North Eastern Regional Power Committee

MINUTES OF THE 109th OPERATION COORDINATION SUB-COMMITTEE MEETING OF NERPC

Date : 20/05/2015 (Wednesday)
Time : 10:00 hrs
Venue : "Hotel Pragati Manor", Guwahati.

The List of Participants in the 109th OCC Meeting is attached at **Annexure – I**

Shri P.K. Mishra, Member Secretary, NERPC welcomed all the participants to the 33rd PCC meeting. He informed the house that 28 officers from power utilities of NER have attended the training on Numerical Relays at Misa conducted by POWERGRID on 27th & 28th April, 2015. He requested the forum to put in record the sincere thanks & appreciation to POWERGRID and especially the faculty members i.e. Mr. P. Kanungo, DGM (AM) & Shri Madhavanand, Manager (AM), NERTS for successful conducting of above training. He requested NERTS to repeat the similar training for the second batch whose nominations have already available with NERPC. He also highlighted about the developments of PSDF funding for R&U in NER as well as the status of SLDCs in NER. He once again mentioned that many of the agenda items were repeated continuously in many OCC meetings; hence, he requested that these issues should be discussed in thread bear and should be resolved. He also requested all the members to actively participate in the discussion for fruitful outcome of the meeting.

Thereafter, Member Secretary requested Shri B. Lyngkhoi to take up the agenda items for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 108th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

SE(O) informed that the minutes of 108th meeting of Operation Sub-committee held on 23rd April, 2015 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2015/4556-4591 dated 06th May, 2015.

Mizoram vide mail dated 12.05.2015 has made an observation & wanted to incorporate in **Item D.3** "**Outage Transmission Elements**" as below:

Amendment to be Recorded:

During the 108th OCC meeting, Mizoram informed that in many instances, shutdown taken by POWERGRID was not restored in time and because of transmission constraint they are forced to pay DSM charges and faced the public anger which is not their fault at all. They requested the sub-committee to look into the matter.

The Sub-committee directed all the agencies who were availing the shutdown to intimate to NERPC/NERLDC atleast 2 (two) hours in advance in case the shutdown could not be restored as per approved shutdown time, so that the same can be intimated to the affected State for necessary action. The matter was viewed seriously by the sub-committee and all the agencies should strictly adhere to the timing and period granted by the OCC Sub-committee and the reason of non-completion of work in time has to be furnished to NERPC/NERLDC with proper justification.

Deliberation of the Committee

All the members expressed concerned about delay in return of shutdown and this had occurred not only with Mizoram but almost all the constituents had suffered the same. The Sub-committee decided that the agency who is availing the shutdown should intimate to NERPC/NERLDC atleast 2 (two) hours in advance in case the shutdown cannot be restored as per approved shutdown time, so that the same can be intimated to the affected State for necessary action. Moreover, the executing agency has to intimate to NERPC/NERLDC the proper justification about the reasons of non-completion as per approved shutdown period. If the same is not reported by the executing agency as stipulated above, all financial implications of the affected State (s) has to be compensated by the executing agency.

The sub-committee requested NERPC to write to all the Heads of Organizations about the decision of OCC Sub-committee above so that strict instruction can be given to all the execution teams.

The Sub-committee confirmed the minutes of 108th OCCM of NERPC as no other comments/observations were received from the constituents.

ITEMS FOR DISCUSSION

B.1. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING APRIL, 2015

As per the data made available by NERLDC, the grid performance parameters for April, 2015 are given below:

NER PERFORMANCE DURING APRIL, 2015

	Energy Met (MU)		w.r.t. Mar,15 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Mar,15 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In Apr, 15
States	**Apr-15**	**Mar-15**		**Apr-15**	**Mar-15**		
Ar. Pradesh	35	**47**	-25.2	37	**48**	-24.2	-5%
Assam	582	**656**	-11.2	629	**688**	-8.5	-4%
Manipur	52	**58**	-11.2	56	**60**	-6.7	-3%
Meghalaya	129	**149**	-13.4	143	**181**	-20.8	-17.6%
Mizoram	31	**37**	-15.7	33	**38**	-14.0	-2%
Nagaland	52	**65**	-20.4	54	**67**	-20.0	-3%
Tripura	79	**85**	-7.0	86	**88**	-3.1	-3%
Region	**959**	**1096**	-12.5	**1037**	**1170**	-11.4	**-7%**

	Demand Met (MW)		w.r.t. Mar,15 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Mar,15 % inc (+) /dec(-)	% inc (+) /dec (-) of Demand vs met. In Apr, 15
States	**Apr-15**	**Mar-15**		**Apr-15**	**Mar-15**		
Ar. Pradesh	114	**107**	6.5	138	**120**	15.0	-17%
Assam	1282	**1215**	5.5	1395	**1320**	5.7	-8%
Manipur	148	**146**	1.4	150	**148**	1.4	-1%
Meghalaya	312	**343**	-9.0	400	**360**	11.1	-4%
Mizoram	80	**81**	-1.2	85	**84**	1.2	-3%
Nagaland	112	**128**	-12.5	120	**130**	-7.7	-1%
Tripura	238	**233**	2.1	265	**260**	1.9	-10%
Region	**2114**	**2131**	-0.8	**2220**	**2403**	-7.6	**-4%**

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	**Apr-15**	**Mar-15**
Total Generation in NER (Gross)	773	813
Total Central Sector Generation (Gross)	527	580
Total State Sector Generation (Gross)	246	233
Inter-Regional Energy Exchange		
(a) NER-ER	10.63	14.50
(b) ER-NER	244.10	342.85
© Net Import	233.47	328.35

AVERAGE FREQUENCY (Hz)

Month---->	**Apr-15**	**Mar-15**
	% of Time	% of Time
Below 49.9 Hz	14.86	16.04
Between 49.9 to 50.05 Hz	60.24	59
Above 50.05 Hz	24.9	24.96
Average	49.96	49.99
Maximum	50.55	50.54
Minimum	49.5	49.52

From the above table, it is seen that energy requirement met (MU) and energy requirement of the region has decreased considerably from the previous month.

The Summary of Messages issued by NERLDC for the constituents of NER for the Month of April, 2015 is given as below:

Constituents	Deviation Violation Message			Zero crossing Violation Message		
	Alert	Emergency	Total	Alert	Emergency	Total
AP	0	0	**0**	0	26	**26**
Assam	5	26	**31**	0	18	**18**
Manipur	0	0	**0**	0	2	**2**
Meghalaya	0	1	**1**	0	1	**1**
Mizoram	0	0	**0**	0	25	**25**
Nagaland	0	6	**6**	0	22	**22**
Tripura	0	12	**12**	0	15	**15**
AGBPP	0	0	**0**	0	0	**0**
AGTPP	0	0	**0**	0	0	**0**
RHEP	0	0	**0**	0	0	**0**
KOPILI	0	0	**0**	0	0	**0**
KHANDONG	0	0	**0**	0	0	**0**
KOPILI –II	0	0	**0**	0	0	**0**
DHEP	0	0	**0**	0	0	**0**
LOKTAK	0	0	**0**	0	0	**0**
PALATANA	0	0	**0**	0	0	**0**

FOLLOW UP ACTION

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

The Sub-committee also reviewed the status of commissioning first unit of NTPC at Bongaigaon, Transmission lines of POWERGRID. The status as informed by NTPC, NEEPCO and POWERGRID is as follows:

SN	Items	Status as given in 108th OCC Meeting	Status as on 109th OCC
1	Trial operation and CoD of Unit -I of Bongaigoan TPS of NTPC	Expected Date for Synchronization of Unit -# I by 31st May 2015. COD is expected by November, 2015	Expected Date for Synchronization of Unit -# I by 30th June, 2015. COD is expected by December, 2015
2	Trial operation and CoD of STG –I & II of AGTPP of NEEPCO	COD for Unit II- May/June, 2015. STG-I trial run with one boiler is May, 2015.	COD for STG – II: End of June, 2015. COD for STG – I: July/ August, 2015.
3	Trial operation and CoD of Monarchak GBPP of NEEPCO	Metering, telemetry, machine data, Connectivity agreement to be signed soon by Tripura. Synchronization depends upon availability of gas.	Connectivity agreement to be signed soon by Tripura. Tripura informed that with present line, evacuation of power from Monarchak has no problem and the 132 kV Monarchak – Surjamaninagar will be completed by December, 2015.
4	400KV D/C Silchar - Melriat line of PGCIL	December, 2015	December, 2015
5	220KV D/C Mariani (New) – Mokokchung of PGCIL	March, 2015	Charged on 29th April, 2015

The Sub-committee noted as above.

C.2 Details of Installations and self-certification (by STUs and CTUs) in respect of operationalisation of Under Frequency Relays (UFRs) in NER systems and additional requirement of UFR and df/dt relays:

The OCC regularly review the status of UFR based load shedding in the region. The latest status intimated during the 108th OCC meeting is given below: -

Assam, Manipur, Mizoram & Nagaland: UFRs based load shedding of 220MW & 20MW respectively have been implemented by both the States. However, UFR operation and amount of load relief reports are to be sent to NERLDC regularly. Assam & Nagaland agreed to do the needful and they have started sending regularly.

Arunachal Pradesh: EE, SLDC informed that UFRs based load shedding for 20MW have been implemented by them for all stages. Ar. Pradesh had furnished the list of feeders and stated that the report would be sent to NERLDC regularly. EE, SLDC informed that the quantum of load relief in each UFR has been mailed to NERPC.

Meghalaya: UFRs based load shedding for Stages I, II & III completed. 4th stage implementation process is held up due to law and order problem in Garo Hills. Reports of UFR operations would be sent regularly to NERLDC.

Tripura: UFRs based load shedding for Stages I & II have been implemented. Tendering is done for Stages III & IV and M/s Alstom is awarded for implementation. It is expected to implement Stages III & IV by May, 2015.

Deliberation of the Sub-Committee

SE(O) informed that as per guidelines by CEA it is mandatory to inspect at least one third of UFRs in the region during the year. In view of the above, inspection will be carried out in the month of June/July, 2015. The itinerary would be intimated in due course. The complete UFR list is attached at **Annexure – C.2**

The sub-committee noted as above.

C.3 CT Ratio of Transmission Lines & Loadability in NER:

During 107th OCC meeting, DGM, NERLDC informed that the list of feeders for enhancement of loadability and present CT ratio available with them was circulated with earlier minutes. He requested constituents to check the list and update the status pertaining to them and also to intimate about the terminal equipments if the load could carry as per the CT ratio.

Further, DGM, NERLDC informed that now the loadability has to be complied as per the operational guidelines issued by NRCE, of CEA. He requested all the constituents to go through this guideline and give their comments in the next OCC meeting. The NRCE guideline is circulated along with Agenda of OCC.

Deliberation of the Sub-Committee

DGM (AM), NERTS stated that in order to comply to NRCE guidelines, constituents have to carry out patrolling on all lines and check the jumpers by using thermo vision instrument and also the terminal end equipments to find out whether the lines could carry the load as per the above guidelines.

After detailed deliberation, the Sub-committee has directed all the constituents to declare the loadability of all the lines pertaining to them and the data should be furnished to NERLDC/NERPC latest by 31.05.2015. Till submission of these data to NERLDC, NERLDC would use load-ability data as per prevailing practice.

C.4 Single Line Diagram of Sub-stations, Switching Stations & Power Stations of NER:

POWERGRID, OTPC, NHPC, NTPC & DoP, Arunachal Pradesh, MSPCL, P&E, Mizoram, MePTCL **(partially),** DoP, Nagaland, TSECL & NEEPCO **(partially)** have furnished.

Single Line Diagrams of some of the nodes of AEGCL have been collected from DPR for rectification of Protection System.

NEEPCO **(Khandong & Khupi)**, AEGCL **(Bihaiting, BRPL, Ghoramari, HPC-Jagiroad, HPC-Panchgram, Star Cement & CALCOM)** and MePTCL **(CMCL, Hill Cement, Leshka, Nalari & Sai Prakash)** are requested to furnish Single Line Diagram of nodes as these diagrams are required for system studies, outage coordination etc.

Deliberation of the Sub-Committee

NERLDC informed that SLD for Sai Prakash of Me.ECL has been received. Further, SLD of Khandong & Khupi sent by NEEPCO could not be opened; they requested NEEPCO to send once again. The SLD from Manipur was also recived by them.

SE(O) requested NERLDC to compile the SLDs of all constituents which was not received by them and furnished to NERPC so that they can write to the concerned constituent to furnish the remaining stations as decided by the Sub-committee. NERLDC agreed.

The Sub-committee noted as above.

C.5 Latest status of FGMO/RGMO implementation in different generating stations:

To update the available record of FGMO/RGMO implementation in NER it is requested that the latest unit-wise status of implementation of FGMO/RGMO in different Central & State sector generating stations may please be furnished to NERLDC at the earliest as per format given by them**.**

During 108th OCC meeting, Sr. Manager, NEEPCO informed that FGMO/RGMO as recorded in the special minutes held on 06.04.2015 will be reviewed by them once again before filing petition to CERC. The status will be intimated to NERPC/NERLDC at the earliest.

Deliberation of the Sub-Committee

SE(O) informed about the comments received from NEEPCO on FGMO/RGMO and the same is reproduced as below:

Status of Ranganadi RGMO:

1. All 3 (Three) Units of Ranganadi can be operated in RGMO between 110 to 135 MW, with droop setting within 3% to 6%.
2. With RGMO in "ON" position, manual control for increase or decrease of generation is override. Hence, maintaining generation based on schedule is not possible.
3. As maintaining of generation is not possible, variation of generation exceeding ± 12% of schedule will attract Additional Deviation Charges to the generating station while supporting the Grid.
4. During the period of very high River Inflow or during Spilling of Reservoir Water, the Guide Vanes are generally kept fully open for optimum generation in order to avoid water loss. In such case, RGMO cannot be put ON as it over-ride the operator control.

5. Hence, the status of FGMO/RGMO of RHEP units may be reviewed and the following points may be considered:

RGMO / FGMO may be allowed on following conditions.

a. When there is no spillage or no high inflow of water.

b. Actual generation should be treated as scheduled generation in order to avoid deviation charge and additional deviation charge while supporting the grid.

DGM (SO-I), NERLDC then intimated and briefed about the latest CERC Petition No. 84/MP/2015 relating to inadequate operation of FGMO/RGMO. He informed that the Commission has directed all the constituents to file the following details/clarification through Affidavit latest by 12.06.2015:

1. Frequency Response Characteristics (FRC) Report of their respective control areas for poor/negative response from their control areas clearly bringing out the generator wise response in MWs, in percentage of ideal response and scheduled MW during both (14.01.15 & 25.04.15) the frequency excursions for all generators of the state.
2. Seek the reasons from the generators who have shown poor or no response as per their respective grid code/Grid code or negative response to the frequency excursions.

He requested all the constituents to go through the above CERC order and file the affidavit at the earliest.

The Sub-committee requested NERPC to circulate the above CERC Order to all the constituents so that necessary action for filing affidavit to CERC can be taken by their concerned wing within the above stipulated time frame.

Also Members is of the opinion that issues related to above information is pertaining to generation wing and requested NERPC to write to head of generation to attend the meeting so that data pertaining to them can be furnished by them and also the meeting will be fruitful.

Member Secretary suggested that while preparation of agenda, it should be clearly mentioned that issues pertaining to generation division, commercial division etc. has to be indicated accordingly so that concerned division should attend the meeting. All members agreed to above suggestion.

The Sub-committee noted as above.

C.6 Submission of list of feeders connected to essential load:

As per clause no 5.8.c of IEGC, essential loads are to be restored on priority during restoration process.

AEGCL, Me. PTCL & TSECL have only furnished the list. All other states utilities of NER are requested to furnish list of feeders connected to essential load at the earliest.

Deliberation of the Sub-Committee

DGM (SO-I), NERLDC informed that list of feeders for essential loads from Manipur & Mizoram have also been received.

Ar. Pradesh & Nagaland have agreed to furnish within 31st May, 2015.

The sub-committee noted as above.

C.7 Progress Report of Ongoing Project:

Progress reports of ongoing generation and transmission projects of NER need to be communicated to NERLDC by all constituents on monthly basis as per format. The progress of different elements are necessary for incorporation in Operational Feedback and other reports as also for preparation of Base Case for system study in NER. Accordingly, constituents are requested to furnish the progress report of their elements by 10th of every month for the previous month.

NERPC vide letter dated 13.02.2015 had written to all concerned constituents followed by reminder letter on 06.05.2015 to furnish the status of ongoing projects to NERLDC at the earliest. Ar. Pradesh had furnished the above information.

NERLDC informed that information has now been received from **NTPC, NEEPCO, DOP, Arunachal Pradesh (detailed report not submitted), AEGCL, MSPCL, P&E, Mizoram & TSECL.** NERLDC requested the remaining constituents viz. POWERGRID, APGCL, MePTCL, MePGCL, DOP,Nagaland & NHPC to furnish the same at the earliest.

Deliberation of the Sub-Committee

The sub-committee requested the remaining constituents viz. APGCL, Me. PGCL, Me. PTCL, Nagaland & POWERGRID to furnish the above information at the earliest. Constituents who do not have any ongoing projects may kindly be informed as NIL report.

C.8 Formats for new unit expected to be commissioned within 2 months:

Information related to charging/first time synchronization of new elements/units is to be furnished to NERLDC (two month in advance). All the activities related to charging/first time synchronization of new elements are to be completed before charging/first time synchronization of new elements. The technical data of the elements are also necessary for preparation of Base Case for system study for NER system.

During the 108th OCC meeting, the name of Nodal Officer along with contact number furnished is given as below:

Constituent	Name of Nodal Officer	Contact No	Email id:
Ar. Pradesh	N. Perme, EE, SLDC	09436288643	sldcitnagar@gmail.com
Assam	B.C. Borah, DGM, LDC	09435119248	sldcaseb@rediffmail.com
Manipur	L. Haokip, Manager	08575004401	l.haokip@mspdcl.com
Mizoram	Vanlalrema, SE, SLDC	09436140353	sldc_mizoram@rediffmail.com
Meghalaya	F.E. Kharshiing, SE, SLDC	09612170657	sldc.shg@gmail.com
	H.F. Shangpliang, EE, MRT	09863315562	hector_fd@rediffmail.com
Nagaland	Atoho Jakhalu, EE, SLDC	09436002696	atoho.jk@gmail.com
Tripura	Mrinal Pal, Manager	09436137022	mrinalpaulnit@gmail.com
NEEPCO	Bhaskar Goswami, Sr. Mgr	09436163983	pbhaskargoswami@yahoo.com
NHPC	R.C. Singh, Manager	09436894889	rcsloktak@yahoo.com
NERTS	Supriya Paul, Dy. Mgr.	09436302995	nerts_os@yahoo.in
	Deep Bhaumick, Engineer	09436335255	-do-
OTPC	Narendra Gupta, Manager	09774233426	nk.gupta@otpcindia.in
NTPC	J. Bhattacharyya, AGM(EMD)	09435720036	jayanbhattacharjee@ntpc.co.in
	G. K. Kundu, AGM(EEMG)	09401826314	

Further, NERLDC has informed that protection system of the element is to be checked & rectified in case of observance of any protection deficiency before charging/first time synchronization of new elements.

The sub-committee requested NERPC to hold the special meeting comprising of nodal officers of constituents, NERLDC & NERPC at the earliest so that the issues related to first time charging of transmission element and first time synchronization of generating unit can be resolved.

Deliberation of the Sub-Committee

SE(O) informed that nomination from NTPC was received only recently, the above meeting could not be conducted. Now since the complete list of nodal officers is received, NERPC will arrange the meeting at the earliest.

The Sub-committee noted as above.

C.9 Assessment of Inter State Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) by SLDC on respective Inter-State Transmission Corridor:

As per Clause No. 4.1 of 'Detailed Procedure for Relieving Congestion in Real Time Operation', SLDC shall assess TTC, TRM and ATC on it's inter-state transmission corridor considering a mesh intra-state corridor for import or export of power with the Inter-state Transmission system (ISTS).

SLDCs of NER were accordingly requested to assess the above on monthly basis, 5 months in advance (e.g. TTC/TRM/ATC for the month of November to be calculated by 15th of July), for further assessment of TTC, ATC and TRM of NER – ER corridor by NERLDC/NLDC and for assessment of TTC / ATC for a group of control areas, individual control areas within the region and state-control-area to state-control-area by NERLDC, whenever required.

During 108th OCC meeting, DGM (SO-II), NERLDC stated that TTC/ATC data are being assessed by them on behalf of constituents and requested them to check the data and give their comments at the earliest. TTC of states under peak & off peak scenarios assessed by NERLDC are as follows:

Import Capability

SN	State	Off-Peak Case		Peak Case	
		Contingency	Total Transfer Capability	Contingency	Total Transfer Capability
1	Arunachal Pradesh	N-1 of 132 kV Rangandi - Ziro S/C	115	N-1 of 132 kV Rangandi - Ziro S/C	115
2	Assam	N-1 of 220/132 kV, 3x100 MVA transformers at Sarusajai	1175	N-1 of 220/132 kV, 3x100 MVA transformers at Sarusajai	1295
3	Manipur	N-1 of 132 kV Imphal (PG) - Imphal D/C	260	N-1 of 132 kV Imphal (PG) - Imphal D/C	260
4	Meghalaya	N-1 of 132 kV Killing-Epip II D/C	250	N-1 of 132 kV Killing-Epip II D/C	250
5	Mizoram	N-1 of 132 kV Aizawl - Zimabawk S/C	37	N-1 of 132 kV Aizawl - Zimabawk S/C	37
6	Nagaland	N-1 of 132 kV Dimapur -Kohima S/C	95	N-1 of 132 kV Dimapur -Kohima S/C	95
7	Tripura	N-1 of 132 kV Palatana - Udaipur S/C	130	N-1 of 132 kV Palatana - Udaipur S/C	126

He also requested to send study results for Peak (Export & Import) & Off Peak (Export & Import) along with assumptions in details to NERLDC for the fifth month by 15th of the month regularly. Further, during the presentation by NERLDC data of exciter, generator, PSS, etc., has to be submitted by the constituents.

Deliberation of the Sub-Committee

The Sub-committee requested all the constituents to go through the above calculation of NERLDC and if they have any discrepancy, they may take up the matter with NERLDC.

C.10 Requirement of Reactor at Balipara & Bongaigoan:

After commissioning of 400 kV Balipara – Bongaigaon III & IV lines & 400 kV Bongaigaon – New Siliguri III & IV lines, voltage trend at Ranganadi, Balipara & Bongaigaon significantly increases during off peak hours.

To contain voltage at these nodes within IEGC band, one circuit of 400 kV Balipara – Bongaigaon lines, 400 kV Bongaigaon – New Siliguri lines & 400 kV Ranganadi – Balipara lines are kept open during off peak hours.

It was agreed in 4th SCM of NER on 13.12.14 for installation of 125 MVAR Bus Reactors by POWERGRID at Balipara and Bongaigaon.

For immediate solution, Line Reactors of 400 kV Balipara - Bongaigaon I & II at Balipara & Bongaigaon are required to be converted into Bus Reactors.

DGM (AM) informed that procurement for switching equipments is under progress and the status will be intimated to NERLDC/NERPC accordingly.

Deliberation of the Sub-Committee

Manager (AM), NERTS informed that procurement for switching equipments is under progress and it may take atleast 6 (six) months to complete the above work.

The Sub-committee noted as above.

Installation of Reactor at Ranganadi:

During 4th SS meeting, DGM (SO-II), NERLDC informed that on several occasions NER grid experiencing very high voltage condition during off-peak hours resulting in opening of numbers of 400 kV circuits to contain over voltage especially at RHEP. 400 kV Balipara- RHEP D/C link is operated through single circuit only in most of the time sacrificing reliability of the system. Similar is the condition in other corridors including IR link. To address the problem, conversion of line reactors as Bus reactors for 400 kV Bongaigaon-Balipara D/C line and installation of additional bus reactors at Balipara have been proposed.

In addition to this, one bus reactor of at least 50 MVAR capacity is required to be installed at RHEP so that over voltage problem can be solved

During meeting on 06.04.2015, SE (O), NERPC informed that the issue regarding installation of reactor at Ranganadi has been discussed in last 107th OCC meeting and the Sub-committee has requested NERPC to write to NEEPCO to enquire about the feasibility to counter the high voltage problem at Ranganadi end.

1. Possibility of installation of Bus Reactor either at 400 kV or 132 kV RHEP Switchyards
2. Possibility of running of machine in synchronous condenser mode during lean hydro period
3. Possibility of installation of Tertiary reactors if Tertiary winding is available in ICTs at RHEP.

SE (O) informed that NERPC has already written to NEEPCO as per request by the Sub-committee on above points the reply is awaited.

It was decided that 50 MVAR Line Reactor of 400 kV Balipara – Ranganadi line is to be taken into Bus Reactor when the line was kept open as high voltage is observing at their end.

Deliberation of the sub-Committee

SE(O) informed that communication from NEEPCO on the above issue has been received and after examining thoroughly by them, they have suggested the possibilities which is reproduced as below:

1. Option-1:- Possibility for installation of bus reactor at 400 kV/ 132kV switchyard has been examined. As per the preliminary study under present site condition, there is a possibility to accommodate one reactor at 400kV switchyard by way of extension of bus towards hill side. However, it will require cutting/ leveling of hillock, providing protection wall, diversion of road, drains, fencing etc.

2. Option-2:- RHEP units cannot be run in synchronous condenser mode because provision for the same is not available in the present scheme and lots of modifications including piping works shall be necessitated.

3. Option-3:-Loading of bus reactor in Tertiary of ICTs is also not feasible; because those are very old ICTs and had failed also earlier and put in service after repairing.

4. NEEPCO is assisting the grid operator to counter the over voltage problem at RHEP by way of putting the 400 kV line reactor at bus whenever required. However, I would like to inform you that this operation is done through isolators as switching breakers are not available. The then Member Secretary, GM, NERLDC, POWERGRID representatives visited the site in 2007 and was dropped

and necessary modification was done at Balipara. The operation through isolators in present scenario involves risks for the operators and detrimental to the equipment like isolators as well. Probably, the present arrangement is not lat all advisable.

Sr. Manager, NEEPCO stated that if the forum agrees for option-1 detail study shall be done and cost estimate & work schedule shall be prepared.

After detailed deliberation, Member Secretary suggested NEEPCO to work out the tentative estimate for above cost and intimate in next PCC meeting so that the matter can be taken up for funding from PSDF since the matter is for the benefit of the region. All embers agreed to the proposal.

The Sub-committee noted as above.

C.11 Hourly Demand data in MW & Daily MU Requirement:

As per clause no 5.3.c of IEGC, each SLDC shall develop methodologies/mechanisms for daily/weekly/monthly/yearly demand estimation (MW, MVAr and MWH) for operational purpose.

SLDCs of NER are requested to furnish hourly demand data in MW & daily MU requirement to NERLDC in excel file by 2000 Hr on day ahead basis through nerldc@yahoo.co.in.These data are required for real time operation and preparation of reports.

Deliberation of the Committee

DGM (SO-I), NERLDC informed that above data has now been received by them.

The sub-committee once again requested all the constituents to furnish the monthly demand forecast for the whole month and NERLDC will review the day ahead demand as per the monthly report. Constituents should commence the above exercise from the month of June, 2015 onwards.

C.12 Second In-feed for NER-ER Corridor:

At present NER Grid is connected to rest of NEWS Grid through 400kV Binaguri – Bongaigoan & 220kV D/C Birpara -Salakati. On 23.02.15 at around 1809 Hrs due to tripping of all the outgoing feeders of 400 kV Bongaigaon substation, 220kV Salakati- BTPS D/C lines overloaded and tripped. This resulted into isolation of NER grid from the rest of NEWS Grid and subsequently major part of NER Grid collapsed.

This type of grid disturbances can be avoided if there is more than one in-feed of NER Grid with ER Grid.

At present Bongaigaon Thermal Power Plant (BgTPP) is connected with 400 kV Bongaigaon S/S through 400 kV Bongaigaon – BgTPP D/C lines. Second in-feed of NER Grid with ER Grid may be formed, albeit at the same geographical location, if one circuit each of 400 kV Bongaigaon – Binaguri lines and 400 kV Bongaigaon – Balipara lines terminated to BgTPP in place of Bongaigaon.

NERLDC pointed out that 2nd in-feed at Balipara could also be formed by connecting one circuit each of 400 kV Bongaigaon – Binaguri lines and 400 kV Bongaigaon – Balipara lines bypassing Bongaigaon S/S subject to technical feasibility.

During 108th OCC meeting, the Sub-committee decided to jointly visit by NERLDC, NERPC, NERTS and NTPC to explore the possibility of creating additional space to incorporate required number of bays for implementation of above scheme. The issue will be discussed in the next OCC meeting.

Deliberation of the Committee

SE(O) informed that due to limited of time, the above visit could not take place, but it is now decided that visit would be on 23.05.2015 and the outcome will be intimated in the next OCC meeting.

The Sub-committee noted as above.

C.13 Monthly MU requirement & availability of each state of NER as per format:

The following figures of state wise MU requirement and availability were taken from LGBR 2015-16 of NERPC.

Requirement:

Name of State	May15	Jun15	Jul15	Aug15	Sep15
Ar. Pradesh	70	67	67	72	72
Assam	745	790	845	845	830
Manipur	65	75	75	75	75
Meghalaya	170	160	170	170	165
Mizoram	40	40	42	42	42
Nagaland	60	65	65	65	70
Tripura	125	125	130	130	120
NER	**1275**	**1322**	**1394**	**1389**	**1374**

Availability:

Name of State	May15	Jun15	Jul15	Aug15	Sep15
Ar. Pradesh	57	68	89	86	74
Assam	554	635	748	739	675
Manipur	69	79	101	101	85
Meghalaya	188	221	294	307	274
Mizoram	49	55	66	65	54
Nagaland	43	51	67	70	64
Tripura	211	212	234	233	192
NER	**1171**	**1321**	**1599**	**1601**	**1418**

- *These data required for preparation of various reports.*

C.14 Monthly MW requirement & availability of each state of NER:

A. Peak Demand in MW

Name of State	May15	Jun15	Jul15	Aug15	Sep15
Ar. Pradesh	138	133	133	138	143
Assam	1382	1439	1469	1510	1480
Manipur	148	138	143	149	149
Meghalaya	400	400	400	395	400
Mizoram	85	90	90	90	85
Nagaland	120	120	135	130	135
Tripura	275	275	275	275	285
NER	**2573**	**2620**	**2675**	**2717**	**2677**

B. Peak Availability in MW

Name of State	May15	Jun15	Jul15	Aug15	Sep15
Ar. Pradesh	126	149	148	143	145
Assam	990	1164	1151	1113	1164
Manipur	129	154	162	159	159
Meghalaya	335	387	470	488	488
Mizoram	92	108	113	109	105
Nagaland	87	103	108	104	104
Tripura	377/230	396/230	403/230	398/230	403/230
NER	**2030**	**2136**	**2461**	**2514**	**2570**

**Tripura indicates 272/230 if Pallatana available/if not available*

A. Off Peak Demand in MW (0800 Hr)

Name of State	May15	Jun15	Jul15	Aug15	Sep15
Ar. Pradesh	76	73	73	76	72
Assam	860	900	905	920	830
Manipur	96	90	93	97	75
Meghalaya	220	220	220	217	165
Mizoram	55	59	55	55	42
Nagaland	72	72	81	78	70
Tripura	194	197	197	201	120
NER	**1573**	**1611**	**1624**	**1644**	**1374**

B. Off Peak Availability in MW (0800 Hr)

Name of State	May15	Jun15	Jul15	Aug15	Sep15
Ar. Pradesh	48	74	110	108	79
Assam	916	1077	1047	1047	900
Manipur	76	103	136	136	97
Meghalaya	254	321	423	440	220
Mizoram	64	75	92	100	55
Nagaland	56	71	96	95	81
Tripura	230	230	230	230	194
NER	**1644**	**1951**	**2134**	**2156**	**1626**

The Sub-committee noted as above.

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

The availability of hydro stations of NEEPCO/NHPC are as follows:

Generating Station	Reservoir level as on 18/04/15	MU Content	Present DC MU	No. of days as per current generation
Khandong & Kopili-II	706.105 mts	4.50	0.108+0.054 = 0.162	
Kopili	596.66 mts	(15 + 4* 6.07) = 39.28	0.0	Plant under shutdown
Doyang	307.65 mts	1.3	0.096	
Loktak	766.78 mts	16.3	0.217	

NEEPCO vide mail dated 14.05.2015 has requested for shutdown of Khandong Unit #1 w.e.f. 21.05.2015 to 30.05.2015 for 10 (ten) days for rectification of the following problem:

1. Repairing of cooling water tapping joint at the penstock where water leakage is observed.
2. Tilling of MIV flow guides with SS plate.
3. Cladding of stay vanes with SS plate at location of the corrosion points. These are new areas of corrosion which needs to be attended.

Also NEEPCO requested for shutdown of Doyang Unit #II w.e.f. 21.05.2015 to 10.06.2015 for 20 (twenty) days for AMP.

DGM, OTPC also requested to avail shutdown of Module- I w.e.f. 25.05.2015 for 40 (forty) days for rectification of following problems:

1. Replacement of GTG and STG HV Bushings (as per BHEL recommendation).
2) Arresting oil leakage in GTG LV Y Phase Bushing.
3) Carrying out statutory Hydro test of HRSG#1 for renew of operating license.
4) GT Air Intake Filters replacement.

Further, he stated that shutdown of Module – I will be taken after Module – II is stabilized and hence one module is always available in the system.

The sub-committee discussed and approved the proposed shutdown of NEEPCO & OTPC as mentioned above. However, OTPC should generate to the full capacity from unit #II. OTPC agreed.

D.2 Water level and spillage data of hydro stations

Historical data of reservoir level and spillage data of Hydro stations are not available with NERLDC. This information is sometimes asked by various authorities to facilitate in making database for the same. All concerned are requested to furnish the available information to NERLDC as early as possible.

NERLDC had sent the format to all the constituents for necessary submission of data. However, till date no constituents have submitted the data to NERLDC.

NERLDC informed that Assam, NEEPCO & NHPC has furnished the above information but not as per the format given by NERLDC.

Water level format:

Year		FRL		MDDL	
Station	Month	Date	Water level	Generation in MU	Water utilized in cumecs

Water spillage format:

Year	Station					
Date	Inflow in cumecs	Status of spillage (Spilling/ Not spilling)	Duration		Total	
			From (Hrs.)	To (Hrs.)	Hrs.	Month

Constituents informed that previous data may not be readily available with them, however, present data available will be sent shortly.

Deliberation in the meeting

Sr. Manager, NEEPCO informed that the format circulated by NERLDC is found to be very much cumbersome for compiling in real time basis. He stated that the generic form of data is available in NEEPCO website which is indicated below:

http://www.neepco.gov.in/neepco/wlm/wlmreports.jsp

He requested NERLDC to download the information from above website.

Again Members is of the opinion that issues related to above information is pertaining to generation wing and requested NERPC to write to head of generation to attend the meeting so that data pertaining to them can be furnished by them and also the meeting will be fruitful.

SE(O) stated that the suggestion of MS, NERPC in Item C.5 will be followed.

The Sub-committee requested NERLDC to write to all constituents once again with a copy to NERPC asking them to furnish the data as per data available with them to NERLDC at the earliest. The Sub-committee also recommended that they can submit whatever data available with them, if not available they can indicate the same so that NERLDC can take the normal standard data.

D.3 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.

Deliberation in the meeting

The sub-Committee discussed and approved the proposal received from the constituents regarding transmission elements for May - June, 2015 and the same has already been uploaded in website of NERPC. Also the committee has decided that no shutdown will be entertained henceforth unless discussed in OCC meeting, except on emergency basis.

D.4 Sharing of Inter-State Transmission Charges & Losses (Third Amendment), Regulations, 2015:

NERLDC informed that Honorable CERC had notified Sharing of Inter State Transmission Charges and Losses (Third Amendment) Regulations, 2015 on 1st April'15 which is available in NERLDC website. These regulations shall come into force with effect from 1st May'15.

As per provisions of the CERC (Sharing of Inter State Transmission Charges and Losses) (Third Amendment), Regulations, 2015, the Designated ISTS Customers (DICs) are required to submit node-wise forecast injection/withdrawal information and maximum injection/withdrawal data for corresponding quarter of last three years to the Implementing Agency for computation of PoC Charges & Losses for Q1 of 2015-16. It is requested that data may be furnished within the stipulated date.

During 108th OCC meeting, NERLDC gave a presentation in this regard and the gists of important points.

Assam requested to send the SEM data to their SLDC so that PoC calculation can be prepared by them.

The Sub-committee requested NERLDC to arrange a workshop in this regard and also to highlight about all the recent CERC's Regulations for the benefit of the NER constituents. NERLDC agreed.

Deliberation in the meeting

DGM (SO-I), NERLDC informed that above data have now been received from all the constituents.

The sub-Committee decided to drop the above agenda for the time being.

D.5 Reliable Communication/Telemetry System in NEEPCO S/S:

NEEPCO informed that the communication system from the old power stations of NEEPCO with NERLDC was established by POWERGRID under ULDC Scheme long back. NEEPCO Engineers are not acquainted with the system commissioned by POWERGRID and presently, found it difficult to maintain/ attend the problem without drawings/ manuals and spares.

NEEPCO informed that numbers of communications were received from NERLDC to maintain the uninterrupted communication facility. They have also informed nos. of time regarding the problems faced by them in real time operation of grid due to non-availability of data telemetry from NEEPCO stations.

Further, they informed that POWERGRID is replacing all S900 RTU in their sub-station and spare support also no longer exists from the OEM because of obsolescence.

Hence, in view of necessity, NEEPCO is also in the process of changing the old system as per suggestion of manufacturer to make the telemetry system operational in order to transfer of reliable telemetry data to NERLDC.

In principle approval for execution of same may kindly be accorded by the OCC Forum

Further, the telemetry data of DHEP, AGTPP and Kopili are out for quite some time with data of DHEP out since 24-01-15. Further the availability from of data from RHEP and AGPP are also only partial. The matter was taken up at ED(O&M) level of NEEPCO but so far there is no visible improvement thereby causing difficulties in day to day operation of the system.

Deliberation in the meeting

Sr. Manager, NEEPCO informed that ULDC Scheme was established by POWERGRID long time back with NERLDC & NEEPCO stations. He requested POWERGRID to highlight the status in this regard.

AGM (Com), APDCL highlighted the issue of ULDC Scheme and the MoU signed by constituents. He stated that maintenance charges for ULDC are being paid by them to POWERGRID and hence it's the responsibility of PGCIL to carry out the AMC as per MoU. He stated that once the new scheme is in place, the methodology will be looked into.

Manager (AM), NERTS stated that AMC is being done by them but replacing of RTUs has to be seen how the MoU was recorded.

NERLDC requested the generators to ensure availability of real time generation data at NERLDC, for proper monitoring and recording through necessary co-ordination among concerned utilities.

After detailed deliberation, the Sub-committee requested POWERGRID to rectify the above communication problem at the earliest as per existing agreement so that reliable communication between NERLDC & constituents is not hampered. The Sub-committee also suggested that this agenda item should be discussed in next UCC meeting to finalize the methodology.

D.6 Status of SLDCs in NER:

The issue of setting up of SLDCs in NER was discussed in various sub-committee of NERPC and during the 14th TCC meeting held at Agartala on 4th September, 2013, all constituents agreed that POWERGRID should go ahead with the implementation of Expansion/Upgradation of SCADA/EMS System in SLDCs & NERLDC and establishment of SLDCs in four states (Ar. Pradesh, Manipur, Mizoram, and Nagaland) of North Eastern Region and investment shall be recovered as tariff determined by CERC.

Deliberation in the meeting

The status of setting-up of SLDC as informed by POWERGRID is given below:

SN	Name of State	Status as given in 109th OCC Meeting
1.	Ar. Pradesh	POWERGRID informed that Building is being identified by Ar. Pradesh. However some internal works viz., partition, AC installation etc. are yet to complete. EE, SLDC stated that it would be better for POWERGRID to carry out all the works including partition, AC fitting etc., along with building & equipments and intimate the final cost as it would not be possible for them to carry out minor works separately by them.
2.	Manipur	Building is completed. Commissioning activity is in progress and the SLDC is likely to be completed by July, 2015
3.	Mizoram	Building has been identified, but the same has not been handed to POWERGRID to carry out the work. Requested the forum to take up the matter with highest Authority of Govt. of Mizoram so that the work can be started up.

4.	Nagaland	Construction of Building is going on but the progress is very slow. Nagaland has informed that the building is likely to be completed in August, 2015. Requested the forum to take up the matter with highest Authority of Govt. of Nagaland so that the work can be started up. EE, SLDC also endorsed the view of Ar. Pradesh and requested POWERGRID to carry out all the furnishing works including partition, AC fitting etc., along with building & equipments and intimate the final cost. He also requested POWERGRID to have a bilateral discussion and finalize the issue with them.

The status of Renovation/up-gradation of SLDC as informed by POWERGRID is given below:

SN	Name of State	Status as given in 109th OCC Meeting
2.	Assam	R&M works is in progress and the scheme is likely to be completed by July, 2015
4.	Tripura	R&M works is in progress and the scheme is likely to be completed by July, 2015
7.	Meghalaya	R&M works is in progress and the scheme is likely to be completed by August, 2015. POWERGRID requested Meghalaya to complete some internal issue regarding to space of room.

The Sub-committee appreciated the status of development in regard to setting up/up-gradation of SLDCs in NER and noted as above. Manager (AM) requested to take up the matter of taking of all works like fixing of Air Conditioners, Civil works etc in a separate meeting. Member Secretary suggested taking up the matter along with O&M practices meeting.

D.7 <u>Overdraw by States and Operational problems:</u>

DGM (SO-I), NERLDC informed that it has been observed from monthly Schedule Vs Drawal plots of the states that some of the states are overdrawing for considerable period of time. These overdrawal coupled with unit trippings, especially Palatana, is causing operational problem within and outside the region.

To avoid such problems constituents are requested to enter into firm contract for purchase of power thro' STOA route instead of leaning on DSM mechanism as interregional Import margin is quite high now-a-days.

Deliberation in the meeting

SE(O) requested NERLDC to give a presentation on Daily Schedule Vs Drawal figures for the month of April, 2015.

NERLDC gave a presentation in this regard and it was observed that all the States overdraw from the grid. DGM (SO-I), stated that ATC/TTC has now been enhanced to around 1100 MW and at present power flow from ER-NER is of the order of 300 - 400 MW. Hence, if constituents enter into firm contract for purchasing power through STOA, this problem can be avoided.

Constituents appreciated the concerned of NERLDC and stated that the above condition occurred due to frequent tripping of Pallatana and also sudden scheduling from Ranganadi HEP. Also due to non functioning of RTUs real time data is not known and this was added due to sudden tripping of lines because of natural calamities. Hence, it is very difficult to control the over/under drawal by the constituents and for this reason huge DSM has to be paid by them unnecessarily.

DGM (MO), NERLDC stated that as per records, there have been sustained overdrawal on many occasions all of which cannot be co-related with Palatana tripping or Ranganadi spilling. He requested all Constituents especially Assam to carry out proper load management to minimize overdrawal and reliance on DSM.

The Sub-committee requested the constituents to look into the matter as suggested by NERLDC as constant overdrawal from the grid may lead to serious constraint in the system operation.

D.8 Up-dated List of Important Grid Elements of NER May, 2015 (Draft):

As per Clause No 5.2.c of IEGC, List of Important Grid Elements of NER May 2015 (Draft) prepared. Updated List of Important Grid Elements of NER May 2015 (Draft) was e-mailed to regional entities of NER and also available in NERLDC website. It is requested to furnish data required for finalization of List of Important Grid Elements by 8th May'15 as this document will be finalized by 25th May'15.

The document is password protected. Password may be collected from SOII department of NERLDC.

DGM (SO-I) informed that comments have been received only from NEEPCO as on date.

Deliberation in the meeting

The Sub-committee once again requested all the constituents to go through the draft document which was already uploaded in NERLDC website and give their observations/comments if any.

D.9 Up-dated Power Maps of NER States, June, 2015 (Draft):

Power maps of NER and States of NER June 2015 has been prepared. Updated Power maps of NER and States of NER June 2015 is e-mailed to regional entities of NER and also available in NERLDC website.

This document will be finalized by 20th June'15. The document is password protected. Password may be collected from SOII department of NERLDC.

Deliberation in the meeting

The Sub-committee once again requested all the Power utilities of NER are requested to submit comment and suggestion for this document by 15th June, 2015.

D.10 Nomination of Nodal Officers for Disaster Management:

All the SLDCs of NER are requested to update the details of Nodal Officer for Disaster Management for onward submission to NLDC

The names of the nodal officers of each SLDC may be sent to NERLDC by 31st May, 2015.

Deliberation in the meeting

The Sub-committee requested NERPC to write to all the Heads of SLDCs and Power utilities of NER to furnish the name and contact number of Nodal Officer for above Disaster Management.

D.11 Website Problem of NERLDC:

NEEPCO vide mail dated 14.05.2015 has intimated that the new website of NERLDC is not functioning. The site does not get open and their engineers in power stations are finding it very difficult to furnish DC to NERLDC, downloading the daily shchedule/revised from NERLDC. The matter was also informed to DGM(OS) NERLDC on 13.5.2015. Day to day operation has become very difficult with this new web site of NERLDC.

They informed that the other web site like NRLDC is accessible in their previous address.

It is requested that NERLDC may be asked to restore the previous web site for ease of plant operation at the earliest in the interest of plan operation.

Deliberation in the meeting

DGM (SO-I) informed that due to changing of service provider, there was some problem and it will take some time to stabilize the new domain. He requested constituents to use the IP address given to them till the website is stable.

The Sub-committee noted as above.

D.12 Erratic Generation of Pallatana:

Tripura informed that erratic & very unstable Generation of Pallatana has created the constituent in severe problem daily for power management & scheduling. In every day Pallatana declares the entitlement, but in real time generation is far below the day ahead scheduling. For this huge commercial losses are to be borne by the constituent. It is also seen, the unit is tripping almost in every day.

Deliberation in the meeting

The issue has been discussed in thread bear in **Item No. D.7 above**.

The Sub-committee noted as above.

D.12 Estimated Transmission Availability Certificate (TAC) for the month of April, 2015:

NETC and NERTS, POWERGRID have submitted TAC data of April, 2015 in the first/second week of May, 2015. This will enable issuance of verification by NERLDC and certification by NERPC on monthly basis within stipulated time frame. Both NETC and NERTS are advised to follow the agreed time schedule in future to avoid accumulation of reports and corresponding delay.

ADDITIONAL AGENDA

A.1 Scheduling of power from storage capacity:

AGM, APDCL informed that the real time scheduling of power is revised absurdly high due to sudden inflow in RHEP. This sudden revision of schedule is sometimes more than 20% of the earlier schedule, causing inconvenience in demand management besides commercial loss through DSM. He requested NEEPPCO to devise some scheduling mechanism by reducing schedules from storage based hydro station while preventing commercial loss of beneficiaries. Members agreed to the proposal of APDCL.

SE(O) informed that the above issue had been discussed in earlier OCC meeting and during 104th OCC meeting, the Sub-committee suggested NEEPCO to formulate a station wise plan for suo-moto control of their generation for safe guarding the interest of the constituents as well as NEEPCO. Further, the Sub-committee requested NEEPCO may look into the matter and give a suitable solution in this matter.

Sr. Manager, NEEPCO stated that it would not be possible to reduce the generation from other hydro projects to accommodate Ranganadi because all projects are having own fixed cost and recovery of energy charges is allowed based on energy generation from each project. The above proposal of APDCL shall directly lead to commercially loss for NEEPCO. Further, each project is having its annual generation target fixed by CEA/ Ministry of power. Ministry of Power had directed them to achieve the generation target and they have to comply with the direction.

AGM, APDCL re-iterated that they the issue is not warranted if there is spillage in the reservoirs or Run of the river project, but when some reservoirs are not in spillage they can reduce the generation from such plants and conserve the water and utilize later on so that it will be win win situation for all.

After detailed deliberation, the sub-committee requested NERPC to convene the meeting with Management of NEEPCO at the earliest to discuss and resolve the above issue.

A.2 Frequent Tripping of 33 kV Feeder to NERPC/POWERGRID Complex:

Member Secretary informed that the power supply to NERPC/POWERGRID complex through 33 kV feeder is frequently tripped and this has not only created inconvenience to the complex but also caused pollution by running the DG sets and at the same time wastage of fuel. He requested Me. ECL to look in to the matter and rectify the problem.

EE, SLDC requested NERPC to write to Director (D), Me. ECL since the above work is under the purview of Distribution wing.

The Sub-committee noted as above.

A.3 Power cut/Load Shedding:

SE(O), informed that CEA has been pressurizing NERPC to furnish the above data urgently. He informed that Chairperson, CEA himself is monitoring these reports to find out simultaneous All India Peak Demand and Demand Met figures. He requested all the constituent States that Hourly Power Cuts and Load shedding-State wise and Region wise may kindly be sent urgently. The format is attached at ***Annexure – A.3.***

The Sub-committee noted as above.

Date & Venue of next OCC meeting

It is proposed to hold the 110th OCC meeting of NERPC on second week of June, 2015. 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 109th OCC Meetings held on 20/05/2015

SN	Name & Designation	Organization	Contact No.
1.	Sh. Nangkong Perme, EE, SLDC	Ar. Pradesh	09436288643
2.	Sh. A.K. Saikia, DGM,LDC, AEGCL	Assam	09401026118
3.	Sh. A.N. Dev Choudhury, AGM (TRC)	Assam	09854120791
4.	Sh. J.P. Choudhury, AGM (Com), APDCL	Assam	09954055295
5.	Sh. G.K. Bhuyan, AGM, AEGCL	Assam	09854015601
6.	Sh. Karuna Sarma, AGM, AEGCL	Assam	09435013532
7.	Sh. B.C. Borah, AGM, SLDC	Assam	09435119248
8.	Sh.K. Goswami, AGM (Com)	Assam	09864020019
9.	Sh. S.P. Singh, Manager, MSPCL	Manipur	09612152014
10.	Sh. Th.Sushanta Singh, Dy. Mgr, MSPCL	Manipur	09862448363
11.	Sh. B. Wankhar, EE, MePTCL	Meghalaya	09436105914
12.	Sh. T. Gidon, EE, MePTCL	Meghalaya	08974027950
	No Representative	**Mizoram**	
13.	Sh.A.Jakhalu, E.E (Trans)	Nagaland	09436002696
14.	Sh. D. Pal, Sr. Manager	Tripura	09436500244
15.	Sh. N.R.Paul, DGM (SO-I)	NERLDC	09436302723
16.	Sh. R. Sutradhar, DGM (MO)	NERLDC	09436302714
17.	Sh. B. Medhi, Dy. Manager	NERLDC	09436335776
18.	Sh. M. Madhavanand, Manager (AM)	PGCIL	09436335250
19.	Sh. B. Goswami, Sr. Manager (E/M)	NEEPCO	09436163983
20.	Sh. Tanya Taji, Sr. Manager (E/M)	NEEPCO	09436042053
21.	Sh. Ashim Kr. Sarmah, Dy. Mgr (E/M)	NEEPCO	09435078860
22.	Sh. J. Bhattacharya, AGM (EMD)	NTPC	09435720036
23.	Sh. Atanu Nath, Asst. Manager	ENICL	09547808241
24.	Sh. S. Medhi, Dy. Manager (AM)	NHPC	09435534564
25.	Sh. Thakor Prasad Pandey, DGM (O&M)	OTPC	08794718423
26.	Sh. P.K. Mishra, Member Secretary	NERPC	09968380242
27.	Sh. B. Lyngkhoi, Director/S.E (O)	NERPC	09436163419
28.	Sh. S.M. Jha, E.E	NERPC	08731845175
29.	Sh. S. Mukherjee, AEE	NERPC	08794277306
30.	Sh. Shaishav Ranjan, A.E	NERPC	08794276168

Annexure - C. 2

SN	Name of State	Total Quantum of Load Shedding required	Location where URF installed (Feeder's Name)	Stage	Load in each feeder	Quantum of Load shedding (MW) implemented	Additional quantum of load shedding required
1	Ar. Pradesh	**20**	**At SMS Smelters** (33 KV Lekhi feeders - 3 Nos)	Stage - I (49.2 Hz)		**3.5**	**1.5**
			At Platinum Alloys (11 KV Lekhi feeders - 3 Nos)	Stage - II (49.0 Hz)		**0**	**5**
			At Satyam Ispat Ltd. (33 KV Lekhi feeders - 3 Nos)	Stage - III (48.8 Hz)		**0**	**5**
			At Nirjuli feeder (11 KV Lekhi feeder - 1 No.)	Stage - IV (48.6 Hz)		**0**	**5**
2	Assam	**220**	**At Gauripur** (132 KV Dhaligoan - Gossaigoan - Gauripur)	**Stage - I (49.2 HZ)**	16	**54.5**	**0**
			At Sipajhar (132 KV Depota - Rowta - Sipajhar)		10		
			At Dhemaji (132 KV Gohpur - Nalkata - Dhemaji)		11		
			At Majuli (132 KV Nalkata - Majuli)		2.5		
			At Baghjap (132 KV Kahilipara - Chandrapur - Baghjap)		15		
			At Diphu (132 KV Samaguri - Sankardev - Diphu)	**Stage - II (49.0 Hz)**	11	**61**	**0**
			At Gohpur (132 KV Samaguri - B. Chariali - Gohpur)		8		
			At Rupai (132 KV Tinsukia - Rupai + AP Load)		17		
			At Jogighopa (132 KV Dhaligoan - Jogighopa)		7		
			At Sankardevnagar (132 KV Samaguri - Sankardevnagar)		18		

SN	Name of State	Total Quantum of Load Shedding required	Location where URF installed (Feeder's Name)	Stage	Load in each feeder	Quantum of Load shedding (MW) implemented	Additional quantum of load shedding required
2	Assam		**At Gossaigoan** (132 KV Dhaligoan - Gossaigoan)	**Stage - III (48.8 Hz)**	7	**59**	**0**
			At Rowta (132 KV Depota - Rowta)		18		
			At Chandrapur (132 KV Kahilipara - Chandrapur)		12		
			At Nalkata (132 KV Gohpur - Nalkata)		11		
			At Bokakhat (132 KV Jorhat - Bokakhat)		11		
			At Sishugram (132 KV Sarusajai - Sishugram)	**Stage - IV (48.6 Hz)**	45	**57**	**0**
			At Ledo (132 KV Tinsukia - Ledo)		12		
3	Manipur	**20**	**At Yurembam** (33 KV Yurembam - Leimakhong)	**Stage - I (49.2 Hz)**		**3**	**2**
			At Yaingangpokpi (33 KV Yaingangpokpi - Napetpalli)	**Stage - II (49.0Hz)**		**0**	**5**
			At Kongba (33 KV Kongba - Mongsangei)	**Stage - II (48.8Hz)**		**0**	**5**
			At Kakching (33 KV Kakching - Wangjing)	**Stage - II (48.6Hz)**		**0**	**5**

SN	Name of State	Total Quantum of Load Shedding required	Location where URF installed (Feeder's Name)	Stage	Load in each feeder	Quantum of Load shedding (MW) implemented	Additional quantum of load shedding required
4	Meghalaya	**60**	**At Nangalbibra** (33 KV Mendipathar - Nangalbibra)	**Stage - I** **(49.2 Hz)**	6.5	**15**	**0**
			At Rongkhon (33 KV Garobadha I - Rongkhon)		8.5		
			At Mawphlang (132/33 KV, 20 MVA Transformer)	**Stage - II** **(49.0 Hz)**		**15**	**0**
			At Khliehriat (132/33 KV, 20 MVA Transformer)	**Stage - III** **(48.8 Hz)**	12	**15**	**0**
			At Nongstoin (33 KV Nongstoin - Mairang)		3		
			At Mawlai (33 KV Mawlai - Nongthymmai)	**Stage - IV** **(48.6 Hz)**	7.5	**15**	**0**
			At NEHU (33 KV NEHU - Happy Valley)		7.5		
5	Mizoram	**20**	**At** 132 KV Khawiva (33 KV Khawiva - Sazaikawn)	**Stage - I** **(49.2 Hz)**	2.38	**5.09**	**0**
			At Bukpui (33 KV Bukpui - Chhingchhip)		2.71		
			At Zuangtui (6.3 MVA, 33/11 KV Transformer - I)	**Stage - II** **(49.0 Hz)**	5.31	**5.31**	**0**
			At Zuangtui (6.3 MVA, 33/11 KV Transformer - II)	**Stage - III** **(48.8 Hz)**	4	**5.1**	**0**
			At Tlangnuam (33 KV Tlangnuam - Aibawk)		1.1		
			At Chawnpui (6.3 MVA, 33/11 KV Transformer - I)	**Stage - III** **(48.6 Hz)**	3	**5.2**	**0**
			At Zuangtui (11 KV Zuangtui - Chaltlang)		2.2		

SN	Name of State	Total Quantum	Location where URF installed (Feeder's	Stage	Load in each	Quantum of Load	Additional
6	Nagaland	**20**	**At Mokokchung** (66 KV Mokokchung - Tuli)	**Stage - I (49.2 Hz)**		**6**	**0**
			At Dimapur (33 KV Dimapur - AP -I)	**Stage - II (49.0 Hz)**		**4.5**	**0**
			At Kohima (132 KV Kohima - Wokha)	**Stage - III (48.8 Hz)**		**5**	**0**
			At Dimapur (33 KV Dimapur - Refferal Hospital)	**Stage - IV (48.6 Hz)**		**4.5**	**0**
7	Tripura	**40**	**At Badharghat** (33 KV Badarghat - Bishalghar)	**Stage - I (49.2 Hz)**	8.5	**11**	**0**
			At Badharghat (33 KV Badarghat - Takarjala)		2.5		
			At 66 KV Rabindra Nagar (33 KV Rabindra Nagar - Melaghar)	**Stage - II (49.0 Hz)**	6.5	**10**	**0**
			At 66 KV Rabindra Nagar (33 KV Rabindra Nagar - Kathalia)		3.5		
			At 79 Tilla (33 KV, 79 Tilla - Mohanpur)	**Stage - III (48.8 Hz)**	7.5	**14.5**	**0**
			At 79 Tilla (33 KV, 79 Tilla - Durjoy Nagar)		7		
			At 79 Tilla (33 KV, 79 Tilla - College Tilla)	**Stage - IV (48.6 Hz)**		**12.5**	**0**

Note: The inbuilt UFR of existing Numerical Relay at identified locations (at 132 KV level) of Assam, Meghalaya & Tripura can be used for above purpose. Existing UFR can also be shifted to new locations, wherever required.

In respect of Ar. Pradesh, Manipur, Mizoram & Nagaland: Setting of existing UFR needs to be changed in case they use the same Feeder. (i.e. 48.8 Hz to be set to 49.2 Hz for Stage - I), (48.5 to be set to 49.0 Hz for Stage - II) & (48.2 Hz to 48.8 Hz for Stage - III) Feeder is to be identified at the earliest for remaining quantum of load shedding of other stages of 48.8 Hz & 48.6 Hz.

STATUS OF UFR IMPLEMENTATION IN NER

Stage	Load shed Required	Implemented	To be Implemented
Stage - I (49.2 Hz)	100 MW	98.09	1.91
Stage - II (49.0 Hz)	100 MW	95.8	4.19
Stage - III (48.8 Hz)	100 MW	98.6	1.4
Stage - IV (48.6 Hz)	100 MW	94.2	5.8
TOTAL	400 MW	386.69	13.3

Power Cuts/Load shedding : Region

Date / Hour	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
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Power Cuts/Load shedding : State1

Date / Hour	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
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Power Cuts/Load shedding : State2

Date / Hour	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
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Power Cuts/Load shedding : State3

Date / Hour	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
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Power Cuts/Load shedding : State4

Date / Hour	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
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Power Cuts/Load shedding : State5

Date / Hour	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
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