

North Eastern Regional Power Committee

Agenda For

100th OCC Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 13th August, 2014 (Wednesday)

Venue : "Hotel Grand Starline", Guwahati.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 99th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 99th meeting of Operation Sub-committee held on 16th July, 2014 at Cherrapunjee were circulated vide letter No. NERPC/SE (O)/OCC/2014/0143-0176 dated 24th July, 2014.

OTPC vide mail dated 01.08.2014 has communicated their observation in respect of 99th OCC minutes of the meeting. On Page 16, under sub-heading **Shutdown of Palatana Unit#1**, it is once again referred that "**GM (P), OTPC assured the house with the information that Unit-II of the station is capable of generating power and could start generation immediately in case of outage of Unit-1**".

OTPC communicated vide letter no. OTPC/UDP/Palatana/14-15/223 dated 27.06.14 addressed to the Director / SE (O), NERPC, vide letter no. OTPC/UDP/Palatana /14-15/285 dated 21.07.14 addressed to the Director / SE (O), NERPC and vide letter no. OTPC/UDP/Palatana /14-15/309 dated 25.07.14 addressed to the Member-Secretary (I/C), NERPC that Pallatana Unit #2 was not synchronized in combined cycle mode as test synchronization for both steam and gas turbines are separated. Further, it was stated that Unit #2 is not ready to run at higher loads because of non completion of various sub-systems required for higher load operation and OTPC is in constant touch with BHEL for completion of the job. Hence, question of running unit #2 as recorded in the minutes is to be corrected.

NERLDC informed that Updated version of Operating Procedure, SLD & Power Maps of NER States and NER has already uploaded in NERLDC website & e-mailed to power utilities of NER for comment and suggestion. Power utilities of NER are requested to submit comment and suggestion for this document latest by 28th July, 2014; otherwise, it will be treated as final.

No observations or comments were received from the constituents. The Sub-committee may confirm minutes of 99th OCCM of NERPC.

ITEMS FOR DISCUSSION

B. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING JULY, 2014

As per the data made available by NERLDC, the grid performance parameters for July, 2014 are given below:

NER PERFORMANCE DURING JULY, 2014

States	Energy Met (MU)		% inc(+)/dec(-)	Energy Reqr. (MU)		% inc(+)/dec(-)
	July-14	June-14		July-14	June-14	
Ar. Pradesh	50.54	47.01	7.5	52.23	49.38	5.8
Assam	756.43	684.38	10.5	820.21	742.77	10.4
Manipur	49.42	45.53	8.6	51.77	48.22	7.4
Meghalaya	131.41	126.19	4.1	154.74	155.41	-0.4
Mizoram	35.85	35.23	1.8	37.59	37.17	1.1
Nagaland	49.71	45.58	9.1	51.72	47.79	8.2
Tripura	93.31	91.19	2.3	100.68	97.46	3.3
Region	1166.6	1075.1	8.5	1268.9	1178.2	7.7

States	Demand Met (MW)		% inc(+)/dec(-)	Demand in (MW)		% inc(+)/dec(-)
	July-14	June-14		July-14	June-14	
Ar. Pradesh	116	110	5.5	118	111	6.0
Assam	1187	1215	-2.3	1329	1343	-1.0
Manipur	125	117	6.8	131	118	10.9
Meghalaya	297	289	2.7	299	294	1.7
Mizoram	82	74	11.4	83	75	10.4
Nagaland	117	111	5.4	120	115	3.6
Tripura	238	230	3.5	239	235	1.6
Region	1996	1998	-0.1	2263	2252	0.5

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	July-14	June-14
Total Generation in NER (Gross)	1139.61	920.033
Total Central Sector Generation (Gross)	795.39	576.11
Total State Sector Generation (Gross)	344.22	343.923
Inter-Regional Energy Exchange		
(a) NER-ER	18.85	20.748
(b) ER-NER	81.81	219.5
© Net Import	62.96	198.752

AVERAGE FREQUENCY (Hz)

Month---->	July-14	June-14
	% of Time	% of Time
Below 49.7 Hz	35.15	37.28
Between 49.7 to 50.2 Hz	49.99	45.31
Above 50.2 Hz	14.86	17.41
Average	49.93	49.93
Maximum	50.36	50.67
Minimum	49.41	49.32

From the above table, it is seen that energy requirement & requirement met (MU) of the region increased considerably, whereas peak met (MW) decreases slightly from the previous month.

C.1 Synchronization of Pallatana Module -I

The CoD of Unit # 1 of OTPC was declared on 04.01.2014 and 3rd Gas Booster Compressor (GBC) is still in BHEL's factory at Hyderabad. The status is being monitored in subsequent OCC meetings and despite several requests from OTPC, ONGC cannot enhance the amount of supply of gas till date. While monitoring the status of transmission lines associated with evacuation of Pallatana Unit # 1 generation, representative from NETC informed that loop in of one circuit of 400 kV D/C Silchar – Bongaigoan at Byrnihat S/S has been completed, but the line cannot be charged further since bay for loop out of this circuit is yet to be completed by Meghalaya. Further, NETC informed the members that 400 kV Silchar – Azara – II will be completed by June, 2014 and as intimated by Assam that 400kV sub-station is also ready for charging and once this line is completed, Azara-Byrnihat-I will be back charged through loop out circuit of Azara towards Byrnihat. NETC also mentioned that the balance section of Azara-Bongaigoan can be commissioned after 3 (three) months of getting the forest clearance for two locations in Aie valley and in Goalpara Division respectively.

Latest status of the commitment of enhancing gas supply by ONGC and readiness of bay for loop out of Pallatana - Azara - I may be intimated by OTPC and Me. PTCL respectively.

Readiness of commissioning of Pallatana Unit-2 and status of its associated transmission lines may be reviewed below:

SN	Items	Status as given in 99 th OCC Meeting	Present Status
1	Trial operation and CoD of Unit -II of Palatana	CoD is expected in Sept, 2014	
2	400KV D/C Silchar - Melriat line	March, 2015	
3	400KV D/C Silchar - Imphal line	November, 2014	
4	220KV D/C Mariani (New) – Mokokchung	Sept, 2014	
5	400KV D/C Byrnihat-Bongaigaon line	Byrnihat-Azara section is almost complete except stringing of 2 spans, which is expected to be completed by June 2014 subject to clearance by Appellate Tribunal for Electricity (APTEL). Azara-Bongaigaon section is expected by December, 2014	

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6	400kV Balipara – Bongaigaon D/C line 3 & 4 with FSC	August, 2014 subject to availability of forest clearance for 5.2 kms of the line. [FSC commissioned on 11.01.2014]	
7	400/220 kV sub-station at Azara of Assam	The LILO arrangement has also complete by AEGCL and the 400kV Byrnihat – Azara line is commissioned by POWERGRID on 28.03.2014	

C.2 SPS scheme for Pallatana

The following four (4) System Protection Scheme (SPS) associated with generating Unit#1 (363.3MW) of OTPC at Palatana has been planned for NER:

Case 1: Tripping of generating unit of OTPC at Palatana

Case 2: Tripping of 400 kV D/C Palatana- Silchar line (with generation from OTPC's plant at Palatana)

Case 3: Tripping of 400 kV Silchar-Byrnihat line (with generation from OTPC's plant at Palatana)

Case 4: Tripping of 400 KV Silchar – Byrnihat line (without generation from OTPC's plant at Palatana)

The OCC Sub-committee continuously review the status of implementation of the scheme and the status as intimated in the 99th OCC Meeting is given below:

Case I & Case IV: Already implemented.

Case II & III: GM, OTPC stated that implementation of SPS -2 & 3 mentioned above was discussed in detail and the scheme was finalized in the meeting held with BHEL at Palatana on 17.01.2014. Subsequently some modification has been carried out by BHEL and same will be circulated to all. The offer of BHEL is intimated by OTPC but the required schematic diagram as agreed in the 97th OCC meeting is unavailable.

OTPC had requested POWERGRID to look into following issues:

- (a) SPS at OTPC end should not be modified with commissioning of 2nd Circuit of Silchar _ Bongaigaon 400kV line. ***It is agreed in earlier OCC meetings that the SPS associated with Palatana need to be reviewed including enhancement of load shedding and NERLDC was requested accordingly to review the SPS on 99th OCC meeting.***

NERLDC may intimate the latest status.

- (b) Trip command from two different sources should be available to desynchronize the machine to avoid unwanted tripping of generating Unit when the generation is more than 200MW. During 93rd OCC meeting, subcommittee had suggested OTPC for getting input from Circuit breakers at both ends of the line (Silchar & Byrnihat) through communication link and to discuss the matter with POWERGRID.

Latest status may be intimated by OTPC and POWERGRID.

- (c) Two out of three logics [i.e. inputs from circuit breaker (s), master trip relay (s) etc.] shall be utilized for de-synchronization of Gas Turbines. During 93rd OCC meeting, subcommittee had suggested OTPC to discuss the matter with POWERGRID.

Latest status may be intimated by OTPC and POWERGRID.

Enhancement of quantum of load relief during SPS operation: The matter was deliberated in last OCC meeting and it was decided to convene meeting of identified committee for the review of SPS schemes to ensure higher load relief as well as changes to be incorporated in the schemes in view of changes in network topology. ***Further OTPC may informed the house the status of SPS-3[NERLDC is of the opinion that the elaborate scheme furnished by M/s BHEL may not be necessary and tripping of the identified CB will be serve the purpose.].*** In addition the SPS-3 requires to be upgraded to incorporate addition of Silchar-Azara 400 kV line.

The Sub-committee may like to discuss for early implementation of the SPS Case II & III.

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:

The OCC regularly review the status of UFR based load shedding in the region. The following details are confirmed in earlier OCC meetings.

Assam: UFRs based load shedding for 220MW have been implemented.

Nagaland: UFRs based load shedding for 20MW have been implemented.

It was also informed in earlier OCC meeting that UFR operation report in prescribed format on monthly basis is received from Mizoram regularly but other beneficiaries have not sent any information. It was requested that all constituent states of the region to complete the installation of UFRs required for all four stages by July, 2014 end and start furnishing of UFR operation reports to NERPC & NERLDC on monthly basis before OCC meetings.

Implementation of UFR load shedding based on average load as per CERC order in Petition No. 263/MP/2012 on 19.12.13: As per para no 13 of CERC order in Petition No. 263/MP/2012 on 19.12.13:

Quote

We have heard the parties and perused the pleadings. We are in agreement with the petitioner that there is a need to review and estimate the actual load on the feeders and the constituents should consider average load in the feeders for computation of target relief on identified feeders. As sufficient load relief has not been achieved, the respondents are directed to identify more feeders for installation of UFR and df/dt relays and submit the details to SRPC.

Unquote

At present, UFR load shedding based on maximum load is implemented in NER. When UFR based load shedding are required, load of identified feeders are not generally at peak load. As such sufficient load relief will not be achieved for system requirement. NER beneficiaries are accordingly requested to compute average load of identified feeders where UFRs are installed and to identify additional feeders for installation of UFRs to fulfil the target based upon average load.

Ar. Pradesh, Manipur, Meghalaya, Mizoram & Tripura may intimate the status of implementation of UFRs based load shedding. Status of sending UFR operation reports to NERPC & NERLDC on monthly basis before OCC meetings may also be deliberated.

C.4 Lines under long outages

During the 99th OCC meeting, the issue for restoration of these lines was reviewed by the committee and the status was as follows:

- a) 220kV BTPS – Agia line (one ckt) – [Since Nov'97]: The representative of Assam informed that the work associated with 20 kms of the line (out of 42km) has been completed and the target for completion of rest of the work is July, 2014. ***AEGCL may intimate the latest status.***
- b) 132kV Mariani – Mokokchung line - [Since Apr'02]

Representative from AEGCL informed that AEGCL has checked the portion of the line pertaining to AEGCL and the following expenditures are required:

Replacement of insulators - ₹ 14 lakhs
Execution cost - ₹ 11 lakhs
Total - ₹ 25 lakhs

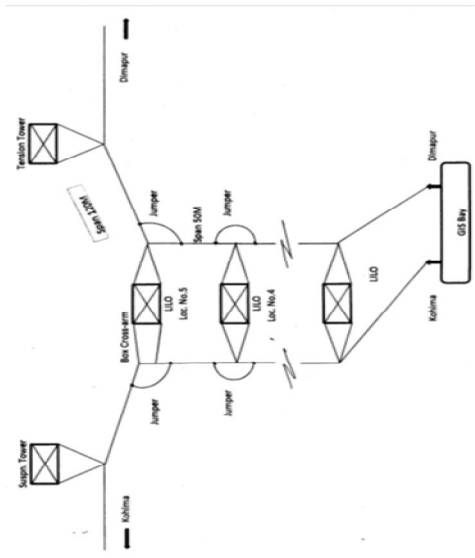
Nagaland representative stated that the assessment had been furnished by Assam but informed that Nagaland would make their own assessment and revert back in the next OCC meeting. ***Nagaland may intimate the latest status.***

- c) 39km of 132kV Rengpang – Jiribam line – [Since Oct'02]

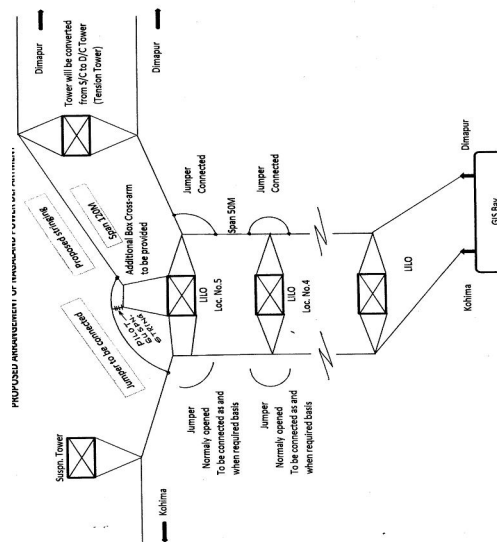
Manipur representatives informed that the status could not be ascertained as the concerned officials looking after transmission were not available. The members requested Manipur representative to inform the status of the line at the earliest. ***Manipur may intimate the latest status.***

C.5 LILO of 132 kV Dimapur (Nagaland) - Kohima

LILO of 132 kV Dimapur (Nagaland) – Kohima (Nagaland) line at 220/132 kV Dimapur (PGCIL) Substation- [Since Aug'11]:



Before Modification



After Modification

During 99th OCC meeting, DoP, Nagaland informed that that the arrangement recommended by POWERGRID is being implemented. However the work for modification of cross arm was delayed as they could not take shutdown due to Lok Sabha election, delayed monsoon etc. The modification work would be taken up as soon as clearance for shutdown is received from the Chief Engineer’s Office.

Nagaland may intimate the current status.

C.6 CT Ratio of Transmission Lines in NER:

During 99th OCC meeting, NERLDC informed that the details of CTs have been received from Tripura, Meghalaya, Nagaland and Kopili (NEEPCO). Assam has handed over the CT details to NERLDC/NERPC during the meeting. NEEPCO informed that details of CT for the remaining stations have already been sent to NERLDC. NERLDC requested NEEPCO to submit again as they have not received the details. Manipur stated that the details of CT will be furnished soon. The subcommittee requested Manipur, Mizoram & AR. Pradesh to submit the CT details to NERLDC at the earliest.

Latest status may be informed by concerned constituents.

C.6 Furnishing Geographic Co-ordinates of Nodes of NER Grid:

Power Maps of NER states are being developed by CBIP. To represent nodes of NER Grid in power maps, Co-ordinates of **existing Nodes, Nodes under construction & identified future Nodes** (66 kV & above) of NER Grid are required. Power Utilities of NER are requested to furnish latitude & longitudes of Nodes of NER Grid.

All the constituents have agreed to furnish the above data to NERLDC at the earliest. However, no data from any power utility have been received till date except Meghalaya and Tripura. Assam representative stated in the 99th OCC meeting that they have outsourced the work and the same would be furnished in the next OCC meeting.

The subcommittee requested concerned utilities to furnish the data by June, 2014 & the utilities agreed. Latest status of actions taken may be intimated.

C.7 Monthly MU requirement & availability of each state of NER as per format:

The following figures of state wise MU requirement and availability were taken from draft LGBR 2014-15 of NERPC. State wise MU requirement and availability for these months are to be checked. Constituents may kindly verify if the above data are correct.

Requirement:

Name of State	Aug14	Sep14	Oct14	Nov14	Dec14
Ar. Pradesh	70	70	70	65	65
Assam	830	825	790	660	680
Manipur	65	65	65	65	65
Meghalaya	150	145	170	175	175
Mizoram	39	36	43	43	40
Nagaland	55	60	65	55	55
Tripura	120	120	120	110	120
NER	1328	1321	1323	1173	1201

Availability:

Name of State	Aug14	Sep14	Oct14	Nov14	Dec14
Ar. Pradesh	78	69	58	47	43
Assam	630	583	534	461	454
Manipur	85	78	72	64	59
Meghalaya	287	268	231	158	148
Mizoram	56	50	46	39	36
Nagaland	60	56	52	38	34
Tripura	159	148	147	134	138
NER	1353	1252	1130	941	914

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

Constituents may kindly furnish the data to NERLDC.

C.8 Monthly MW requirement & availability of each state of NER:

The following figures were taken from LGBR 2014-15 of NERPC. These figures are to be reviewed.

A. Peak Demand in MW

Name of State	Aug14	Sep14	Oct14	Nov14	Dec14
Ar. Pradesh	90	139	136	125	125
Assam	1400	1350	1380	1435	1450
Manipur	110	135	140	135	135
Meghalaya	260	310	335	350	345
Mizoram	85	86	87	90	80
Nagaland	110	100	140	120	125
Tripura	250	260	310	270	250
NER	2345	2380	2528	2525	2460

B. Peak Availability in MW

Name of State	Aug14	Sep14	Oct14	Nov14	Dec14
Ar. Pradesh	100	101	130	120	118
Assam	1050	1045	993	874	867
Manipur	90	122	134	115	118
Meghalaya	350	401	415	290	276
Mizoram	95	91	91	80	79
Nagaland	100	95	86	75	75
Tripura	260	300	295	285	281
NER	2045	2155	2145	1839	1814

A. Off Peak Demand in MW

Name of State	Aug14	Sep14	Oct14	Nov14	Dec14
Ar. Pradesh	74	77	75	69	69
Assam	918	868	856	890	899
Manipur	81	81	84	81	81
Meghalaya	202	202	201	210	207
Mizoram	54	57	57	59	52
Nagaland	72	72	84	72	75
Tripura	182	175	202	176	163
NER	1500	1460	1485	1555	1470

B. Off Peak Availability in MW

Name of State	Aug14	Sep14	Oct14	Nov14	Dec14
Ar. Pradesh	129	121	121	115	114
Assam	955	903	914	831	835
Manipur	123	114	114	104	105
Meghalaya	460	437	390	276	264
Mizoram	94	89	84	76	76
Nagaland	88	83	78	70	71
Tripura	291	284	284	279	274
NER	2068	1955	1910	1751	1740

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

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

Khandong -	MU
Kopilli -	MU
Ranganadi -	MU
Doyang -	MU
Loktak -	MU
Pallatana -	MU

Details of unit wise status of Kopili HEP as informed by NEEPCO during 99th OCC meeting are given below: -

Unit – I: Running.

Unit – II: Will be ready by 25.07.2014.

Unit – III: Tender floated for replacement of defective parts.

Unit – IV: Will be ready by 18th July, 2014.

Further, DGM, NEEPCO informed that Khandong Unit # 2 and Ranganadi Unit #1 will be ready by end of July, 2014.

NEEPCO may kindly intimate the current status.

Hydro Generation Planning: In view of inadequate rainfall in the region and corresponding less reservoir level in most of the hydro plants of the region, it is highly essential to utilize the available water judiciously so that generation of these stations can be maintained for longer duration. The matter was also discussed in last OCC meeting.

The Committee may discuss and approve the proposed shutdown by Generating Stations.

NEEPCO proposed shutdown of AGBP U # 5 w.e.f. 6.9.2014 to 15.9.2014 (10 days) for CI & BI. However, generation level of around 200 to 210 MW (present level) shall be available.

OTPC informed that Block-I has to undergo Combustion Inspection (CI) within 8000 Fixed Firing Hours as per stipulation of GE. Hence, they propose to undertake CI in the month of August, 2014. OTPC may kindly intimate the duration of proposed shutdown.

During 99th OCC meeting, constituents of NERPC agreed for shutdown of Pallatana U#1 only after commercial synchronization of U#2 to the grid. The sub-committee however advised OTPC to place the road map for bringing the U #2 on bar by next OCC so that the proposed shutdown of Palatana U#1of OTPC could be reviewed again.

D.2 Water level and spillage data of Hydro Stations

Historical data of reservoir level & spillage data of hydro stations are not available with NERLDC. This information is sometimes asked by various authorities. To facilitate in making a data base for the same, all concerned are requested to please furnish the available information to NERLDC as early as possible.

It was decided in the 99th OCC meeting that NERLDC would give a format for furnishing the data to all the constituents.

NERLDC may intimate the status.

D.3 Outage Planning Transmission elements

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

Furnishing request of shut down of the element, which was approved by NERPC, by Indenting Agency (ISTS licensees/STUs/Generating Companies) to NERLDC: Planned shutdown approved by NERPC shall be considered for implementation by NERLDC on D-3 basis. If an outage is to be availed on say 10th of the month, the shutdown availing agency would reconfirmed to NERLDC on 7th of the month by 1000 Hr. This practice is necessary to ensure optimal capacity utilization and the time required for associated system study/coordination by/amongst RLDC/NLDC.

The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for August - October, 2014 as enclosed at Annexure- D.3

D.4 TTC of NER-ER Corridor under N-1 Criteria & enhancement of TRM of NER-ER Corridor:

Subsequent to the commissioning of Azara S/s and associated transmission lines etc, it has been observed from system study that sensitivity towards BTPS has increased and accordingly the credible contingency for calculation of TTC of NER-ER Corridor under present condition is taken as collapse of tower of 220kV BTPS Salakati line [i.e. N-1-1 Criteria] and the TTC is 780/600 MW during Off-peak/Peak considering N-1 of Misa ICT also. Further as per detailed procedure for relieving congestion in real time operation of CERC, size of largest generating unit in the control area/ group of control area/Region will be import transmission reliability margin (TRM) of the corridor. Import TRM of NER-ER corridor is presently taken as 50 MW. However now 363 MW of Palatana is largest size of machine in NER Grid

and being located in southern part of the region the TRM is directly related to the outage of this unit. Accordingly import TRM of NER-ER corridor needs to be revised; around 300 MW considering SPS based load relief is considered.

The sub-Committee may like to discuss.

D.5 Review of Generation Run-back frequency setting of Pallatana machines:

It has been observed that Pallatana generation starts decreasing when system frequency is more than 50.60 Hz (Generation run back continues till frequency reaches 50.3 Hz). It is requested to review the settings to avoid sharp decrease of generation in case of system isolation resulting collapse of the system.

The sub-Committee may like to discuss.

D.6 Status/Load ability of 132 kV Lumshnong – Panchgram Line:

Meghalaya informed that since the line is old, loading of above line needs to be fixed at a safe thermal limit. Hence both Assam & Meghalaya may look into the matter for strengthening of the system.

During 98th OCC meeting, Assam informed the members that healthiness of the line has been checked by AEGCL till Panchgram and it was found that the line is very old and cannot be loaded up to 50 MW. Healthiness of the line from Lumshnong end may be confirmed from Me. PTCL.

During 99th OCC meeting, Member Secretary (I/C) informed that the 132kV Lumshnong – Panchgram line is an interstate line benefiting the NER region. Strengthening of this line is essential to increase the loadability of the line beyond 50MW and this will require huge expenditure. He further stated that possibility of funding from PSDF may be explored as per PSDF guidelines.

He advised Me.ECL to apply for funding from PSDF by filling in prescribed formats as provided by CEA/NLDC.

Me. ECL may kindly intimate the current status.

D.7 Status of Construction of:

1. 220/132/33 kV sub-station at Sonapur
2. LILO of 132 kV Kahilipara – Umtru Line at Byrnihat.

During 99th OCC meeting, members requested Assam and Meghalaya to resolve the matter bilaterally and inform the members in the next OCCM.

Assam/Meghalaya may kindly intimate the current status.

D.8 Frequent disruption of power supply to Kameng HEP:

It was informed in earlier OCC meetings that, the Department of Power, Govt. of Arunachal Pradesh was allowed to draw power from a Tee-connection at Tipi (near Bhalukpong) from the 132 kV Balipara - Khuppi Transmission Line. The Tee-connection was energized on 31-05-11 and drawal of power was temporarily allowed for two months only within which time the LILO System was supposed to be commissioned. It may be noted that the drawal of power in the 132 kV Balipara - Khuppi Line is monitored from Balipara end and therefore the drawal of power in the said Tee-connection is being accounted.

However, due frequent over-drawal by Department of Power, Govt. of Arunachal Pradesh from the said Tee-connection, 132kV Balipara-Khuppi line is frequently opened from Balipara substation which hampers the construction work of Kameng HEP of NEEPCO.

It was agreed in the 99th OCC meeting that NEEPCO will remove the Tee-Connection in consultation with Ar. Pradesh.

Latest status may be intimated by NEEPCO and committee may like to discuss.

D.9 Commissioning of 315 MVA ICT at NTPC Bongaigoan & also 220 kV BTPS(Assam):

NTPC D/C line for off loading 220kV Salakati-BTPS D/C line – It has been observed that the 220 kV Salakati – BTPS D/C line is getting overloaded during peak hours posing threat to system security. For off-loading the link it is requested to NTPC for taking actions for early commissioning of 315 MVA ICT at NTPC Bongaigaon & also 220 kV BTPS(Assam) – NTPC D/C line for off loading 220kV Salakati-BTPS D/C line. As no representatives from NTPC were present in the 99th OCC meeting, the subcommittee advised NERLDC/NERPC to take up the matter with NTPC for early commissioning of 315 MVA ICT at NTPC Bongaigoan.

NERPC vide letter dated 30.07.2014 has written to NTPC in this regard, but no reply was received from them.

Committee may like to discuss.

D.10 Partial Requisition Based Scheduling in NER:

During 98th OCC meeting, members noted the difficulties in scheduling Run-of-river project as it is a must run station in case of spillage. The same is also applicable for other Hydro stations in case of spillage. It was agreed that the issue will be deliberated in next OCCM to arrive at better practice of scheduling.

The issue was also discussed in the 21st CCM as below where representative of NERLDC referred Clauses 6.5.12 and 6.5.13 of IEGC which are quoted below:

Clause 6.5.12 of IEGC : Run-of-river power station with pondage and storage type power stations are designed to operate during peak hours to meet system peak demand. Maximum capacity of the station declared for the day shall be equal to the installed capacity including overload capability, if any, minus auxiliary consumption, corrected for the reservoir level. The Regional Load Despatch Centers shall ensure that generation schedules of such type of stations are prepared and the stations despatched for optimum utilization of available hydro energy except in the event of specific system requirements/constraints.

Clause 6.5.13 of IEGC : The schedule finalized by the concerned load dispatch centre for hydro generating station, shall normally be such that the scheduled energy for a day equals the total energy (ex-bus) expected to be available on that day, as declared by the generating station, based on foreseen/planned water availability/release. It is also expected that the total net energy actually supplied by the generating station on that day would equal the declared total energy, in order that the water release requirement is met."

It was clarified by NERLDC that in case of hydro, water available in the reservoir would have to be optimally utilized and reduced requisition resulting in sub-optimal utilization would not be possible as it would violate IEGC provisions. In case of ROR and spilling reservoir based hydro, water would have to be fully used and scheduling would have to be done accordingly. But in case of no spilling, there can be appropriate water management/planning in OCC as per requirement of beneficiaries which would effectively result in requisition based scheduling. Commercial Committee advised that in such cases when there is no spilling, OCC may plan MU/day for each reservoir hydro for a period till next OCC. This would help beneficiaries to decide their action plan. Based on the broad planning in OCC, RLDC would prepare entitlement/schedule in MW in day ahead basis taking into account demand profile of States/Region.

Regarding sudden change in ROR schedule, it was felt that such variation would have to be absorbed by beneficiaries by regulating own generation and reducing requisition from gas thermal up to technical minimum. It was also felt that continuous trading in PX once implemented would come to the rescue of beneficiaries.

Committee may like to discuss.

D.11 Evacuation of power from Margherita Power Plant.

APGCL is developing a 660 MW supercritical power plant in Margherita based on Assam coal, with a provision of future expansion with an identical unit. The project is proposed to be executed in joint venture with NEEPCO. Being a plant of large capacity in comparison with Assam grid, we are faced with issues of evacuation of power and stability of Assam grid in case of sudden outage of the plant.

It is therefore requested that the matter be placed before appropriate forum from your end for discussion and solution.

Committee may like to discuss.

D.11 Estimated Transmission Availability Certificate (TAC) for the month of July, 2014.

The Estimated Transmission System Availability for the month of July, 2014, furnished by PGCIL, is **99.9820%**. The detail outage data for calculation of Transmission System Availability furnished by PGCIL, is at **Annexure D.15**. NER constituents are requested to kindly communicate their views and observations, if any, by 28th August, 2014 so that Final TAC for the month of July, 2014 may be finalized by NERPC Secretariat.

Availability certification of ISTS elements – POWERGRID & NETC submitted outage reports of their lines for certification for the first time for this control period i.e. 2014-19. Being the first certificate to be issued for the control period 2014-19 the same may be thoroughly deliberated by the constituents vis a vis the new tariff regulation so that any inadvertent mistake can be detected & corrected before issuance of certificate by NERPC.

The Sub-Committee may like to discuss.

Any other item:

Date and Venue of next OCC

It is proposed to hold the 101st OCC meeting of NERPC on second week of September, 2014. The exact venue will be intimated in due course.

POWER GRID CORPORATION OF INDIA LIMITED
OPERATION SERVICE DEPARTMENT, NERTS, SHILLONG
Exception Report of Bus Reactors

MONTH: JULY-14

Sl. No.	Name of the Element		Ckt No		Duration of Outage and Attributable To						Outage under categories of Deemed Available	Category	Reason of Outage	
	Outage		Restoration		POWERGRID		Other Constituents		Sys.Const/Natural calamities/ Militant activities					
	Date	Time	Date	Time	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.				
BR_SILCHAR(63MVAR)			#2											
1	04/07/2014	18:54	05/07/2014	00:26	00	00	00	00	00	00	05	32	SVRD	h/T for vol. regu. On RLDC instruction vide code 1035
Sub-Total					00	00	00	00	00	00	05	32		
BR_BONGAIGAON(80MVAR)			#4											
2	01/07/2014	00:00	01/08/2014	00:00	00	00	00	00	00	00	744	00	SVRD	h/T for vol. regu. On RLDC instruction vide code 902
Sub-Total					00	00	00	00	00	00	744	00		
BR_BONGAIGAON(80MVAR)			#3											
3	01/07/2014	00:00	06/07/2014	04:45	00	00	00	00	00	00	124	45	SVRD	h/T for vol. regu. On RLDC instruction vide code 941
4	07/07/2014	18:27	01/08/2014	00:00	00	00	00	00	00	00	581	33	SVRD	h/T for vol. regu. On RLDC instruction vide code 1087
Sub-Total					00	00	00	00	00	00	706	18		
Grand Total					00	00	00	00	00	00	1455	50		

POWER GRID CORPORATION OF INDIA LIMITED
OPERATION SERVICE DEPARTMENT, NERTS, SHILLONG
Exception Report

MONTH: JULY-14

Sl. No.	Name of the Element		Ckt No		Duration of Outage and Attributable To								Category	Reason of Outage
	Outage		Restoration		POWERGRID		Other Constituents		Sys.Const/Natural calamities/ Militant activities		Outage under categories of Deemed Available			
	Date	Time	Date	Time	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.		
RCN_AGARTALA					# 1									
1	20/07/2014	20:55	20/07/2014	21:25	00	00	00	30	00	00	00	00	OMSU	Fault in Tripura state system
2	23/07/2014	09:20	23/07/2014	11:55	02	35	00	00	00	00	00	00	OMST	SD taken for rectification of Rph CT summer at 79rilla end
3	23/07/2014	11:55	23/07/2014	12:44	00	00	00	49	00	00	00	00	OMSU	Line could not be charged after SD due to problem at NEEPCO end
Sub-Total					02	35	01	19	00	00	00	00		
RCN_AGARTALA					# 2									
4	20/07/2014	20:55	20/07/2014	21:35	00	00	00	40	00	00	00	00	OMSU	Fault in Tripura state system
5	27/07/2014	01:17	27/07/2014	01:50	00	00	00	33	00	00	00	00	OMSU	Fault in downstream Tripura system
Sub-Total					00	00	01	13	00	00	00	00		
AIZWAL_KUMARGHAT														
6	01/07/2014	09:25	01/07/2014	11:14	01	49	00	00	00	00	00	00	OMST	ESD taken for checking of PSL pertaining to autoreclosure feature at Aizawl end
7	12/07/2014	16:19	12/07/2014	16:44	00	00	00	25	00	00	00	00	OMSU	Tripped due to downstream fault in Mizoram system
8	22/07/2014	10:30	22/07/2014	12:37	00	00	00	00	02	07	00	00	LMAC	SD taken for clearing of bamboos leaning towards condr from outside line corridor in
9	26/07/2014	08:25	26/07/2014	11:53	00	00	00	00	03	28	00	00	LNCC	Offlin etest shows no abnormality. Lightning suspected
Sub-Total					01	49	00	25	05	35	00	00		
BADARPUR_KHLIERIAT														
10	20/07/2014	13:08	20/07/2014	13:20	00	00	00	00	00	12	00	00	LNCC	Tripped due to lightning(LA countr incr at KHLT in RYB nh)
Sub-Total					00	00	00	00	00	12	00	00		
DIMAPUR_IMPHAL														
11	01/07/2014	08:11	01/07/2014	17:15	00	00	00	00	09	04	00	00	LNCC	SD taken for shifting of endangered loc.139
12	02/07/2014	08:00	04/07/2014	20:00	00	00	00	00	60	00	00	00	LNCC	do
13	05/07/2014	10:27	05/07/2014	15:24	00	00	00	00	04	57	00	00	LNCC	SD taken for dismantling old tower in connection with shifting of endangered
14	27/07/2014	18:45	27/07/2014	19:08	00	23	00	00	00	00	00	00	OMST	ESD taken for attending hotspot in Rph CT terminal

Sl. No.	Name of the Element		Ckt No		Duration of Outage and Attributable To								Category	Reason of Outage
	Outage		Restoration		POWERGRID		Other Constituents		Sys.Const/Natural calamities/ Miltant activities		Outage under categories of Deemed Available			
	Date	Time	Date	Time	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.		
Sub-Total					00 : 23		00 : 00		74 : 01		00 : 00			
GOHPUR_NIRJULI														
15	05/07/2014	15:37	05/07/2014	19:07	03 : 30		00 : 00		00 : 00		00 : 00		SEFT	Yph LA failed at nirjuli end
Sub-Total					03 : 30		00 : 00		00 : 00		00 : 00			
IMPHAL_IMPHAL			#1											
16	05/07/2014	08:25	05/07/2014	08:14	00 : 00		-24 : 11		00 : 00		00 : 00		OMSU	Downstream fault(condr snapping) in 33KV Manipur svstem
17	18/07/2014	12:32	18/07/2014	12:36	00 : 00		00 : 04		00 : 00		00 : 00		OMSU	due to downstream fault in Manipur system
18	22/07/2014	04:45	22/07/2014	05:36	00 : 00		00 : 51		00 : 00		00 : 00		OMSU	Tripped due to fault in Manipur state system
19	22/07/2014	06:09	22/07/2014	06:19	00 : 00		00 : 10		00 : 00		00 : 00		OMSU	Tripped due to fault in Manipur state system
20	22/07/2014	14:13	22/07/2014	14:24	00 : 00		00 : 11		00 : 00		00 : 00		OMSU	Tripped due to fault in Manipur state system
Sub-Total					00 : 00		-23 : 27		00 : 00		00 : 00			
JIRIBAM_AIZWAL														
21	02/07/2014	15:25	02/07/2014	15:32	00 : 00		00 : 00		00 : 07		00 : 00		LNCC	Tripped due to lightning
22	03/07/2014	11:46	03/07/2014	14:34	00 : 00		00 : 00		02 : 48		00 : 00		LNCC	ESD taken for replacement of insulator in Bnh at loc 414 damaged by lightning
23	12/07/2014	16:19	12/07/2014	16:38	00 : 00		00 : 19		00 : 00		00 : 00		OMSU	Tripped due to downstream fault in Mizoram svstem
24	13/07/2014	09:25	13/07/2014	12:18	00 : 00		00 : 00		00 : 00		02 : 53		SCSD	SD taken for retrofitting of MICOM relay at Aizawl
25	22/07/2014	12:24	22/07/2014	12:32	00 : 00		00 : 00		00 : 08		00 : 00		LNCC	Tripped due to lightning
Sub-Total					00 : 00		00 : 19		03 : 03		02 : 53			
JIRIBAM_HAFLONG														
26	01/07/2014	13:05	01/07/2014	16:45	00 : 00		03 : 40		00 : 00		00 : 00		OMSU	Trip due to arcing during stringing of HT line by State utility near line
Sub-Total					00 : 00		03 : 40		00 : 00		00 : 00			
JIRIBAM_LOKTAK			# 2											
27	20/07/2014	08:15	20/07/2014	14:29	00 : 00		00 : 00		06 : 14		00 : 00		LNCC	Tripped due to landslide causing a tree to come within vicinity of Bnh condr at loc 61-
Sub-Total					00 : 00		00 : 00		06 : 14		00 : 00			
KHANDONG-HAFLONG														
28	24/07/2014	20:35	24/07/2014	21:04	00 : 00		00 : 00		00 : 29		00 : 00		LNCC	Heavy lightning. Insulator flashover at loc 80-81
Sub-Total					00 : 00		00 : 00		00 : 29		00 : 00			
KHANDONG_KHLIERIAT			I											

Sl. No.	Name of the Element		Ckt No		Duration of Outage and Attributable To								Category	Reason of Outage
	Outage		Restoration		POWERGRID		Other Constituents		Sys.Const/Natural calamities/ Miltant activities		Outage under categories of Deemed Available			
	Date	Time	Date	Time	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.		
29	23/07/2014	11:49	23/07/2014	14:05	00	00	00	00	02	16	00	00	LNCC	SD taken for replacement of Yph Insulator string shattered due to lightning impact
30	27/07/2014	12:55	27/07/2014	13:07	00	00	00	00	00	12	00	00	LNCC	(Tripped due to lightning with LA counter incr. at KHLT
31	29/07/2014	03:59	29/07/2014	04:23	00	00	00	24	00	00	00	00	OMSU	fault in Meghalaya downstream system
Sub-Total					00	00	00	24	02	28	00	00		
KHANDONG_KHLIERIAT			# 2											
32	24/07/2014	19:05	24/07/2014	19:26	00	00	00	00	00	21	00	00	LNCC	R & Bph Insulator at loc.51 damaged due to Heavy lightning with LA counter incr. at fault in Meghalaya downstream system
33	29/07/2014	03:59	29/07/2014	04:32	00	00	00	33	00	00	00	00	OMSU	
34	30/07/2014	11:26	30/07/2014	17:00	00	00	00	00	05	34	00	00	LNCC	ESD taken for replacement of Insulator string at loc.51(R&B) damaged by lightning
Sub-Total					00	00	00	33	05	55	00	00		
KHLIERIAT_KHLIERIAT														
35	29/07/2014	03:59	29/07/2014	04:10	00	00	00	11	00	00	00	00	OMSU	fault in Meghalaya downstream system
Sub-Total					00	00	00	11	00	00	00	00		
KUMARGHAT_R C NAGAR														
36	27/07/2014	16:25	27/07/2014	16:36	00	00	00	00	00	11	00	00	LNCC	Heavy lightning near loc.106
37	28/07/2014	01:51	28/07/2014	02:04	00	13	00	00	00	00	00	00	LPPT	Transient ph-ph fault
38	28/07/2014	08:37	28/07/2014	08:52	00	00	00	15	00	00	00	00	SRMU	Relay mal-operation at RC Nagar end
39	30/07/2014	11:29	30/07/2014	11:39	00	10	00	00	00	00	00	00	LEFT	tripped during heavy lightning
40	31/07/2014	07:20	31/07/2014	16:15	08	55	00	00	00	00	00	00	OSPT	Planned maintenance work in the line
Sub-Total					09	18	00	15	00	11	00	00		
LOKTAK_IMPHAL			# 2											
41	22/07/2014	04:45	22/07/2014	05:20	00	00	00	35	00	00	00	00	OMSU	Tripped due to fault in Manipur state system
Sub-Total					00	00	00	35	00	00	00	00		
KOLASIB-AIZAWL														
42	05/07/2014	13:03	05/07/2014	14:10	00	00	00	00	01	07	00	00	LNCC	ESD taken for clearing of bamboo leaning towards condr near loc 78 due to cyclonic
43	08/07/2014	11:02	08/07/2014	17:08	00	00	00	00	06	06	00	00	LNCC	ESD taken for replacement of Yph condn in bet 192-93 damaged under the impact of
44	12/07/2014	16:19	12/07/2014	16:53	00	00	00	34	00	00	00	00	OMSU	Tripped due to downstream fault in Mizoram svstem
45	24/07/2014	18:01	24/07/2014	18:12	00	00	00	11	00	00	00	00	OMSU	Fault beyond line length

Sl. No.	Name of the Element		Ckt No		Duration of Outage and Attributable To								Category	Reason of Outage
	Outage		Restoration		POWERGRID		Other Constituents		Sys.Const/Natural calamities/ Militant activities		Outage under categories of Deemed Available			
	Date	Time	Date	Time	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.		
Sub-Total					00 : 00		00 : 45		07: 13		00 : 00			
RANGANADI-ZIRO														
46	04/07/2014	09:53	04/07/2014	10:03	00 : 00		00 : 10		00 : 00		00 : 00		OMSU	Tripped due to downstream fault in AP svsystem
Sub-Total					00 : 00		00 : 10		00: 00		00 : 00			
SILCHAR-BADARPUR-I			#1											
47	06/07/2014	07:14	06/07/2014	16:38	09 : 24		00 : 00		00 : 00		00 : 00		OSPT	SD taken for mass tightening of jumpers in the line
48	07/07/2014	07:16	07/07/2014	15:42	08 : 26		00 : 00		00 : 00		00 : 00		OSPT	do
Sub-Total					17 : 50		00 : 00		00: 00		00 : 00			
SILCHAR-BADARPUR-II			#2											
49	06/07/2014	07:30	06/07/2014	16:41	09 : 11		00 : 00		00 : 00		00 : 00		OSPT	SD taken for mass tightening of jumpers along the line
50	07/07/2014	07:16	07/07/2014	15:42	08 : 26		00 : 00		00 : 00		00 : 00		OSPT	do
Sub-Total					17 : 37		00 : 00		00: 00		00 : 00			
SILCHAR-HAILAKANDI			#1											
51	04/07/2014	07:50	04/07/2014	15:55	08 : 05		00 : 00		00 : 00		00 : 00		OSPT	SD taken for tightening of jumpers along the line
52	04/07/2014	15:55	04/07/2014	18:07	00 : 00		02 : 12		00 : 00		00 : 00		OMSU	Line could not be charged due to non-receipt of clearance from NFERI DC
53	27/07/2014	09:29	27/07/2014	13:36	00 : 00		04 : 07		00 : 00		00 : 00		OMSU	Jumper failure in AEGCL section of the line near Panchoram
Sub-Total					08 : 05		06 : 19		00: 00		00 : 00			
SILCHAR-HAILAKANDI			#2											
54	04/07/2014	07:18	04/07/2014	15:55	08 : 37		00 : 00		00 : 00		00 : 00		OSPT	SD atken for tightening of jumpers along the line
55	04/07/2014	15:55	04/07/2014	16:48	00 : 00		00 : 53		00 : 00		00 : 00		OMSU	Line could not be charged due to non-receipt of clearance from NFERI DC
56	15/07/2014	13:49	15/07/2014	14:44	00 : 00		00 : 55		00 : 00		00 : 00		OMSU	shutdown by ASEB
Sub-Total					08 : 37		01 : 48		00: 00		00 : 00			
BALIPARA_TEZPUR														
57	07/07/2014	12:34	07/07/2014	20:31	00 : 00		07 : 57		00 : 00		00 : 00		OMSU	fault in ASEB section of the line
Sub-Total					00 : 00		07 : 57		00: 00		00 : 00			
MISA_DIMAPUR			# 1											
58	23/07/2014	07:22	23/07/2014	17:03	00 : 00		00 : 00		09 : 41		00 : 00		LNCC	SD taken for extensive clearing of high rise trees leaning towards condnr from outside
59	27/07/2014	18:10	27/07/2014	18:39	00 : 29		00 : 00		00 : 00		00 : 00		OMST	ESD taken for attending heavy sparking in Isolator

Sl. No.	Name of the Element		Ckt No		Duration of Outage and Attributable To								Category	Reason of Outage
	Outage		Restoration		POWERGRID		Other Constituents		Sys.Const/Natural calamities/ Militant activities		Outage under categories of Deemed Available			
	Date	Time	Date	Time	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.		
Sub-Total					00 : 29		00 : 00		09: 41		00 : 00			
MISA_DIMAPUR # 2														
60	24/07/2014	07:34	24/07/2014	18:32	00 : 00		00 : 00		10 : 58		00 : 00	LNCC	SD taken for extensive clearing of high rise trees leaning towards condr from outside	
Sub-Total					00 : 00		00 : 00		10: 58		00 : 00			
MISA_MARIANI(OLD)														
61	25/07/2014	05:21	25/07/2014	06:37	00 : 00		00 : 00		01 : 16		00 : 00	GGDC	tripped on O/V at Misa during grid disturbance	
Sub-Total					00 : 00		00 : 00		01: 16		00 : 00			
MISA_SAMAGURI # 1														
62	25/07/2014	05:24	25/07/2014	20:32	00 : 00		00 : 00		15 : 08		00 : 00	SNCC	Heavy lightning & switching overvoltage led to LA failure at Samaguri	
63	30/07/2014	03:15	30/07/2014	03:35	00 : 00		00 : 00		00 : 20		00 : 00	LNCC	Heavy lightning acuated tripping	
Sub-Total					00 : 00		00 : 00		15: 28		00 : 00			
MISA_SAMAGURI # 2														
64	30/07/2014	03:15	30/07/2014	03:35	00 : 00		00 : 00		00 : 20		00 : 00	LNCC	Tripped due to lightning	
Sub-Total					00 : 00		00 : 00		00: 20		00 : 00			
SALAKATI_BTPS # 2														
65	24/07/2014	10:03	24/07/2014	13:38	00 : 00		03 : 35		00 : 00		00 : 00	OMSU	SD taken by BTPS for maintenance work at their end	
Sub-Total					00 : 00		03 : 35		00: 00		00 : 00			
SALAKATI-BTPS # 1														
66	04/07/2014	18:59	04/07/2014	19:55	00 : 56		00 : 00		00 : 00		00 : 00	OMST	ESD taken for isolation of faulty Bph CVT	
67	07/07/2014	09:55	07/07/2014	14:20	04 : 25		00 : 00		00 : 00		00 : 00	OMST	ESD SD taken for replacement of Bph CVT	
Sub-Total					05 : 21		00 : 00		00: 00		00 : 00			
MISA-MARIANI(NEW)														
68	25/07/2014	05:21	25/07/2014	08:21	00 : 00		00 : 00		03 : 00		00 : 00	GGDC	tripped tripped on high voltage during grid disturbance	
Sub-Total					00 : 00		00 : 00		03: 00		00 : 00			
MISA_BALIPARA # 1														
69	17/07/2014	09:43	17/07/2014	10:03	00 : 00		00 : 00		00 : 20		00 : 00	LNCC	Line patrolled thoroughly, no abnormality found Lightning suspected	
70	19/07/2014	16:14	19/07/2014	19:58	03 : 44		00 : 00		00 : 00		00 : 00	OMST	ESD taken for checking of Rph CVT at Misa due to abnormal sound	
71	25/07/2014	05:15	25/07/2014	05:58	00 : 00		00 : 00		00 : 43		00 : 00	GGDC	Tripped on O/V at BLP during grid disturbance	
Sub-Total					03 : 44		00 : 00		01: 03		00 : 00			

Sl. No.	Name of the Element		Ckt No		Duration of Outage and Attributable To								Category	Reason of Outage		
	Outage		Restoration		POWERGRID		Other Constituents		Sys.Const/Natural calamities/ Miltant activities		Outage under categories of Deemed Available					
	Date	Time	Date	Time	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.				
MISA-BALIPARA			#2													
72	25/07/2014	05:15	25/07/2014	05:59	00	00	00	00	00	44	00	00	GGDC	Tripped on O/V at BLP during grid disturbance		
Sub-Total					00	00	00	00	00	44	00	00				
BALIPARA-RANGANADI			# 1													
73	07/07/2014	11:54	07/07/2014	12:24	00	00	00	00	00	30	00	00	LNCC	Line patrolled thoroughly, no abnormality. Lightning susnected		
74	25/07/2014	05:15	25/07/2014	05:15	00	00	00	00	00	00	00	00	LART	Successful A/R		
Sub-Total					00	00	00	00	00	30	00	00				
BALIPARA-RANGANADI			# 2													
75	18/07/2014	10:05	18/07/2014	13:33	00	00	00	00	00	00	03	28	SCSD	SD taken for testing of SPAR in DPR		
76	25/07/2014	05:15	25/07/2014	12:09	00	00	00	00	06	54	00	00	LNCC	Earthwire in the span 33-34 damaged/snapped due to lightning		
Sub-Total					00	00	00	00	06	54	03	28				
Grand Total					79	18	06	55	155	15	06	21				