

# North Eastern Regional Power Committee

## Agenda

### For

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

Time of meeting : 10:00 Hrs.

Date of meeting : 6<sup>th</sup> December, 2014 (Saturday)

Venue : "Hotel Acacia", Dimapur.

### A. CONFIRMATION OF MINUTES

#### CONFIRMATION OF MINUTES OF 103<sup>rd</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 103<sup>rd</sup> meeting of Operation Sub-committee held on 13<sup>th</sup> November, 2014 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2014/2954-2989 dated 19<sup>th</sup> November, 2014.

*No observations or comments were received from the constituents. The Sub-committee may discuss & confirm minutes of 103<sup>rd</sup> OCCM of NERPC.*

### ITEMS FOR DISCUSSION

#### B. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING NOV, 2014

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

**NER PERFORMANCE DURING NOVEMBER, 2014**

States	Energy Met (MU)		% inc(+)/dec(-)	Energy Reqr. (MU)		% inc(+)/dec(-)
	Nov-14	Oct-14		Nov-14	Oct-14	
Ar. Pradesh		53.37	-1.1		70.0	0.0
Assam		727.01	5.7		790.0	-4.2
Manipur		65.47	9.5		66.0	1.5
Meghalaya		128.03	-2.4		170.0	17.2
Mizoram		37.57	9.0		43.0	19.4
Nagaland		59.69	9.2		65.0	8.3
Tripura		96.08	3.3		120.0	0.0
Region		1167.21	4.7		1324.00	0.2

States	Demand Met (MW)		% inc(+)/dec(-)	Demand in (MW)		% inc(+)/dec(-)
	Nov-14	Oct-14		Nov-14	Oct-14	
Ar. Pradesh		126	9.6		136	-2.2
Assam		1257	4.1		1380	2.2
Manipur		134	6.3		140	3.7
Meghalaya		273	-2.5		335	8.1
Mizoram		80	2.6		87	1.2
Nagaland		118	1.8		140	19.7
Tripura		266	3.9		310	19.2
Region		2141	1.4		2528	6.2

**REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU**

Month---->	Nov-14	Oct-14
Total Generation in NER (Gross)		1083.71
Total Central Sector Generation (Gross)		703.04
Total State Sector Generation (Gross)		380.67
<b>Inter-Regional Energy Exchange</b>		
(a) NER-ER		18.19
(b) ER-NER		128.19
© Net Import		110.00

**AVERAGE FREQUENCY (Hz)**

Month---->	Nov-14	Oct-14
	% of Time	% of Time
Below 49.9 Hz		25.06
Between 49.9 to 50.05 Hz		52.9
Above 50.05 Hz		22.04
Average		49.97
Maximum		50.49
Minimum		49.53

From the above table, it is seen that energy requirement & requirement met (MU) of the region increased from the previous month.

The peak met (MW) also increased from the previous month.

**C.1 Synchronization of Palatana Module -I**

During 103<sup>rd</sup> OCC meeting, representative from OTPC informed that CoD of Unit-II is expected to be commissioned by November 2014.

***The Sub-committee would like to review the status of commissioning of second unit of OTPC at Pallatana, first unit of NTPC at Bongaigoan, following Transmission lines of POWERGRID and substation at Azara of Assam. The status as informed by OTPC, NTPC, Assam and POWERGRID is as follows:***

SN	Items	Status as given in 103 <sup>rd</sup> OCC Meeting	Status as on 104 <sup>th</sup> OCC
1	Trial operation and CoD of Unit -II of Palatana	OTPC Unit-II- All testing for trial run shall be completed by 30 <sup>th</sup> Nov 2014.Expected COD by December end	
2	Trial operation and CoD of Unit -I of NTPC at Bongaigoan	NTPC Unit-I (250 MW) – Boiler light up shall be completed by 30 <sup>th</sup> Nov 2014.Expected COD by March, 2015	
2	400KV D/C Silchar - Melriat line	June, 2015	
3	400KV D/C Silchar - Imphal line	December, 2014	
4	220KV D/C Mariani (New) – Mokokchung	December, 2014	
5	400KV D/C Byrnihat-Bongaigaon line	December, 2014	

During 103<sup>rd</sup> OCC meeting, it was deliberated that during testing of Block-II, the generation of Block-I may have to be reduced to accommodate infirm generation from Block-II, which will affect the scheduled availability of constituents. Forum requested the constituents to bear with this for greater interest of commissioning of the Block-II of OTPC and subsequent COD, which will enhance the generation availability of the region benefitting the constituents. Constituents agreed to the same but requested OTPC to intimate the testing programme of Block-II & availability from Block-I well in advance so that they can plan their drawal schedule from various sources vis-à-vis requirement.

AEGCL representative informed the members that the Reverse Power Relay settings at Azara are already implemented.

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

## **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 99<sup>th</sup> 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 97<sup>th</sup> 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 2<sup>nd</sup> 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 99<sup>th</sup> OCC meeting.***
- (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 93<sup>rd</sup> 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.
- (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 93<sup>rd</sup> OCC meeting, subcommittee had suggested OTPC to discuss the matter with POWERGRID.

During 103<sup>rd</sup> OCC meeting, OTPC representative informed the members that BHEL has already implemented the scheme for reduction of generation of Palatana to 200 MW immediately on operation of SPS – 3.

DGM, NERTS informed that the necessary modification of SPS – 3 & SPS – 4 will be done by November 2014.

OTPC was requested to submit the detail scheme of SPS – II & III to NERLDC. OTPC agreed and informed that they have completed SPS at their end and will inform through letter. Logic will be sent to NERLDC by OTPC.

***OTPC may kindly intimate the status.***

**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 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 matter was studied and deliberated by the system study group of NERPC on 14.10.2014 at NERLDC, Shillong. The minutes are reproduced below: -

1. Lumshnong – Khliehriat will be disconnected and Lumshnong will be fed from Panchgram

***Once Palatana trips, then Lumshnong S/s will be tripped and a load relief of 15 MW may be expected.***

2. Dharmanagar - P.K. Bari will remain disconnected and Dharmanagar & Dullavcherra will be fed from Silchar S/S radially.

***Once Palatana trips, then 132kV Sichar-Dullavcherra feeder will be tripped at Silchar End through SPS and relief of 14 MW load can be achieved.***

DGM, NERTS informed the members that the incorporation of tripping of 132kV Sichar - Dullavcherra feeder in SPS-1 & SPS-2 will be completed by November 2014.

***The Sub-committee requested POWERGRID to complete the wiring for all the cases above in co-ordination with OTPC and also requested OTPC to extend all help to POWERGRID if necessary.***

The above suggestions may be reviewed by system study committee as and when required.

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

**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 102<sup>nd</sup> OCC meeting.

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

**Manipur:** Informed that UFRs based load shedding for all the four stages have been implemented, however, the exact amount of load relief would be furnished soon. Relays have been tested and reports are sent to NERLDC. UFR operation and amount of load relief reports will be sent to NERLDC regularly.

**Tripura:** UFRs based load shedding for Stages I & II have been implemented. Tendering is done for Stages II & IV, after evaluation of tenders; approval from TSECL Board will be taken. It is expected to implement Stages II & IV by December 2014.

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

**Arunachal Pradesh:** EE, SLDC informed that Stage - I is completed. Stage - II is under consideration and may be expected by December 2014. Stage - III and Stage - IV may be expected to be completed by March 2015. ***The Sub-committee requested Ar. Pradesh to furnish the feeder's name of Stage II, III & IV at the earliest. Ar. Pradesh agreed.***

**Mizoram:** EE, SLDC, Mizoram informed that UFR based load shedding for Stages I has been completed. Stage - II is under consideration which may be expected to be implemented by December 2014. Status of Stage - III & IV will be intimated in next OCC meeting. Mizoram is sending the UFR reports regularly for the implemented stages.

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

**C.4 Lines under long outages**

During the 101<sup>st</sup> OCC meeting, the issue for restoration of these lines was reviewed by the committee and the status was as follows:

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

Manipur representative informed that towers are faulty in locations 90 and 91 due to constructions railway line and road by Ministry of Railway and BRTF. Compensation for the same is awaited from the 2 parties and repairing work may be completed after 2 months from receipt of the compensations.

During 102<sup>nd</sup> OCC meeting, Manipur representative stated that the line would be completed by end of November 2014.

***Manipur may like to inform the status.***

#### **C.5 CT Ratio of Transmission Lines in NER:**

During 102<sup>nd</sup> OCC meeting, CT ratios of transmission lines of NER are to be enhanced for enhancement of transfer capability & reliable grid operation. List of these transmission lines are available in minutes of 102<sup>nd</sup> OCCM of NERPC.

During 103<sup>rd</sup> OCC meeting, OTPC and NEEPCO informed that the works pertaining to them have been completed and the same has been sent to NERLDC.

***Concerned transmission utilities are requested to enhance CT ratio of these elements at the earliest.***

#### **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.

During 101<sup>st</sup> OCC meeting, NERLDC informed that all the beneficiary states except Manipur have submitted the required information.

During 102<sup>nd</sup> OCC meeting, Manipur representative stated that they had already sent to GM, NERLDC. Tripura representative submitted to NERLDC during the meeting. NERTS agreed to submit soon. NEEPCO will check and submit. OTPC agreed to submit soon.

POWERGRID (Biswanath Chariali, Mariani, Mokokchung, Melriat, Namsai, Tezu & Roing), NHPC (Lower Subhansiri HEP), OTPC (Palatana GBPP) and NTPC (Bongaigaon TPP) have not furnished these data till date.

During 103<sup>rd</sup> OCC meeting, OTPC, NEEPCO, AEGCL submitted the required information. NHPC submitted the information for Loktak HEP and agreed to submit detail of Subhansiri HEP within a week. NERTS and NTPC also agreed to submit the required information within a week.

***Arunachal Pradesh, Assam, Meghalaya and Tripura have not furnished the data of the nodes as per Annexure-C.6 till date.***

**C.7 Single Line Diagram of Sub-stations, Switching Stations & Power Stations of NER:**

P&E, Mizoram, Me. PTCL, TSECL, POWERGRID and DoP, Arunachal Pradesh has furnished Single Line Diagram of their Sub/Switching Stations. However, Single Line Diagram of few Sub-stations are not furnished by them. POWERGRID, NEEPCO, OTPC, NHPC, Arunachal Pradesh, Assam, Manipur, Me. PTCL, Mizoram, Nagaland and Tripura are requested to furnish Single Line Diagram of Sub-Stations, Switching Stations & Power Stations as per **Annexure-C.7** as these diagrams are required for system studies, outage coordination etc.

All other constituents of NER are requested to furnish Single Line Diagram of Sub-Stations, Switching Stations & Power Stations owned by them at the earliest as these diagrams are required for proper visualization.

***Constituents may kindly furnish the information at the earliest.***

**C.8 Finalization of Annual Load Generation Balanced Report (LGBR) for peak as well as off-peak scenarios and the Annual outage plan for 2015-2016 by 31.12.2014 as per IEGC:**

As per IEGC, each SLDC shall submit LGBR for its control area, for peak as well as off-peak scenario, **by 31st October for the next financial year**, to respective RPC Secretariat. The annual plans for managing deficits/surpluses in respective control areas shall clearly be indicated in the LGBR submitted by SLDCs.

As per IEGC, all SEBs/STUs, Transmission Licensees, CTU, ISGS, IPPs, MPPs and other generating stations shall provide to the respective RPC Secretariat their proposed outage plan in writing for **the next financial year by 31st October of each year**. These shall contain identification of each generating unit/transmission line/ICT etc., the preferred date for each outage and its duration and where there is flexibility, the earliest start date and latest finishing date.

During 103<sup>rd</sup> OCC meeting, Me. PDCL, APDCL and NEEPCO have submitted the required information.

NHPC, OTPC and Nagaland agreed to submit the required information within a week. Ar. Pradesh and TSECL agreed to submit the required information this month. NTPC was also requested to submit the generation target and annual maintenance programme in respect of Bongaigaon TPS for the year 2015 – 2016.

In the meantime, NERPC has prepared the draft LGBR for 2015-2016 which is enclosed at **Annexure – C.8**.

***Constituents may please intimate the status & discuss.***



**C.9 Latest status of FGMO/RGMO implementation in different generating stations:**

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

During 103<sup>rd</sup> OCC meeting, NERLDC highlighted the present status available with them, members agreed to send the updated status to NERLDC at the earliest.

***Constituents may please furnish the above information.***

**C.10 Submission of list of feeders connected to essential load:**

As per clause no 5.8.c of IEGC, essential loads are to be restored on priority during restoration process. Constituents of NER are requested to furnish list of feeders connected to essential load at the earliest to incorporate in next version of Black start & Restoration Procedures of NER.

During 103<sup>rd</sup> OCC meeting, all SLDCs were requested to prepare restoration procedure in respect of concerned states and intimate essential loads to be restored on priority to NERLDC at the earliest.

***Constituents may please furnish the above information.***

**C.11 Gas Grid for Gas Based Power Stations & Mining Load Network:**

Gas Grids for Gas Based Power Stations representing location of gas production, gas network & location of gas based power station are required for creation of data bank. AEGCL/TSECL/NEEPCO/OTPC are requested to send these to NERLDC as early as possible. Mining Load & its connectivity with grid sub-station is required for system operation and identification essential load. AEGCL/Me. PTCL are requested to send these information to NERLDC.

During 103<sup>rd</sup> OCC meeting, Assam submitted the above information and other constituents agreed to look into the matter and send the required information if available.

***Concerned Constituents may please furnish the above information.***

**C.12 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	Dec14	Jan15	Feb15	Mar15	Apr15
Ar. Pradesh	65	65	55	48	
Assam	680	690	615	570	
Manipur	65	70	55	51	
Meghalaya	175	195	175	175	
Mizoram	40	41	35	40	
Nagaland	55	60	55	50	
Tripura	120	125	120	120	
<b>NER</b>	<b>1201</b>	<b>1246</b>	<b>1090</b>	<b>1054</b>	

**Availability:**

Name of State	Dec14	Jan15	Feb15	Mar15	Apr15
Ar. Pradesh	43	40	31	40	
Assam	454	439	385	413	
Manipur	59	56	47	47	
Meghalaya	148	133	111	110	
Mizoram	36	36	31	32	
Nagaland	34	32	27	31	
Tripura	138	137	112	150	
<b>NER</b>	<b>914</b>	<b>873</b>	<b>744</b>	<b>823</b>	

**C.13 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	Dec14	Jan15	Feb15	Mar15	Apr15
Ar. Pradesh	125	130	130	120	
Assam	1450	1380	1235	1320	
Manipur	135	150	135	140	
Meghalaya	345	390	385	360	
Mizoram	80	79	78	84	
Nagaland	125	130	120	119	
Tripura	250	245	235	260	
<b>NER</b>	<b>2460</b>	<b>2455</b>	<b>2318</b>	<b>2403</b>	

**B. Peak Availability in MW**

Name of State	Dec14	Jan15	Feb15	Mar15	Apr15
Ar. Pradesh	118	110	101	100	
Assam	867	835	816	826	
Manipur	118	109	105	106	
Meghalaya	276	246	192	200	
Mizoram	79	75	71	70	
Nagaland	75	70	66	64	
Tripura	281	275	272	270	
<b>NER</b>	<b>1814</b>	<b>1719</b>	<b>1623</b>	<b>1636</b>	

**C. Off Peak Demand in MW (08:00 Hrs)**

Name of State	Dec14	Jan15	Feb15	Mar15	Apr15
Ar. Pradesh	69	72	72	70	
Assam	899	856	766	800	
Manipur	81	90	81	80	
Meghalaya	207	234	231	232	
Mizoram	52	51	51	50	
Nagaland	75	78	72	74	
Tripura	163	159	153	155	
<b>NER</b>	<b>1470</b>	<b>1465</b>	<b>1426</b>	<b>1461</b>	

**D. Off Peak Availability in MW (08:00 Hrs)**

Name of State	Dec14	Jan15	Feb15	Mar15	Apr15
Ar. Pradesh	114	107	100	101	
Assam	835	817	796	799	
Manipur	105	102	98	97	
Meghalaya	264	240	216	220	
Mizoram	76	73	69	70	
Nagaland	71	68	64	65	
Tripura	274	271	268	270	
<b>NER</b>	<b>1740</b>	<b>1465</b>	<b>1611</b>	<b>1622</b>	

**D. NEW ITEMS**

**D.1 Generation Planning (ongoing and planned outages)**

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

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

**Hydro generation planning for lean hydro period** - On the onset of winter season reservoir levels in all the hydro stations have started depleting. Specially level of

Loktak reservoir is very low and requires immediate reduction of generation. NERPC issued one letter to NHPC in this respect but no action is noticed. Proper planning is required to utilize the available water for entire lean hydro period, say upto May, 2015.

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

**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 database for the same, all concerned are requested to furnish the available information to NERLDC as early as possible.

During 101<sup>st</sup> OCC meeting, DGM, NERLDC informed that the format was sent to all the constituents for necessary submission of data. However, till date no constituents have submitted the data to NERLDC.

During 103<sup>rd</sup> OCC meeting, the Sub-committee once again requested all the constituents to furnish the data as per format given below to NERLDC at the earliest.

**Water level format:**

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

**Water spillage format:**

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

***The Sub-committee once again requested all the constituents to furnish the data to NERLDC at the earliest.***

### **D.3 Outage Planning Transmission elements**

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

**Furnishing request of shut down of the element, which was approved by NERPC, by Indenting Agency (ISTS licensees/STUs/Generating Companies) to NERLDC:** Planned shutdown approved by NERPC shall be considered for implementation by NERLDC on D-3 basis. If an outage is to be availed on say 10<sup>th</sup> of the month, the shutdown availing agency would reconfirm to NERLDC on 7<sup>th</sup> of the month by 10:00 Hr. This practice is necessary to ensure optimal capacity utilization and the time required for associated system study/coordination by/amongst RLDC/NLDC.

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

### **D.4 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** – 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 99<sup>th</sup> OCC meeting, the subcommittee advised NERLDC/NERPC to take up the matter with NTPC for early commissioning of 315 MVA ICT at NTPC Bongaigaon.

During 100<sup>th</sup> OCC meeting, AGM, NTPC informed the members that tie transformers I & II have been charged but not the ICT. ICT is expected to be charged within 3 months.

Further, 4 bays have been commissioned viz.

- 1) 400 kV BTPS – Bongaigaon – I
- 2) 400 kV BTPS – Bongaigaon – II
- 3) 400/33 kV Tie I
- 4) 400/33 kV Tie II

Start-up power is drawn from Tie transformer – I only and the project is expected to be commissioned by March 2015.

***NTPC may kindly intimate the status.***

#### **D.5 Requisition based scheduling:**

In the 102<sup>nd</sup> OCC meeting, representative from APDCL informed that the real time scheduling of power is revised absurdly high due to sudden inflow in RHEP. This sudden revision of schedule is sometimes more than 20% of the earlier schedule, causing inconvenience in demand management besides commercial loss through DSM. He requested the forum to devise some scheduling mechanism by reducing schedules from storage based hydro station while preventing commercial loss of beneficiaries.

Members agreed to the proposal of APDCL. After deliberation, it was decided that NERLDC may come out with a proposal for implementing requisition based scheduling for storage based hydro stations also. However, the following points should be noted: -

- 1) All scheduling will be done as per IEGC.
- 2) There should not be any spillage of water as stipulated in IEGC.
- 3) Technical minimum criteria may be different from thermal stations.
- 4) Such reduction in requisition may be done only when there are sudden changes of schedule due to inflow of RoR stations.

During 103<sup>rd</sup> OCC meeting, forum deliberated that during sudden inflow in RHEP, constituents will first under requisition from Gas based station after that possibility shall be explored for reduction of generation in Storage bases Hydro station.

It was opined that since RHEP is NEEPCO Station, so due to sudden inflow in RHEP only NEEPCO hydro station generation will be reduced.

After deliberation, it was agreed that in case of revision of schedule more than 20 % from RHEP, generation from other stations of NEEPCO may be reduced proportionately to safeguard the violations of IEGC by beneficiaries due to such revisions in schedules.

However, since minimum generation from each unit of NEEPCO generating stations are different and details are not yet provided by NEEPCO. In order to absorb the revised schedule of RHEP, many units of NEEPCO plants may need to be reduced or even some units may be required to be stopped. Therefore, it was agreed that for proper planning purposes NEEPCO may come with a proposal in next OCC for efficient scheduling from their units in case of revision from RHEP.

***The Sub-committee may like to discuss.***

#### **D.6 Un-Requisition Surplus (URS) of power:**

As discussed in 23<sup>rd</sup> NERPC Commercial Committee Meeting and as a practice being followed in other regions of the country, the committee deliberated that the power non-requisitioned/non-scheduled/surrendered by any beneficiary of a generation project may be requisitioned/availed by any other beneficiary of the

generation project. In such a case the beneficiary who is buying such non-requisitioned/non-scheduled/surrendered power will only have to pay Energy Charges for this power as the Capacity Charges will be borne by the original beneficiary who non-requisitioned this power. Such a practice will indeed be beneficial for both the generators as well as the beneficiaries. However, the modalities for requisition may please be discussed with NERLDC.

To take up this practice there needs to be good communication between the generator and the beneficiaries on real time basis, so that such non-requisitioned/non-scheduled/surrendered power may be availed by other beneficiaries. We would hence request all the beneficiaries to nominate nodal officer(s) from their respective Discom / Department, whom OTPC/NTPC/NEEPCO can contact to intimate about availability of such non-requisitioned power of Palatana/NTPC/NEEPCO Plants, as and when required.

*The Sub-committee may like to discuss.*

#### **D.7 Progress Report of Ongoing Projects:**

Progress reports of ongoing generation and transmission projects of NER need to be communicated to NERLDC by all constituents on monthly basis as per format at **Annexure D.7**. The progress of different elements are necessary for incorporation in Operational Feedback and other reports as also for preparation of Base Case for system study in NER. Accordingly, constituents are requested to furnish the progress report of their elements by 10<sup>th</sup> of every month for the previous month.

This matter was deliberated earlier in OCC meetings and it was requested to all concerned to intimate the latest status of ongoing projects in OCC forum so that any planning required for operational purposes can be finalized well in advance. Moreover, information regarding commissioning & trial operation of new elements are also not forthcoming as per stipulated time line in prescribed formats of the procedure. The procedure was discussed in OCC meetings & was also circulated to all concerned. Lot of difficulties are being faced by NERLDC in processing the applications submitted for commissioning/trial operation in short notice.

Currently, only NTPC, NEEPCO and Me. PGCL are furnishing monthly progress report of elements on regular basis.

*Constituents are requested to furnish the above data as per format.*

#### **D.8 Formats for new unit expected to be commissioned within 2 months:**

Information related to new units which are expected to be added/ commissioned within next 2 months needs to be furnished to NERLDC by concerned utilities as per format at Annexure C1. The technical data are necessary for preparation of Base Case for system study in NER which may be furnished as per **Annexure-D.8 (i) & (ii)**.

**D.9 Commissioning schedule of combined cycle units of AGTPP:**

The commissioning schedule of 2X25.6 MW combined cycle units of AGTPP is required to finalize operational planning in advance so that there should not be any evacuation problem. Further NEEPCO is requested to complete all formalities required for trial run and subsequent test for COD as per regulation such as SEM installation (through CTU), Telemetry, Protection, Documentation etc.

***NEEPCO may please intimate the status.***

**D.10 Requisition of ERS:**

During 103<sup>rd</sup> OCC meeting, Assam has intimated that they are planning to procure 8 (eight) numbers of ERS for their transmission networks. The procurement will be funded from PSDF as discussed during the meeting with Member (Power System), CEA on 10.11.2014.

The forum requested all the constituents to furnish to NERPC the requirement at the earliest so that the consolidated requirements of NER can be sent to CEA.

In the meantime, ERS requisition has been received from Assam, Ar. Pradesh, Manipur, Mizoram, Nagaland & Meghalaya.

***Tripura may kindly furnish at the earliest for submission to CEA.***

**D.11 SPAR for Loktak HEP:**

NHPC informed that Single Phase Auto-reclosure scheme is going to be installed at Loktak -Jiribam – II and Loktak – Imphal –II feeders in the month of January, 2015. Shutdown of Sub-station at Loktak is required during this time and the exact date will be intimated after getting the date from M/S AREVA (T&D) Ltd.

***The Sub-Committee may like to discuss.***

**D.12 Restoration Procedure of NER Grid:**

Like every year, this year also NERLDC has to revise the restoration procedure of NER grid by end of December, 2014. The draft has been uploaded in NERLDC website. All the utilities of NER are requested to please go through the procedure and forward their comments/views by 20th December, 2014 so that the same can be finalized by last week of December, 2014.

Further, a seminar on restoration procedure is proposed one day before or after the OCC meeting of January, 2015. All the SLDCs are requested to give a small presentations (10-20 minutes) in the seminar regarding their own system for the benefit of all stakeholders

***Members may please deliberate & extend their help to finalize the procedure & organize the seminar.***



**D.13 Metering Error in Inter-Regional Lines:**

During the 23<sup>rd</sup> CC Meeting, the issue of metering error has been discussed in detailed which are reproduced below:

NERLDC are yet to receive correct SEM readings from Bongaigaon for Bongaigaon-New Siliguri D/C lines. Same is status with Balipara-Bongaigaon D/C also where correct readings from both ends are yet to be received. A time drift status has been received from Bongaigaon duly signed by POWERGRID personnel and we can see time drift of 12 hours 23 minutes and 16 minutes respectively in two circuits of new inter-regional Bongaigaon-New Siliguri lines. Reading from meters with such drift is useless and will have no meaning.

Bongaigaon end meter reading of NPTC-Bongaigaon line showing negative polarity.

The forum felt that no seriousness from any quarter has been taken care to address the issue.

No pre-commissioning check at all before installation of meters which have been insisted many times.

Only option would be to take New Siliguri end reading in current week and in such case loss of the section will be loaded to NER and will have commercial implications.

Non-receipt of readings has created serious constraint in computation of data. Last week, even New Siliguri reading was not available and it has become a nightmare nowadays.

These are all violations of decision taken in CCM.

NERPC may look into it and take appropriate action.

NERLDC may be advised how to proceed with data processing, computation in such cases.

All concerned may be suitably appraised regarding lapses, commercial implications. If necessary, special meeting may be convened to address metering issues.

***The Sub-Committee may like to discuss.***

**D.14 Automatic Demand Management Scheme (ADMS) restoration Procedure of NER Grid:**

NER states are supposed to implement Automatic Demand Management Schemes in their respective control areas for automatic disconnection of loads in case of exigencies, in line with IEGC stipulations in clause-5.4.2(d). The matter was raised and deliberated in 101<sup>st</sup> OCC meeting. So far no intimation received from the States regarding the action taken in this respect. A presentation on the subject was supposed to be arranged by NERPC.

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

**D.15 Requirement of Reactor at Balipara & Bongaigaon:**

After commissioning of 400 kV Bongaigaon-New Siliguri III & IV and 400 kV Balipara- Bongaigaon III & IV, persistent high voltage is being observed at Ranganadi for which some 400 kV lines have to be opened to control over-voltage. It is thus proposed to install Bus-reactor at Balipara in order to keep all lines in service. System study is being carried out to assess the requirement of Reactive Compensation which will be circulated in 104<sup>th</sup> OCC Meeting.

*Members may please deliberate*

**D.16 Estimated Transmission Availability Certificate (TAC) for the month of November, 2014.**

The Estimated Transmission System Availability for the month of October, 2014, furnished by PGCIL, is **99.9820%**. The detail outage data for calculation of Transmission System Availability furnished by PGCIL, is at **Annexure D.16**. NER constituents are requested to kindly communicate their views and observations, if any, by 28<sup>th</sup> November, 2014 so that Final TAC for the month of October, 2014 may be finalized by NERPC Secretariat.

***Procedure for calculation of Transmission system availability factor for a month as per CERC Regulation 2014-19.***

The OCC/PCC forum has agreed the procedure for calculation and mechanism to be submitted by the utilities and NERLDC/NERPC will adhere to the earlier decision while finalizing and certification of TAC.

Further, in respect of Availability verification of ISTS elements, it is requested that POWERGRID & NETC may furnish DR outputs and relay indication at both ends of a transmission line for every tripping case. Also, the justifications pertaining to tripping may be furnished in excel format sorted date and time wise. In Case tripping due to lightning stroke appropriate evidence in form of DR/ Lightning counter increment/certification by concerned station may be provided.

***The Sub-Committee may like to discuss.***

**Any other item:**

**Date and Venue of next OCC**

It is proposed to hold the 105<sup>th</sup> OCC meeting of NERPC on second week of January, 2015. The exact venue will be intimated in due course.

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

MONTH : NOVEMBER-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.				Hrs.
<b>BR_SILCHAR(63MVAR)</b>			<b>#2</b>											
1	20/11/2014	10:27	20/11/2014	13:50	00	00	00	00	03	23	00	00	SVRD	HT for voltage regu
<b>Sub-Total</b>					00	00	00	00	03	23	00	00		
<b>BR_BALIPARA (50MVAR)</b>														
2	28/11/2014	07:37	01/12/2014	00:00	00	00	00	00	00	00	64	23	SCSD	For replacement of gasket in BR(stressed due to High voltage)
<b>Sub-Total</b>					00	00	00	00	00	00	64	23		
<b>BR_SILCHAR(63MVAR)</b>			<b>#1</b>											
3	19/11/2014	10:44	19/11/2014	20:10	00	00	00	00	09	26	00	00	SVRD	H/T for voltage regu
<b>Sub-Total</b>					00	00	00	00	09	26	00	00		
<b>Grand Total</b>					00	00	00	00	12	49	64	23		

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

MONTH: NOVEMBER-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/ Miltant activities		Outage under categories of Deemed Available			
	Date	Time	Date	Time	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.	Hrs.	Mns.		
<b>RCN_AGARTALA # 1</b>														
1	21/11/2014	15:49	21/11/2014	17:50	00	00	02	01	00	00	00	00	OMSU	S/D taken by state (R. C. Nagar)
2	22/11/2014	16:08	22/11/2014	17:19	00	00	01	11	00	00	00	00	OMSU	CB problem at R.C.Nagar
<b>Sub-Total</b>					00	00	03	12	00	00	00	00		
<b>RCN_AGARTALA # 2</b>														
3	21/11/2014	14:47	21/11/2014	15:46	00	00	00	59	00	00	00	00	OMSU	S/D taken by state (R. C. Nagar)
4	22/11/2014	16:08	22/11/2014	16:43	00	00	00	35	00	00	00	00	OMSU	CB problem at R.C.Nagar
<b>Sub-Total</b>					00	00	01	34	00	00	00	00		
<b>AIZWAL_KUMARGHAT</b>														
5	15/11/2014	14:28	15/11/2014	17:27	00	00	00	00	02	59	00	00	LMAC	Due to militant activities
<b>Sub-Total</b>					00	00	00	00	02	59	00	00		
<b>BADARPUR_KHLIERIAT</b>														
6	11/11/2014	12:00	11/11/2014	13:29	00	00	00	00	01	29	00	00	LNCC	Emergency S/D taken for cutting of bamboos
<b>Sub-Total</b>					00	00	00	00	01	29	00	00		
<b>DIMAPUR_IMPHAL</b>														
7	15/11/2014	10:35	15/11/2014	15:15	04	40	00	00	00	00	00	00	OMST	Replacement of R-phs CVT at Imphal S/s
8	19/11/2014	10:10	19/11/2014	11:41	00	00	00	00	01	31	00	00	LMAC	E.S/D taken for clear a big tree fallen near Loc No 162 cut by miscreant
<b>Sub-Total</b>					04	40	00	00	01	31	00	00		
<b>DOYANG_DIMAPUR # 1</b>														
9	21/11/2014	06:15	21/11/2014	10:34	00	00	04	19	00	00	00	00	OMSU	S/D taken by Doyang(NEEPCO).
10	22/11/2014	06:00	22/11/2014	10:34	00	00	04	34	00	00	00	00	OMSU	S/D by NEEPCO
11	23/11/2014	06:03	23/11/2014	10:27	00	00	04	24	00	00	00	00	OMSU	Do
12	24/11/2014	06:00	24/11/2014	10:25	00	00	04	25	00	00	00	00	OMSU	do
<b>Sub-Total</b>					00	00	17	42	00	00	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.						
<b>DOYANG_DIMAPUR</b>					# 2													
13	21/11/2014	06:15	21/11/2014	10:34	00	00	04	19	00	00	00	00	OMSU	S/D taken by Doyang(NEEPCO).				
14	22/11/2014	06:00	22/11/2014	10:34	00	00	04	34	00	00	00	00	OMSU	/D by NEEPCO				
15	23/11/2014	06:03	23/11/2014	10:26	00	00	04	23	00	00	00	00	OMSU	do				
16	24/11/2014	06:00	24/11/2014	10:25	00	00	04	25	00	00	00	00	OMSU	do				
<b>Sub-Total</b>					00	00	17	41	00	00	00	00						
<b>IMPHAL_IMPHAL</b>					#1													
17	06/11/2014	20:35	06/11/2014	20:54	00	00	00	19	00	00	00	00	OMSU	tripped due to fault in 132 kv Karong-Kohimeil(State) line				
18	16/11/2014	11:02	16/11/2014	11:20	00	00	00	18	00	00	00	00	OMSU	tripped due to fault in 132 kv Karong-Kohima(State) line				
19	19/11/2014	16:12	19/11/2014	16:29	00	00	00	17	00	00	00	00	OMSU	tripped due to fault in 132 kv Karong (State) line				
<b>Sub-Total</b>					00	00	00	54	00	00	00	00						
<b>JIRIBAM_AIZWAL</b>																		
20	22/11/2014	07:01	22/11/2014	15:58	08	57	00	00	00	00	00	00	OSPT	S/D taken for replacement of insulators at loc no 137				
<b>Sub-Total</b>					08	57	00	00	00	00	00	00						
<b>KHANDONG_KHLIERIAT</b>					I													
21	05/11/2014	08:02	05/11/2014	08:12	00	00	00	00	00	10	00	00	LMAC	trees cutting by unknown miscreants between loc no 75-76				
22	05/11/2014	13:22	05/11/2014	15:00	01	38	00	00	00	00	00	00	OMST	E/S/D for clearing the tree branches from loc no 75-76				
23	19/11/2014	11:32	20/11/2014	17:32	00	00	30	00	00	00	00	00	OMSU	S/D by NEEPCO				
24	21/11/2014	12:05	22/11/2014	16:49	00	00	28	44	00	00	00	00	OMSU	S/D by NEEPCO				
<b>Sub-Total</b>					01	38	58	44	00	10	00	00						
<b>KUMARGHAT_R C NAGAR</b>																		
25	22/11/2014	10:51	22/11/2014	17:21	00	00	06	30	00	00	00	00	OMSU	S/D by NEEPCO				
<b>Sub-Total</b>					00	00	06	30	00	00	00	00						
<b>LOKTAK_IMPHAL</b>					# 2													
26	11/11/2014	12:02	11/11/2014	12:12	00	10	00	00	00	00	00	00	LEFT	Transient E/F				
27	11/11/2014	12:12	11/11/2014	12:39	00	00	00	27	00	00	00	00	OMSU	relay problem at loktak end				
<b>Sub-Total</b>					00	10	00	27	00	00	00	00						
<b>SILCHAR-HAILAKANDI</b>					#1													

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.		
28	18/11/2014	09:57	18/11/2014	15:50	00	00	05	53	00	00	00	00	OMSU	S/D by State
<b>Sub-Total</b>					00	00	05	53	00	00	00	00		
<b>SILCHAR-HAILAKANDI</b>			<b>#2</b>											
29	19/11/2014	09:04	19/11/2014	16:03	00	00	06	59	00	00	00	00	OMSU	S/D by state
30	20/11/2014	09:04	20/11/2014	15:54	00	00	06	50	00	00	00	00	OMSU	S/D by state
31	21/11/2014	09:02	21/11/2014	15:34	00	00	06	32	00	00	00	00	OMSU	S/D by state
<b>Sub-Total</b>					00	00	20	21	00	00	00	00		
<b>BALIPARA_TEPZPUR</b>														
32	05/11/2014	11:56	05/11/2014	12:23	00	00	00	27	00	00	00	00	OMSU	Fault beyond PGCIL jurisdiction
<b>Sub-Total</b>					00	00	00	27	00	00	00	00		
<b>MISA_KOPILI</b>			<b># 2</b>											
33	18/11/2014	16:01	18/11/2014	16:22	00	00	00	21	00	00	00	00	OMSU	A person electrocuted at loc 121-122
<b>Sub-Total</b>					00	00	00	21	00	00	00	00		
<b>MISA_MARIANI(OLD)</b>														
34	07/11/2014	13:43	07/11/2014	16:57	03	14	00	00	00	00	00	00	LEFT	transient E/F
35	08/11/2014	11:27	08/11/2014	17:40	00	00	00	00	06	13	00	00	LMAC	Emergency S/D taken for replacement of insulator at Loc 881 damaged by miscreant
<b>Sub-Total</b>					03	14	00	00	06	13	00	00		
<b>SALAKATI_BTPS</b>			<b># 2</b>											
36	05/11/2014	17:05	05/11/2014	20:37	03	32	00	00	00	00	00	00	LHWT	jumper burnt at loc no.468 in B-ph
37	12/11/2014	07:45	12/11/2014	16:12	00	00	00	00	08	27	00	00	LNCC	Insulator replacement by Polymer.
38	13/11/2014	08:05	13/11/2014	15:56	00	00	00	00	07	51	00	00	LNCC	Insulator replacement by Polymer.
39	14/11/2014	08:05	14/11/2014	15:11	00	00	00	00	07	06	00	00	LNCC	Insulator replacement by Polymer.
40	15/11/2014	08:00	15/11/2014	14:17	00	00	00	00	06	17	00	00	LNCC	Insulator replacement by Polymer.
<b>Sub-Total</b>					03	32	00	00	29	41	00	00		
<b>SALAKATI-BTPS</b>			<b># 1</b>											
41	05/11/2014	17:05	05/11/2014	18:17	00	00	00	00	01	12	00	00	GGDC	Powerswing
42	10/11/2014	07:42	10/11/2014	15:27	00	00	00	00	07	45	00	00	LNCC	insulator replacement by polymer
43	11/11/2014	08:12	11/11/2014	17:26	00	00	00	00	09	14	00	00	LNCC	Insulator replacement by Polymer.

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.		
<b>Sub-Total</b>					00 : 00		00 : 00		18 : 11		00 : 00			
<b>MISA-MARIANI(NEW)</b>														
44	25/11/2014	11:37	25/11/2014	13:38	02 : 01		00 : 00		00 : 00		00 : 00		OMST	E/S/D taken for replacement of DPR at Mariani
<b>Sub-Total</b>					02 : 01		00 : 00		00 : 00		00 : 00			
<b>BALIPARA_BONGAIGAON</b>			<b># 2</b>											
45	27/11/2014	08:30	27/11/2014	16:20	07 : 50		00 : 00		00 : 00		00 : 00		OSPT	S/D taken for alignment of line isolators at halinara.
<b>Sub-Total</b>					07 : 50		00 : 00		00 : 00		00 : 00			
<b>MISA_BALIPARA</b>			<b># 1</b>											
46	15/11/2014	07:46	15/11/2014	16:46	09 : 00		00 : 00		00 : 00		00 : 00		OMST	Line CVT replacement at Misa SS and Line Isolator Alignment at Balinara SS
<b>Sub-Total</b>					09 : 00		00 : 00		00 : 00		00 : 00			
<b>BALIPARA-RANGANADI</b>			<b># 1</b>											
47	02/11/2014	23:48	03/11/2014	07:08	00 : 00		00 : 00		00 : 00		07 : 20		LVRD	H/T for vol. regu. On RLDC instruction
48	04/11/2014	23:05	06/11/2014	16:36	00 : 00		00 : 00		00 : 00		41 : 31		LVRD	H/T for vol. regu. on RLDC instruction
49	08/11/2014	02:08	08/11/2014	16:50	00 : 00		00 : 00		00 : 00		14 : 42		LVRD	H/T for vol. regu. on RLDC instruction
50	10/11/2014	00:17	10/11/2014	17:24	00 : 00		00 : 00		00 : 00		17 : 07		LVRD	H/T for vol. regu. on RLDC instruction
51	11/11/2014	23:38	12/11/2014	16:53	00 : 00		00 : 00		00 : 00		17 : 15		LVRD	H/T for vol. regu. on RLDC instruction
52	14/11/2014	00:19	14/11/2014	17:23	00 : 00		00 : 00		00 : 00		17 : 04		LVRD	H/T for vol. regu. on RLDC instruction
53	15/11/2014	23:30	16/11/2014	17:11	00 : 00		00 : 00		00 : 00		17 : 41		LVRD	H/T for vol. regu. on RLDC instruction
54	16/11/2014	23:14	17/11/2014	17:06	00 : 00		00 : 00		00 : 00		17 : 52		LVRD	H/T for vol. regu. on RLDC instruction
55	17/11/2014	12:25	17/11/2014	12:35	00 : 00		00 : 10		00 : 00		00 : 00		OMSU	Miscreant cut down a tree from up hill side
56	17/11/2014	22:32	18/11/2014	17:49	00 : 00		00 : 00		00 : 00		19 : 17		LVRD	H/T for vol. regu. on RLDC instruction
57	19/11/2014	23:29	20/11/2014	19:08	00 : 00		00 : 00		00 : 00		19 : 39		LVRD	H/T for vol. regu. on RLDC instruction
58	21/11/2014	23:19	22/11/2014	17:13	00 : 00		00 : 00		00 : 00		17 : 54		LVRD	H/T for vol. regu. on RLDC instruction
<b>Sub-Total</b>					00 : 00		00 : 10		00 : 00		207 : 22			
<b>BALIPARA-RANGANADI</b>			<b># 2</b>											
59	03/11/2014	00:04	03/11/2014	00:08	00 : 00		00 : 00		00 : 04		00 : 00		GOVC	tripped on over-voltage at ranganadi end
60	06/11/2014	22:01	07/11/2014	16:57	00 : 00		00 : 00		00 : 00		18 : 56		LVRD	H/T for vol. regu. on RLDC instruction



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.		
61	09/11/2014	00:45	09/11/2014	17:13	00	00	00	00	00	00	16	28	LVRD	H/T for vol. regu. on RLDC instruction
62	10/11/2014	23:52	11/11/2014	15:32	00	00	00	00	00	00	15	40	LVRD	H/T for vol. regu. on RLDC instruction
63	13/11/2014	00:13	13/11/2014	17:18	00	00	00	00	00	00	17	05	LVRD	H/T for vol. regu. on RLDC instruction
64	14/11/2014	23:32	15/11/2014	17:27	00	00	00	00	00	00	17	55	LVRD	H/T for vol. regu. on RLDC instruction
65	18/11/2014	23:04	19/11/2014	17:00	00	00	00	00	00	00	17	56	LVRD	H/T for vol. regu. on RLDC instruction
66	21/11/2014	01:10	21/11/2014	17:13	00	00	00	00	00	00	16	03	LVRD	H/T for vol. regu. on RLDC instruction
67	22/11/2014	23:50	23/11/2014	17:30	00	00	00	00	00	00	17	40	LVRD	H/T for vol. regu. on RLDC instruction
68	23/11/2014	23:38	24/11/2014	08:25	00	00	00	00	00	00	08	47	LVRD	H/T for vol. regu. on RLDC instruction
<b>Sub-Total</b>					00	00	00	00	00	04	146	30		
<b>Grand Total</b>					41	02	133	56	60	18	353	52		