¼ãäÀ¡ã ÔãA‡ãšãÀ Government of India
ãÌã²ã¦ã ½ã¨äãÊã¾ã Ministry of Power
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North Eastern Regional Power Committee
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Meghalaya State Housing Finance Co-Operative Society Ltd. Building
¶ãäãØã¾ã ãÖÊÔã, ãÍãÊãäØã – 793003
Nongrim Hills, Shillong – 793003.

ISO 9001:2008

Ph. No: 0364 - 2520034
Fax No: 0364 - 2520030

No. NERPC/SE (O)/OCC/2013/ 4696-4725 Date: 16th August, 2013

To,

1. Managing Director, AEGCL, Bijuli Bhawan, Guwahati – 781 001
2. Director (Distribution), Me. ECL, Lumjingshai, Short Round Road, Shillong – 793 001
3. Director(Transmission), Me.PTCL, Lumjingshai, Short Round Road, Shillong – 793 001
4. CGM, (LDC), SLDC Complex, AEGCL, Kahelipara, Guwahati-781 019
5. Chief Engineer (WE Zone),Department of Power ,Govt. of Arunachal Pradesh, Itanagar- 791 111
6. Chief Engineer (EE Zone),Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
7. Chief Engineer (TP&MZ),Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
8. Engineer-in-Chief (P&E), Department of Power, Govt. of Mizoram, Aizawl – 796 001
9. Chief Engineer (P), Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
10. Chief Engineer (P), Department of Power, Govt. of Nagaland, Kohima – 797 001
11. General Manager, TSECL, Agartala – 799 001
12. ED (O&M), NERTS, PGCIL, Dongtieh-Lower Nongrah, Lapalang, Shillong -793 006
13. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
14. ED (Commercial), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
15. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad,Haryana-121003
16. GM (Plant), OTPC, Badarghat Complex, Agartala, Tripura - 799014
17. GM, NERLDC, Dongtieh, Lower Nongrah, Lapalang, Shillong -793 006
18. Member Secretary, ERPC, 14 Golf Club Road, Tollygunge, Kolkata-700033
19. Chief Engineer, GM Division, Central Electricity Authority, New Delhi – 110066

Sub: Minutes of the 88th OCC Meeting held on 7th August, 2013 at Guwahati.

The Minutes of the 88th OCC Meeting of NERPC held on 07.08.2013 at "Hotel Grand Starline", Guwahati is enclosed for favour of kind information and necessary action please**.**

The minutes is also available on the website of NERPC **www.nerpc.nic.in**

Encl: As above

¼ãÌãªã¾ã / Yours faithfully,

(ºãã. ãÊãŒãäƒ /B. Lyngkhoi)
,ã£ãäàã¥ã ,ãã¾ã¾ã¦ãã / Superintending Engineer (O)

Copy to:

1. Chief Engineer, AEGCL, Bijuli Bhavan, Guwahati - 781001
2. Chief Engineer, APGCL, Bijuli Bhavan, Guwahati - 781001
3. Chief Engineer, DISCOM, Bijuli Bhavan, Guwahati - 781001
4. Head of SLDC, Me.ECL, Lumjingshai, Short Round Road,Shillong – 793 001
5. Head of SLDC, Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
6. Head of SLDC, Department of Power, Dimapur, Nagaland
7. Head of SLDC, Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
8. Head of SLDC, Department of Power, Govt. of Mizoram, Aizawl – 796 001
9. Head of SLDC, TSECL, Agartala – 799 001
10. Chief Engineer(Elect), Loktak HEP,Vidyut Vihar, Kom Keirap, Manipur- 795124
11. DGM (C&M), OTPC, 6th Floor, A-Wing, IFCI Tower -61, Nehru Place, New Delhi – 110019.

North Eastern Regional Power Committee

MINUTES OF THE 88th OPERATION COORDINATION SUB-COMMITTEE MEETING OF NERPC

Date : 07/08/2013 (Wednesday)
Time : 10:00 hrs
Venue : "Hotel, Grand Starline", Guwahati.

The List of Participants in the 88th OCC Meeting is attached at **Annexure – I**

The meeting was started with welcome address by Shri S.K. Ray Mohapatra, MS I/C, NERPC. He welcomed Shri H.C. Phukan, who has taken over the charge of CGM (LDC) of AEGCL (Assam) and stated that the forum will be benefited by his experience & long association with power sector. Presence of senior officers of constituents always helps in resolving many important issues. He also expressed concern about the absence of representative from Manipur, Mizoram & Nagaland as many issues would not be deliberated. He also informed that many important issues are to be discussed in this OCC meeting viz. implementation of requisition based scheduling, UFR based load shedding & identification of feeders for such load shedding, inspection of one third of UFRs in NER and the inspection has to be completed at the earliest. He expressed concern about the frequent trippings in Meghalaya & Manipur system and in Loktak, NHPC and requested the concern constituents to look into the matter seriously for improvement in the situation, which is required for safe and secure operation of the grid. Further, he also stated that the DPRs have been received from all the constituents and the total estimated cost is about Rs. 816 Crores (for seven states excluding NEEPCO, NHPC and POWERGRID). He mentioned that funding for entire amount projected in the DPR may not be available and hence constituents should gear up or plan accordingly to rectify the deficiencies in their system. He informed that the matter was discussed in last NPC meeting held at CEA, Delhi on July 16, 2013 and CEA has proposed to Min. of Power for considering 20% funding from PSDF. The minutes of meeting is awaited. The outcome will be intimated to all the constituents so that they can take up the issue with the Competent Authority and the matter can be discussed further

in the coming TCC/RPC meeting scheduled to be held on 4th & 5th September, 2013 at Agartala. The rectification / renovations of substations / generating stations are essential for safety, security and reliable operation of the system. He briefed about the power scenario in the region and stated that demand for power of NE states is in rising trend, particularly of Assam and less rain fall is going to be the matter of concern for the days to come. In such scenario, the availability of generation from the power plant of OTPC at the earliest is the need of hour. He also highlighted about the serious problem in Kopili HEP due to acidic nature of water, which has started affecting the major structures like penstock other than major components of machines and requested the forum to extend support to NEEPCO in resolving this issue. Further, he mentioned that issue of Operating Procedure for transmission elements outage planning, Islanding Scheme, implementation of SPS in Pallatana etc., will also be discussed and requested all the constituents to actively participate in the discussion for fruitful outcome of the meeting.

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

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 87th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

S.E (O) informed that the minutes of 87th meeting of Operation Co-ordination Sub-committee held on 9th July, 2013 at Guwahati were circulated vide letter No. NERPC/OP/OCC/2013/4080-4109 dated 16th July, 2013.

POWERGRID vide mail dated 23.07.2013 wanted **Item No. C.2** to be modified as below:

Item No: C.2- Minutes recorded: "On enquiry about the status of DPR, DGM, POWERGRID informed that DPR has already been prepared and has been sent to corporate office for approval before submission to CEA and NERPC and the estimated cost is about Rs. 23.7 crores".

Minutes to be recorded as: "On enquiry about the status of DPR, DGM, POWERGRID informed that the matter will be discussed with concerned authority and revert back accordingly"

The table under **Item No. C2** may be read as follows:

The estimated cost projected in the DPR for rectification / renovations of substations / generating stations is given below:

Name of Utility	Estimated Cost (Rs. In Crores)
Ar. Pradesh	33.454
Assam	381.584
Manipur	40.815
Meghalaya	183.659
Mizoram	65.247
Nagaland	37.525
Tripura	73.618
NEEPCO	40.74
NHPC	5.549
POWERGRID	To Revert back.
Total	[Rs. 862.19 crores excluding PGCIL]

NEEPCO also intimated by email dated 22.07.2013 that the **Item No. D.6** may be corrected as below:

Item No: D.6- Minutes recorded: Shutdown as approved by the Committee:

"STG #1 of AGBPP – w.e.f. 04.08.2013 for 30 days (subject to confirmation by Japanese Technical Advisors from MHI)"

Minutes to be recorded as:

"**GTG #1 of AGBPP** – w.e.f. 04.08.2013 for 30 days (subject to confirmation by Japanese Technical Advisors from MHI)"

The Sub-committee confirmed the minutes of 87th OCCM of NERPC as no other observations or comments were received from the constituents.

SE (O), NERPC then requested NERLDC to give the presentation on the grid performance of NER during the month of July, 2013.

The presentation as given by NERLDC is given as below:

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

B.1. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING JULY' 13

As per the data made available by NERLDC, the grid performance parameters for July, 2013 are given below:

i) **Average frequency** during July, 2013 was 50.07 Hz as compared to 50.08 Hz in June, 2013

ii) **Minimum frequency** in July, 2013 was 49.02 Hz (05.07.13 at 19:45 hrs) as compared to 49.05 Hz recorded in the previous month.

iii) **Maximum frequency** was 50.63 Hz (20.07.13 at 08:02 hrs) as compared to 50.77 Hz recorded in June, 2013.

iv) **System frequency** remained within permissible range of 49.7 Hz to 50.2 Hz for 85.35 % of the time, below 49.7 Hz for 0.15 % and above 50.2 Hz for 14.50 % of the time as compared to 80.79 %, 1.72 % and 17.49 % respectively in the previous month.

v) **Regional peak** demand in July, 2013 was 1984 MW as compared to 2101 MW in June, 2013, a decrease of 5.5 % over the previous month.

vi) **Regional peak availability** was 1973 MW as compared to 1900 MW in previous month, an increase of 3.84 % over the previous month.

vii) **Energy requirement** was1139.97 MUs in July, 2013 compared to 1112.08MUs in June, 2013, an increase of 2.5% over the previous month.

viii) **Regional energy availability** was 1126.12 MUs compared to 1016.68 MUs in the previous month, an increase of 10.76% over the previous month.

ix) **Rise in demand met** was recorded in Manipur (.8%), Assam (6.2%), Nagaland over the previous month.

x) **Drop in demand met** was recorded in Meghalaya over the previous month

xi) **No Over Voltage** at 400 kV Sub-Station was observed

xii) **No over Voltages** were observed at 220kV & 132 kV S/S.

xiii) **No under Voltages** were observed at 400 kV S/S & 220 kV S/S.

xiv) **No Under voltage** at 132kV S/S was observed.

xv) **Regional Generation & Inter-regional Exchanges** during the month of July, 2013 compared to June, 2013 are given below:

SN	Parameter	July, 2013	June, 2013
REGIONAL GENERATION & INTER – REGIONAL EXCHANGES (in MU)			
1	Total Generation in NER (Gross)	**1024.25**	**873.59**
2	Total Central Sector Generation (Gross)	**650.62**	**537.64**
	Total State Sector Generation (Gross)	**373.63**	**335.95**
3	Inter-Regional Energy Exchanges		
	(a) NER – ER	**30.56**	**20.89**
	(b) ER – NER	**146.56**	**177.33**
	(c) Net Import	**116**	**156.44**

The Summary of Category A, B, C Messages issued by NERLDC for the constituents of NER for the Month of July, 2013 is given as below:

State	A (<49.8 Hz)		B (<49.7 Hz)		C (<49.7 Hz Persistent Overdrawal)		Total	
	Jun'13	Jul'13	Jun'13	Jul'13	Jun'13	Jul'13	Jun'13	Jul'13
Ar. Pradesh	03	1	0	0	0	0	03	1
Assam	01	1	0	0	0	0	01	1
Manipur	04	1	0	0	0	0	04	1
Meghalaya	01	1	0	0	0	0	01	1
Mizoram	01	1	0	0	0	0	01	1
Nagaland	02	1	0	0	0	0	02	1
Tripura	01	0	0	0	0	0	01	0

The Sub-committee noted as above.

FOLLOW UP ACTION

C.1 Synchronization of Pallatana Module -I

During the 87th OCC meeting, OTPC representative informed that the plant was inaugurated by Hon'able President of India on 21st June, 2013 and during that time the generation was around 70 MW. However, the machine tripped after sometime due to some problem in the gas pipeline. OTPC is trying their best, in consultation with ONGC and BHEL, to resolve the problem as early as possible so that COD is achieved before July 31, 2013, the deadline as per CERC order.

The Sub-committee enquired from OTPC & POWERGRID about the following issues:

i) Permission from CERC for Extension of injection of infirm power till CoD & Commissioning of Unit #2

OTPC informed that the matter regarding the dead line for injection of infirm power to the grid is being taken up by the management and necessary action will be taken in time. Further, he informed that Unit #2 is ready in all respect and the same is likely to be commissioned by August, 2013

ii.) The status of following transmission system associated with evacuation of power from generating stations of OTPC at Palatana and of NTPC at Bongaigaon as informed by POWERGRID is given below:

Byrnihat – Bongaigaon 400kV line – **October, 2013**
Balipara – Bongaigoan 400 KV D/C line **- December, 2013**
Silchar- Imphal 400kV D/c line and substation at Imphal- **works in progress**
Silchar- Melriat 400kV D/c line and substation at Malriat - **works in progress**
Mariani – Mokokchung 220kV D/c line - **works in progress**

SN	Name of Line	Total Tower Locations	Line Length (Km)	Cumulative Progress as on 01.07.2013		
				Foundations completed (Nos)	Erection of towers (Nos)	Strng (Ckm)
1	400KV D/C Silchar - Melriat line	436	143.58	142	125	79.3
2	400KV D/C Silchar - Imphal line	472	165.99	298	179	51.08
3	220KV D/C Mariani (New) - Mokokchung	157	48	79	47	0
4	400KV D/C Byrnihat-Bongaigaon line	565	201.46	498	485	134.082

POWERGRID stated that the status of works which are under progress will be intimated in the next TCC/RPC meetings. Further, POWERGRID informed that 400kV Balipara – Bongaigaon D/C line # 3 & 4 with FSC & Quad conductor will be commissioned by December 2013 and subsequently the same will be put under Commercial operation to enhance the reliability of NER system.

(iii) Revival of Palatana generation: Palatana unit is under outage since 06.07.2013 due to gas related problems. Revival of this unit is very essential in view of the increasing demand of the region. OTPC may please intimate the exact date of revival of unit so that proper generation planning can be done. ***While on the subject it is brought to the notice of the forum that while the demand of NER have gone up considerably there is no major addition of capacity (except for Palatana) and the import ATC is also more or less the same. Considering the above it is essential that all existing units (both in state and central sector) are optimally operated and proper demand management done.***

Deliberation of the Committee

(i) Permission from CERC for Extension of injection of infirm power till CoD & Commissioning of Unit #2

The Sub-committee requested OTPC to highlight about the current status of Pallatana Unit-#I since the dead line for injection of infirm power to the grid (i.e. 31.07.2013) is over and the commissioning schedule of Unit #2.

OTPC representative informed that the matter regarding extension of permission from CERC for injection of infirm power to the grid till 31.12.2013 is being taken up by the management with CERC and necessary clearance from CERC is expected

shortly as OTPC has planned to commission the Unit #1 within August, 2013. Further, he informed that Unit #2 is ready in all respect and the same is likely to be commissioned by September, 2013. He also informed that cleaning up of gas pipelines is under progress; the pigging activity is expected to be over by August 15, 2013 and ONGC is being pursued to supply the clean gas at the earliest so that plant is ready before the coming Durga Puja festival. NERLDC informed that without permission from CERC it will not be possible to inject the infirm power to the grid by OTPC.

Sub-committee requested OTPC to take necessary action at the earliest for getting the required directives from CERC. The Sub-committee also requested OTPC to provide the progress of the work and the data received from ONGC regularly to NERPC/NERLDC so that constituents are kept informed and if necessary, the forum can pursue with ONGC along with OTPC. The representative from OTPC agreed.

(ii) The status of commissioning schedule of transmission system associated with evacuation of power from generating stations of OTPC at Palatana and of NTPC at Bongaigaon as informed by POWERGRID is given below:

Byrnihat – Bongaigaon 400kV line – **October, 2013**

Balipara – Bongaigoan 400 KV D/C line **- December, 2013**

SN	Name of Line	Total Tower Locations	Line Length (Km)	Cumulative Progress as on 01.07.2013		
				Foundations completed (Nos)	Erection of towers (Nos)	Strng (Ckm)
1	400KV D/C Silchar - Melriat line	436	143.58	144	127	79.3
2	400KV D/C Silchar - Imphal line	472	165.99	307	192	53.22
3	220KV D/C Mariani (New) - Mokokchung	157	48	83	53	0
4	400KV D/C Byrnihat-Bongaigaon line	565	201.46	503	490	136.02
5	400KV D/C Balipara-Bongaigaon line #3 & 4 with FSC & Quad Conductor	834	304.57	819	779	412

(iii) Revival of Palatana generation:

The Sub-committee expressed concern that with less rainfall prevailing this year, the water levels in all reservoirs are rapidly depleting and at the same time the demand for power has kept on increasing in the region. In such a scenario, the

generation from power plant at Pallatana is very much necessary, hence, OTPC should adhere to their commitment and Pallatana Unit #1 should be commissioned in August, 2013 as agreed to. Moreover, the spilling of water due to non-availability of machine has also become the matter of concern for the region. The constituent states were advised to plan their demand management properly to face the prevailing situation.

The Sub-committee noted as above.

C.2 Independent third party audit of protection system:

SE (O) stated that the DPR have been received from all the constituents, except POWERGRID and funding for entire amount projected for the scheme may not be available and hence constituents should gear up or plan accordingly to rectify the deficiencies in their system. The rectification / renovations of substations / generating stations are required for safety, security and reliable operation of the system. He requested the constituents to priorities the work and identify the critical sub-stations and plan accordingly based on the availability of the fund.

On enquiry about the status of DPR, DGM, POWERGRID informed matter has been referred to concerned authority and accordingly POWERGRID will revert back.

The estimated cost projected in the DPR for rectification / renovations of substations / generating stations is given below:

Name of Utility	Estimated Cost (Rs. In Crores)
Ar. Pradesh	**33.454**
Assam	**381.584**
Manipur	**40.815**
Meghalaya	**187.659**
Mizoram	**65.247**
Nagaland	**37.525**
Tripura	**73.618**
NEEPCO	**40.74**
NHPC	**5.137**
POWERGRID	**(to be reverted back)**
Total	**Rs. 862.19 Crores (Approx.) excluding POWERGRID**

Deliberation of the Committee

SE (O) stated that the funding for entire amount, projected in the DPR may not be available and hence constituents should gear up or plan accordingly to rectify the deficiencies in their system. The issue of funding from Govt. of India / PSDF was discussed during the 2nd NPC meeting held at CEA, Delhi on July 16, 2013 and CEA has proposed to Min. of Power for considering 20% funding from PSDF. The fund accumulated in PSDF from NER is only about Rs. 110 crores. The rectification / renovations work proposed in DPR cannot be taken up with this nominal fund. The minutes of meeting of NPC is awaited. The outcome will be intimated to all the constituents so that they can take up the issue with the Competent Authority and the matter can be discussed further in the coming TCC/RPC meeting scheduled to be held on 4th & 5th September, 2013 at Agartala. The rectification / renovations of substations / generating stations are essential for safety, security and reliable operation of the system.

The Sub-committee noted as above.

C.3 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:

During 87th OCC, the committee decided that the UFR based load shedding will be as follows:

The 60% of NER's peak load (i.e. about 1800 MW) = 1080 MW. The amount of load shedding for NER could be as follows:

Sl. No.	Stages	Frequency (in Hz)	Amount of Load shedding (in %)	Amount of Load shedding (in MW)
1	Stage-I	49.2	10%	108
2	Stage-II	49.0	10%	108
3	Stage-III	48.8	15%	162
4	Stage-IV	48.6	15%	162
	Total load shedding			**540**

Meanwhile CEA vide their letter dated 22.07.2013 had intimated that during the 2nd NPC meeting held on 16.07.2013, the Committee had decided to ~~revised~~ revise the quantum of load shedding under UFRs for NER could be as follows:

Sl. No.	Stages	Frequency (in Hz)	Amount of Load shedding (in MW)
1	Stage-I	49.2	100
2	Stage-II	49.0	100
3	Stage-III	48.8	100
4	Stage-IV	48.6	100
	Total load shedding		**400**

Further CEA vide their letter dated above had requested that the scheme should be implemented within three months as agreed in the NPC meeting and monthly progress report of implementation should be communicated to CEA regularly.

Deliberation of the Committee

SE (O) informed that NERPC have worked out the quantum of UFR based load shedding required at different stages by each constituents in NER as per the formula adopted in Special TCC meeting of NERPC held in 2009 as below:

SN	Stages	Frequency (in Hz)	State-wise Load Shedding	Total Load shedding (in MW)
1	Stage-I	49.2	Arunachal = 5 MW Assam = 55 MW Manipur = 5 MW Meghalaya = 15 MW Mizoram = 5 MW Nagaland = 5 MW Tripura = 10 MW	100
2	Stage-II	49.0	Arunachal = 5 MW Assam = 55 MW Manipur = 5 MW Meghalaya = 15 MW Mizoram = 5 MW Nagaland = 5 MW Tripura = 10 MW	100

3	Stage-III	48.8	Arunachal = 5 MW Assam = 55 MW Manipur = 5 MW Meghalaya = 15 MW Mizoram = 5 MW Nagaland = 5 MW Tripura = 10 MW	100
4	Stage-IV	48.6	Arunachal = 5 MW Assam = 55 MW Manipur = 5 MW Meghalaya = 15 MW Mizoram = 5 MW Nagaland = 5 MW Tripura = 10 MW	100
			Total load shedding	**400**

All constituents agreed to the above proposal. The Sub-committee requested all constituents to identify and furnish the list of feeders for above quantum of UFR based load shedding in their respective States so that the same can be finalized in the next OCC/PCC meetings.

The Sub-committee noted as above.

C.4 Lines under long outages

The status for restoration of these lines as reviewed in the 87th OCC meeting is as follows:

(a) 220kV BTPS – Agia line (one ckt) – Tender has already been opened and order is likely to be placed by April, 2013 and the target for completion of work is January, 2014.

(b) 132kV Mariani – Mokokchung line – during 83rd OCC meeting, AEGCL informed that the line was charged but tripped immediately after charging due to faults in some portion of the lines under Nagaland. During 84th OCC meeting, the representative of Nagaland informed that the work of replacement of some insulators is under progress. After completion of replacement work, the line can be charged. The status could not be updated since there was no representative from Nagaland

(c) 39km of 132kV Rengpang – Jiribam line – Manipur informed that stringing of line is complete and work at termination point near substation is going on; the same will be completed by July, 2013.

(d) 132 kV Dimapur - Dimapur - II line – POWERGRID informed that Nagaland has agreed to the proposals made by them and the issue will be resolved soon. Nagaland representative informed that some local arrangement is being done to charge the Kohima line directly from Dimapur S/S and the work is likely to be completed by April 2013. As soon as the work is over, the problem with 132 kV Dimapur - Dimapur - II line will be resolved in association with POWERGRID. The status could not be updated since there was no representative from Nagaland.

Deliberation of the Committee

The status for restoration of these lines as reviewed in the 88th OCC meeting is as follows:

(a) 220kV BTPS – Agia line (one ckt) –Material has already been procured and the target for completion of work is January, 2014.

(b) 132kV Mariani – Mokokchung line – during 83rd OCC meeting, AEGCL informed that the line was charged but tripped immediately after charging due to faults in some portion of the lines under Nagaland. During 84th OCC meeting, the representative of Nagaland informed that the work of replacement of some insulators is under progress. After completion of replacement work, the line can be charged. Representative from DoP, Nagaland informed that the work is in progress to revive this line by replacing the insulators, checking the jumpers, conductor etc. Further, he informed that the work is likely to be completed by September, 2013. **Status could not be updated since no representative from Nagaland was present.**

(c) 39km of 132kV Rengpang – Jiribam line – During 86th OCC meeting the representative of Manipur had informed that stringing of line is complete and work at termination point near substation is going on; the same will be completed by July, 2013. **The status could not be updated since no representative from Manipur was present.**

(d) 132 kV Dimapur - Dimapur - II line – POWERGRID informed that Nagaland has agreed to the proposals made by them and the issue will be resolved soon. Nagaland representative informed that some local arrangement is being done to

charge the Kohima line directly from Dimapur S/S and the work is likely to be completed by April 2013. As soon as the work is over, the problem with 132 kV Dimapur - Dimapur - II line will be resolved in association with POWERGRID. Representative from DoP Nagaland informed that since Kohima is State capital and it will be difficult to give consent unless power is assured from Karong side. He further mentioned that POWERGRID had intimated that they will take up with DoP Manipur to check the healthiness of the line and communication link between Kohima and Karong before taking shutdown to take up LILO work at Dimapur, but the same has not been carried out by them. **Status could not be updated since no representative from Nagaland was present.**

The Sub-committee expressed disappointment that issues could not be updated in the meeting due to non representative from constituents and requested NERPC to refer the matter to 14th NERPC Meeting as no positive outcome has been observed so far.

The Sub-committee noted as above.

C.5 SPS scheme for Pallatana

During 84th OCC meeting, the committee reviewed the nomination for System Study Group; the nominations were as given below:

Ar. Pradesh – Shri Tarik Mize, Executive Engineer.
Assam – Navjit Patir, AEGCL.
Manipur – Shri N. Jasobanta Singh, AE & Shri Th. Bimol Singh, AE
Mizoram- Sh. C.C.Lalrimwala, SDO & Sh. Zoramdina, AE
Meghalaya – Sh. D.J. Lyngdoh, AEE, SLDC & Sh. L. Nongkhlaw, AEE, SLDC
Nagaland- Sh. S. Longkumer, SDO, Sh. H. Assumi, SDO & Sh. C. Walling, SDO
Tripura – Sh. Mrinal Paul, Manager & Sh. Anwesh Choudhury, Manager.
NEEPCO – Sh. Bhaskar Goswami, Sr. Manager.
NERLDC – Sh. A. Mallick, CM & Sh. Anupam Kumar, Engineer
NERTS – Sh. P. Kanungo, DGM & Sh. Supriya Paul, Dy Manager
OTPC – Sh. Tapas Karmakar, Asstt. Manager
NERPC – Sh. Lalrinsanga, EE & Sh. S.M. Jha, EE

IIT, Guwahati - nomination will be taken up by NERPC Secretariat.

During 84th OCC meeting, NERLDC gave the presentation on system studies associated with System Protection Scheme (SPS) under following conditions:

Case 1: Tripping of generating unit of OTPC at Palatana

Case 2: Tripping of 400 kV D/C Palatana-Silchar line

Case 3: Tripping of 400 kV Silchar-Byrnihat line,

NERLDC informed that the study was carried out by taking the base case of NER peak and off-peak conditions in July, 2013.

During off-peak hours, the above trippings may not create serious problem. But during peak hours, above trippings may lead to grid disturbance.

As pre-condition, for successful operation of the proposed System Protection Scheme (SPS), the following lines should be kept in open condition for all the three cases mentioned above

- 132 kV D/C Khliehriat(PG) – Khliehriat(MeECL) lines at Khliehriat(MeECL)
- 132 kV Khliehriat(MeECL) – NEHU line
- 132 kV Khliehriat(MeECL) – NEIGRIHMS line
- 132 kV Pailapool – Jiribam line at Jiribam end

The scheme for all the three cases will be as follows:

Case 1: <u>When Palatana unit trips:</u>

i. When generator at Palatana trips a signal will be generated from trip relay of the unit.

ii. This signal should trip the CB of 132 kV Silchar – Srikona D/C & 132 kV Silchar – Panchgram lines at Silchar.

iii. Subsequent to tripping of 132 kV Silchar – Panchgram line, the CB at Badarpur of 132 kV Badarpur – Panchgram line should be tripped.

iv. After these trippings an instant load of 80 MW will be relieved during off-peak hours & 130 MW will be relieved during peak hours which will prevent the system from cascade tripping

v. Then manual demand disconnection/management should be imposed.

Case 2: <u>When 400 kV Palatana-Silcher (D/C) lines trip</u>

i. When both the ckts of 400 kV Palatana – Silchar lines trips, a signal will be generated from trip relays at Silchar

ii. This signal should trip the CBs at Silchar end of 132 kV Silchar – Srikona D/C & 132 kV Silchar – Panchgram lines.

iii. Subsequent to tripping of 132 kV Silchar – Panchgram line, the CB at Badarpur end of 132 kV Badarpur – Panchgram line should be tripped.

iv. After these trippings an instant load of 80 MW will be relieved during off-peak hours & 130 MW will be relieved during peak hours which will prevent the system from cascade tripping

v. Then manual demand disconnection/management should be imposed.

Case 3: <u>400 kV Silchar – Byrnihat line</u>

i. When 400 kV Byrnihat – Silchar lines trip, signal will be generated from trip relays at Silchar

ii. This signal should trip CB of GTG/STG of Generating Unit at Palatana. But unit may run in Full Speed No Load (FSNL) condition.

iii. An instant relief of load of 230/130 MW will prevent the system from cascade tripping.

v. Then manual demand disconnection/management should be imposed.

The committee deliberated in details about trippings under above three conditions and requested POWERGRID to check the feasibility for implementation of the above schemes. Further, the committee requested all constituents to go through the schemes and give their suggestions/comments before finalization of the schemes.

MS I/C, NERPC informed that the SPS should be in place before trial operation of Unit #1 of OTPC for safe operation of the grid and requested POWERGRID & OTPC to take early necessary action for designing the scheme including inter-tripping arrangement for successful implementation of the proposed SPS scheme. All constituents agreed to give their comments in the next OCC/PCC meeting to finalize the SPS.

During the 86th OCC meeting, the representative of OTPC informed that necessary action has already been taken at their end for successful implementation of the proposed SPS pertaining to tripping of generating Unit#1 (Case-I). The auxiliary contact of CB has been wired upto PLCC panel in consultation with POWERGRID.

DGM, NERLDC stated that the backing down of generation manually will not solve the problem the scheme should operate automatically.

EE(O), NERPC informed that the SPS scheme for Case 2 may be reviewed as it may require backing down of generation /tripping of GT/STG of Unit #1 of OTPC.

OTPC requested the forum that the SPS pertaining to other two cases [Case-II & Case-III], requiring automatic tripping of STG/GT of generating Unit#1, needs further discussion. The tripping of STG may lead to reduction of generation to a very low level. Hence detail discussion is required with BHEL, POWERGRID, NERLDC and NERPC before implementation of the SPS for Case II &III.

Meghalaya stated that Leshka HEP has started full generation and since so many Meghalaya lines are kept in open condition for implementation of SPS, NERLDC need to ensure the evacuation of full generation of power of Leshka HEP.

After detailed deliberation, the committee suggested that the system study group need to study the proposal in detail, particularly SPS pertaining to Case-II & III and prepare action plan for implementation of SPS.

Deliberation of the Committee

DGM, POWERGRID informed that the end-to-end testing of SPS scheme was carried out jointly with the representatives of Pallatana on 26.07.2013. At present, the scheme has been kept in SWITCHED OFF condition.

Meanwhile NERLDC informed that the SPS scheme, when there is generation from OTPC's plant at Palatana, has already been deliberated and is under implementation. However, the new SPS scheme, when there is no generation from the power plant at Palatana, has also been studied by NERLDC. NERLDC gave the presentation on the new SPS scheme and the same is enclosed at **Annexure-C.5**.

After detailed deliberation, the Sub-committee decided that the issue shall be discussed further and finalized on 20th August, 2013 at NERLDC, Shillong and requested OTPC to attend the above meeting along with representative of BHEL. The sub-committee also desired for participation of members of system study group and requested all constituents to nominate the concerned persons for participation in the meeting. This will be the first meeting of system study group. The issues relating to various system studies required for NER network and individual state network shall also be discussed so that constituent states can carry out various studies independently in consultation with NERLDC.

The Sub-committee noted as above.

C.6 Implementation of islanding scheme in NER

During the 87th OCC meeting, the committee had decided the following islanding scheme and associated frequencies levels for creation of islands in NER:

SN	Islanding Scheme	Frequency
1.	Island comprising of generating units of AGBPP, NTPS & LTPS and loads of Upper Assam system & Deomali area [Total Generation: 380-400MW and load: 200-300MW]	48.80 Hz
2.	Island comprising of generating units of AGTPP, generating units at Baramura, Rokhia & Gumati (Hydro) and loads of Tripura system & Dullavcherra area [Total Generation: 150-160MW and load: 110-150MW]	48.20 Hz
3.	Isolation of NER from NEW grid at ER-NER boundary with rest of the generation and load of NER	47.90 Hz

Further, the committee suggested for discussion with ER regarding isolation of NER from NEW grid at ER-NER boundary. All constituents were requested to study the proposal so that the matter can be discussed further for finalization.

Deliberation of the Committee

MS I/C informed that the islanding scheme 1 & 2 mentioned above was agreed by the committee and hence these two schemes should be implemented at the earliest. There is no financial implication for UFRs as the inbuilt feature of Numerical relays, provided for protection of the corresponding line (s) at identified location would be used. Regarding the Case – III above, the matter was highlighted in 2nd NPC meeting held at CEA, Delhi on July 16, 2013. The SE (O), WRPC volunteered to help for studying the third islanding scheme proposed in the NER system i.e. isolation of NER from ER at ER-NER boundary. All the relevant data collected from NERLDC, has already been forwarded to WRPC for studying the case. After completion of study, SE(O), WRPC will share his views on above proposal and accordingly the outcome will be communicated to constituents of the region. The following implementation plan, proposed by NERPC was discussed.

SN	Islanding Scheme	Lines required to be opened	UFR Location	Implementing Agency
1	**ISLAND AT 48.80 Hz:** Island comprising of generating units of AGBPP (Gas), NTPS (Gas) & LTPS (Gas) and loads of Upper Assam system & Deomali area (Ar. Pradesh) **[Total Generation: 380-400MW and load: 200MW (off peak)-300MW (peak)]**	(a) 220 kV New Mariani (PG) – AGBPP	UFR-1 [At New Mariani (PG)]	**POWERGRID**
		(b) 220 kV New Mariani (PG) – Misa		
		(c) 220 kV Mariani – Misa	UFR-2 [At Mariani, Samaguri of AEGCL]	**AEGCL**
		(d) 220 kV Mariani – Samaguri		
		(e) 132 kV Mokukchung – Mariani		
		(f) 132 kV Dimapur (PG) – Bokajan	UFR-3 [At Dimapur (PG)]	**POWERGRID**
2	**ISLAND AT 48.20 Hz:** Island comprising of generating units of AGTPP (Gas), generating units at Baramura (Gas), Rokhia (Gas) & Gumati (Hydro) and loads of Tripura system & Dullavcherra area (Assam) **[Total Generation: 150-160MW and load: 110MW (off-peak)-150MW (peak)]**	132 kV Palatana – Udaipur	UFR-1 [At Palatana]	**OTPC**
		132 kV Palatana – Surjamani Nagar		
		132 kV Silchar – Dullavcherra	UFR-2 [At Silchar]	**POWERGRID**
		132 kV AGTPP – Kumarghat	UFR-3 [At Kumarghat]	**POWERGRID**
		132 kV P K Bari – Kumarghat		
3	**ISLAND AT 47.90 Hz:** Isolation of NER from NEW grid at ER-NER boundary with rest of the generation and load of NER	To be decided after system study		

NOTE: The UFR as in-built feature of Numerical relays provided for protection of the corresponding line (s), if available, at identified location may be used.

The committee suggested for discussing and finalizing the above issue in the PCC meeting.

The Sub-committee noted as above.

C.7 Loadability Enhancement of 132KV Transmission lines:

NERLDC has requested POWERGRID, vide their letter No.NERLDC/GM/547 dtd 14.11.2012 for enhancement of loading capacity of the following lines:

a) 132KV S/c Badarpur-Khliehriat Line (77 KM)
b) 132KV S/c Loktak-Jiribam-II Line (82 KM)
c) 132KV S/c Dimapur-Imphal Line (169 KM)
d) 132KV S/c Imphal-Loktak-II Line (35 KM)

NERLDC has stated that enhancement of loading capacity of the above lines is required for higher load dispatch, particularly in the context of evacuation of power from Pallatana GBPP.

Accordingly, POWERGRID has already taken the following actions for increased loadability:

Upgradation of existing CTs

Upgradation of the terminal CTs of 132KV S/C Loktak-Jiribam_II line, 132KV S/c Dimapur-Imphal line is being taken up by POWERGRID for which the required number of CTs of higher capacity (600/1) had already been ordered by POWERGRID & subsequently dispatched from the manufacturer premises in the month of July-12. However, 10Nos. CTs were damaged during transit. The matter has been taken up with the concerned manufacturer for replenishment of the damaged CTs. The new CTs expected to arrive at site by January'13.

Installation of the same shall be carried out on arrival of the new CTs. As for 132KV Badarpur-Khliehriat line, the terminal CTs installed are of 600/1 capacity.

During 80th OCC meeting, NERLDC requested to include following lines for enhancement of loading capacity:

i) 132 kV Khandong- Khlerehiet –I
ii) 132 kV Khandong - Haflong

The committee requested POWERGRID to complete the CT replacement of the above lines at the earliest to increase the loadability of these lines.

During 83rd NEEPCO informed the house that tenders are yet to be called for procurement of CTs**.**

POWERGRID informed that the work for enhancement of loading capacity of the above lines will be completed by June, 2013.

NEEPCO informed that the work for enhancement of loading capacity of 132 kV Khandong- Khliehriat –I & 132 kV Khandong - Haflong lines will be completed by Jan, 2014. However, NEEPCO also requested for inclusion of cost of the required CTs in the DPR, likely to be prepared based on findings of protection audit team.

Deliberation of the Committee

NEEPCO informed that the procurement of CTs for Khandong – Khliehriat and Khandong-Halflong is in progress and the work will be completed by January, 2014.

The Sub-committee noted as above.

Fixing of Additional Jumpers:

Fixing of additional jumpers at Tension Locations of 132KV Dimapur-Imphal line has been completed while that for 132KV Jiribam-Loktak_II line is planned for execution in the month of January-13.

In addition to the above, additional jumpering is now planned to be taken up for 132KV Loktak-Imphal-II & Badarpur-Khliehriat lines in line with NERLDC's observation.

During 83rd OCC meeting, POWERGRID intimated that the fixing of additional jumpers in 132 KV Loktak – Jiribam – II line has been completed on 01.03.2013. Also fixing of additional jumpers in 132 KV Badarpur – Khliehriat line & 132 KV Loktak – Imphal – II line the order for special connectors has already been placed by them and the same is likely to be delivered at site by 20.03.2013. Accordingly, the work is planned to be started w.e.f. 25.03.2013 in 132 KV Badarpur – Khliehriat line followed by 132 KV Loktak – Imphal – II line.

POWERGRID informed that the fixing of modified connectors is under progress and the work is likely to be completed as per schedule.

Deliberation of the Committee:

DGM, POWERGRID informed that the current status of existing CTs & Additional jumpering in identified transmission lines is as below:

SN	Line for loadability enhancement	Status of Up-gradation of existing CTs (300/1) to higher capacity CTs (600/1)	Fixing of additional jumpers at all tension locations
1	132 KV S/C Loktak – Jiribam II	Complete	Complete
2	132 KV S/C R.C. Nagar – Kumarghat	Complete	Complete
3	132 KV S/C Aizawl – Kumarghat	Complete	Complete
4	132 KV S/C Nirjuli – Ranganadi	Complete	Complete
5	132 KV S/C Dimapur – Imphal	Planned in Aug, 13	Complete
6	132 KV S/C Badarpur – Khliehriat	Complete	Complete, except for 20 locations. Expect to complete Sept, 2013
7	132 KV S/C Loktak – Imphal II	Complete	Planned in Oct, 13. Materials under procurement

The Sub-committee noted as above.

C.8 LGBR for 2013 -2014:

SE (O), NERPC informed that during the 87th OCC meeting, all the STUs, Generators and POWERGRID were requested to submit the outage planning for Generating units as well as important transmission elements which affects the operation of the NER grid at the earliest so that same can be included in LGBR before circulation. However only POWERGRID have furnished the data. He once again requested all the concern constituents to submit the data at the earliest.

The Sub-committee noted as above.

C.9 Grid Security Expert System (GSES):

POWERGRID has planned an automated defense plan for all five regions named as Grid Security Expert System (GSES). The Region wise estimated cost based on the feeders identified by POSOCO including IDC shall be as follows:

S.N	Subject	NR	SR	WR	ER	NER	All India
1.	Estimated DPR cost of GSES (in Rs. Crores)	82.59	42.13	124.85	55.42	49.47	354.46
2.	Number of Feeders	1064	763	1502	503	410	4242
3.	Estimated DPR cost of OPGW based communication system (in Rs. Crores)	141.61	368.37	174.24	83.18	80.42	847.82
4.	Length of OPGW	4967	14706	6111	2868	2688	31340
	Total Estimated cost (in Rs. Crores)	224.20	410.50	299.09	138.60	129.89	1202.30

The GSES was discussed in detail in last Special TCC held at Shillong on 9th February, 2013. After detailed deliberation the following decisions of the TCC was conveyed to CERC.

1. All constituents agreed in principle to the technical requirement of the GSES scheme for NER grid.
2. The basic infrastructure at most of Sub-station like circuit breakers, protection relays, etc. are not adequate for implementation of the scheme.
3. There are no full fledged SLDCs in Ar. Pradesh, Manipur, Mizoram and Nagaland.
4. Funding is major concern as NER states are financially weak.
5. The quantum of UFR based load shedding needs to be relooked for NER States.
6. More deliberation on technical and commercial issues is required before formulation/implementation of the scheme.

All constituents had agreed in principle to the technical requirement of the GSES scheme for NER grid, but more deliberation on technical and commercial implication was required before formulation / implementation of the scheme.

During the 87th OCC meeting, SE (O) informed that NERPC have mailed once again the break up details & cost of OPGW as received from POWERGRID to all the constituents, but comments have been received only from Assam & Tripura till date.

The committee requested all State constituents to go through the details pertaining to GSES and communicate their comments/feedback to LDC Division PGCIL and NERPC so that the matter can be discussed further in next TCC/RPC meeting.

Deliberation of the Committee

SE (O) once again informed that comments/observations have been received only from Assam, Tripura & Mizoram till date. He requested all the constituents to submit any comments pertaining to their states latest by 20th August, 2013 so that the same can be forwarded to POWERGRID.

The Sub-committee suggested that the comments/observations received from Assam, Tripura and Mizoram should be forwarded to LD&C Division of POWERGRID and comments /observations from other constituents can be forwarded to POWERGRID as and when received from them.

The Sub-committee noted as above.

C.10 Release of day ahead drawal schedule based on actual requisition by Constituents instead of open and full capacity requisition:

During the 87th OCC meeting, NERLDC gave a presentation on requisition based scheduling and highlighted the difficulties likely to be encountered. During the presentation, the format in which schedule for 96 time blocks should be submitted was explained and the importance of minimum technical limit, ramp rate of machine, dead band of hydro machines etc. were also explained to the constituents.

DGM, NERLDC requested all the constituents to submit the data in the prescribed format so that mock exercise can be carried out.

After detail deliberation, for the benefit of constituents, the Sub-committee decided to start the mock exercise w.e.f. 22.07.2013 and the status will be reviewed in the next OCC meeting.

Deliberation of the Committee

The Sub-committee enquired from NERLDC about the current status and requested NERLDC to highlight about the difficulties likely to be encountered by them in the process of implementation of requisition based scheduling.

DGM, NERLDC informed that only some States used to submit the data regularly for the mock exercise, which was started from 22-07-2013 as a preparation for implementation of requisition based schedule as per decision in 87th OCC meeting. He requested the constituents to ensure that requisitions of demand is submitted to NERLDC on daily basis in prescribed format (block-wise for 96 blocks and for each station) without which requisition based scheduling cannot be implemented. He also informed that in case of revisions in generation/DC from the generating stations, ideally constituents have also to revise their requisition accordingly. Revision in requisition from hydro stations should be avoided as it will affect 4th day schedule. He also stated that during the initial period of implementation of the scheme there might be teething problems and it would take some time for stabilization.

On the issue of revision by ISGS, TSECL representatives opined that full or curtailed requisition initially submitted by the constituents may be considered for subsequent revisions also**.** Members supported the view and also opined that in case of non-submission of requisition by any constituent due to unavoidable reasons, full share of that constituent may be considered for preparation of schedule.

After detail deliberation, for the benefit of constituents, the Sub-committee decided to implement the requisition based scheduling w.e.f 27.08.2013 (based on requisition submitted by the constituents on 26-08-2013). Constituents have to furnish the requisition by 26.08.2013 accordingly. The constituents are requested to submit the data on daily basis to NERLDC till 25-08-2013, which will be treated as mock exercise to familiarize the constituent states before implementation on 27-08-2013. NERLDC was also requested to intimate the constituent state(s), if any discrepancy is observed in the submission of requisition so that they can rectify their mistakes during the period of mock exercise.

Similarly, generating stations should submit their minimum technical requirement, ramp up rate of machine, dead band of hydro machines etc. to NERLDC so that the new system is implemented successfully. The Sub-committee requested the constituent states to bear with the problems likely to be encountered during initial phases and co-operate with NERLDC for successful implementation.

The constituents have agreed for full support and co-operation. The status will be reviewed in the next OCC meeting.

The Sub-committee noted as above and agreed to co-operate with NERLDC.

C.11 Maintenance of Isolators at 79 Tilla S/S:

Tripura informed that maintenance work of 6 nos of isolators at 79 Tilla Grid s/s which are connected with 132 KV R C Nagar L-I & L – II have been pending since a very long time. Power Grid had done only partial maintenance work on 3 (three) isolators out 6 (six). The remaining work of isolators along with Earth switches is very urgent from operational point of view.

During the 87th OCC meeting, POWERGRID informed that purchase order of materials for the above work has been placed and work is expected to be completed by September, 2013.

Deliberation of the Committee

DGM, POWERGRID informed that materials are expected soon and the work will be completed in September, 2013.

The Sub-committee noted as above.

C.12 Installation of Harmonic Filters:

During the 87th OCC meeting held on 09.07.2013, representative from DoP, Ar. Pradesh informed that the material for the above work has already been procured as per the specification of POWERGRID and the material has reached the site. He requested POWERGRID to send their representative to check and verify so that Ar. Pradesh can pursue with Satyam Steel Plant to install the filters at the earliest. POWERGRID agreed.

POWERGRID vide letter dated 24.07.2013 informed that they have deputed their engineer to visit the plant on 10.07.2013 and found that they were carrying out the installation work. However, on 11.07.2013 the GM of the plant informed that the filters got burned during charging. Further, POWERGRID engineer verified the purchase order and challan of the equipment and found out that the purchase order is as per the specification of CPRI, however, the challan is not as per the specifications.

The installation of Harmonic Filter took place after prolonged period of 2/3 years and unfortunately, when the same was charged immediate failure occurred. The matter is required to be investigated properly for installation of proper equipment and accordingly DoP, Ar. Pradesh may take up the issue strongly with M/S Satyam Steel Plant for early installation of filters so that the problem of harmonic stress on the equipments can be eliminated.

Deliberation of the Committee

EE, SLDC, DoP, Ar. Pradesh informed that the matter has been taken up with Satyam Plant and power supply will not be resumed to the plant until the work of installation of harmonic filter is completed. The status will be updated to the forum from time to time.

The Sub-committee noted as above.

C.13 Telemetry Data/Voice Communication of Bongaigoan TPP:

NERLDC vide their letter dated 05.06.2013 had informed that the 1st Unit of Bongaigoan TPP (3 x 250 MW) of NTPC is expected to be commissioned during May/June, 2014. In this regard, this is to state that before commissioning of the project, the connectivity conditions pertaining to Telemetry Data/Voice Communication systems in terms of clause 4.6.2 of IEGC 2012 read with clause 6(3) of CEA (Technical Standards for connectivity of the Grid) Regulations, 2007 are fully met and the real time data of the said project be made available in the SCADA database of NERLDC along with voice communication systems at the time of commissioning.

Deliberation of the Committee

Since there was no representative from NTPC, the issue could not be discussed.

The Sub-committee noted as above.

C.14 Poor Availability of Auxiliary Supply at various Sub-stations of POWERGRID in NER:

In line with the MOM of 87th OCC Meeting the issue has been taken up with concerned utilities to look into the matter and improve the availability & reliability of existing source from which auxiliary power supply is provided to following Sub Stations of POWERGRID, NER:

SN	Station	Present Availability	Communication Made	Status / Action Plan
1	Bongaigaon SS	60%	The CGM (D), LAR	
2	Salakati SS	60%	The CGM (D), LAR	
3	Kumarghat SS	80%	AGM (CS & O), TSECL	
4	Misa SS	20%	The CGM (D), CAR	
5	Balipara SS	75%	The CGM (D), CAR	
6	Badarpur SS	60%	The CGM (D), LAR	

Deliberation of the Committee

CGM, LDC, AEGCL enquired from POWERGRID about the percentage mentioned above, whether it is only the availability or the reliability also. Further, he requested POWERGRID to intimate the quantum of auxiliary load requirement at each substation mentioned above.

DGM, POWERGRID informed that both availability & reliability is necessary for smooth operation of the grid. Regarding the quantum of load, he stated that there is no change in requirement of auxiliary load in the above stations, however, the same will be submitted to AEGCL.

CGM, LDC requested POWERGRID to keep in touch with the concerned person of above substation and inform them about the non-availability of power supply as and when it occurs and AEGCL will also pursue the matter for improvement in availability of reliable auxiliary supply, which is required for the benefit of the grid.

The Sub-committee noted as above.

C.15 Provision of 2nd Source for Auxiliary Supply at various Sub-stations of POWERGRID in NER:

In line with the MOM of 87th OCC Meeting the issue has been taken up with concerned utilities to look into the matter and identify the second independent source through which redundant auxiliary power supply can be provided to the sub stations of POWERGRID, NER. Further, our representative has also discussed with the in-charge of local stations and the status is as below:

SN	Station	Communication Made	Status / Action Plan
1	Bongaigaon	CGM (D), LAR	Applied for a second source to DGM, APDCL, Kokrajhar. Response is being awaited till now. ***APDCL may please expedite***
2	Salakati	CGM (D), LAR	
3	Kumarghat	AGM (CS & O), TSECL	Already has a 33 kV Connection apart from the existing 11 kV connection in use. The 33/0.4 kV Transformer is to be commissioned. ***No issue***
4	Misa	CGM (D), CAR	Applied to SDO, Kathiatoli, for a second source. APDCL is to give estimate. ***APDCL may please expedite***

SN	Station	Communication Made	Status / Action Plan
5	Balipara	CGM (D), CAR	Applied to SDO, Balipara for a second source. DGM PDCL, Tezpur confirmed that a 33 kV Line can be extended from Ghoramari S/S. Survey is to be conducted and estimate to be prepared. ***APDCL may please expedite***
6	Badarpur	CGM (D), LAR	Applied to DGM, APDCL, Panchgram for a second 33 kV connection, who has confirmed it's feasibility but yet to submit cost estimate to POWERGRID. ***APDCL may please expedite***
7	Dimapur	The Addl. Chief Engineer, DoP, NL	Applied to Ex. Engr, Dimapur who has confirmed verbally that there is no provision for a second source. ***Issue may be discussed***
8	Haflong	CGM (D), LAR	Applied to AGM, APDCL, Haflong who has confirmed that there is no provision for a new 33 kV connection. However he has confirmed that a 33 kV connection is possible from the 132/33 kV Haflong Grid Substation and requested to take up the matter with AGM, AEGCL, Silchar. ***AEGCL may please comment***
9	Aizawl	Chief Engineer (Distribution) P & E Deptt.	Taken up with P&E Deptt. and it is confirmed that a second 11 kV connection is possible from Luangmual S/S. POWERGRID to request P&E Deptt. for an estimate for the new connection. ***P&E, Mizoram may please expedite***
10	Nirjuli	Chief Engr(P) WEZ,DOP, AP	POWERGRID, Nirjuli will approach DoP, AP shortly. ***DoP, AP may please expedite***

Deliberation of the Committee

CGM, LDC requested POWERGRID to keep in touch with the concerned person of above substation and inform them about the non-availability of power supply as and when it occurs and AEGCL will also pursue the matter for improvement in availability of reliable auxiliary supply, which is required for the benefit of the grid.

DGM, TSECL informed that their proposal has already been communicated and requested POWERGRID to take up the matter with concerned authority so that the work can be completed at the earliest. EE, SLDC, Ar. Pradesh also agreed with the proposal of Tripura. He also requested POWERGRID to take up the matter with concerned authority of DoP, Ar. Pradesh for early necessary action.

Since no representatives from Mizoram & Nagaland were present in the meeting, the Sub-committee requested POWERGRID to take up the issue directly with them.

The Sub-committee noted as above.

C.16 Monthly MU requirement & availability of each state of NER as per format:

Requirement

Name of State	Jun13	Jul13	Aug13	Sep13	Oct13
Arunachal Pradesh					
Assam					
Manipur					
Meghalaya					
Mizoram					
Nagaland					
Tripura					

Availability

Name of State	Jun13	Jul13	Aug13	Sep13	Oct13
Arunachal Pradesh					
Assam					
Manipur					
Meghalaya					
Mizoram					
Nagaland					
Tripura					

These data required for system study, daily report, computation of TTC-ATC etc.

During the 87th OCC meeting all constituents have agreed to furnish the data as per format above, but till date no constituents have submitted the data.

Deliberation of the Committee

DGM, NERLDC informed that the above data have not been received by them, he once again requested all the constituents to submit the same at the earliest.

The Sub-committee noted as above.

C.17 Energy Audit & Energy Account Circulation:

Energy Metering System for regional energy accounting are installed & maintained by PGCIL. Energy audit in calibration of Energy Metering Systems has so far been not found conducted and reports not circulated to any constituent/beneficiary. Under ABT regime the accuracy of meter reading and compilation of meter data is very much essential for satisfactorily settlement of commercial issues. It is therefore, proposed to carry out calibration of all energy metering system by CPRI and conduct energy audit by Third Party Agency (TPA).

During 87th OCC meeting, the Committee requested POWERGRID to carry out the calibration of all energy meters, which are in operation for more than five (5) years, through external agency as per requirement of CERC.

Deliberation of the Committee

DGM, POWERGRID informed that all the Energy Meters, which are in service, are less than 5 years old. He requested NERLDC to list out the meters which are likely to complete 5 years of service so that necessary action can be taken up by POWERGRID accordingly.

The Sub-committee noted as above.

C.18 Non-submission of weekly SEM readings by Deomali (Ar. Pradesh) & Rengpang (Manipur):

Rengpang and Deomali are drawal points of Manipur and Ar. Pradesh respectively. Weekly SEM readings are not being received from these locations. Installation of Meter at Motonga SS in 132kV Rangia Bay not done, in spite of discussion/decision in CCM.

During 87th OCC meeting, EE/SLDC, Itanagar informed that the DCD of Deomali is not working and requires replacement. The Sub-committee requested POWERGRID to look into the matter for early replacement. Manipur representative was absent so Rengpang issue could not be discussed.

Deliberation of the Committee

DGM, POWERGRID informed that DCD for Deomali (Ar. Pradesh) have already been arranged from Misa substation which Ar. Pradesh is to collect deputing their representative to Misa substation.

EE, SLDC, Ar. Pradesh informed that he will request the concerned engineer to collect the meter from Misa.

Regarding the installation of Meter at Motanga, he informed that the same has been arranged, but during last shut down, the replacement work could not be done due to on-going bandh / strike in lower Assam. The installation will be done in next opportunity. He further informed that the Meter meant for Motanga has been installed at Rangia end along with existing meter for trial run and the same is found to function properly.

The Sub-committee noted as above.

C.19 Procurement of Notebooks/Laptops instead of DCDs:

During 20th CC meeting, NERTS representative informed that action for procurement of lap tops could not be taken up as details viz. number of laptops, location where laptops are to be provided etc. has not been finalized. In 19th CC meeting, NERTS had agreed to go for lap tops (in place of DCDs) in next round of procurement.

During 20th CC meeting, the representative of Assam suggested that spare DCDs / laptops with required software should be made available along with internet facility in nearby area / at a centralized location to meet any contingency requirement.

During 87th OCC meeting, the Sub-committee requested POWERGRID to procure the laptops instead of DCD as laptops are cheaper than DCD as the same has already been discussed and approved in the 19th CC & 20th meetings. POWERGRID was also requested to finalize the quantities in consultation with NERLDC.

Deliberation of the Committee

DGM, POWERGRID informed that the matter has already been discussed with GM, NERLDC regarding onetime procurement of meters based on the requirement for next 4 to 5 years. POWERGRID will intimate NERLDC about the list of projects likely to come in next 4 to 5 years time so that NERLDC can finalize the quantity of Meters, DCDs & Laptops required for next 4 to 5 years and accordingly inform POWERGRID for procurement.

The Sub-committee noted as above.

C.20 Concurrence of AMR Project:

During 20th CC meeting, it was agreed that PGCIL will give detail presentation along with back up arrangement to take care of failure of AMR in next OCC meeting.

During 87th OCC meeting, DGM, POWERGRID informed that presentation of above AMR Project will be given in the next OCC meeting.

Deliberation of the Committee

POWERGRID gave the presentation of AMR project and the same is enclosed at **Annexure – C.20.**

The Sub-committee appreciated the importance of AMR and its merits. However, sub-committee requested NERPC to circulate the above presentation along with the minutes of OCC so that constituents can go through the merits & demerits of the project and give their comments/observations before finalization.

The Sub-committee noted as above.

D. NEW ITEMS

D.1 Proforma for Operational Statistics

The operational Statistics as given below was not furnished in the meeting.

(i) – Schedule Vs Actual Generation.

(ii) – Peak Demand: Schedule Vs Actual.

(iii) – Integrated Operation of the system.

(iv) – Details of DC, schedules and injections from Central sector stations, drawal schedules and entitlements of constituents.

(v) – Details of major reservoirs in NER.

The operational statics were shown in the presentation by NERLDC.

The Sub-committee noted as above.

D.2 State-wise anticipated peak demand/requirement, shortage for August-December, 2013.

The sub-Committee reviewed & finalized the anticipated peak demand/energy requirement/Availability (without Pallatana generation) for the months of August to December, 2013.

A. Peak Demand

SN.	State	Peak Demand (MW) Aug' 13	Peak Demand (MW) Sep' 13	Peak Demand (MW) Oct' 13	Peak Demand (MW) Nov' 13	Peak Demand (MW) Dec' 13
1	Ar. Pradesh	130	130	130	130	130
2	Assam	1300	1350	1350	1350	1350
3	Manipur	130	130	130	130	130
4	Meghalaya	280	280	280	280	280
5	Mizoram	90	85	85	85	85
6	Nagaland	120	120	120	120	120
7	Tripura	250	250	260	260	260
	Region	2300	2345	2355	2355	2355

B. Peak Availability

SN.	State	Peak Availability (MW) Aug' 13	Peak Availability (MW) Sep' 13	Peak Availability (MW) Oct' 13	Peak Availability (MW) Nov' 13	Peak Availability (MW) Dec' 13
1	Ar. Pradesh	120	120	120	120	
2	Assam	1050	1050	1050	1050	
3	Manipur	110	110	115	115	
4	Meghalaya	250	250	250	250	
5	Mizoram	75	75	75	75	
6	Nagaland	90	110	115	115	
7	Tripura	155	170	150	150	
	Region	1850	1885	1875	1875	

December Availability is yet to be finalized.

The Committee noted as above.

D.3 <u>Signing of BPSA in respect of Loktak Power Station:</u>

Signing of BPSA in respect of Loktak Power Station is pending with Dept. of Power, Govt. of Ar. Pradesh and APDCL (Assam) in spite of regular follow up. In the 19th CCM, beneficiaries had assured NERPC & NHPC that these BPSA will be signed on priority but no significant development took place.

<u>Deliberation of the Committee</u>

AGM, AEGCL informed that they have taken up the matter with SERC to revise their tariff before signing the agreement. Unless SERC gives their concurrence to their proposal, it would be difficult for them as the burden has to pass on to their consumers. However, Assam will pursue the matter with SERC and agreement will be signed immediately once they get the concurrence.

EE, SLDC, Ar. Pradesh informed that the matter will be taken up with the Competent Authority and the status will be intimated accordingly.

The Sub-committee noted as above.

D.4 Status of Rokhia GT Project:

As per the MoU signed by Govt. of Mizoram and Govt. of Tripura, regarding modalities for sharing of power from NEC funded Rokhia GBPP Phase – II, Mizoram has a share of 50% of power generated from this project Phase – II (Unit –V & VI of 8 MW each). The Bulk Power Supply Agreement between TSECL and P&E Dept., Govt. of Mizoram has been signed on 29th July, 2006 and the LC Account for payment of energy bill was opened at SBI, Dawrpui Branch, Aizawl.

Since both the units of this phase –II project are out of service, share of power could not be obtained since February, 2007. Mizoram requested to study the modalities and arrived at solution as to how TSECL would replenish the deficit power due to Mizoram.

Deliberation of the Committee

DGM, TSECL informed that two units of Rokhia GBPP (Unit # V & VI, each of 8MW) are out of service and revival of these units will not be possible as spare parts are not available. It may not be techno-economically viable also. He also informed that not only Mizoram & Manipur, but also Tripura is losing their share because of outage of above two units. Moreover, Baramura Units # 1, 2, & 3 are under maintenance. Tripura is trying their best to revive these units at the earliest. Tripura also informed that LC has been opened with SBI by Mizoram without any money in the account.

The Sub-committee was of the opinion that Tripura can approach CEA, highlighting about the non-availability of spares & techno-economic viability etc., for advice in this regard. Tripura agreed.

The Sub-committee noted as above.

D.5 Enhancement of Power Allocation:

Mizoram informed that the restricted demand of power during FY 2011-12 is 75 MW whereas in FY 2012-13, the seasonal and peak period restricted demand is around 107 MW. CEA projection of unrestricted demand of power in Mizoram at the end of 12th Five Year Plan is 285 MW. Hence, there is acute shortage of power at all time.

With the implementation of RGGVY scheme in the state, 137 un-electrified villages and 570 intensive electrifications are on the verge of completion. It is calculated that about 20 MW additional power is needed. The state flagship programme "New Land Use Policy (NLUP)" has various trades and power requirement will shoot up by 51 MW. Besides, Indo-Bangladesh border fencing is in full swing and flood-lighting alone is 71x100 KVA and hence for defence consumption alone about 15 MW would have to be allotted to these purposes. So by the end of 12th Five year plan power requirement is calculated to be 371 MW.

Even though many hydel power projects are on the pipeline but the same could not be taken up speedily due to non-availability of statutory clearance and fund constraints in-spite that MoU have already signed during 2011 and 2012.

Therefore, to relieve from acute shortage of power, present allocation of 105.98 MW needs to be reviewed and enhanced to atleast 120 MW.

Deliberation of the Committee

The Sub-committee advised Mizoram to approach to Ministry of Power, Govt. of India directly for enhancement of power allocation as RPC has no role to play on this matter.

The Sub-committee noted as above.

D.6 Pending Power Purchase Agreement with APDCL:

The issue of executing fresh Power Purchase Agreements (PPAs) with Assam Power distribution Co. Ltd (APDCL) for all the Power stations in operation was initiated by NEEPCO vide its letter dated 16.08.2004. In response to the APDCL letter no. ASEB/COM/NEEPCO/KHEP/2008/45 dated 19.01.2011, NEEPCO forwarded 07(seven) no. draft PPAs to the APDCL for its 07 (seven) no. Power stations in operation vide letter no. NEEPCO/ED/COMML/R-9/2011-12/3859 dated 01.02.2012. Since then, a series of communications have been made by NEEPCO to the APDCL for execution of the said PPAs.

Though a very long period have already been elapsed since initiation of the matter relating to execution of fresh PPAs, no positive response/communication has been received by NEEPCO from APDCL till date

Deliberation of the Committee

Refer **Item No. D.3 above.**

The Sub-committee noted as above.

D.7 Reporting Procedure in case of reportable event:

NERLDC has requested SLDC, ISGS & ISTS licensees for submission of report of reportable events as per clause no 4.6.3 and 5.9.6 of IEGC and clause no 12.1 and 15.3 of Grid Standards.

As per 5.2.r of IEGC, information/data of reportable event including disturbance recorder/sequential event recorder output to be sent to RLDC within 24 hours. In absence of such details, objective analysis of the tripping/event could not be done. Analysis of tripping/events is essential for improvement of reliability and security of the grid as well as for regulatory compliance/reporting.

Deliberation of the Committee

All the constituents agreed to furnish the information/data of reportable event including disturbance recorder/sequential event recorder output to NERLDC within 24 hours whenever such incidences occur. The Sub-committee also requested NERLDC for analysis of trippings and to suggest the remedial actions, in consultation with the involved parties as discussed in 10th PCC meeting, for the benefit of the region. NERLDC informed that they have come out with various suggestions /recommendations in the past. Some of these suggestions /recommendations were implemented and some were not. NERLDC requested for active participation of all concerned and also speedy implementation of recommendations. The analysis of trippings is being done in PCC forum.

The Sub-committee noted and agreed as above.

D.8 Reliable Voice/data communication:

Many Telemetry Data/Voice communication links provided under the NEULDC scheme is not operational due to lack of maintenance and other issues. Then it may

be noted that the infrastructure of SLDCs for the state of Manipur, Mizoram, Nagaland and Arunachal Pradesh are now almost nonexistent and need to be augmented at the earliest in view of the fast changing scenario in the Power sector. The matter was discussed in OCC/ UCC but there is no tangible improvement especially in the State sector.

Further new ISGSs namely Monarchak, Pare [of NEEPCO] and BTPS [of NTPC] are likely to be commissioned within the next one year with Monarchak likely to be commissioned within the next 2-3 months. The telemetry, voice communication in addition to other requirements of the IEGC has to be in place before synchronization of the units.

Constituents/Utilities may please ensure the availability of 100% data at SLDCs/RLDC and all important Power stations/Sub stations.

Deliberation of the Committee

Sr. Manager, NEEPCO stated that the matter will be taken up with Competent Authority so that the communication links as required by NERLDC are in place before commissioning of Monarchak & Pare project. Since no representative from NTPC was present, the status could not be updated.

The Sub-committee noted as above.

D.9 Metering in ISTS – need of timely action as per Regulations:

IEGC 6.4.21: The CTU shall install special energy meters on all inter connections between the regional entities and other identified points for recording of actual net MWh interchanges and MVArh drawals. The installation, operation and maintenance of special energy meters shall be in accordance with Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006. ***All concerned entities (in whose premises the special energy meters are installed) shall take weekly meter readings and transmit them to the RLDC by Tuesday noon The SLDC must ensure that the meter data from all installations within their control area are transmitted to the RLDC within the above schedule.***

IEGC 6.4.22: ***The RLDC shall be responsible for computation of actual net injection / drawal*** of concerned regional entities, 15 minute-wise, based on the above meter readings.

Deliberation of the Committee

All constituents agreed to submit the data to NERLDC as proposed above.

The Sub-committee noted as above.

D.10 CEA Metering Regulations:

Ownership of meters: - (1) Interface meters

All interface meters installed at the points of interconnection with Inter-State Transmission System (ISTS) for the purpose of electricity accounting and billing **shall be owned by CTU.**

Meter failure or discrepancies: - (1) Interface meters

(d) Billing for the Failure period:

Readings recorded by Main, Check and Standby meters for every time slot shall be analyzed, crosschecked and validated by the Appropriate Load Despatch Centre (LDC). ***The discrepancies, if any, noticed in the readings shall be informed by the LDC in writing to the energy accounting agency for proper accounting of energy. LDC shall also intimate the discrepancies to the Appropriate Transmission Utility or the licensee,*** who shall take further necessary action regarding testing, calibration or replacement of the faulty meters in accordance with the provisions laid down

Deliberation of the Committee

Refer **Item D.9 above.**

The Sub-committee noted as above.

D.11 Procedure for outage Planning of Transmission Lines:

Draft procedure for outage planning of transmission lines was sent to RPCs by NLDC for discussion in OCC meetings of different regions and forwarding comments to NLDC for finalization of the procedure.

Deliberation of the Committee

The sub-committee discussed in detail about the outage planning of transmission elements. During discussion following major procedures were highlighted:

1. The indenting agency shall submit the proposed shutdown for next calendar month latest by 3rd day of the current month to the RPC Secretariat as per prescribed Format.

2. In case of shut down of inter-regional lines and intra-regional lines affecting the transfer capability of any inter regional corridor, the indenting agency shall submit the shutdown proposal in both the concerned RPCs.

3. RPC secretariat shall compile all received proposals and put up the same on its website by 5th day of the month as per the prescribed Format.

4. The RPC shall discuss proposed outages in the OCC meeting. RPCs would attempt to schedule all their OCC meetings between 10th to 15th day of the month.

5. RPC shall send the list of approved transmission outages to SLDC/RLDCs/NLDC within 3 days of the OCC meeting and preferably latest by 18th of the month as per the prescribed format. The same shall also be displayed on RPC websites.

The other details are in the Document, which is enclosed as **Annexure D.11**.

The Sub-committee noted as above.

D.12 Default Protection Scheme in Manipur System:

As intimated in the last OCC and PCC meetings the default protection schemes of Manipur system are not working properly; however the matter could not be discussed in details as no representative was present from Manipur. Further on 16-07-13 at 0910 hrs, MOCB of 33kV Mongsangei feeder burst at Imphal S/S(Manipur state) causing tripping of. 132 kV Imphal(PG)-Imphal(state),132 kV Loktak – Ningthoukhong, 132 kV Loktak - Imphal(PG) and all running units of Loktak causing power disruption to Manipur and insecurity in the grid. Had the protection schemes of Manipur were in working condition the fault would have not reflected outside Manipur system.

The matter has become extremely serious and the forum is requested to deliberate the issue irrespective of presence of member from Manipur.

Deliberation of the Committee

The Sub-committee expressed concerned about the frequent tripping in Manipur system due to absence / non-operation of required protection system or switchgears and such situation is creating problem not only in Manipur system but in the NER grid as well. The sub-committee requested NERPC to write to DoP, Manipur to resolve/reduce the trippings, which is required for safe & secure operation of the NER grid.

The Sub-committee noted as above.

D.13 Non availability of Telemetry System:

The issue of non availability of telemetry was deliberated in earlier OCC, UCC meetings but there is very little improvement specially in the state sector. Recently on 30-07-13 due to non availability of circuit breaker status, Kopli-Khandong ckt II status was wrongly intimated/inferred resulting in Grid disturbance in 132kV pocket while according emergency shutdown of Silchar-Byrnihat line. To avoid such type of incidents all Stake holders are requested to ensure availability of CB and IS status in the control room as well as at RLDC. The details of availability of telemetry including CB/IS status from NERLDC perspective have been put up at NERLDC web site for information of all concerned as per direction of Hon'ble CERC. A brief summary of the telemetry status is also enclosed in **Annexure – D.13.**

Deliberation of the Committee

DGM, POWERGRID informed that CB problem in Kopili has been rectified.

Regarding the details of telemetry status as enclosed in **Annexure – D.13**, the matter has been referred to PCC meeting.

The Sub-committee noted as above and agreed to ensure proper telemetry.

D.14 Long outage of Transformers at BTPS:

During the 86th OCC meeting, Assam had informed that one transformer (160 MVA, 220/132 KV) & one 80 MVA, 220/132 KV transformer at BTPS was under shutdown

Deliberation of the Committee

CGM, LDC, AEGCL informed that the (1x160MVA, 220/132kV) transformer failed during the warranty period and hence was dispatched to the factory of M/s EMCO for repair for which outage of the transformer was so long. CGM, LDC, AEGCL informed that commissioning of the transformers (1x160 MVA, 220/132kV + 1x80 MVA, 220/132kV) will be completed by September, 2013.

The Sub-committee noted as above.

D.15 Generation Planning (ongoing and planned outages)

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

Khandong –	1.620 MU
Kopilli –	2.376 MU
Ranganadi -	Subject to inflow
Doyang –	1.680 MU
Loktak –	2.520 MU

The Committee discussed and agreed the proposed shutdown of AGTP #I of NEEPCO from 12.08.13 (22:00 Hrs) to 13.08.2013 (22:00 Hrs)

Generation planning for Hydro stations: The demand met figure of the region has already touched around 2000 MW level. Present reservoir levels in different hydro stations & generation availability have become serious concern for system operation. In addition to that non availability of Palatana generation is affecting regional availability very badly. Proper generation planning from hydro stations is to be chalked out to meet ever increasing demand of the region.

Deliberation of the Committee

The Sub-committee expressed concerned about the rapid depletion of water level in almost all reservoirs and discussed in detailed about planning of generation from various generating stations and how to conserve water before lean season approaches or till generating Unit(s) at Palatana is commissioned. The Committee suggested that the current DC given by generating stations shall be maintained till the next OCC meeting and in case of urgency NERPC & NERLDC will review the same.

The Sub-committee noted as above.

D.16 Outage Planning Transmission elements

After detail discussion the sub-committee approved the shutdown as proposed by POWERGRID, ENCIL, TSECL, AEGCL & NEEPCO for August/September, 2013 as given in **Annexure – D.16.**

The Sub-committee noted as above.

D.17 Estimated Transmission Availability Certificate (TAC) for the month of July, 2013.

The Estimated Transmission System Availability for the month of July, 2013, furnished by PGCIL, is **99.9604%.** The detail outage data for calculation of Transmission System Availability furnished by PGCIL, is at **Annexure D.17**. NER constituents are requested to kindly communicate their views and observations, if any, by 26th August, 2013 so that Final TAC for the month of July, 2013 may be finalized by NERPC Secretariat.

Further, Govt. of India has constituted a Comprehensive Award Scheme for Power Sector on annual basis. One of the best awards under the scheme "Best Transmission System Availability". The process has been initiated for the said awards for the year 2012-13 for which nominations from all Central, State and eligible Private/JV Sector transmission licencees are invited. The transmission licencees are requested to forward their data as per enclosed formats given in **Annexure – D. 17(i)** through respective RPCs latest by 14th August, 2013 with due certification by concerned RLDCs/SLDCs where applicable. The name and nodal officers along with contact details should also be provided from respective Organizations.

Deliberation of the Committee

The Sub-committee informed that none of transmission licensee in the NER (including NETC), other than POWERGRID is eligible for the comprehensive award scheme as their 132kV and above transmission line network is less than 2000CKMS. The Sub-committee requested POWERGRID to submit the data to NERPC after duly certified by NERLDC so that the same can be submitted by NERPC to CEA before the stipulated time i.e. 14th August, 2013.

The Sub-committee noted as above.

D.18 Major grid disturbances in the previous month (July, 2013)

There was no major grid disturbance during the month of July, 2013 pertaining to NER grid.

The Sub-committee noted as above.

D.19 Any other item:

D.19.1 NER System Strengthening Scheme-II (Tariff Based Competitive Bidding Part)

CEA has requested confirmation regarding availability of Space at following stations so that the recommendation for the proposed schemes in NER can be sent to MoP for implementation through Tariff Based Competitive Bidding (TBCB)

(a) **Byrnihat Substation (of Me.ECL):** Space for accommodating 2 Nos. 400kV line bays for termination of LILO of 2nd circuit of Silchar-Bongaigaon 400kV D/c line at Byrnihat, 50MVAR fixed line reactor at Byrnihat end of for 2nd circuit of 400kV Silchar-Byrnihat and second 63MVAR bus reactor.

(b) **New Kohima substation(of DoP, Nagaland):** Space for accommodating 2 Nos. 132kV line bays at New Kohima S/S of Govt. of Nagaland for termination of Imphal (PG)-New Kohima (Nagaland) 400kV D/C line (initially to be charged at 132kV)

(c) **Itanagar Substation(of DoP, Ar. Pradesh):** Space for accommodating 4 Nos. 132kV line bays at Itanagar Sub-station, Govt. of Ar. Pradesh for termination of (2 Nos) of Biswanath Chariyali- Itanagar 132kV D/c line (Zebra conductor) and (2 Nos) of LILO of Ranganadi HEP -Nirjuli(PG) 132kV D/c line at Itanagar.

(d) **Ranganadi HEP(of NEEPCO):** Space for accommodating 2 Nos. 132kV line bays at Ranganadi HEP switchyard matching with the commissioning of Ranganadi - Nirjuli(PG) 132kV D/c line

Deliberation of the Committee

SE (T&T), Me.ECL informed that due to space constraint in 400/220/132kV substation at Byrnihat, it is difficult to provide additional space for accommodating

2 Nos. 400kV line bays for termination of LILO of 2nd circuit of Silchar-Bongaigaon 400kV D/c line at Byrnihat, 50MVAR fixed line reactor at Byrnihat end of for 2nd circuit of 400kV Silchar-Byrnihat and second 63MVAR bus reactor. He informed that the reply in this regard will be sent to CEA shortly.

There was no representative from DoP, Nagaland. However, MS I/C informed that Nagaland have already communicated to CEA in this regard.

EE, SLDC, Ar. Pradesh informed that he will take up the matter with Competent Authority and the response in this regard will be intimated to CEA accordingly.

Sr. Manager, NEEPCO informed that POWERGRID was requested to inspect the Ranganadi switchyard to explore the possibility (including GIS or Hybrid option) of accommodating two Nos. of 132kV line bays. The outcome of the inspection on space available will be intimated to CEA accordingly.

The Sub-committee noted as above.

D. 19.2 Proper functioning/healthiness of UFRs installed in NER)

As per decision of NPC meeting, one third of UFRs installed in NER is to be inspected in year to check the healthiness/ proper functioning. In NER, twenty one (21) UFRs have been installed in different states [one each in Manipur and Ar. Pradesh, three (3) each in Mizoram, Nagaland, Tripura, Meghalaya and seven (7) in Assam]. Therefore, at least 7 Nos. of UFRs are to be inspected in year for checking of healthiness.

Deliberation of the Committee

The Sub-committee referred the issue to PCC forum.

The Sub-committee noted as above.

D.19.3 Procurement of UFR Testing Kit:

In order to check the healthiness/ proper functioning of UFRs in NER, testing kit is necessary. POWERGRID is requested to procure the UFR testing kit on behalf of NERPC. The expenditure will be reimbursed through Board Fund of NERPC.

Deliberation of the Committee

The Sub-committee enquired from POWERGRID about the approximate cost of UFR testing kit.

DGM, POWERGRID informed that the cost of Frequency Injection kit as enquired from M/S Alstom is about Rs. 3.5 to 4.0 Lakhs (approx). Further, he informed that the UFR can also be tested with present generation Relay Test Kits which costs around Rs. 20 lakhs.

NERPC wanted to review the matter.

The Sub-committee noted as above.

D.19.4. Status of frequent tripping of machines in AGBPP of NEEPCO

During the 11th PCC meeting, Sr. Mgr. (E/M), NEEPCO informed that AGBPP has already initiated the action and order has already been placed for procurement of three (3) gas engines with compressor of higher capacity and the work is likely to be completed by March, 2014. After commissioning of gas engines of higher capacity, the problem is likely to be resolved.

Deliberation of the Committee

The Sub-committee enquired from NEEPCO about the preventive action being taken by AGBPP to reduce frequent tripping of machines till the commissioning of high capacity gas engines.

Sr. Manager, NEEPCO informed that all efforts are being taken to reduce the frequent tripping of the plant. Moreover, during the winter season, the plant is more stable compared to summer season and the commissioning of gas engines of higher capacity (likely to be completed by March 2014) will resolve the problem of frequent tripping.

The Sub-committee noted as above.

D.19.5 Parallel Operation of 3x20 MVA Transformers with 160 MVA Auto-transformer at Kopili:

The representative of POWERGRID was requested to fix a suitable date for the meeting in consultation with NEEPCO and to take necessary action to complete the paralleling operation of transformers at the earliest so that 3x20MVA, 220/132kV transformers can be utilized effectively.

During 11th PCC meeting, the committee discussed about the importance of bringing the 3x20MVA transformer back into service. Sr. Mgr. (E/M), NEEPCO informed that the matter has been taken up with POWERGRID. It has been observed that the 3x20MVA, transformer can only operate at Principal tap and there is no back up O/C+E/F protection on 220kV side of transformer. However, all efforts are to be taken to complete the work by July, 2013. The sub-committee suggested that all required protection should be in place before operation of the transformer.

Deliberation of the Committee

Sr. Manager, NEEPCO informed that Kopili HEP is facing serious problem due to acidic nature of water and most of the engineers are busy with restoration of the plant. However, all efforts will be put by NEEPCO to complete all required tests at the earliest before bringing the transformers into operation and parallel operation of above transformer is likely to be completed by August, 2013.

The Sub-committee noted as above.

D.19.6 Frequent Disturbances in Loktak – Manipur Sub-syatem:

Around 20 to 21 disturbances have been experienced in this sub-system since April, 2013. Matters related to corrective actions to be taken were discussed in details in 86th OCC & 10th PCC meetings. No improvement notice.

Deliberation of the Committee

Since no representative from Manipur was present, the status could not be discussed & updated.

The Sub-committee noted as above.

D.19.7 Kumarghat ISTS Link in Pallatana:

Tripura informed that in-spite of having all necessary arrangements, in time of isolation of Tripura with R.C Nagar generation and unavailability of Kumarghat ISTS link, Pallatana is not agreeing for synchronization with 400 KV Silchar system. Such non co-operation of OTPC is putting the state network and R.C Nagar generation to run in isolated mode for longer period which in turn inviting serious instability in the system.

Deliberation of the Committee

After deliberation, the Sub-committee requested OTPC to co-ordinate with Tripura for synchronization of the system. OTPC agreed.

The Sub-committee noted as above.

D.20 Date & Venue of next OCC meeting

It is proposed to hold the 89th OCC meeting of NERPC on second week of September, 2013. As per roaster, Mizoram will be the host for 89th OCC meeting. The exact 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 88th OCC meeting held on 07/08/2013

SN	Name & Designation	Organization	Contact No.
1.	Sh. Tarik Mize, EE(E), SLDC	Ar. Pradesh	09436059758
2.	Sh. H.C. Phukan, CGM, SLDC	Assam	09435559447
3.	Sh. P. K. Sarma, GM, Com-T	Assam	09435344083
4.	Sh. B. C. Bordoloi, DGM, SLDC	Assam	09435045675
5.	Sh. J. K. Baishya, AGM, SLDC	Assam	09435041494
6.	Sh. A. K. Saikia, AGM	Assam	09864116176
7.	Sh. K. Goswami, AGM,	Assam	09864020019
8.	Sh. J.P. Choudhury, AGM, Comml	Assam	09954055295
9.	**No Representatives**	**Manipur**	
10.	Sh. A. Kharpan, SE, Me. PTCL	Meghalaya	09436117802
11	Sh. R. Syiem, SE, Me. PTCL	Meghalaya	09863065704
12.	Sh. P. Chetry, EE, (Killing SS)	Meghalaya	09436112679
13.	Sh. D.J. Lyngdoh, AEE, SLDC	Meghalaya	09863063375
14.	**No Representatives**	**Mizoram**	
15.	**No Representatives**	**Nagaland**	
16.	**No Representatives**	**NTPC**	
17.	Sh. B. Debbarma, DGM (SO)	Tripura	09436450501
18.	Sh. Debabrata Pal, Sr. Mgr	Tripura	09436500244
19.	Sh. N. R. Paul, DGM	NERLDC	09436302723
20.	Sh. B.R Medhi, Sr.Engineer	NERLDC	09436335379
21.	Sh. P. Kanungo, DGM	NERTS	09436335376
22.	Sh. Madhavan, Manager	NERTS	09436335250
23.	Sh. D.Goswami, Sr.Mgr. (E/M)	NEEPCO	09435577655
24.	Sh. R. C. Singh, Mgr (E)	NHPC	09436894889
25.	Sh. P. Saha, Advisor (O&M)	OTPC	08974728670
26.	Sh. S.K. Ray Mohapatra, MS I/C	NERPC	09818527857
27.	Sh.B. Lyngkhoi, SE (O)	NERPC	09436163419
28.	Sh. S. M. Jha, EE (O)	NERPC	09831078162
29.	Sh. S. M. Aimol, EE (C)	NERPC	08974002106

AEGCL RTU STATUS

Annexure - D.13

Total No. RTU	50	
Partial Reporting	22	(Agia,Bokaj,Bokak,Boko,BTPS,Borna,Dibru,Depot,Gohpu,Jagir,Jorha,
		Kahel,Langp,Lakwa,Maria,Margh,NTPS,Rangi,Rowta,Samag,Sipaj,Tinsu)
Full Reporting RTU	3	(Naran,Sarus,Sishu)
Not Reporting RTU	25	(APM,Badar,BNC,Dhali,Dulla,Dhema,Diphu,Golan,Gosai,Gauri,Lanka,
		Moran,Nazir,Lakhi,Nalba,Sriko,Sibsa,Majul,Paila,Haflo,Panch,Doomd,
		Dispu,Golao,CTPS)

*** In some station such as AGIA_AS the data quality showing good but actual data not matiching with the SCADA data.
So,data validation is very much required.

TSECL RTU STATUS

Total No. RTU	15	
Partial Reporting	6	(Jiran,Barmu,Agart,Udaip,Rokhi,Dhala)
Full Reporting RTU	0	
Not Reporting RTU	9	(Kamal,Gourn,Budhj,Badha,PKBAR,Dharm,Gumti,Gamai,Ambas)

MeECL RTU STATUS

Total No. RTU	10	
Partial Reporting	5	(Umiam,Khlei,Mawla,Umia2,Byrni)
Full Reporting RTU	5	(Nehu,Umia3,Umia4,Umtru,Umia1)
Not Reporting RTU	0	

NAGALAND RTU STATUS

Total No. RTU	3	
Not Reporting RTU	3	(Dimap,Kohima,Mokak)

Manipur SCADA STATUS

Total No. RTU	4	
Not Reporting RTU	4	(Impha,Karong,Ningthou,Kakch)

Mizoram RTU STATUS

Total No. RTU	1	
Not Reporting RTU	1	(Aizawl)

CS RTU STATUS

POWERGRID RTU	18	(All Reporting)
ISGS RTU	8	(All Reporting)

1. COMMUNICATION LINK STATUS WITH CS STATION **Annexure D.13**

Sl. No	ISGS/CS	BY DESIGN		CURRENT STATUS(29.07.13)
1	BONGA_PG	2		1
2	SALAK_PG	2		1
3	BALIP_PG	2		2
4	MISA__PG	2		2
5	ITANA_PG	2		1
6	ZIRO__PG	1		1
7	DIMAP_PG	2		2
8	IMPHA_PG	2		1
9	JIRIB_PG	2		1
10	SILCR_PG	2		1
11	BADAR_PG	2		2
12	KOLAS_PG	1		1
13	KHLEI_PG	2		2
14	HAFLO_PG	1		1
15	KUMAR_PG	2		1
16	AIZAW_PG	2		1
17	KOPEX	1		1
18	RANGA_NO	2		1
19	DOYAN_NO	2		1
20	KATHA_NO	2		1
21	KOPILI_NO	2		2
22	KHNDG_NO	2		2
23	AGART_NO(RCnagar)	2		2
24	LOKTA_NH	2		1
25	PALATANA	2		1

2. COMMUNICATION LINK WITH TSECL,AEGCL AND MeECL STATION THROUGH ULDC OUT

3. CS RTU REPORTING WITH SINGLE CHANNEL

1 KATHALGURI
2 RANGANADI
3 SALAKATI
4 ITANAGAR
5 BONGAIGAON
6 KUMARGHAT
7 JIRIBAM
8 LOKTAK
9 IMPHAL
10 DOYANG

11 AIZAWL
12 SAILCHAR
13 PALATANA

4. Stations where RTU not installed

1 Leshka of Meghalaya
2 Likhimro of Nagaland.
3 Killing(Byrnihat) :SAS installed and data available.
4 Deomali (220 KV S/S) of AP
5 Lumnsnong (132 KV S/S) of Meghalaya.
6 Along (132 KV) of AP.
7 Naharlagun(132 KV) of AP.
8 Rengpang of Manipur.
9 Jiribam of Manipur.

PROVISIONAL APPROVED SHUTDOWN OF ELEMENTS FOR THE MONTH OF August, 13 & September,13

SN	Name of Element	Aug-13 8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Sep-13 1	2	3	4	5	6	7	8	9	Time
1.TRANSMISSION LINES																																			
	132KV Imphal-Ningthoukhong (Manipur SEB)								Y																											Cont. SD:10.08.2013 (8:00 Hrs) to 13.08.2013 (16:00 Hrs)
	132KV Loktak-Imphal-II line		Y	Y																															8:00 to 16:00 Hrs
	132KV Khliehriat-Khliehriat-I													Y	Y	Y																			8:00 to 16:00 Hrs
	132KV PK-Bari-Kailasahar(TSECL) line																		Y														Y		8:00 Hrs to 16:00 Hrs
	132KV RC Nagar-Kumarghat line																		Y														Y		
	400KV Misa-Balipara-I															Y				ATC will effect															8:00 to 16:00 Hrs
	400KV Misa-Balipara-II																Y			ATC will effect															8:00 to 16:00 Hrs
	400KV Misa-Dimapur-I																	Y																	8:00 to 16:00 Hrs
	400KV Misa-Dimapur-II																		Y																8:00 to 16:00 Hrs
	132KV Dimapur-Imphal line	Y																																	8:00 to 16:00 Hrs
	400KV Balipara-Ranganadi-I																																		
	400KV Balipara-Ranganadi-II																																		Cont. SD from 09.08.13(8:00 Hrs) to 14.08.13(16:00 Hrs
	400KV Balipara-Bongaigaon-I															Subject to law & order condition														Subject to OCC decision. ATC will be reduced				8:00 to 16:00 Hrs
	400KV Balipara-Bongaigaon-II																																		8:00 to 16:00 Hrs
	132KV Silchar-Srikona-I		Y																																8:00 to 16:00 Hrs
	132KV Silchar-Srikona-II			Y																															8:00 to 16:00 Hrs
	400KV Silchar-Byrnihat line																Y	Y	Load restriction in 132 kV Pocket																	8:00 to 16:00 Hrs
	132KV Rangiya-Deothang line(PTC)															Assam's consent reqd																			8:00 to 16:00 Hrs
	132KV Aizawl-Kolasib line																		Y																9:00 to 13:00 Hrs
	220 kV Samaguri - Sarusajai -I																																		10:00 to 14:00 Hrs
	220 kV Samaguri - Sarusajai -II																																		10:00 to 14:00 Hrs
	132 kV Nirjuli - RHEP																			Assam's consent reqd															10:00 to 12:00 Hrs
	400 kV D/C Bongaigoan - Siliguri- I&II																																		26.08.13 & 27.08.13 (7AM to 5 PM)
	400 kV D/C Bongaigoan - Siliguri- I&II																																		02.09.13 & 03.09.13 (7AM to 5 PM)
	400 kV D/C Bongaigoan - Siliguri- I&II																																		12.09.13 & 13.09.13 (7AM to 5 PM)
	400 kV D/C Bongaigoan - Siliguri- I&II																																		26.09.13 & 27.09.13 (7AM to 5 PM)

The proposed shutdown of 400 KV D/C Bongaigoan - Siliguri I& II as requested by ENICL was discussed in detail during 88th OCC Meeting and the Sub-committtee has not approved due to law & order problem prevailing in Assam. The same will be reviewed in the next OCC meeting.

2. SUBSTATION																																				
	400KV Balipara Substation																																			
	132KV Khupi bay					AP & NEEPCO's consent reqd																															8:00 to 16:00 Hrs
	220/132KV Dimapur Substation																																			
	220/132KV, 100MVA ICT-2																			Y																8:00 to 16:00 Hrs
	400KV Bongaigaon Substation																																			
	400KV Main Bus-1					Y	There should not be any outage of line																													8:00 to 16:00 Hrs
	400KV Main Bus-2													Y	There should not be any outage of line																					8:00 to 16:00 Hrs
	400KV Balipara-1 Main Bay																																			12.08.2013(8:00 Hrs) to 25.09.2013(16:00 Hrs)
	400/220 KV, 315 MVA ICT																																			10:00 to 10:45 Hrs
	400/220 KV, 315 MVA ICT Main Bay																																			8:00 to 16:00 Hrs
	132KV Nirjuli Substation																																			
	33KV Bus(Section-I)																																			8:00 to 16:00 Hrs
	33KV Bus(Section-II)																																			8:00 to 16:00 Hrs
	132KV Imphal(State) Substation																																			
	132KV Main Bus						Manipur's consent reqd																														6:00 Hrs to 8:00 Hrs
	400KV Misa Substation																																			
	400/220KV, 315 MVA ICT-I						ATC will effect																									Y				8:00 to 12:00 Hrs
	33 KV Incomer bay																															Y				8:00 to 16:00 Hrs
	400/220KV, 315 MVA ICT-II						ATC will effect																										Y			8:00 to 12:00 Hrs
	400/220KV Byrnihat(MeECL) S/s																																			
	220KV Bus-I													Y	Y		There should not be any interruption																			8:00 to 16:00 Hrs
	220KV Bus-II															Y	Y																			8:00 to 16:00 Hrs
	AGBPP																																			
	220 kV AGBPP-Mariani			Y																																10:00 to 13:00 hrs
	220 kV AGBPP-Misa					Y																														10:00 to 13:00 hrs
	AGTPP																																			
	AGTPP Unit-I							Y																												22:00 hrs(12/08/13) to 22:00hrs(13/08/13)
	AGTPP - Agartala line -II																																			
														:	Daytime Shutdown																					
														:	Continuous Shutdown																					