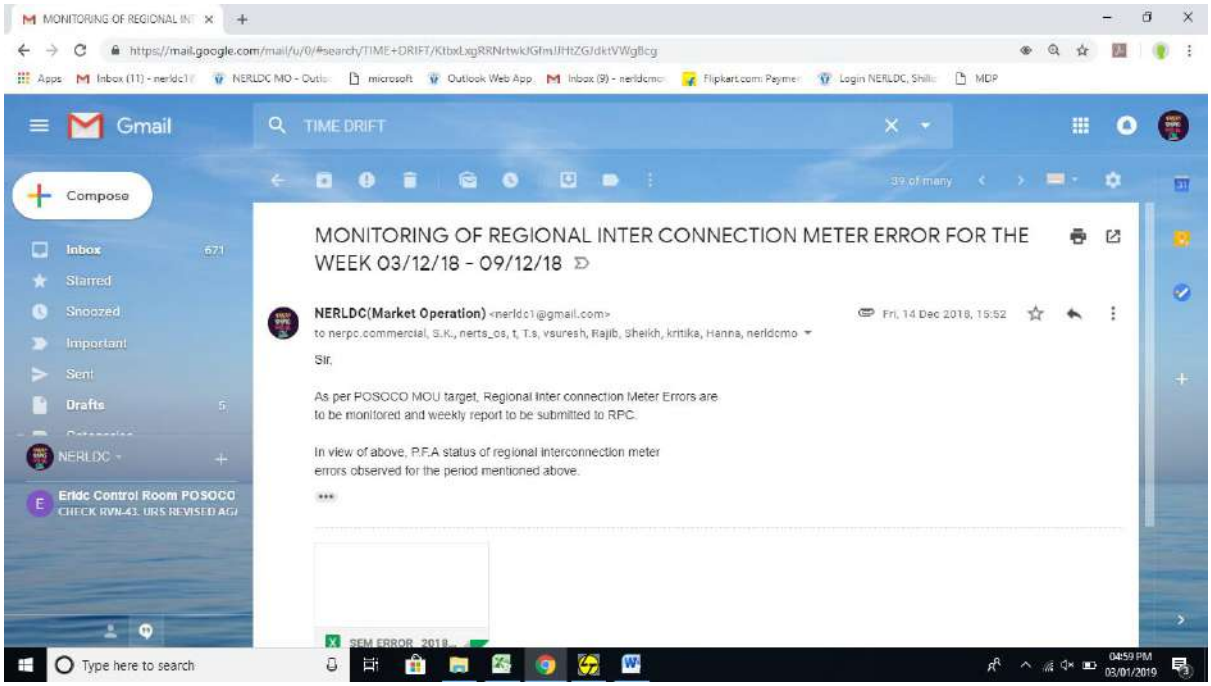
Meter error details:

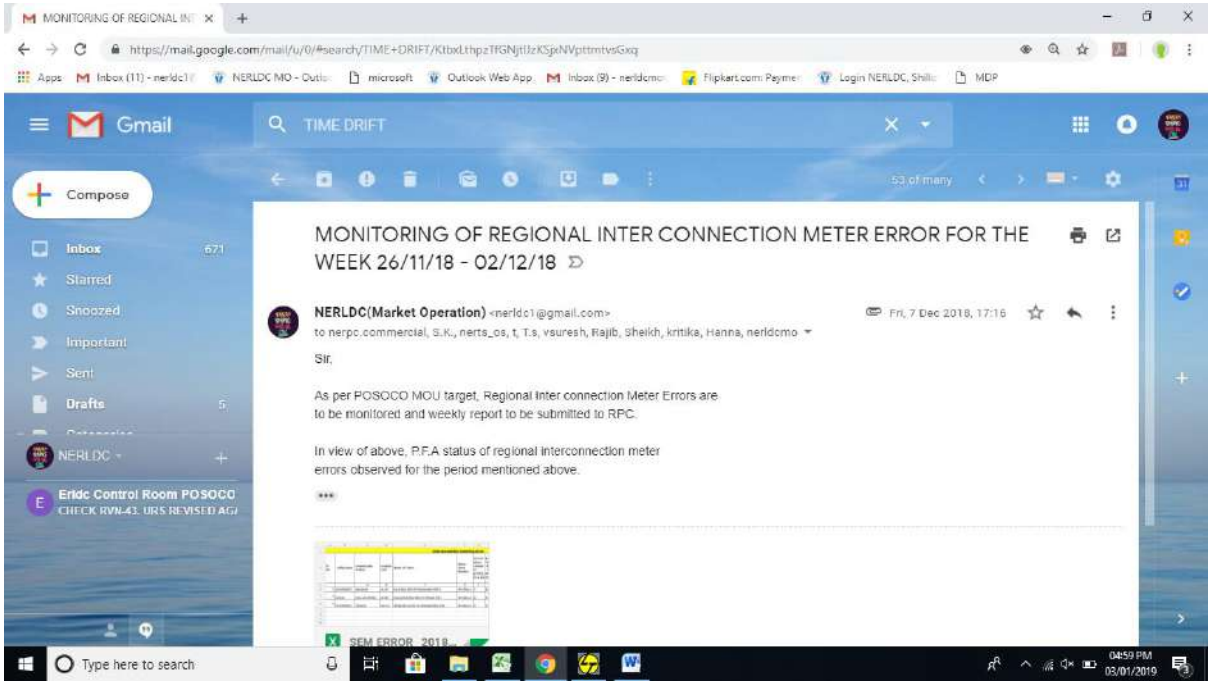
S□.□O	F□□D□□ □□M□	M□T□□ □O	□□□SO□	□□M□□□S
1	IMPH□□P□□□□D OF DIM□P□□ □P□□	□P-866□-□	□□□O□□□O□S □□□DI□□	
2	P□□CH□□□M □□D OF □DP□P□□FD□	□P-6872-□	CT/PT ISS□□	Other end used for accounting



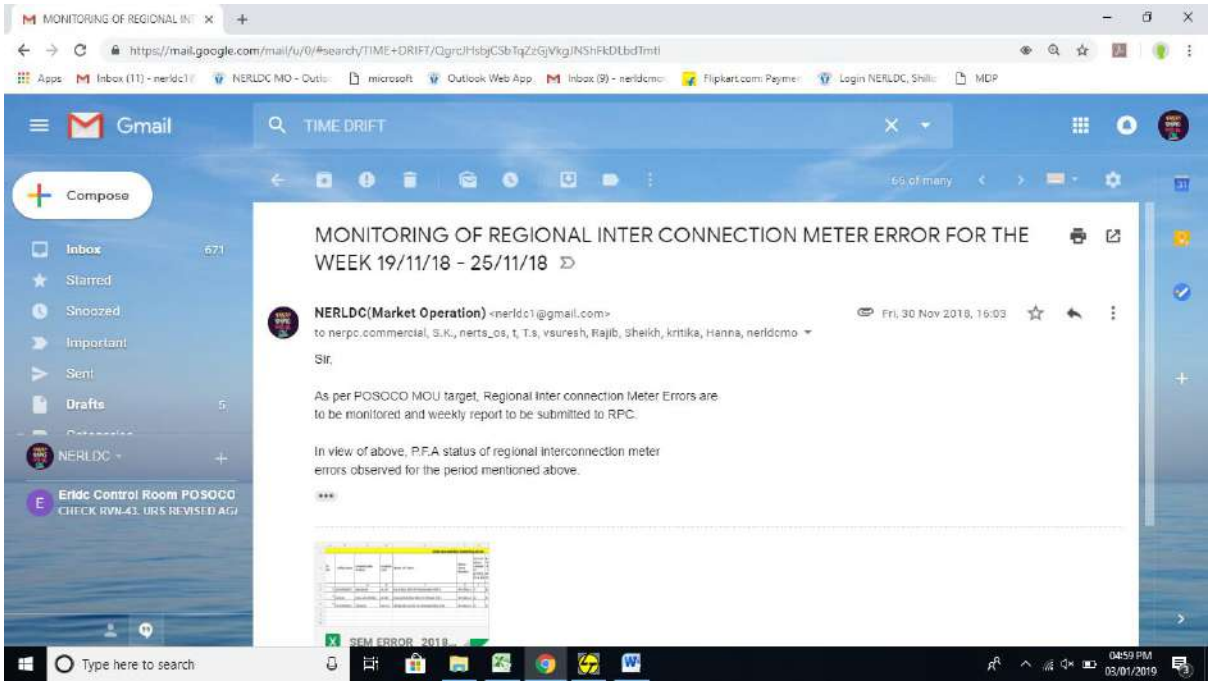


Annexure-H


Gmail
TIME DRIFT
Compose
Inbox 671
Starred
Snoozed
Important
Sent
Drafts 5
MONITORING OF REGIONAL INTER CONNECTION METER ERROR FOR THE WEEK 03/12/18 - 09/12/18
NERLDC(Market Operation) <nerldc1@gmail.com>
Fri, 14 Dec 2018, 15:52
to nerpc.commercial, S.K., nerts_os, t, T.s, vsuresh, Rajib, Sheikh, kritika, Hanna, nerldcmo
Sir,
As per POSOCO MOU target, Regional Inter connection Meter Errors are to be monitored and weekly report to be submitted to RPC.
In view of above, P.F.A status of regional interconnection meter errors observed for the period mentioned above.
SEM ERROR_2018...
Type here to search
04:59 PM
03/01/2019


Gmail
TIME DRIFT
Compose
Inbox 671
Starred
Snoozed
Important
Sent
Drafts 5
MONITORING OF REGIONAL INTER CONNECTION METER ERROR FOR THE WEEK 26/11/18 - 02/12/18
NERLDC(Market Operation) <nerldc1@gmail.com>
Fri, 7 Dec 2018, 17:16
to nerpc.commercial, S.K., nerts_os, t, T.s, vsuresh, Rajib, Sheikh, kritika, Hanna, nerldcmo
Sir,
As per POSOCO MOU target, Regional Inter connection Meter Errors are to be monitored and weekly report to be submitted to RPC.
In view of above, P.F.A status of regional interconnection meter errors observed for the period mentioned above.
SEM ERROR_2018...
Type here to search
04:59 PM
03/01/2019

Annexure-H


MONITORING OF REGIONAL INTER CONNECTION METER ERROR FOR THE WEEK 19/11/18 - 25/11/18
NERLDC(Market Operation) <nerldc1@gmail.com>
Fri, 30 Nov 2018, 16:03
Sir,
As per POSOCO MOU target, Regional Inter connection Meter Errors are to be monitored and weekly report to be submitted to RPC.
In view of above, P.F.A status of regional interconnection meter errors observed for the period mentioned above.
SEM ERROR_2018
Type here to search
04:59 PM
03/01/2019