

# North Eastern Regional Power Committee

## Agenda For

### 130<sup>th</sup> OCC Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 17<sup>th</sup> March, 2017 (Friday)

Venue : "Hotel Rajmahal", Guwahati.

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

##### **CONFIRMATION OF MINUTES OF 129<sup>th</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.**

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

*The Sub-committee may confirm the minutes of 128<sup>th</sup> 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 129<sup>th</sup> OCC:

State	Protection System	ADMS	CAPACITOR INSTALLATION
Arunachal Pradesh	Approval from the Govt. is awaited	DPR will be submitted soon 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 will be submitted soon to CEA & NLDC	DPR will be submitted soon to CEA & NLDC
Mizoram	By Mar'17 all LOAs would be issued.	DPR will be submitted soon to CEA & NLDC	DPR will be submitted soon 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	LOA for 20 Cr. Tender for 20 Cr. Additional LOA for 10Cr. by 31.01.17 Remainder by Mar'17	DPR to be prepared	DPR to be prepared.
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***States may please intimate the latest status.***

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

It was deliberated in the 4<sup>th</sup> 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 128<sup>th</sup> OCC, S.E.(C&O), NERPC stated that currently no CPP figures are being received by NERPC. This is leading to improper shortfall calculation in monthly Power Supply Position. Also shortfall figures are not being classified as scheduled load shedding, unscheduled load shedding or shortfall due to system constraints. He requested all SLDCs to kindly clarify the above in their daily report to NERLDC, in order to avoid improper reporting further on.

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 Scheduled 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 130<sup>th</sup> 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.

***NERPC, NERLDC & SLDCs may please intimate the latest status.***

**3. Long Outage of Important Grid Elements:**

Name of the Element	Name of Utility	Status as informed in 129 <sup>th</sup> OCC	Latest status
63MVAR Reactor at Byrnihat	MePTCL	SE, MePTCL informed that the matter is still being pursued with CGL.	
400KV 80MVAR Bus Reactor at Palatana	OTPC	04Nos bushing to be replaced. Work would be completed by OTPC itself. Tentative completion 31.10.2017.	

**B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING FEBRUARY, 2017**

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

**NER PERFORMANCE DURING FEBRUARY, 2017**

States	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
	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
<b>Region</b>	<b>1070.79</b>	<b>1212.55</b>	<b>-11.69</b>	<b>1088.71</b>	<b>1226.10</b>	<b>-11.21</b>	<b>-1.65</b>

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States	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
	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
<b>Region</b>	<b>2234</b>	<b>2320</b>	<b>-3.71</b>	<b>2243</b>	<b>2330</b>	<b>-3.73</b>	<b>-0.40</b>

**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
<b>Inter-Regional Energy Exchange</b>		
(a) NER-ER	<b>137.16</b>	<b>147.19</b>
(b) ER-NER	<b>12.38</b>	<b>1.36</b>
(c)NER-NR	<b>0.00</b>	<b>0.02</b>
(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

**C. OLD ITEMS**

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

During 130<sup>th</sup> OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 130 <sup>th</sup> OCC Meeting	Status as given in 129 <sup>th</sup> OCC Meeting
<b>a. New Projects</b>			
1	Trial operation and CoD of Unit -II of Bongaigoan TPS of NTPC		Unit synchronized on 13.02.2017. CoD by 31.03.2017

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2	400/220kV, 2x315 MVA ICT of NTPC at Bongaigaon		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
4	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)		Unit #1 Oct'17 Unit #2&#3 Nov'17 Unit #4 Dec'17
5	Pare HEP of NEEPCO (2 x 55 MW)		Unit #1 July'17 Unit #2 Aug'17
6	400 kV D/C Silchar - Melriat line of PGCIL		June, 2017.
7	220kV Rangia - Salakati of AEGCL		December 2017
8	132kV Monarchak – Surjamaninagar D/C of TSECL		July, 2017
9	400/132 kV, 2nd 125 MVA ICT at Pallatana		Synchronized on 08.10.2016 COD expected by 31.01.2017
10	132kV Pasighat – Aalong of Ar. Pradesh		February, 2017.
11	132kV Doyang- Wokha		March, 2017
12	220 kV, 20 MVAR Bus Reactor& bay at AGBPP		Trial operation by 28.02.17.
13	132kV Surjamaninagar Bay at OTPC		Work to be executed by GE (T&D). Would be completed by 31.03.2018.
14	400kV D/C Balipara – Kameng of Ar. Pradesh		March 2017.
15	RHEP 80 MVAR Bus Reactor		T.S. preparation stage.
16	SLDCs (Ar. Pradesh, Manipur, Mizoram, Nagaland)		Manipur – Completed, handover by Mar'17, Mizoram- Mar'17,

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			Nagaland-Building ready and handed over, AP- Building handover issues sorted out.
17	400/220 kV 315 MVA ICT-II at Bongaigaon		Manufacturing stage
18	220/132 kV, 2x160 MVA ICTs at Balipara		By 31 <sup>st</sup> August 2017(LOA date).
19	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili		By 31 <sup>st</sup> August 2017(LOA date).
20	400/132 kV, 1x315 MVA ICT-III at Silchar		December, 2017(LOA date).
21	Replacement of 2x315 MVA ICTs with 2x500 MVA ICTs at Misa (PG)		December, 2017(LOA date).
22	400 kV Silchar - Misa D/C		Under TBCB
23	1x125 MVAR Bus Reactor at 400 kV at Balipara		December, 2017(LOA date).
24	1x125 MVAR Bus Reactor at 400 kV Bongaigoan		December, 2017(LOA date).
25	Bays at Hailakandi & 132V Silchar-Hailakandi		June, 2017.
26	Tuirial HEP of NEEPCO		June, 2017.
<b>b. Elements under breakdown/ upgradation</b>			
27	63MVAR Reactor at Byrnihat of Me.PTCL		As recorded in item <b>B.1.(3)</b>
28	Up-gradation of 132 kV Lumshnong-Panchgram line		DPR preparation stage
29	Switchable line Reactors at 400kV Balipara & Bongaigoan		Procurement works underway. Both to be completed by 31.03.17
30	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-Ningthoukhong

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31	LILO of 132kV Ranganadi – Nirjuli at Pare of NEEPCO by PGCIL		PGCIL-no space for bay at Pare. Solution to be explored.
32	LILO of 132kV Ranganadi – Itanagar (Chimpu) at Pare of Ar. Pradesh		Bay at Pare under construction Bay 1: completed Bay 2: March 2017
33	400KV 80MVAR Bus Reactor at OTPC Palatana		As recorded in item <b>B.1.(3)</b>

***Concerned constituents may kindly intimate the status.***

**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 123<sup>rd</sup> 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 indicated as NIL.

The latest status as informed by NERLDC in 129<sup>th</sup> OCC:

Arunachal Pradesh	Furnished for Oct'16
Assam	Furnished for Jan'17
Manipur	Furnished for Jan'17
Meghalaya	Furnished for Jan'17
Mizoram	Furnished for Jan'17
Nagaland	Furnished for Jan'17
Tripura	Furnished for Dec'16

The 129<sup>th</sup> OCC forum decided that NERPC will form a team for UFR inspection for 1st Stage. 1st stage will cover Arunachal Pradesh, Assam and Manipur. Team will also discuss possibilities for mapping of feeders identified for UFR with SCADA.

***NERPC/NERLDC may please inform the status.***

**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				
Kopili				
Kopili-II				
Ranganadi			Subject to inflow	
Doyang				
Loktak				
AGBPP	-	-	-	-
AGTPP	-	-	-	-

***Hydro planning***

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 below.***

**D.2 Outage Planning Transmission elements**

It was agreed in the 99<sup>th</sup> 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 10<sup>th</sup> of the month, the shutdown availing agency would reconfirm to NERLDC on 7<sup>th</sup> 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 124<sup>th</sup> 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 129<sup>th</sup> 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 28<sup>th</sup> 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 28<sup>th</sup> 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 10<sup>th</sup> of the month, the indenting agency would forward such requests to the concerned RLDC on 7<sup>th</sup> 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.

***The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for March, 2017 - April, 2017 at Annexure-D.2., which is available in the 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.

***Members may please discuss.***

**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 3<sup>rd</sup> Validation Committee meeting for PoC application period Oct'15-Dec'15, held on 30<sup>th</sup> 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 21<sup>st</sup> February'17, Hon'ble CERC has noted no participation from constituents of NER. 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.

***Members are requested to submit data for Q2 (2017-18).***

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

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 20<sup>th</sup> 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 20<sup>th</sup> 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 122<sup>nd</sup> 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 20<sup>th</sup> March'17.**

*Members may please discuss.*

**D.6. Renovation and Modernization of Umiam Stage-III HEPP (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 HEP (2 x 30 Mw) commissioned in 1979, considering the aggravated condition of the power plant.

In 126<sup>th</sup> 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.

In 129<sup>th</sup> OCCM S.E.(O), NERPC informed that NERPC would take up with CEA and apprise members of the status in the next meeting.

***MeECL/NERPC may please inform the status.***

**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 17<sup>th</sup> August 2016. The app can be downloaded on smartphones or be accessed through its website ([www.tarang.website](http://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 3<sup>rd</sup> day of the next month to NERLDC.

In 126<sup>th</sup> 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: [nerldc@yahoo.co.in](mailto:nerldc@yahoo.co.in) by 3<sup>rd</sup> of every month for the previous month.

In 127<sup>th</sup> OCCM, Sr. Engineer, NERLDC informed that whatever elements have been commissioned in previous month need to be mailed to NERLDC by 3<sup>rd</sup> 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 129<sup>th</sup> OCCM, 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.

***NERLDC may please inform the status.***

**D.8. Installation of DAS to monitor FRC for generators:**

In continuation to discussions in 125<sup>th</sup> OCC meeting on this matter, and letter from ED-NLDC dtd. 10<sup>th</sup> 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 129<sup>th</sup> 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.

***NEEPCO/NHPC/NERLDC may please inform the status.***

**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 31<sup>st</sup> 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 31<sup>st</sup> 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 finalisation 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 128<sup>th</sup> 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.

***NERPC may please intimate the status.***

#### **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, 80 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.

The status of different reactors under outage as informed in 129<sup>th</sup> OCC is as follows:

<b>Sl.No.</b>	<b>Name of element</b>	<b>Status on 129<sup>th</sup> OCC Meeting</b>
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	<b>Pls refer to Item B.1.(3)</b>

Agenda for 130<sup>th</sup> OCC Meeting to be held on 17<sup>th</sup> March, 2017

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.
6.	2x2 Mvar Bus Reactor at Dharmanagar	Reactor is <b>out of service</b> and would never be put again in service.
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

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

***AEGCL/TSECL/MeECL/NERTS may please inform the latest status.***

**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 is attached in Annexure-I.

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

All stake holders are requested to take suitable action for early restoration.

Sl. No.	Station Name	Status as informed in 129 <sup>th</sup> OCC
1	Ranganadi	Tendering stage for installation of RTU
2	Ziro	ABB has done site visit. Report awaited.
3	Kopili	LOA for installation of RTU placed on 30.12.2016
4	Doyang	LOA for installation of RTU placed on 30.12.2016
5	Khandong	LOA for installation of RTU placed on 30.12.2016
6	Kathalguri	Link working.
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.

***NERTS/DoP Ar. Pradesh/NEEPCO/NERLDC may please inform the latest status.***

**D.12. 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:**

The Ranga De Reserve Village is situated under Bihpuria Circle of Lakhimpur District in Assam at the left bank of Dokrong 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 129<sup>th</sup> OCCM, 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.

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

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

POWERGRID vide. C/CTU-PIg/NE/02/Bangladesh dated. 07.02.2017 has informed that in the 12<sup>th</sup> 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 SMNagar-South Comilla line	Limit transfer to 130MW on Cross-Border link, followed by shifting of 30MW load from Indian grid to Bangladesh grid.

In 129<sup>th</sup> 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.

***NERPC may please inform the status.***

**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 129<sup>th</sup> 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.

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

#### **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 attached at **Annexure-D.15**).

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 11<sup>th</sup> Manipur Assembly election.

***DoP Nagaland may please intimate the status.***

#### **D.16. FOLD Working Group on Hydro:**

NERLDC informed that during 18<sup>th</sup> FOLD (Forum of Load Despatcher) held on 21<sup>st</sup> 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 16<sup>th</sup> Feb'17) regarding circulation of a Questionnaire was presented and discussed. Questionnaire was circulated among the constituents.

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

***NERLDC may please inform the status.***

#### **AGENDA ITEMS FROM NERLDC:**

##### **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.

Members may discuss. It is requested POWERGRID to furnish status of installation of Anemometers.

***NERLDC may please deliberate.***

##### **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.**

***NERLDC may please deliberate.***

**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.

***NERLDC may please deliberate.***

**D.20. Absorption of MVARs by ISGS Generators:**

It is been observed in the VDI reports prepared by NERLDC that many of the 400 kV nodes of NER grid experiences prolonged high voltage outside IEGC band. To keep voltage within IEGC band, response from generators is of extreme importance.

It is requested to NEEPCO, NHPC, OTPC & NTPC to absorb reactive power according to grid conditions.

***NERLDC may please deliberate.***

**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 etc) 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.

***NERLDC may please deliberate.***

**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

Agenda for 130<sup>th</sup> OCC Meeting to be held on 17<sup>th</sup> March, 2017

their respective sheets, for which necessary orientation programme will be arranged. NERLDC will process those data and prepare required reports.

***Members may please co-operate for successful testing and implementation.***

**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.

***NERLDC may please deliberate.***

**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.

***Members may please give the latest status.***

**Any other item:**

**Date and Venue of next OCC**

It is proposed to hold the 130<sup>th</sup> OCC meeting of NERPC on second week of March, 2016. The date & exact venue will be intimated in due course.

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**ANNEXURE- D.4****Comparison of Demand for Q3-16-17**

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





MSPCL MANIPUR <slcmanipur@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 <slcmanipur@yahoo.in>, MSPCL MANIPUR <slcmanipur@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 <slc.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 Slc <slcmanipur@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**

**Dongtiah, Lower Nongrah, Lapalang,**

**Shillong - 793006, Meghalaya**

**Contact No- 0364-2537482/2537427/841590060**

**Fax- 0364- 2537486/2537470**

**ULDC NO- 23640023/23640024/23640028**

## ANNEXURE-D.17

Activities that are to be followed by all constituents in view with the upcoming Windy Season:-

1. Appropriate action for load – generation balance.
2. Keep frequency, line loading and voltage within prescribed limit.
3. During High Frequency, generation back down of machines within your system.
4. During High Voltage, keep all 'Capacitors' out of service and all 'Bus Reactors' in service. Use 'Line Reactors' as 'Bus Reactors' after discharging the line.
5. During High Voltage, absorption of 'Reactive Power' by generating unit should be according to 'capability curves'.
6. Operation of 'Synchronous Condenser Mode in Hydro machine, if possible.
7. Maintain alertness on all substations, generating stations and control centers of your system.