North Eastern Regional Power Committee

MINUTES OF THE 130th OPERATION COORDINATION SUB-COMMITTEE MEETING OF NERPC

Date : 17/03/2017 (Friday)

Time : 10:00 hrs

Venue : "Hotel RajMahal", Guwahati.

The List of Participants in the 130th OCC Meeting is attached at **Annexure – I**

Shri P.K. Mishra, Member Secretary, NERPC welcomed all the participants to the 130th OCC meeting. He noted the presence of participants from all the utilities except Mizoram. However, he expressed satisfaction about the maximum participants from all the utilities and requested to continue the same in future so that the matter can be resolved during the meeting. He also mentioned that from now on all the issues discussed in the meeting will be reviewed in the next meeting and all the commitments given in the meeting should be adhered to and non-compliance of the decision taken will be taken seriously. He requested all the members to look into their own agenda and should come prepare in the meeting for fruitful deliberation. He further stated that participants represented from their organization should consult their decision authorities before attending the meeting and once they represent the meeting full authority should be given to them to state the factual position pertaining to their organizations.

Thereafter, Member Secretary requested Shri B. Lyngkhoi, Director/SE(C&O) to take up the agenda items for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 129th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 129th meeting of Operation Sub-committee held on 17th February, 2017 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 28th February, 2017.

The Sub-committee confirmed the minutes of 129th OCCM of NERPC with the above modifications as no further 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 130th OCC:

State	Protection System	ADMS	CAPACITOR INSTALLATION
Arunachal Pradesh	Approval from the Govt. is awaited. Requested NERPC to take up with Govt. of AP	DPR already submitted to CEA & NLDC	Study is in progress and the same will be submitted to NERPC for approval
Nagaland	LOAs already completed and works is likely to be completed by 30.09.2017	DPR already submitted to CEA & NLDC	DPR already submitted to CEA & NLDC
Mizoram	By Mar'17 all LOAs would be issued.	DPR already submitted to CEA & NLDC	DPR already submitted to CEA & NLDC
Manipur	By June'17 all LOAs would be issued.	DPR will be submitted soon to CEA & NLDC	DPR preparation stage
Tripura	By June'17 all LOAs would be issued.	DPR will be submitted soon to CEA & NLDC	-
Assam	By June'17 all LOAs would be issued.	DPR will be submitted soon to CEA & NLDC	-
Meghalaya	MePTCL – All LOAs will be completed by April, 2017. MePGCl – by April, 2017	DPR to be prepared. SE, SLDC requested the survey firm to discuss with them for further action.	DPR to be prepared.

Deliberation of the sub-Committee:

Director/S.E. (C&O), NERPC once again reiterated that progress of PSDF projects are to be submitted on monthly basis by all the NER States in formats prepared by the National Power Committee (NPC) for onward transmission to them as the status of progress is being closely monitored by NPC/NLDC.

The Sub-Committee noted as above.
Action: All state utilities.

2. Reasons For Demand - Supply Gap And Its Variation:

It was deliberated in the 4th NPC meeting that monthly power supply position prepared & published by CEA based on the data furnished by the states reflected shortages in almost all the states. However, a number of those states intimated adequate availability of power. This meant that the deficit/shortage in such states was actually not the deficit in true sense but demand-supply gap due to reasons other than shortage of power. The other reasons for the demand-supply gap could be inadequate availability of power, transmission constraint, distribution constraint, financial constraint, etc. The reason for demand-supply gap needed to be clearly mentioned to reflect true picture of power supply position in different states and also to invite attention of various agencies including policy makers to the specific problem areas in the power sector for suitable solution.

After deliberation it was decided in the meeting that all the RPCs would advise the states in their respective regions to intimate broad break-up of demand-supply gap due to various reasons, or at least, the main reason(s) for demand-supply gap in each month.

In 126th OCCM, S.E.(C&O),NERPC informed the forum that as per communication received from GM Division CEA, unscheduled load shedding and scheduled load shedding for peak demand met instance is to be provided. Accordingly, all the constituents & NERLDC were requested to indicate the latter from November, 2016 onwards. The forum requested DoP Ar. Pradesh, MSPCL and DoP Nagaland to submit the shortfall figures periodically.

NERLDC expressed that differences are coming up on account of several reasons, and proper accounting of captive load and generation is to be done by SLDCs. In case the captive power consumption is not included, the overall demands met of the states are reflecting less than actual. All SLDCs were requested to check and reflect the captive generation figures in their daily operational reports.

NERPC will circulate the Installed Capacity figures compiled by them for ratification by all.

In 129th OCCM, after detailed deliberation the following were decided:

- In order to arrive at correct Energy Availability/Requirement figures SLDCs are to provide feeder wise drawal figures in the daily report to NERLDC.
- Figures corresponding to Schedule load shedding and unscheduled load shedding are to be indicated clearly in Daily Report.

Sr. Manager, TSECL requested a clarification about the meaning of scheduled and unscheduled load shedding. Member Secretary, NERPC clarified that scheduled load shedding means the planned load shedding including load shedding due to commercial constraints, while unscheduled load shedding means load shedding due to system constraints or contingencies in the system.

The forum requested NERLDC to accordingly modify the daily report formats and circulate. All SLDCs were requested to submit daily to NERLDC in the new format.

NERLDC again raised the issue of mismatch of Installed Capacity figures available with CEA/ NERPC/ NERLDC. After detailed deliberation it was decided that NERLDC & NERPC will circulate final Installed Capacity Figures based on the data received from all constituents before next OCC Meeting and the same shall be finalized and validated in 130th OCC Meeting.

Member Secretary, NERPC once again informed that de-commissioning of generating units will only recorded when communication is received from CEA. He requested utilities to write to concerned division of CEA for de-commissioning of generating units.

Deliberation of the sub-Committee:

NERLDC informed that the new daily report formats have been circulated to SLDCs of Assam, Meghalaya and Tripura. The forum requested the SLDCs to submit the report regularly. AGM (SO-I), NERLDC informed that a new in-house web based reporting software has been developed by NERLDC which is under testing stage. He requested the above SLDCs to send data in the new formats for testing purposes. However, as per existing practice they shall continue to furnish night & morning data till stabilization of the software and hosting in web server. After hosting make use of the software for furnishing data. It was also decided to drop the agenda item in the meantime and review later on.

The Sub-Committee noted as above.

Action: All SLDCs/NERLDC.

3. Long Outage of Important Grid Elements:

Name of the Element	Name of Utility	Status
63MVAR Reactor at Byrnihat	MePTCL	SE, MePTCL informed that DPR has been completed as per PSDF format. The

		proposal would be sent to CEA/NLDC/NERPC after internal approval. Refer to TCC/RPC for approval.
400KV 80MVAR Bus Reactor At Palatana	OTPC	04 Nos bushing to be replaced. Work would be completed by OTPC itself. Tentative completion 31.10.2017.

The Sub-Committee noted as above.

Action: MePTCL, OTPC.

B.2. <u>OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING FEBRUARY, 2017</u>

As per the data made available by NERLDC, the grid performance parameters for February, 2017 are given below:

<u>NER PERFORMANCE DURING FEBRUARY, 2017</u>

	Energy Met (MU)		w.r.t. Jan,17 % inc (+) /Jan (-)	Energy Reqr. (MU)		w.r.t. Jan,17 % inc (+) /Jan (-)	% inc (+) /Jan (-) of energy reqr vs met. In Feb,17
States	**Feb-17**	**Jan-17**		**Feb-17**	**Jan-17**		
Ar. Pradesh	57.25	63.89	-10.39	58.08	65.02	-10.67	-1.43
Assam	610.78	709.43	-13.91	624.98	718.33	-13.00	-2.27
Manipur	59.30	70.89	-16.35	60.18	72.08	-16.51	-1.46
Meghalaya	158.66	151.38	4.81	158.66	151.38	4.81	0.00
Mizoram	41.73	47.76	-12.63	42.38	48.79	-13.14	-1.53
Nagaland	48.07	64.99	-26.03	48.86	65.92	-25.88	-1.62
Tripura	95.01	104.21	-8.83	95.57	104.58	-8.62	-0.59
Region	**1070.79**	**1212.55**	**-11.69**	**1088.71**	**1226.10**	**-11.21**	**-1.65**

	Demand Met (MW)		w.r.t. Jan,17 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Jan,17 % inc (+) /dec (-)	% inc (+) /dec (-) of Demand vs met. In Feb,17
States	**Feb-17**	**Jan-17**		**Feb-17**	**Jan-17**		
Ar. Pradesh	135	120	12.50	139	122	13.93	-2.88
Assam	1396	1464	-4.64	1398	1466	-4.64	-0.14
Manipur	162	163	-0.61	163	163	0.00	-0.61
Meghalaya	300	332	-9.64	300	331	-9.37	0.00
Mizoram	93	98	-5.10	95	98	-3.06	-2.11
Nagaland	147	121	21.49	148	122	21.31	-0.68
Tripura	223	223	0.00	223	224	-0.45	0.00
Region	**2234**	**2320**	**-3.71**	**2243**	**2330**	**-3.73**	**-0.40**

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	**Feb-17**	**Jan-17**
Total Generation in NER (Gross)	1050.32	1136.24
Total Central Sector Generation (Gross)	819.96	842.39
Total State Sector Generation (Gross)	230.36	293.86
Inter-Regional Energy Exchange		
(a) NER-ER	**137.16**	**147.19**
(b) ER-NER	**12.38**	**1.36**
(c)NER-NR	**0.00**	**0.02**
(d)NR-NER	276.78	353.79
© Net Import	152.00	207.94

AVERAGE FREQUENCY (Hz)

Month---->	**Feb-17**	**Jan-17**
	% of Time	% of Time
Below 49.9 Hz	5.39	6.20
Between 49.9 to 50.05 Hz	73.84	70.42
Above 50.05 Hz	20.78	23.31
Average	50.00	50.00
Maximum	50.34	50.33
Minimum	49.76	49.71

The Sub-committee noted as above.

I T E M S F O R D I S C U S S I O N

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

During 130th OCC meeting, the status as informed by NTPC, NEEPCO, POWERGRID, DoP Ar. Pradesh and DOP, Nagaland is as follows:

SN	Items	Status as given in 130th OCC Meeting	Status as given in 129th OCC Meeting
a. New Projects			
1	Trial operation and CoD of Unit -II of Bongaigoan TPS of NTPC	Unit synchronized on 13.02.2017. CoD by 31.03.2017.	Unit synchronized on 13.02.2017. CoD by 31.03.2017
2	400/220kV, 2x315 MVA ICT of NTPC at Bongaigaon	1st 315 MVA ICT - To be charged within 31.03.17 2nd 315 MVA ICT - Not yet received at site	1st 315 MVA ICT - To be charged within 28.02.17 2nd 315 MVA ICT - Not yet received at site
3	Trial operation and CoD 36MW STG of Monarchak GBPP of NEEPCO	Subject to gas availability	Subject to gas availability

4	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	Delay in dam construction. First unit by early 2018.	Unit #1 Oct'17 Unit #2&#3 Nov'17 Unit #4 Dec'17
5	Pare HEP of NEEPCO (2 x 55 MW)	Delay in dam construction. First unit by early 2018.	Unit #1 July'17 Unit #2 Aug'17
6	400 kV D/C Silchar - Melriat line of PGCIL	June, 2017.	June, 2017.
7	220kV Rangia - Salakati of AEGCL	December 2017	December 2017
8	132kV Monarchak – Surjamaninagar D/C of TSECL	July, 2017	July, 2017
9	132kV Pasighat – Aalong of Ar. Pradesh	March, 2017.	February, 2017.
10	132kV Doyang– Wokha	March, 2017	March, 2017
11	220 kV, 20 MVAR Line Reactor& bay at AGBPP on 220 kV NewMariani – AGBPP line	March, 2017	Trial operation by 28.02.17.
12	132kV Surjamaninagar Bay at OTPC	Work to be executed by POWERGRID. Timeline to be given by PGCIL.	Work to be executed by GE (T&D). Would be completed by 31.03.2018.
13	400kV D/C Balipara – Kameng	May 2017.	March 2017.
14	RHEP 80 MVAR Bus Reactor	T.S. preparation stage.	T.S. preparation stage.
15	SLDCs (Ar. Pradesh, Manipur, Mizoram, Nagaland)	Manipur – Completed, handover by Mar'17, Mizoram- Mar'17, Nagaland-Building ready and handed over, AP- Building handover issues sorted out.	Manipur – Completed, handover by Mar'17, Mizoram-Mar'17, Nagaland-Building ready and handed over, AP-Building handover issues sorted out.
16	400/220 kV 315 MVA ICT-II at Bongaigaon	Manufacturing stage	Manufacturing stage
17	220/132 kV, 2x160 MVA ICTs at Balipara	By 31st August 2017(LOA date).	By 31st August 2017(LOA date).
18	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	By 31st August 2017(LOA date).	By 31st August 2017(LOA date).

19	400/132 kV, 1x315 MVA ICT-III at Silchar	December, 2017(LOA date).	December, 2017(LOA date).
20	Replacement of 2x315 MVA ICTs with 2x500 MVA ICTs at Misa (PG)	December, 2017(LOA date).	December, 2017(LOA date).
21	400 kV Silchar – Misa D/C	Under TBCB	Under TBCB
22	1x125 MVAR Bus Reactor at 400 kV at Balipara	December, 2017(LOA date).	December, 2017(LOA date).
23	1x125 MVAR Bus Reactor at 400 kV Bongaigoan	December, 2017(LOA date).	December, 2017(LOA date).
24	Bays at Hailakandi & 132V Silchar-Hailakandi	June, 2017.	June, 2017.
25	Tuirial HEP of NEEPCO	Unit #I - Oct'2017 Unit #II - Dec'2017 Unit #III - 2018	June, 2017.
b. Elements under breakdown/ upgradation			
26	63MVAR Reactor at Byrnihat of Me.PTCL	As recorded in item **B.1.(4)**	As recorded in item **B.1.(4)**
27	Up-gradation of 132 kV Lumshnong-Panchgram line	DPR preparation stage	DPR preparation stage
28	Switchable line Reactors at 400kV Balipara & Bongaigoan	Procurement works underway. Both to be completed by 31.03.17	Procurement works underway. Both to be completed by 31.03.17
29	PLCC Panels at Loktak end of Loktak – Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	Work(s) have been included in tender for additional line of 132kV Loktak-Ningthoukong	Work(s) have been included in tender for additional line of 132kV Loktak-Ningthoukong
30	LILO of 132kV Ranganadi – Nirjuli at Pare of NEEPCO by PGCIL	Work given to KEC. Completion by May'2018	Jan'17
31	LILO of 132kV Ranganadi – Itanagar (Chimpu) at Pare of Ar. Pradesh	Bay 1 at Pare : completed Bay 2 at RHEP: March 2017	Bay at Pare under construction Bay 1: completed Bay 2: March 2017
32	400KV 80MVAR Bus Reactor at OTPC Palatana	As recorded in item **B.1.(4)**	As recorded in item **B.1.(4)**

GM, NERLDC advised all generating utilities especially NEEPCO who are about to add capacity to the grid, to plan the communication and telemetry issues beforehand. He suggested that status of communications should be monitored in totality in NETeST meeting so that no hiccups will be there before any elements are added to the grid. Further, he mentioned that scope of work in **SN. 31 above has been modified** as intimated by DGM(AM), NERTS, he requested NERTS to inform the exact status in next meeting.

EE,SLDC, Meghalaya informed that even though new SLDC and SCADA has been commissioned, additional work of earthing is yet to be completed. The forum requested NERTS to expedite in completing the work at the earliest.

EE, SLDC, Ar. Pradesh informed that bay at Pare mentioned at SN-32 above should be recorded as Ranganadi.

The Sub-committee noted as above.

C.2 Furnishing of UFR Report and status of Implementation:

As per recommendation of enquiry Committee, the status of installation of UFR in NER was already circulated earlier. It is gathered that, 18.5 MW quantum is yet to be implemented in Arunachal Pradesh & Manipur.

The 123rd OCC forum decided that monthly report is not being furnished. As per clauses of relevant regulations, and Order of Hon'ble CERC in matter of Petition no. 113/MP/2014, NERLDC and NERPC are mandated to submit status of UFR operation and non-operation to CERC. SLDCs were thus requested to submit UFR operation details (feeder-wise quantum of load relief to be indicated) on monthly basis, and even if no UFR operated in particular month, it should be indicated as NIL.

The 127th OCC forum requested all the SLDCs/state utilities to certify healthiness of the relays while submitting the UFR operation report monthly.

The latest status as informed by NERLDC in 130th OCC:

Arunachal Pradesh	Furnished for Feb'17
Assam	Furnished for Feb'17
Manipur	Furnished for Feb'17
Meghalaya	Furnished for Feb'17
Mizoram	Furnished for Feb'17

Nagaland	Furnished for Feb'17
Tripura	Furnished for Feb'17

The Sub-committee noted as above.

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

NEEPCO/NHPC may kindly intimate the availability for hydro stations:

Generating Station	Units running	MW	MU	Reservoir
Khandong	2			
Kopili-II	1			
Kopili	4			
Ranganadi	3		Subject to inflow	
Doyang	3			
Loktak	3			
AGBPP	-	-	-	-
AGTPP	-	-	-	-

Hydro planning

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

Deliberation of the sub-Committee:

The Committee discussed and approved the proposed shutdown by Generating Stations and the same has already been uploaded in the website of NERPC.

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.

In 124th OCCM, SE(C&O) strongly opined that constituents should inform to NERPC/NERLDC in case shutdown is not avail as approved in the OCC meeting and should mention clearly the reason for not availing the shutdown. The full list of shutdown would be placed in the next OCC by NERLDC so that proper record can be made in future for generating units as well as transmission lines. All constituents endorsed the view of SE(C&O).

In 128th OCCM, S.E.(C&O),NERPC stated that OCC approved shutdowns are not being availed and also shutdown requests after OCC approval are being sent repeatedly by different utilities. He stressed that this practice is highly undesirable and no shutdown request after OCC approval would be entertained except in dire emergencies.

In 129th OCCM, NERPC decided that outages to be discussed in OCC meeting to be forwarded by last date of previous month. (i.e. Shutdowns for March'17 OCC to be forwarded by 28th Feb'17). No outage will be entertained after that.

NERLDC also informed that as per Clause no. 6.1 of Procedure for Transmission Elements Outage Planning issued by NLDC vide letter POSOCO/NLDC/System Operation/Outage Planning dated 28th February'13 that Planned Outages which have been approved in the OCC meeting of a region shall be considered for approval by RLDCs/NLDC on D-3 basis. If an outage is to be availed on say 10th of the month, the indenting agency would forward such requests to the concerned RLDC on 7th of the month by 1000 hours. In case the request for transmission element outage is not received within the timeline, it will be assumed that the indenting agency is not availing the outage.

Member Secretary opined strongly about non commitments of earlier decision by the constituents and stated that all proposed plan shutdowns and agenda for the next OCC meeting should be sent to NERPC Secretariat **latest by 5th day of next month**. He directed SE(C&O) that the decision should be strictly adhere to and no shutdowns or agenda will be entertained after that stipulated date.

The sub-Committee discussed and approved the proposals received from the constituents regarding transmission elements and generating units for March, 2017 - April, 2017 and the same has already been uploaded in website of NERPC.

D.3 Estimated Transmission Availability Certificate (TAC) for the month of November & December, 2016:

NETC and POWERGRID have submitted the outage data for the month of November & December, 2016. So the attributability of outage of the said elements may please be finalized.

The forum once again advised NETC & POWERGRID to submit data in a time bound manner as decided previously.

The Sub-Committee noted as above.

D.4 Furnishing of Technical and Commercial data for computation of PoC Charges and Losses for Q2 of 2017-18 (July 2017 – September 2017):

In the 3rd Validation Committee meeting for PoC application period Oct'15-Dec'15, held on 30th September 2015, at NLDC conference Hall, CERC had proposed a methodology for ratification of projected data at RPC form.

During last validation committee meeting for Q1 of 2017-18 (April-June'17) held on 21st Febuary'17, Hon'ble CERC has noted no participation from constituents of NER except Meghalaya. It is requested to all constituents to make it convenient to attend validation committee meetings either by video conference or by physical presence.

CERC has also pointed out that there is a huge difference between projected and actual demand data. Comparison of Projected Vs Actual data for Q3 of 2016-17 (Oct-Dec'16) is shown in enclosed Annexure D.4 .

TSECL has not furnished YTC data for Q1 of 2017-18 (April-June'17). It is requested to MePTCL, AEGCL and TSECL to furnish YTC data while submitting node wise data for PoC calculation.

Deliberation in the meeting

NERLDC requested TSECL to submit YTC data for Q1 of 2017-18 (April-June'17) at the earliest. NERLDC also requested all the states to give reason for the huge difference between projected and actual demand data for Q3 of 2016-17 (Oct-Dec'16) as pointed out by Hon'ble CERC. The forum also requested all the members to attend Validation Committee meeting either through VC or in person.

The Sub-Committee noted as above.

Action: TSECL.

D.5 <u>Assessment of Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) by SLDC on respective Inter-State Transmission Corridor</u>

Updated PSSE Base Cases have been **mailed to all the SLDCs on 01.03.17**. All SLDCs are requested to assess the Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) **for the month of March'17** using these cases, and submit the study cases and results to NERLDC **by 20th March, 2017**.

NERLDC has assessed the state control area wise, state subsystem wise and group of control-area wise TTCs for NER Grid, on behalf of SLDCs of NER. The study results conducted by NERLDC will be mailed to all SLDCs. SLDCs are requested to check the TTC of their control areas as computed by NERLDC and **give comments, if any by 20th March'17.**

If no comments received from any SLDCs of NER, TTC, ATC & TRM figures of State control area and group of control areas as assessed by NERLDC will be considered as final **and may be uploaded on website.**

As per discussions in 122nd OCC meeting of NERPC, all SLDCs of NER may host the assessed TTC / ATC / TRM figures on their website for information dissemination.

Modelling has been done up to 33 kV levels in state network. For better simulation results, distribution level modelling also has to be done in the PSSE.

It is requested to all SLDCs to furnish distribution level data for modelling in PSSE. Also verify the modelling that has been done up to 33 kV level and give comments, if any by 20th March'17.

<u>Deliberation in the meeting</u>

NERLDC informed the forum that in the PSSE training given by NERLDC on 16th Feb'17, it was decided that each state will give presentation on ATC/TTC calculated by them in the next OCC meetings. AEGCL and MSPCL representative informed that SLD provided was not working. It was also requested by all SLDCs that one more training is to be conducted for ATC/TTC calculation.

GM, NERLDC stated that SLDC personals are always welcome to visit NERLDC, Shillong for more exposure on PSSE software. He also opined that the issues faced may be first discussed in PSSE google group for getting immediate help from NERLDC. Forum once again requested all SLDCs to compute ATC/TTC figures, verify the modelling done by NERLDC and give comments if any by 31st March'17.

The Sub-Committee noted as above.
Action: All SLDCs.

D.6. Renovation and Modernization of Umiam Stage-III HEP (2 x 30 Mw)

In line with the policy for taking up Renovation & Modernization (R & M) of old hydroelectric power plants initiated by the Ministry of Power, Government of India, MeECL has decided to take up R & M of Umiam Stage-III HEPP (2 x 30 Mw) commissioned in 1979,considering the aggravated condition of the power plant.

In 126th OCCM, S.E., MePGCL informed that Umiam Stage-III has already completed its useful life having been in service for 37 years since commissioning. He requested that R&M cost be funded from PSDF.

S.E.(C&O),NERPC informed that R&M of power plants are not specifically funded from PSDF under PSDF regulations. However they may be funded under extraordinary Cl.4.1.(e). He requested MePGCL to submit the proposal at the earliest so that the matter may be followed up with NLDC/CERC.

Deliberation in the meeting

SE, SLDC, Meghalaya informed that DPR has been sent to NLDC/CEA. He requested NERPC to kindly inform the status at the earliest.

The Sub-committee noted as above.
Action: MePGCL/NERPC/CEA.

D.7 Reporting of commissioned transmission elements for TARANG App.

TARANG (Transmission App for Real Time Monitoring and Growth) Mobile App & Web Portal has been developed by REC Transmission Projects Company Ltd (RECPTL) for progress monitoring of transmission systems on Pan-India basis, which was launched by Hon'ble Minister of State for Power on 17th August 2016. The app can be downloaded on smartphones or be accessed through its website (www.tarang.website).

As part of the responsibility charter, POSOCO has been assigned the responsibility to update the systems under operation in the 'Completed Transmission Systems' section of the app.

In order to provide this information to the Ministry of Power, it is requested to provide the details of commissioning of transmission elements in respective state for each month by the 3rd day of the next month to NERLDC.

In 126th OCCM, Sr. Engineer, NERLDC emphasized the need for furnishing this data for TARANG app devised by Ministry of Power, Govt. of India for information to the public. It was also mentioned that during recent visit to Guwahati on 11.11.2016, the same was emphasized by Joint Secretary (Power). NERLDC requested all utilities to submit the data to: **nerldcso2@posoco.in** by 3rd of every month for the previous month.

In 127th OCCM, Sr. Engineer, NERLDC informed that whatever elements have been commissioned in previous month need to be mailed to NERLDC by 3rd of every month. DGM, SLDC, AEGCL requested that respective transmission utilities may be approached for the required data. DGM(MO),NERLDC clarified that the details of any EHV commissioned elements within a State are supposed to be available with SLDCs, so there should not arise any difficulty in this regard.

It was agreed that SLDCs would furnish the data.

In 128th OCCM, NERLDC informed that even if no elements have been commissioned in the preceding month then a NIL report is to be submitted to NERLDC. NERLDC also informed that the updated Power Map and Grid Maps of all the states of NER will be circulated and all utilities are requested to give comments on the same.

In 129th OCC NERLDC informed that currently only MSPCL is mailing the report on commissioned elements. It was requested to all the SLDCs to submit the report by mail periodically.

Deliberation in the meeting

NERLDC informed that only MSPCL is mailing the report on commissioned elements. AEGCL requested that the details be perused from Progress Report, which is being mailed regularly. NERLDC informed that the progress report is being submitted by 20th of every month but the information about newly commissioned elements are to be passed on to NLDC by 5th of every month. MePTCL informed that the latest status of commissioned elements would be mailed within one week. Forum requested all

SLDCs to submit the information of newly commissioned elements in the previous month by 3rd of every month to NLDC & copy to NERPC & NERLDC.

The Sub-committee noted as above.
Action: All SLDCs.

D.8. <u>Installation of DAS to monitor FRC for generators:</u>

In continuation to discussions in 125th OCC meeting on this matter, and letter from ED-NLDC dtd. 10th October'16, it is requested that all generators may take urgent action to ensure Primary response as per stipulation [As per Sec.1(4) of Part-II of CEA's Grid Connectivity standards, 0-10% droop for hydro generator governors ; 3-6% droop for Thermal generator governors].

Also, as per Section 11.2.(i) of CEA's Technical Standards for Construction, all generating stations must store important analog data in 1 seconds interval.

NEEPCO has informed that AGTPP and Ranganadi HEP have properly working DAS, that are capable of storing Machine side data like Voltage, frequency, Active power generation, Reactive power generation, Line currents, etc. Also, it was confirmed in last OCC that DAS at AGBPP is installed but not time-synchronized.

All generating stations may confirm that their governors are properly tuned for giving primary response as per regulations.

Also, NEEPCO may intimate the status of installation of DAS for their remaining generating stations.

In 126th OCCM, Sr. Manager, NEEPCO informed that all their plants have DAS installed. AGM(SO-I),NERLDC clarified that in case of oscillations/ disturbance response of generators(in ms) cannot be captured by SCADA due to low resolution of data.

NERLDC requested NEEPCO to ensure that all their installed DAS are time synchronized and data during events is not lost. Also, the resolution of data of DAS to be checked by NEEPCO and ensured that at least 1 sec resolution data is available.

In 127th OCCM, Sr. Engineer, NERLDC once again reiterated that DAS is required for analyzing response of governors and their absence severely impairs calculation of FRC. Sr. Manager, NEEPCO informed that installation of DAS in case of old generating units of Kopili, Khandong and Doyang involves huge financial involvement. He assured that management would be apprised of the requirement and any decision taken in this regard would be informed to the forum.

In 128th OCCM, NERLDC informed that on 23.12.2016, at 0127 hrs, all 400 kV lines from Kishenpur substation (Northern Region) except 400 kV Moga -Kishenpur II tripped which led to complete Valley (Kashmir) system collapse. Total Load Loss in J&K was about 1200 MW and Generation loss was of about 250 MW. All the generators primary response characteristics are required. In this respect NERLDC requested all generating utilities to provide time stamped MW, MVAR, Voltage and frequency data from 01:20Hrs to 01:30 Hrs of 23.12.2016. NERLDC also informed that the format was mailed to all the generators on 26th Dec'16.

In 129th OCCM, NERLDC informed that data from BgTPP, Loktak HEP, Khandong, Kopili, AGBPP, AGTPP and Doyang has not yet been received after repeated request. Manager, NHPC, Loktak informed that DAS is not installed at Loktak, so providing the data is difficult. He requested NERLDC to intimate the minimum time resolution required, upon which exercise would be done to furnish the data. NERLDC informed that format for submission for data already mailed to all the generating stations and requested all generators to furnish data at least in 1 sec interval.

AGM, NERLDC informed that following two incidences occurred in National grid for which FRC calculations are to be done. Without proper data it is very difficult to calculate/ascertain exact contributions of Generators and States towards frequency correction. He requested all for submission of data as requested.

1) On 21.02.17, at 1559 hrs,900 MW generation loss due to tripping of Klaisindh Units - 1,2
2) On 05-Feb-17, at 12:24hrs 765kV Mainpuri-Bara ckt tripped along with both running units at Bara TPS (UP). Generation loss of 1100MW occurred.

Deliberation in the meeting

NERLDC informed that no data has been received till date. The forum requested all the concerned generating utilities to submit the data forthwith. NERLDC requested all generators to furnish data within 6 hours in case of an LFO event so that the matter can be properly analyzed within 24 Hrs.

The Sub-committee noted as above.
Action: NHPC, NEEPCO.

D.9. Finalization of the Annual Load Generation Balance Report (LGBR) for Peak as well as Off-peak scenarios and the Annual outage plan for 2017-18 by 31.12.16 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 October 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.

For performing system studies, load forecasting, outage management and various other activities, it is necessary that LGBR report for the upcoming Financial Year is available beforehand. All entities are requested to furnish their details to NERPC for finalization of LGBR.

For purpose of system studies, it is requested that Demand Figures of states for the months of April'17, May'17, and June'17 be indicated to NERLDC.
In 127th OCCM, it was decided that the utilities would submit their figures at the earliest to NERPC.

NERLDC intimated that for computation of TTC/ATC figures on 5 months ahead basis, the LGBR figures as indicated by NERPC are required. To facilitate TTC calculations, the forum was requested to submit figures for April'17, May'17 and June'17 at the earliest to NERLDC.

In 128th OCCM, after detailed deliberation it was decided that all state utilities would submit their figures at the earliest to NERPC.

NERLDC again requested the forum to submit figures for May'17 and June'17 at the earliest to NERLDC for calculation of TTC/ATC figures on 5 month ahead basis.

Deliberation in the meeting

AD-I, NERPC gave a detailed presentation on Installed capacity, methodology of preparation of LGBR based on guidelines of CEA etc., and the final status of IC as well

as the demand vs availability to the constituents and all members appreciated the efforts of NERPC.

It was decided that the LGBR data along with effective Installed Capacities would be sent by NERPC to all the constituents and the same should be revert back to NERPC latest by 25.03.2017. If no observations, the above data will be treated as final and the same would be sent to CEA.

SE(C&O) also informed the letter received from CEA regarding retirement of their units and the copy of the same was circulated during the meeting. He mentioned that if utility wanted to retire the unit, they can do so on their own and the same should be communicated to CEA with a copy to NERPC.

NERLDC again requested the forum to submit figures for July'17 and Aug'17 at the earliest to NERLDC for calculation of TTC/ATC figures on 5 month ahead basis.

The Sub-committee noted as above.
Action: NERPC, All Constituents.

D.10. Status of reactors under outage in NER Grid

400 kV Nodes in NER Grid are experiencing high voltage during Off-Peak hours. As per information available with NERLDC, the following reactors are under outage:

63 Mvar Line Reactor of 400 kV Balipara - Bongaigaon III line at Bongaigaon is under out since 12.11.16.

400 kV, 50 Mvar Bus Reactor at Misa is under outage since 03.12.16.
400 kV, 63 Mvar Bus Reactor at Byrnihat is under outage since 09.12.14
400 kV, 80 Mvar Bus Reactor at Palatana is under outage since 15.03.16
200 kV, 2x12.5 Mvar Bus Reactor at Samaguri is under long outage.
132 kV, 2x2 Mvar Bus Reactor at Dharmanagar is under long outage.

It is requested to inform the status of restoration of the above reactors at the earliest.
Apart from the above reactors, it is also requested to provide commissioning status of the following reactors:

20 Mvar Line Reactor of 220 kV AGBPP - New Mariani (PG) line at AGBPP

Conversion of line Reactors of 400 kV Balipara - Bongaigoan I & II lines at Balipara and Bongaigaon to Bus reactors (4 Nos.)

400 kV, 1x125 Mvar Bus Reactor at Balipara
400 kV, 1x125 Mvar Bus Reactor at Bongaigaon.

400 kV, 1x80 Mvar Bus Reactor at Ranganadi.

220 kV, 1x31.5 Mvar Bus Reactor at Mokokchung (PG).

In view the Critical voltage profile of NER Grid in Off-Peak hours, it is suggested no shutdown of Reactors in NER Grid shall be availed unless in case of Emergency.

Deliberation in the meeting

The status of different reactors under outage as informed in 130th OCC is as follows:

Sl. No.	Name of element	Status on 130th OCC Meeting
1.	50 MVAR bus reactor at Misa	In service
2.	63 Mvar Line Reactor of 400 kV Balipara - Bongaigaon III line at Bongaigaon	Sent to factory for repair. One spare reactor for HVDC BNC would be installed at Bongaigaon within 31.03.2017.
3.	63MVAR bus reactor at Byrnihat	**Pls refer to Item B.1.(4)**
4.	80 Mvar Bus Reactor at Palatana	Within 31.10.2017 would be charged.
5.	2x12.5 Mvar Bus Reactor at Samaguri	Under revival stage. Would be restored within 31.07.2017. Shifting of reactor from other site also being explored.
6.	2x2 Mvar Bus Reactor at Dharmanagar	De-commissioned
7.	20 Mvar Line Reactor of 220 kV AGBPP	Pls refer to Item C.1.(12)
8.	400 kV, 1x125 Mvar Bus Reactor at Balipara	Pls refer to Item C.1.(23)
9.	400 kV, 1x125 Mvar Bus Reactor at Bongaigaon	Pls refer to Item C.1.(24)
10.	400 kV, 1x80 Mvar Bus Reactor at Ranganadi.	Pls refer to Item C.1.(15)
11.	220 kV, 1x31.5 Mvar Bus Reactor at Mokokchung (PG).	December'17

The Sub-committee noted as above.

Action: AEGCL/TSECL/NERTS/MeECL/OTPC.

D.11. Dedicated voice communication and Data channel:

Dedicated voice communication with Substations and Generating Stations needs to be checked daily. Currently in most of the stations only one link is installed. In some stations VOIP phones are out (NLDC, Doyang, Kathalguri etc). Redundant of links

need to be established on priority. Details of status of voice communication are attached in Annexure-D.29.

SCADA data from KATHALGURI, DOYANG, KOPILI, KHANDONG, RANGANADI, ITANAGAR, ZIRO etc are out since long due to which Grid management activity is severely affected.

RTU Outage details are given below:

Sl. No.	Station Name	Date of Outage
1	Ranganadi	21.05.16
2	Ziro	07.08.16
3	Kopili	09.05.15
4	Doyang	24.01.15
5	Khandong	16.09.16
6	Khatalguri	25.07.16
7	Haflong	14.09.16
8	Itanagar	01.08.16

In 127th OCCM, Sr. Manager, NEEPCO informed the following:

RTU for RHEP is at tendering stage.

AGBPP RTU commissioned. By Jan 2017 data would be received at NERLDC subject to link restoration.

RTUs for Kopili, Khandong and Doyang in final stage of LOA.

NERTS and DoP Ar. Pradesh were requested to update the status by next OCC meeting.

Deliberation in the meeting

Sl. No.	Station Name	Status as informed in 130th OCC
1	Ranganadi	Re-tendering stage. Work will be completed by Dec'2017.
2	Ziro	ABB has done site visit. Report awaited.
3	Kopili	By 31.05.2017 will be commissioned.
4	Doyang	By 30.06.2017 will be commissioned.
5	Khandong	By 31.05.2017 will be commissioned.
6	Kathalguri	Restored. Data received at NERLDC.
7	Haflong	PLCC panel shifted. Link yet to be established. Will be complete by 31.01.17.
8	Itanagar	NERLDC to update the latest status.

The Sub-Committee took serious note of non-reporting of new RTUs due to link non-restoration/failure. Since the issue involves common link jurisdiction between CSGS and CTU, the matter was referred to next NETeST meeting for resolution.

The Sub-committee noted as above.
Action: NEEPCO/NERTS/DoP Ar. Pradesh/NERLDC/NERPC.

D.12. <u>Providing of Bank Protection of Dikrong River at Ranga De Reserve Village, Bihpuria Circle, Dist: Lakhimpur, Assam due to erosion of land on account of discharge of Ranganadi HEP:</u>

The Ranga De Reserve Village is situated under Bihpuria Circle of Lakhimpur District in Assam at the left bank of Dikrong River where continuous erosion river bank is going on due discharge of Ranganadi Hydro Generation. At present, the fate of the villagers is in uncertainty. Earlier NEEPCO had provided river bank protection of Dikrong River from Bihari Basti to a part of Ranga De Reserve Village leaving around 2 kM bank unprotected which is suffering erosion endangering the life and property of the villagers.

In fact due to indiscriminate erosion of Dikrong River Bank, POWERGRID is shifting all the Towers of 400kV D/C Balipara-Ranganadi Line to pile foundation as per the approval of NERPC. Presently, the construction of those Pile foundations is in progress.

Now, the villagers of Ranga De Reserve Village are not allowing POWERGRID to carry out pile foundation in Location No. 48 & 49 which falls in said stretch of 2kM unprotected bank and pressing hard for providing River Bank Protection.

NEEPCO may extend the Bank Protection in unprotected 2 kM stretch in line with earlier execution of River Bank Protection as the river bank erosion is mainly on account of downstream discharge of Ranganadi HEP.

In 129th OCC DGM (AM), NERTS informed that matter was referred to GM, Pare HEP of NEEPCO but, GM, Pare stated that the matter does not come under the purview of Pare HEP. Subsequently, matter was referred to GM, Ranganadi HEP and Circle Officer of Bihpuria Circle of Lakhimpur District in Assam. S.E. (C&O), NERPC stated that NEEPCO should involve into the matter to resolve ROW in co-ordination with POWERGRID and Local administration so that POWERGRID can complete the pile foundation. Accordingly, the forum advised NEEPCO and NERTS to jointly conduct the site survey and revert back to the forum.

Deliberation in the meeting

S.E.(C&O),NERPC informed that no joint report has been submitted by NEEPCO/NERTS. The forum decided that in light of the stalemate, the issue should be resolved bilaterally by NEEPCO/NERTS. It was further decided to drop the agenda item in the meantime and review later on in case of non-resolution.

The Sub-committee noted as above.

Action: NEEPCO/NERTS.

D.13. SPS for transfer of 160 MW to Bangladesh through Tripura-Bangladesh link:

POWERGRID vide. C/CTU-Plg/NE/02/Bangladesh dated. 07.02.2017 has informed that in the 12th India-Bangladesh JWG &JSC meeting decision was taken to enhance power transfer through 400kV SMNagar-South Comilla link (charged at 132 kV). In this regard a SPS needs to be in place to increase reliability in power supply. Following SPS action has been suggested by POWERGRID:

Sl. No.	Contingency	SPS Action
1	Outage of one ICT out of 400/132kV 2x125MVA ICTs at Palatana	Limit transfer to 100MW on Cross-Border link, followed by shifting of 60MW load from Indian grid to Bangladesh grid.
2	Outage of 132 kV Palatana-SMNagar line	Tripping of Cross border link followed by shifting of entire 160MW load from India to Bangladesh grid.
3	Outage of one circuit of S.M. Nagar-South Comilla line	Limit transfer to 130MW on Cross-Border link, followed by shifting of 30MW load from Indian grid to Bangladesh grid.

In 129th OCCM, AGM(SO-I),NERLDC informed that as per the suggested scheme of SPS, its implementation involves load reduction in Bangladesh system. In order for effective resolution, he suggested that a meeting be convened with Bangladesh Power

Department officials, NERPC, NERLDC, CTU and TSECL. The forum requested NERPC to write to CTU for taking up the matter with MoP.

Deliberation in the meeting

S.E.(C&O),NERPC informed that the matter is being followed up with CTU/MoP and latest status would be informed in next OCCM.

The Sub-committee noted as above.

Action: NERPC.

D.14. Delay in restoration of Manipur system after partial collapse:

On 03/02/2017 at 10.05 hrs Manipur system collapsed partially affecting around 50 MW of load in surrounding areas of Imphal (MA). Ningthoukhong, Jiribam (MA) loads were not affected. As reported by SLDC, Imphal, the reason for the disturbance was bursting of one 33kV Cable & Bus PT at Imphal S/S of Manipur. This fault resulted in tripping of following lines-

1) 132 kV Dimapur – Imphal(PG) from Dimapur end
2) 132 kV Loktak – Imphal(PG)from Loktak end
3) 132 kV Silchar – Imphal(PG) I & II from Silchar end
4) 132 kV Dimapur – Imphal from Dimapur end

Despite of best efforts the system restoration took considerable time and only at 1144 Hrs power could be extended to Imphal (MA) from Imphal (PG).

Concerned authorities are requested to please elaborate the reasons for delay as well as unwarranted trippings of above lines due to internal faults in Manipur system.
In 129th OCCM, MSPCL representative informed that on 03.02.2017 faulty cable feeder was charged multiple times from Imphal (PG) end without communicating with SLDC, Manipur.

DGM (AM), NERTS informed that a detailed investigation would be carried and forum would be apprised. MSPCL informed that due to non-availability of persons at Imphal (PG) restoration was delayed. The forum expressed concerned about the incident and requested NERTS to avoid the same in future.

Deliberation in the meeting

DGM(AM),NERTS informed that investigation is still underway. The forum expressed concerned on NERTS for the delay in investigation. EE, SLDC, Ar. Pradesh opined that the delay in restoration in most of the cases is due to mis-coordination. Administrative problems like these should be sorted out bilaterally. However, in this

regard for delay in addressing the issue on NERTS part, is not appreciated. Members unanimously approved his opinion.

The Sub-committee noted as above.

Action: NERTS

D.15. Status of 132kV Kohima – Karong Circuit Breaker at Kohima End:

The Circuit Breaker of 132kV Karong-Kohima line at Kohima end is nonoperational since October 2016, due to which the alternate supply to Karong is affected. Currently, 132kV Karong-Kohima line is kept idle charged from Karong end and isolated at Kohima end. Last November, SLDC Nagaland informed that a new circuit breaker is under installation and expected to be commissioned by the end of November 2016 (copy of e-mail circulated in the meeting).

132kV Yurembam-Karong line is highly fault prone and it is always difficult to reach the fault area and rectify due to law and order problems. As such it is highly essential to keep the alternate supply line operational for 132/33/11 kV Karong Sub-Station from Kohima end.

In this regard, the Forum may kindly deliberate and ensure availability of alternate power to Karong from Kohima end, in view of the upcoming 11th Manipur Assembly election.

Deliberation in the meeting

EE(Trans), DoP Nagaland informed that the work has been completed. MSPCL representative also confirmed the same.

The Sub-committee noted as above

D.16. FOLD Working Group on Hydro:

NERLDC informed that during 18th FOLD (Forum of Load Despatcher) held on 21st November'17 at New Delhi formation of Working Group on Hydro for studying various aspects of Hydro Stations was discussed. Letter from CEO, POSOCO (Letter No. POSOCO/NLDC/AASO/2017/1325 dated 16th Feb'17) regarding circulation of a Questionnaire was presented and discussed. Questionnaire was circulated among the constituents.

In 129th OCCM, NERLDC requested NEEPCO, NHPC, AEGCL, MePTCL, Mizoram, Nagaland and TSECL to submit the Questionnaire by 28th Feb'17.

Deliberation in the meeting

NERLDC informed the following status in 130th OCC meeting:

AEGCL	Submitted
NEEPCO Stations	Submitted
NHPC	Pending
MePTCL	Submitted
Mizoram	Pending
Nagaland	Pending

Action: NEEPCO, NHPC, AEGCL, MePTCL, Mizoram, Nagaland and TSECL

D.17. Windy Weather Preparedness:

All states of North Eastern Region usually experience heavy windy weather from mid of March and this prevails till last of April. As a result of this weather condition, chances of load crashes in the state system as well as tripping of critical grid elements that can lead to Grid Disturbances are high. Last year, in March there were 24 Grid Disturbances and 3 load crashes reported while in April, number of Grid disturbances increased to 45 and load crashes to 15 Nos.

As a part of this preparedness, NERLDC has given an activity list that is to be followed to all states of NER. The same is indicated in the enclosed **Annexure D.17**.

During windy season, most of the tripping of lines are due to lack of proper vegetation clearance especially due to bamboos coming to the vicinity of line as observed in previous years. So it is very much necessary to clear all vegetation to avoid unwanted tripping at the earliest.

As per CERC Order in Petition number 9/SM/2014 dated 14.06.16, in the matter of Investigation of tower collapse and load crash in Northern Region on 30.5.2014, Hon'ble CERC has directed PGCIL to install Anemometer in its all sub-stations to record wind speed.

It is requested POWERGRID to furnish status of installation of Anemometers.

Deliberation in the meeting

The forum approved the activity list and recommended that it is to be strictly followed by all the utilities. AEGCL informed that Point 5 in Activity list is important to Assam grid, particularly w.r.t. Kathalguri. NERLDC informed the forum that huge margin was observed between actual absorption of MVAR and capability limits in case of AGBPP units & BgTPP unit where high voltage problem persists. Sr. Manager, NEEPCO informed that AVR takes care of reactive compensation automatically. Further with

commissioning of 20 MVAR reactor at Kathalguri the situation would improve to a large extent.

The forum requested to all generators to absorb reactive power to maintain voltage profile.

Member Secretary, NERPC explained the importance of installation of anemometer in POWERGRID substations and requested POWERGRID to furnish status of installation of anemometers in the next OCC meeting.

The Sub-committee noted as above
Action: All SLDCs, All CSGS.

D.18. Calculation of Voltage Deviation Index at State Level:

NERLDC is calculating Voltage Deviation Index, Frequency Deviation Index and System Reliability Index on a daily, weekly and monthly basis at ISTS level and these are reported to all constituents for taking proper actions at their end. These VDI, FDI & SRI figures are submitted to CERC on yearly basis.

There is a need of calculation of VDI in state level by all SLDCs to limit the voltage parameter within IEGC band. Over voltage issue is predominant in 400 kV levels but low voltage issue also to be taken care in state level.

It is requested to all states to identify the critical stations where VDI to be calculated and SLDCs may instruct generators to respond as per voltage scenarios.

Deliberation in the meeting

NERLDC informed the forum that practice of calculation of VDI figures will help states to identify the nodes where capacitor banks/reactors are to be put in place. Members appreciated the NERLDC proposal and requested all SLDCs to adopt the suggestions. Forum requested NERLDC to circulate an example calculation of VDI among all SLDCs.

The Sub-committee noted as above
Action: All SLDCs.

D.19. Reliability of Auxiliary Supply to substations:

Reliable auxiliary power supply is of absolute necessity for smooth operation of control and protection system. Recent CERC order against Petition No. 133/MP/2014 stresses on reliability as well as commercial aspects of auxiliary supply to substations.

Healthiness of DG sets is critical during restoration after a partial/total black out. As per clause no 5.8(b) of IEGC, Diesel Generator set for black start operation would be tested on weekly basis and test results are to be sent to RLDC on quarterly basis.

It is requested to all constituents to furnish DG set test results to NERLDC on quarterly basis and list of source of supply to auxiliary requirement to sub-stations.

Deliberation in the meeting

The forum requested all generating utilities to kindly submit DG test results to NERLDC on periodical basis. NERLDC requested all members to furnish details about auxiliary supplies available in all substations connected to Grid along with relevant SLDs. Forum requested NERLDC to circulate format for data submission to all constituents. AEGCL also requested that SLDs (particularly auxiliary supply) of HVDC and other stations of POWERGRID in NER be provided to SLDCs. NERTS concurred.

The Sub-committee noted as above

Action: NERTS, NERLDC.

D.20. Absorption of MVARs by ISGS Generators:

Please Refer in item No D.17

The Sub-committee noted as above

Action: All CSGSs.

D.21. Comparison of Load Forecast done by SLDCs Vs Load forecast in SCADA Application:

It has observed that the deviation is high for day-ahead load forecast done by state utilities from actual demand met. This gap may be due to non-consideration of weather data during preparation of load forecast.

Weather Report (Warning, Forecast etcs) from IMD, Guwahati), Forecasted Weather Data (Hourly Temperature, Relative Humidity & Rainfall) & 15 minutes Load Forecast based on SLDC data & SCADA Load Forecasting Tools are being sent by NERLDC to all the constituents on daily basis for accurate load forecasting.

It is requested to all SLDCs to consider weather data also for preparation of day-ahead load forecast.

Deliberation in the meeting

NERLDC requested SLDCs of NER to start using EMS applications for load forecast. AGM (SO-I), NERLDC informed forum that non-consideration of weather data may the

reason resulting in huge error in forecasted demand. So he requested all SLDCs to start considering weather data in day ahead forecast for better results. SLDC Tripura informed that the weather data is unreliable and is majorly responsible for the wrong forecasts. NERLDC informed that day-ahead demand forecast along with weather data is being mailed to all states on a daily basis. EE,SLDC, Meghalaya stated that in addition to weather data, all the RTUs should report and binary inputs like CB, isolator status are required for load forecast using SCADA tools. AEGCL once again informed that due to non-reporting of many RTUs in Assam grid, EMS cannot be used by them. The forum requested all SLDCs of NER to start using load forecasting tools of EMS application consider weather data also for load forecast.

The Sub-committee noted as above

Action: NERLDC, all SLDCs.

D.22. Online submission of daily data:

NERLDC has developed in-house web based reporting software. Formats for filling the online data have been sent to Assam, Meghalaya & Tripura, all ISGS generators and CPCC NERTS. As they are required to fill data in the given excel formats on daily basis just after midnight and send them to NERLDC through mail for so that NERLDC can compile them and prepare the reports before 4 am for onward transmission to Ministry. This is planned for testing of the software. After successful testing the software will be hosted in our website and the utilities will have to fill data online in their respective sheets, for which necessary orientation programme will be arranged. NERLDC will process those data and prepare required reports.

Deliberation in the meeting

Members appreciated the efforts of NERLDC and agreed to submit the data as per the methodology proposed.

The Sub-committee noted as above

Action: AEGCL, MeECL, TSECL, NEEPCO, NHPC, NTPC, OTPC & NERTS.

D.23. Testing of WBES software:

Trial run of newly developed Web based scheduling software is going on since 01.03.17. After trial run for a month or so we will completely switch over to this software. All ISGS generators and all constituents will be required to declare their DC and their requisitions respectively by filling the specified on line formats on the web based scheduling software. User ID & Passwords have been provided to all ISGS

stations and constituents. All ISGS generators and constituents are requested to be familiar with the system so that they are able to fill up there DC and requisitions respectively and also furnish revisions. Any difficulty in filling the requisite data can be reported to NERLDC co-ordinators so that the matter can be taken up with the software developers. Once trial run is over it will be the responsibility of ISGS and constituents to timely declare their DC and Requisition on line in line with the regulations.

Deliberation in the meeting

Sr. Engineer, NERLDC clarified the stages of rolling out of WBES for NER. He further provided the contact details of NERLDC co-ordinators for WBES, which is also given below:

Shri Sourav Mondal, Engineer	Mobile-09402102354
Shri Debashis Mondal, Engineer	Mobile-09402120102

The Sub-committee noted as above

D.24. Dedicated voice communication and SCADA:

a)RTU Outage

Itanagar, Ziro, Haflong, Khandong, Kopili , Doyang, Ranganadi .

b)Dedicated Voice Communication:(In all S/S min 2 nos of phones are must)

Itanagar-23640151, Jiribam-23640130, Kathalguri-23640154 Palatana-23640127 Ranganadi-23640119, Kolasib-23640111.

Deliberation in the meeting

The matter was referred to next NETeST meeting of NERPC.

The Sub-committee noted as above

D.25. Reconfiguration 220kv network of Powergrid at New Mariani S/S:

Consequent upon the LILO connection of 220kv Misa line & 220kv Kathalguri line at PGCIL's New Mariani S/S five nos. of double circuit towers of PGCIL will become defunct. As per the scheme two 220kv bays at New Mariani GSS will be kept reserved for AEGCL lines. AEGCL would like to utilize these redundant towers for commissioning of lines from its Mariani GSS to New Mariani bays to reinforce the reliability and security of 220kv system at our Mariani GSS. As such AEGCL may be allowed to retain the abandoned route along with the towers.

Deliberation in the meeting

The forum approved the proposal in-principle and referred the matter to next SCM of NER.

The Sub-committee noted as above

D.26. SPS for 400/132 kV 125 MVA ICT-2 at Palatana:

Proposed SPS to avoid over loading of Palatana ICT if one of our ICT trips then the other ICT would get overloaded if load more than 130MW(including 10% emergency load cater by ICT).

Deliberation in the meeting

Manager (O&M), OTPC reiterated the need for the SPS for safe operation of ICTs. The forum decided that the scheme be devised in concurrence with the "**SPS for transfer of 160 MW to Bangladesh through Tripura-Bangladesh link"**

OTPC informed that currently around 160 MW is going through both ICTs during peak hours (around 80 MW each), so tripping of one ICT will lead to tripping of other ICT. TSECL informed forum that tripping of both ICTs at Palatana will lead to over loading of several 132 kV lines in Tripura system and this will ultimately lead to collapse of entire Tripura system along with Bangladesh load.

Forum informed that a Special Meeting will be called within 15 days for further discussion on this matter.

The Sub-committee noted as above

D.27 Real-Time Energy Assessment System for effective Grid Management- Software by CDAC

CDAC has submitted a proposal for Real-Time Energy Assessment System for effective Grid Management. The Proposed system has majorly three components namely, real-time data acquisition system, real-time energy assessment system and short term load forecasting. This would be very useful for the SLDCs for forecasting the load and to plan the scheduling accordingly. This would also be useful for the users to have online information of the schedule and UI charges, this would help them to schedule and reduce their penalty and thereby contributing to the Grid stability. The project would approximately cost around 2 crores which would also require user contribution. The detailed proposal has been circulated earlier**.**

Members agreed to study the proposal in detail and revert back.

During 124th OCC meeting, Member Secretary, NERPC informed that the cost of the software will be borne by CDAC. The cost of hardware needs to be shared by the user. (Constituents' share of cost is 20% of total cost of Rs. 2 Crores i.e. Rs. 40 lakhs approx.)

All constituent appreciated the initiative taken by NERPC/NERLDC and unanimously agreed in principle to avail the above software and requested CDAC to go ahead with their project. However, the financial approval has to be accorded by their managements. They requested NERPC to take up the matter in the next RPC meeting.

The 17th TCC/NERPC approved the proposal as proposed by the OCC Sub-committee.

Deliberation in the meeting

SE (C&O) requested all the constituents to make the payment at the earliest as agreed and decided in the 17th NERPC meeting in respect to C-DAC for hardware part of "Real time energy assessment project" being implemented by them for the benefit of NER States. Constituents agreed to make payment as early as possible.

Regarding finalization of technical specifications of the software, members decided that M/S. C-DAC should arrange for presentation in next OCC meeting detailing their proposed scheme so that any deficiencies or clarifications can be addressed to them before preparing the software.

Date & Venue of next OCC meeting

It is proposed to hold the 131st OCC meeting of NERPC on second week of April, 2017. However, the exact date and venue will be intimated in due course.

The meeting ended with thanks to the Chair.

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Annexure-I

List of Participants in the 130th OCC Meetings held on 17.02.2017

SN	Name & Designation	Organization	Contact No.
1.	Sh. N. Perme, EE, SLDC	Ar. Pradesh	09436288643
2.	Sh. Prabal Borah , DGM, SLDC	Assam	09864064679
3.	Sh. J.P. Rabha, AM,APDCL	Assam	08402981282
4.	Sh. J.P. Choudhury, AGM, APDCL	Assam	09954055295
5.	Sh. B.C. Borah, AGM, SLDC	Assam	09435119248
6.	Sh. Pranab Saha, DM, SLDC	Assam	09435561717
7.	Sh. Dipesh Ch. Das, AGM,LD(Com)	Assam	09954110254
8.	Sh. Lohit Krishna Borah, AGM, SLDC	Assam	09435188931
9.	Ms. Toushita Jigdung, DM, SLDC,AEGCL	Assam	09707134351
10.	Sh. M.K.Saikia, CGM, SLDC,AEGCL	Assam	
11.	Ms. Laishram Ritu, Manager, SLDC	Manipur	09612882984
12.	Ms. A. Sujata, AM, SLDC,MSPCL	Manipur	09612882984
13.	Sh. B. Wankhar, EE (MO)	Meghalaya	09436105914
14.	Sh. R. Majaw,SE/EM	Meghalaya	09436110871
15.	Sh. F.E. Kharshiing, SE, SLDC	Meghalaya	09863066960
16.	Sh. B. Nikhla, EE, SD MePTCL	Meghalaya	09436314163
17.	Sh. D.J. Lyngdoh, EE(SM), SLDC	Meghalaya	09774285158
	No Representatives	**Mizoram**	
18.	Sh. A. Jakhalu,EE(TRANS)	Nagaland	09436002696-
19.	Sh. Debabrata Pal, Sr. Manager (Comml.)	Tripura	09436500244
20.	Sh. Mrinal Paul, Manager	Tripura	09436137022
21.	Sh. Joypal Roy, Sr. Manager (E/M)	NEEPCO	09435577726
22.	Sh. Jatin Ch. Deka,, Sr. Manager (E/M)	NEEPCO	09435339831
23.	Sh. Subrata Chakraborty , Manager (E/M)	NEEPCO	09435719617
24.	Sh. Dhan Ch. Maiti, Dy. Manager (E/M)	NEEPCO	09435315493
25.	Sh. T.S. Singh, GM	NERLDC	09436302717
26.	Sh. N.R. Paul, AGM	NERLDC	09436302723
27.	Sh. R. Sutradhar, DGM (MO)	NERLDC	09436302714
28.	Sh. Samar Chandra De, Asst.GM	NERLDC	0943633536

29.	Sh. Ankit Jain, Sr. Engineer (SO-I)	NERLDC	09436335381
30.	Sh. Jerin Jacob, Engineer	NERLDC	09402120113
31.	Sh. P. Kanungo, DGM (AM)	PGCIL	09436302823
32.	Sh. C.L. Khayringam, Dy. Manager(E)	NHPC	09402667740
33.	Sh. N.K. Gupta, Manager	OTPC	09774233426-
34.	Sh. S.N. Pait, Manager (EEMG)	NTPC	09435720152
35.	Sh. P.K. Mishra, MS	NERPC	-
36.	Sh. B. Lyngkhoi, Director/S.E (C&O)	NERPC	09436163419
37.	Sh. S. Mukherjee, AEE	NERPC	08794277306
38.	Sh. A. Agrawal, AEE	NERPC	07424064484
39.	Sh. S. Ranjan, AE	NERPC	08794276168

Annexure-A

METHODLOGY ADOPTED BY RLDCs FOR ACTUAL INJECTION / DRAWALCOMPUTAION – NPC Proposed Methodology
(In case of non-availability of Main/Check/Standby Meter data)

Description	NRLDC	WRLDC	SRLDC	ERLDC	NERLDC	**NPC Proposal**
A. Generating Stations:(Main & Check Meter on all outgoing feeders and Standby meter at HV side of GTs & SATs)						
Non-availability of **Main Meter data**	Check meter data	Check meter data	Check meter data	Check meter data	Other end meter data on outgoing feeders applying transmission loss. *	**Check Meter data #**
Non-availability of **Main & Check Meter data**	Standby Meter data installed on HV side of GT	Other end meter data on the line applying transmission loss	Other end Meter data on the line	Other end Meter data on the line	Standby Meter data	**Standby Meter at HV side of GTs & SATs #**
Non-availability of **Main, Check & Standby Meter data**	Other end meter data on the line by applying line loss		HV side of GTs & STs	HV side of GTs & STs		**Other end Meter data on the outgoing feeders considering transmission loss**
B. Transmission Lines: (Main Meter at one of end of the line between S/S of same licensee and at both ends of two different licensees. Meter installed at other end of the line shall work as Standby meter						
Non-availability of **Main Meter data**	Standby Meter data applying transmission loss	Standby Meter data applying transmission loss	Standby meter data	Standby Meter data	Standby Meter data applying transmission loss	**Standby Meter data applying transmission loss**
Non-availability of **Main & Standby Meter data**	Bus mismatch reading / Loss Meters		Computed using net sum of power flow at the station.	Data from meter installed by respective State		**Computation using net Bus flow at the S/S.**
C. ICT : (Main Meter at HV side and Standby Meter at LV side of Inter Connecting Transformers)						
Non-availability of **Main Meter data**		Standby meter data without applying ICT loss	Standby meter data		Standby meter data	**Standby Meter data # applying ICT loss**
Non-availability of **Main & Standby Meter data**						**Computation using net Bus flow at the S/S.**
D. **Main & Check Meter**	Installed on same CT/PT					**Shall be installed at different core of CT/PT**
E. Standard Transmission Loss						
765kV		1.5 %	***No transmission loss is applied in any of the cases***			**1.5%**
400 kV	1.5%	2.0 %			1.5%	**1.5%**
220kV	3.0%	4.0%			3.0%	**2.0%**
132 kV & below	4.0%				4.0%	**4.0%**

* No check meters installed in NER

Location of Meter as per CEA Regulation.

ANNEXURE- D.4

Comparison of Demand for Q3-16-17

Entity	Projected Demand (MW)	Actual Peak Demand Met (MW)	Change (in %)
Arunachal Pradesh	132	127	- 4%
Assam	1,365	1,509	11%
Manipur	172	151	-12%
Meghalaya	327	307	-6%
Mizoram	87	96	10%
Nagaland	141	128	-9%
Tripura	290	260	-10%

Gmail MSPCL MANIPUR <sldcmanipur@gmail.com>

Fwd: Inability to Charge 132 kV Kohima-Karong Line.

1 message

nerldc shillong <nerldccontrolroom@gmail.com> Fri, Nov 4, 2016 at 11:11 AM
To: SLDC Manipur <sldcmanipur@yahoo.in>, MSPCL MANIPUR <sldcmanipur@gmail.com>

Please find SLDC/Dimapur mail w r t the non availability of 132 kV Kohima-Karong line CB at Kohima end for your kind information

सादर /Regards,

पाली प्रभारी

Shift-In-Charge
North Eastern Load Despatch centre
Shillong-793006
Contact No- 0364-2537482/2537427/841590060
Fax- 0364- 2537486/2537470
ULDC NO- 23640023/23640024/23640028

---------- Forwarded message ----------
From: **SLDC Nagaland** <sldc.ngl@gmail.com>
Date: Fri, Nov 4, 2016 at 11:06 AM
Subject: Inability to Charge 132 kV Kohima-Karong Line.
To: nerldc control room <nerldc_cr@yahoo.co.in>, nerldc shillong <nerldccontrolroom@gmail.com>
Cc: Manipur Sldc <sldcmanipur@yahoo.in>

Sir,

It is regretted to inform that the 132 kV Kohima- Karong Circuit Breaker at Kohima End is still not ready as it has become necessary to install a new breaker, which is still under installation. The Breaker is expected to be commissioned by the end of November 2016. For till such time it is requested to bear with the inconvenience.

Regards,
Shift-in-Charge,
SLDC, Nagaland.

On Thu, Nov 3, 2016 at 4:10 PM, nerldc control room <nerldc_cr@yahoo.co.in> wrote:
Sir,
For information and necessary action Please.

A.N.Pal.
Shift - in-Charge,
North Eastern Regional Load Despatch Centre
Dongtieh, Lower Nongrah, Lapalang,
Shillong – 793006, Meghalaya
Contact No- 0364-2537482/2537427/841590060
Fax- 0364- 2537486/2537470
ULDC NO- 23640023/23640024/23640028