

# North Eastern Regional Power Committee

## Agenda For

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

Time of meeting : 10:00 Hrs.

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

Venue : "Hotel Rajmahal", Guwahati.

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

#### **CONFIRMATION OF MINUTES OF 128<sup>th</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.**

The minutes of 128<sup>th</sup> meeting of Operation Sub-committee held on 19<sup>th</sup> January, 2017 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 31<sup>st</sup> January, 2017.

#### ***Observation(s) of OTPC***

##### **Item No. B.1.(4):**

**Status as recorded:** On 13.01.17 GM(C&M) has intimated BHEL to complete work within 31.01.17 or work would be given to other agency.

**To be Recorded:** OTPC is pursuing with BHEL for warranty claim. Date will be provided once there is clarity on the work.

##### **Item No. D.1:**

**Recorded:** The forum unanimously objected to OTPC availing shutdown in the lean season inspite of repeated requests not to do so. S.E., SLDC, Meghalaya stated that OTPC has deceived their beneficiaries repeatedly by not adhering to the shutdown programme.

**To be Recorded:** OTPC shall try to optimize the outages or reduce the outage period and allow common station shutdown.

**The Sub-committee may confirm the minutes of 128<sup>th</sup> OCCM of NERPC with above observations as no other comments/observations were received from the constituents.**

#### **ITEMS FOR DISCUSSION**

##### **B.1. ACTION TAKEN:**

##### **DIFFERENCE IN ACTUALS VS LGBR:**

##### **Energy Requirement:**

Name of State	Nov16 (actual)	Nov16 (LGBR)	Dec16 (actual)	Dec16 (LGBR)	Jan17 (actual)	Jan17 (LGBR)
Ar. Pradesh	58.87	68	62.50	68	65.02	68
Assam	706.25	714	685.17	714	718.33	714
Manipur	62.19	88	70.84	95	72.08	92
Meghalaya	136.75	195	144.88	210	151.38	220
Mizoram	42.74	46	48.88	48	48.79	48
Nagaland	59.82	68	62.99	71	65.92	69
Tripura	53.00	112	58.81	122	104.58	128
<b>NER</b>	<b>1119.62</b>	<b>1291</b>	<b>1134.05</b>	<b>1328</b>	<b>1226.10</b>	<b>1339</b>

**Energy Availability:**

Name of State	Nov16 (actual)	Nov16 (LGBR)	Dec16 (actual)	Dec16 (LGBR)	Jan17 (actual)	Jan17 (LGBR)
Ar. Pradesh	57.73	52	61.39	54	63.89	51
Assam	694.49	567	669.55	580	709.43	567
Manipur	60.66	81	69.56	76	70.89	71
Meghalaya	136.75	150	144.88	138	151.38	125
Mizoram	41.52	48	47.66	44	47.76	43
Nagaland	58.56	55	61.77	54	64.99	50
Tripura	51.96	211	58.14	224	104.21	222
<b>NER</b>	<b>1101.68</b>	<b>1163</b>	<b>1112.96</b>	<b>1171</b>	<b>1212.55</b>	<b>1130</b>

**Demand:**

Name of State	Nov16 (act)	Nov16 (LGBR)	Dec16 (actual)	Dec16 (LGBR)	Jan17 (actual)	Jan17 (LGBR)
Ar. Pradesh	127	132	131	132	122	137
Assam	1531	1508	1388	1518	1465	1456
Manipur	152	179	161	184	163	179
Meghalaya	312	425	310	430	331	390
Mizoram	97	95	97	101	98	101
Nagaland	128	135	127	135	122	135
Tripura	266	275	230	260	224	250
<b>NER</b>	<b>2377</b>	<b>2749</b>	<b>2245</b>	<b>2760</b>	<b>2330</b>	<b>2688</b>

It has been observed that there is considerable difference in case of Manipur, Meghalaya and Tripura. Previous OCC forums had requested that states may check the reasons for such variation as to whether due to forecasting error or other reasons, and intimate.

In 129<sup>th</sup> OCC after detailed deliberation it was concluded that as per presentation by SLDC Meghalaya on 18.01.2017 the main reason for deviation from LGBR figures is the unreliable forecast given by OA consumers. The drawal of OA consumers has been found to be vacillating and this has resulted in the deviation for 2016-17. Members appreciated the analysis of SLDC Meghalaya and requested to keep higher tolerance in forecast for 2017-18. Manipur and Tripura were requested to intimate the reasons for deviation by next OCC meeting.

***MSPCL and TSECL may please intimate the reasons.***

**2. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:**

The status as informed in 128<sup>th</sup> OCC:

State	Protection System	ADMS	CAPACITOR INSTALLATION
Arunachal Pradesh	Approval from the Govt. is awaited	DPR will be submitted soon to CEA & NLDC	Study is in progress and the same will be submitted to NERPC for approval

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Nagaland	LOAs already completed and works is likely to be completed by 30.09.2017	DPR will be submitted soon to CEA & NLDC	DPR will be submitted soon to CEA & NLDC
Mizoram	By Mar'17 all LOAs would be issued.	DPR will be submitted soon to CEA & NLDC	DPR will be submitted soon to CEA & NLDC
Manipur	By June'17 all LOAs would be issued.	DPR will be submitted soon to CEA & NLDC	DPR preparation stage
Tripura	By June'17 all LOAs would be issued.	DPR will be submitted soon to CEA & NLDC	-
Assam	By June'17 all LOAs would be issued.	DPR will be submitted soon to CEA & NLDC	
Meghalaya	LOA for 20 Cr. Tender for 20 Cr. Additional LOA for 10Cr. by 31.01.17 Remainder by Mar'17	DPR to be prepared	DPR to be prepared.

The reporting format(s) for PSDF funded projects is attached at **Annexure B.1**.

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

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

It was deliberated in the 4<sup>th</sup> NPC meeting that monthly power supply position prepared & published by CEA based on the data furnished by the states reflected shortages in almost all the states. However, a number of those states intimated adequate availability of power. This meant that the deficit/shortage in such states was actually not the deficit in true sense but demand-supply gap due to reasons other than shortage of power. The other reasons for the demand-supply gap could be inadequate availability of power, transmission constraint, distribution constraint, financial constraint, etc. The reason for demand-supply gap needed to be clearly mentioned to reflect true picture of power supply position in different states and also to invite attention of various agencies including policy makers to the specific problem areas in the power sector for suitable solution.

**After deliberation it was decided in the meeting that all the RPCs would advise the states in their respective regions to intimate broad break-up of demand-supply gap due to various reasons, or at least, the main reason(s) for demand-supply gap in each month.**

In 126<sup>th</sup> OCCM, S.E.(C&O),NERPC informed the forum that as per communication received from GM Division CEA, unscheduled load shedding and scheduled load shedding for peak demand met instance is to be provided. Accordingly, all the constituents & NERLDC were requested to indicate the latter from November, 2016 onwards. The forum requested DoP Ar. Pradesh, MSPCL and DoP Nagaland to submit the shortfall figures periodically.

In 127<sup>th</sup> OCCM, S.E.(C&O), NERPC once again requested the SLDCs to indicate breakup of short fall figures clearly. He requested NERLDC to provide the breakup in monthly reports clearly and highlight the cases where not provided.

NERLDC expressed that differences are coming up on account of several reasons, and proper accounting of captive load and generation is to be done by SLDCs. In case the captive power consumption is not included, the overall demands met of the states are reflecting less than actual. All SLDCs were requested to check and reflect the captive generation figures in their daily operational reports.

NERPC will circulate the Installed Capacity figures compiled by them for ratification by all.

In 129<sup>th</sup> OCC, S.E.(C&O), NERPC stated that currently no CPP figures are being received by NERPC. This is leading to improper shortfall calculation in monthly Power Supply Position. Also shortfall figures are not being classified as scheduled load shedding, unscheduled load shedding or shortfall due to system constraints. He requested all SLDCs to kindly clarify the above in their daily report to NERLDC, in order to avoid improper reporting further on.

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

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

Name of the Element	Name of Utility	Status as informed in 128 <sup>th</sup> OCC	Latest status
63MVAR Reactor at Byrnihat	MePTCL	SE, MePTCL informed that the matter is still being pursued with CGL.	
400KV 80MVAR Bus Reactor At Palatana	OTPC	On 13.01.17 GM(C&M) has intimated BHEL to complete work within 31.01.17 or work would be given to other agency.	

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

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

**NER PERFORMANCE DURING JANUARY, 2017**

States	Energy Met (MU)		w.r.t. Dec,16 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Dec,16 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In Jan,17
	Jan-17	Dec-16		Jan-17	Dec-16		
Ar. Pradesh	63.89	61.39	4.07	65.02	62.50	4.03	-1.74
Assam	709.43	669.55	5.96	718.33	685.17	4.84	-1.24
Manipur	70.89	69.56	1.91	72.08	70.84	1.75	-1.65
Meghalaya	151.38	144.88	4.49	151.38	144.88	4.49	0.00
Mizoram	47.76	47.66	0.21	48.79	48.88	-0.18	-2.11
Nagaland	64.99	61.77	5.21	65.92	62.99	4.65	-1.41
Tripura	104.21	58.14	79.24	104.58	58.81	77.83	-0.35
<b>Region</b>	<b>1212.55</b>	<b>1112.96</b>	<b>8.95</b>	<b>1226.10</b>	<b>1134.05</b>	<b>8.12</b>	<b>-1.11</b>

States	Demand Met (MW)		w.r.t. Dec,16 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Dec,16 % inc (+) /dec (-)	% inc (+) /dec (-) of Demand vs met. In Jan,17
	Jan-17	Dec-16		Jan-17	Dec-16		
Ar. Pradesh	120	129	-6.98	122	131	-6.87	-1.64
Assam	1464	1389	5.40	1466	1388	5.62	-0.14
Manipur	163	157	3.82	163	161	1.24	0.00
Meghalaya	332	310	7.10	331	310	6.77	0.30
Mizoram	98	96	2.08	98	97	1.03	0.00
Nagaland	121	127	-4.72	122	127	-3.94	-0.82
Tripura	223	231	-3.46	224	230	-2.61	-0.45
<b>Region</b>	<b>2320</b>	<b>2223</b>	<b>4.36</b>	<b>2330</b>	<b>2245</b>	<b>3.79</b>	<b>-0.43</b>

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

Month---->	Jan-17	Dec-16
Total Generation in NER (Gross)	1136.24	1197.89
Total Central Sector Generation (Gross)	842.39	844.02
Total State Sector Generation (Gross)	293.86	205.76
<b>Inter-Regional Energy Exchange</b>		
(a) NER-ER	<b>147.19</b>	<b>177.63</b>
(b) ER-NER	<b>1.36</b>	<b>36.39</b>
(c)NER-NR	<b>0.02</b>	<b>18.34</b>
(d)NR-NER	353.79	323.55
© Net Import	207.94	163.97

**AVERAGE FREQUENCY (Hz)**

Month---->	Jan-17	Dec-16
	% of Time	% of Time
Below 49.9 Hz	6.20	11.22
Between 49.9 to 50.05 Hz	70.42	69.95
Above 50.05 Hz	23.31	19.26
Average	50.00	50.00
Maximum	50.33	50.31
Minimum	49.71	49.67

**C. OLD ITEMS**

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

During 129<sup>th</sup> OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 129 <sup>th</sup> OCC Meeting	Status as given in 128 <sup>th</sup> OCC Meeting
<b>a. New Projects</b>			
1	Trial operation and CoD of Unit -II of Bongaigoan TPS of NTPC		Synchronization & CoD by 31.03.2017
2	400/220kV, 2x315 MVA ICT of NTPC at Bongaigaon		1st 315 MVA ICT - To be charged within 21.01.17 2nd 315 MVA ICT - Not yet received at site
3	Trial operation and CoD 36MW STG of Monarchak GBPP of NEEPCO		Subject to gas availability
4	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)		Unit #1 Oct'17 Unit #2&#3 Nov'17 Unit #4 Dec'17
5	Pare HEP of NEEPCO (2 x 55 MW)		Unit #1 July'17 Unit #2 Aug'17
6	400 kV D/C Silchar - Melriat line of PGCIL		June, 2017.
7	220kV Rangia - Salakati of AEGCL		June 2017
8	132kV Monarchak – Surjamaninagar D/C of TSECL		July, 2017
9	400/132 kV, 2nd 125 MVA ICT at Pallatana		Synchronized on 08.10.2016 COD expected by 31.01.2017

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10	132kV Pasighat – Aalong of Ar. Pradesh		January, 2017.
11	132kV Doyang- Wokha		Doyang end bay work complete. Line to be charged at mutually agreeable date.
12	220 kV, 20 MVAR Bus Reactor& bay at AGBPP		NEEPCO site not ready (hydrant and fire extinguisher) Trial operation by 31.01.17.
13	132kV Surjamaninagar Bay at OTPC		31.08.2017
14	400kV D/C Balipara – Kameng of Ar. Pradesh		March 2017.
15	RHEP 80 MVAR Bus Reactor		Tendering in process.
16	SLDCs (Ar. Pradesh, Manipur, Mizoram, Nagaland)		Manipur – Jan'17, Mizoram- Feb'17, Nagaland-Building ready and handed over, AP- Complete Building handover not done.
17	400/220 kV 315 MVA ICT-II at Bongaigaon		Manufacturing stage
18	220/132 kV, 2x160 MVA ICTs at Balipara		By 31 <sup>st</sup> August 2017(LOA date).
19	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili		By 31 <sup>st</sup> August 2017(LOA date).
20	400/132 kV, 1x315 MVA ICT-III at Silchar		December, 2017(LOA date).
21	Replacement of 2x315 MVA ICTs with 2x500 MVA ICTs at Misa (PG)		December, 2017(LOA date).
22	400 kV Silchar – Misa D/C		Under TBCB
23	1x125 MVAR Bus Reactor at 400 kV at Balipara		December, 2017(LOA date).
24	1x125 MVAR Bus Reactor at 400 kV Bongaigoan		December, 2017(LOA date).

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25	Bays at Hailakandi & 132V Silchar-Hailakandi		March, 2017.
<b>b. Elements under breakdown/ upgradation</b>			
26	63MVAR Reactor at Byrnihat of Me.PTCL		As recorded in item <b>B.1.(4)</b>
27	Up-gradation of 132 kV Lumshnong-Panchgram line		DPR preparation stage
28	Switchable line Reactors at 400kV Balipara & Bongaigoan		Procurement works underway. Both to be completed by 31.03.17
29	PLCC Panels at Loktak end of Loktak – Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder		Work(s) have been included in tender for additional line of 132kV Loktak-Ningthoukhong
30	LILO of 132kV Ranganadi – Nirjuli at Pare of NEEPCO by PGCIL		Jan'17
31	LILO of 132kV Ranganadi – Itanagar (Chimpu) at Pare of Ar. Pradesh		Bay at Pare under construction Bay 1: completed Bay 2: March 2017
32	400KV 80MVAR Bus Reactor at OTPC Palatana		As recorded in item <b>B.1.(4)</b>

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

**C.2 Furnishing of UFR Report and status of Implementation:**

As per recommendation of enquiry Committee, the status of installation of UFR in NER was already circulated earlier. It is gathered that, 18.5 MW quantum is yet to be implemented in Arunachal Pradesh & Manipur.

The 123<sup>rd</sup> OCC forum decided that monthly report is not being furnished. As per clauses of relevant regulations, and Order of Hon'ble CERC in matter of Petition no. 113/MP/2014, NERLDC and NERPC are mandated to submit status of UFR operation and non-operation to CERC. SLDCs were thus requested to submit UFR operation details (feeder-wise quantum of load relief to be indicated) on monthly basis, and even if no UFR operated in particular month, it should indicated as NIL.

The latest status as informed by NERLDC in 128<sup>th</sup> OCC:

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

The 127<sup>th</sup> OCC forum requested all the SLDCs/state utilities to certify healthiness of the relays while submitting the UFR operation report monthly.

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

<b>D. NEW ITEMS</b>
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**D.1 Generation Planning (ongoing and planned outages)**

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

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

***Hydro planning***

The outage of other generating stations may be approved considering the present water levels in reservoirs.

***The Committee may discuss and approve the proposed shutdown by Generating Stations as given in Annexure - D.2 below.***

**D.2 Outage Planning Transmission elements**

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

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

In 124<sup>th</sup> OCCM, SE(C&O) strongly opined that constituents should inform to NERPC/NERLDC in case shutdown is not avail as approved in the OCC meeting and should mention clearly the reason for not availing the shutdown. The full list of shutdown would be placed in the next OCC by NERLDC so that proper record can be made in future for generating units as well as transmission lines. All constituents endorsed the view of SE(C&O).

In 128<sup>th</sup> OCCM, S.E.(C&O),NERPC stated that OCC approved shutdowns are not being availed and also shutdown requests after OCC approval are being sent repeatedly by different utilities. He stressed that this practice is highly undesirable and no shutdown request after OCC approval would be entertained except in dire emergencies.

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

**D.3 Estimated Transmission Availability Certificate (TAC) for the month of October & November, 2016:**

NETC and POWERGRID have submitted the outage data for the month of October & November, 2016. So the attributability of outage of the said elements may please be finalized.

***Members may please discuss.***

**D.4 Furnishing of Technical and Commercial data for computation of PoC Charges and Losses for Q1 of 2017-18 (April 2017 – June 2017):**

In the 3rd Validation Committee meeting for PoC application period Oct'15-Dec'15, held on 30th September 2015, at NLDC conference Hall, CERC had proposed a methodology for ratification of projected data at RPC form.

In line with the decision in the Validation Committee meeting, Demand and Generation projections w.r.t North Eastern Region constituents as given by Implementing Agency is attached in **Annexure D.4** for ratification of members.

***Members may please ratify data for Q1 (2017-18).***

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

Updated PSSE Base Cases have been **mailed to all the SLDCs on 06.02.17**. All SLDCs are requested to assess the Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) **for the month of**

**February'17** using these cases, and submit the study cases and results to NERLDC by **20<sup>th</sup> February, 2017**.

NERLDC has assessed the state control area wise, state subsystem wise and group of control-area wise TTCs for NER Grid, on behalf of SLDCs of NER. The study results conducted by NERLDC will be mailed to all SLDCs. SLDCs are requested to check the TTC of their control areas as computed by NERLDC and **give comments, if any by 20<sup>th</sup> February'17**.

If no comments received from any SLDCs of NER, TTC, ATC & TRM figures of State control area and group of control areas as assessed by NERLDC will be considered as final **and may be uploaded on website**.

**As per discussions in 122<sup>nd</sup> OCC meeting of NERPC, all SLDCs of NER may host the assessed TTC / ATC / TRM figures on their website for information dissemination.**

*Members may please discuss.*

#### **D.6. Certification of open cycle generation of AGBPP:**

As per methodology decided in 87<sup>th</sup> OCC meeting and modus operandi decided in 19<sup>th</sup> & 20<sup>th</sup> CCM the open cycle generation of AGBPP for FY 15-16 is to be certified. Accordingly it is requested of NERLDC to kindly verify "the generator operation in OC mode due to some fault and problem is resolved in a reasonable time, with DC revision". After verification by NERLDC, certification would be done by NERPC.

In 128<sup>th</sup> OCCM, S.E.(C&O),NERPC intimated the forum that the verification for FY15-16 has been received from NERLDC. The final certification would be presented in next OCC/CCM for ratification by members. Sr. Manager, NEEPCO informed that outage details are being submitted quarterly. SE(C&O), NERPC requested NEEPCO to submit the details monthly.

The open cycle certification for FY15-16 is attached in **Annexure D.6**. Members may please ratify.

*Members may please deliberate.*

#### **D.7. Renovation and Modernization of Umiam Stage-III HEPP (2 x 30 Mw)**

In line with the policy for taking up Renovation & Modernization (R & M) of old hydroelectric power plants initiated by the Ministry of Power, Government of India, MEECL has decided to take up R & M of Umiam Stage-III HEP (2 x 30 Mw) commissioned in 1979, considering the aggravated condition of the power plant.

In 126<sup>th</sup> OCCM, S.E., MePGCL informed that Umiam Stage-III has already completed its useful life having been in service for 37 years since commissioning. He requested that R&M cost be funded from PSDF.

S.E.(C&O),NERPC informed that R&M of power plants are not specifically funded from PSDF under PSDF regulations. However they may be funded under extraordinary Cl.4.1.(e). He requested MePGCL to submit the proposal at the earliest so that the matter may be followed up with NLDC/CERC.

*MeECL/NERPC may please inform the status.*

**D.8. Reporting of commissioned transmission elements for TARANG App.**

TARANG (Transmission App for Real Time Monitoring and Growth) Mobile App & Web Portal has been developed by REC Transmission Projects Company Ltd (RECPTL) for progress monitoring of transmission systems on Pan-India basis, which was launched by Hon'ble Minister of State for Power on 17<sup>th</sup> August 2016. The app can be downloaded on smartphones or be accessed through its website (www.tarang.website).

As part of the responsibility charter, POSOCO has been assigned the responsibility to update the systems under operation in the 'Completed Transmission Systems' section of the app.

In order to provide this information to the Ministry of Power, it is requested to provide the details of commissioning of transmission elements in respective state for each month by the 3<sup>rd</sup> day of the next month to NERLDC.

In 126<sup>th</sup> OCCM, Sr. Engineer, NERLDC emphasized the need for furnishing this data for TARANG app devised by Ministry of Power, Govt. of India for information to the public. It was also mentioned that during recent visit to Guwahati on 11.11.2016, the same was emphasized by Joint Secretary (Power). NERLDC requested all utilities to submit the data to: nerldc@yahoo.co.in by 3<sup>rd</sup> of every month for the previous month.

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

DGM, SLDC, AEGCL requested that respective transmission utilities may be approached for the required data.

DGM(MO),NERLDC clarified that the details of any EHV commissioned elements within a State are supposed to be available with SLDCs, so there should not arise any difficulty in this regard. It was agreed that SLDCs would furnish the data.

In 128<sup>th</sup> OCCM, NERLDC informed that even if no elements have been commissioned in the preceding month then a NIL report is to be submitted to NERLDC. NERLDC also informed that the updated Power Map and Grid Maps of all the states of NER will be circulated and all utilities are requested to give comments on the same.

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

**D.9. Installation of DAS to monitor FRC for generators:**

In continuation to discussions in 125<sup>th</sup> OCC meeting on this matter, and letter from ED-NLDC dtd. 10<sup>th</sup> October'16, it is requested that all generators may take urgent action to ensure Primary response as per stipulation [As per Sec.1(4) of Part-II of CEA's Grid Connectivity standards, 0-10% droop for hydro generator governors ; 3-6% droop for Thermal generator governors].

Also, as per Section 11.2.(i) of CEA's Technical Standards for Construction, all generating stations must store important analog data in 1 seconds interval.

NEEPCO has informed that AGTPP and Ranganadi HEP have properly working DAS, that are capable of storing Machine side data like Voltage, frequency, Active power generation, Reactive power generation, Line currents, etc. Also, it was confirmed in last OCC that DAS at AGBPP is installed but not time-synchronized.

All generating stations may confirm that their governors are properly tuned for giving primary response as per regulations.

Also, NEEPCO may intimate the status of installation of DAS for their remaining generating stations.

In 127<sup>th</sup> OCCM, Sr. Engineer, NERLDC once again reiterated that DAS is required for analyzing response of governors and their absence severely impairs calculation of FRC.

Sr. Manager, NEEPCO informed that installation of DAS in case of old generating units of Kopili, Khandong and Doyang involves huge financial involvement. He assured that management would be apprised of the requirement and any decision taken in this regard would be informed to the forum.

In 128<sup>th</sup> OCCM, NERLDC informed that on 23.12.2016, at 0127 hrs, all 400 kV lines from Kishenpur substation (Northern Region) except 400 kV Moga -Kishenpur II tripped which led to complete Valley (Kashmir) system collapse. Total Load Loss in J&K was about 1200 MW and Generation loss was of about 250 MW. All the generators primary response characteristics are required. In this respect NERLDC requested all generating utilities to provide time stamped MW, MVAR, Voltage and frequency data from 01:20Hrs to 01:30 Hrs of 23.12.2016. NERLDC also informed that the format was mailed to all the generators on 26th Dec'16.

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

**D.10. Finalization of the Annual Load Generation Balance Report (LGBR) for Peak as well as Off-peak scenarios and the Annual outage plan for 2017-18 by 31.12.16 as per IEGC**

As per IEGC, each SLDC shall submit LGBR for its control area, for peak as well as off-peak scenario, by 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.

For performing system studies, load forecasting, outage management and various other activities, it is necessary that LGBR report for the upcoming Financial Year is available beforehand. All entities are requested to furnish their details to NERPC for finalisation of LGBR.

For purpose of system studies, it is requested that Demand Figures of states for the months of April'17, May'17, and June'17 be indicated to NERLDC.

In 128<sup>th</sup> OCCM, after detailed deliberation it was decided that all state utilities would submit their figures at the earliest to NERPC.

NERLDC again requested the forum to submit figures for May'17 and June'17 at the earliest to NERLDC for calculation of TTC/ATC figures on 5 month ahead basis.

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

**D.11. Status of reactors under outage in NER Grid**

400 kV Nodes in NER Grid are experiencing high voltage during Off-Peak hours. As per information available with NERLDC, the following reactors are under outage:

63 Mvar Line Reactor of 400 kV Balipara - Bongaigaon III line at Bongaigaon is under out since 12.11.16.

400 kV, 80 Mvar Bus Reactor at Misa is under outage since 03.12.16.

400 kV, 63 Mvar Bus Reactor at Byrnihat is under outage since 09.12.14

400 kV, 80 Mvar Bus Reactor at Palatana is under outage since 15.03.16

200 kV, 2x12.5 Mvar Bus Reactor at Samaguri is under long outage.

132 kV, 2x2 Mvar Bus Reactor at Dharmanagar is under long outage.

It is requested to inform the status of restoration of the above reactors at the earliest.

Apart from the above reactors, it is also requested to provide commissioning status of the following reactors:

20 Mvar Line Reactor of 220 kV AGBPP - New Mariani (PG) line at AGBPP

Conversion of line Reactors of 400 kV Balipara - Bongaigaon I & II lines at Balipara and Bongaigaon to Bus reactors (4 Nos.)

400 kV, 1x125 Mvar Bus Reactor at Balipara

400 kV, 1x125 Mvar Bus Reactor at Bongaigaon.

400 kV, 1x80 Mvar Bus Reactor at Ranganadi.

220 kV, 1x31.5 Mvar Bus Reactor at Mokokchung (PG).

In view the Critical voltage profile of NER Grid in Off-Peak hours, it is suggested no shutdown of Reactors in NER Grid shall be availed unless in case of Emergency.

In 128<sup>th</sup> OCCM, Sr. Manager, TSECL informed that Bus reactor at Dharmanagar is under outage since 20 years back, the exact status of restoration and whether it should be altogether removed from list of elements will be informed in next OCC meeting. DGM, SLDC, AEGCL informed that Samaguri reactor would be restored by 31.07.2017.

NERPC informed all the utilities that if any reactor is to be removed from the overall list of Reactive Power Capacity of NER it will be done only after getting decommissioning letter from CEA.

ACE, MePTCL also requested that since the reactor is very important from operational point of view for NER Grid and stated that since MePTCL do not have the capital to invest on repairing the 63MVA fault reactor at Byrnihat, he requested NERPC Secretariat to explore funding from PSDF.

SE(C&O) stated that they will look into the matter and requested MePTCL to send the proposal; however, MePTCL should go ahead with repairing for safety of the grid.

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

**D.12. Constraint in Bipolar Operation of +/- 800 kV HVDC Biswanath Chariali – Agra**

As communicated by NLDC, in case of operation of the HVDC Bipole BNC-Agra link for power flow in Agra-BNC direction, it is not possible to operate the Bipole link in Constant Power mode. In this scenario for operation in Agra-BNC direction, only constant current mode is possible wherein upon tripping of any pole, the other will not share load and the filters may also not disconnect.

During lean hydro (winter) months, NER may import power from NR through this Bipole link to relieve congestion of Eastern-Regional grid. In constant current mode operation, if the filter banks do not trip immediately after reduction of power flow through the link, the 400 kV Nodes in NER may experience severe overvoltage (due to low fault level of around 4000 MVA at 400 kV Biswanth Chariali) that may lead to tripping of the 400 kV lines from Biswanth Chariali, Ranganadi, Balipara, Bongaigaon, and trigger a major disturbance in NER.'

Considering the importance of this link in operation of NER grid, NERTS may intimate the following:

- Issues related to operation of +/- 800 kV Agra-BNC bipole in Constant Power Mode
- Time required for disconnection of Filter Banks at BNC in case while running in Constant Current Mode, 1 Pole gets blocked / tripped?
- Maximum possible Power Flow in Agra to BNC direction (separately for different modes of operation)

In 127<sup>th</sup> OCCM, NERLDC explained that in case of power flow in Agra-BNC direction in Bipolar mode, the poles operated independently of each other and thus the cause of concern in grid operation, particularly in Lean Hydro season in NER. The matter was discussed at length.

S.E.(C&O),NERPC concluded that POWERGRID to depute concerned person from Biswanath-Chariali HVDC to attend next OCCM for fruitful deliberation of agenda items pertaining to HVDC operation, and clarification of any queries of forum members.

In 128<sup>th</sup> OCCM, DGM(AM),NERTS informed that upon consultation with HVDC team it has been confirmed that operation in constant power mode with load sharing is possible. The forum requested NERTS to conduct site visit to BNC for OCC members' familiarisation with HVDC operation. NERTS concurred. The forum again requested NERTS that concerned person from Biswanath-Chariali HVDC to attend next OCCM for fruitful deliberation of agenda pertaining to HVDC operation, and to clarify any queries of the members.

AGM, NERLDC expressed concerns about Non/improper operation of filters at BNC resulting in high voltage problems and on some occasions causing tripping of lines on over voltage. He requested for corrective actions by concerned authorities.

***NERTS, POWERGRID may intimate the forum.***

**D.13. Dedicated voice communication and Data channel:**

Dedicated voice communication with Substations and Generating Stations needs to be checked daily. Currently in most of the stations only one link is installed. In some stations VOIP phones are out (NLDC, Doyang, Kathalguri etc). Redundant of links need to be established on priority. Details of status of voice communication is attached in Annexure-I.

SCADA data from KATHALGURI, DOYANG, KOPILI, KHANDONG, RANGANADI, ITANAGAR, ZIRO etc are out since long due to which Grid management activity is severely affected.

RTU Outage details are given below:

Sl. No.	Station Name	Date of Outage
1	Ranganadi	21.05.16
2	Ziro	07.08.16
3	Kopili	09.05.15
4	Doyang	24.01.15
5	Khandong	16.09.16
6	Khatalguri	25.07.16
7	Haflong	14.09.16
8	Itanagar	01.08.16

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

Sl. No.	Station Name	Status as informed in 128 <sup>th</sup> OCC
1	Ranganadi	Tendering stage for installation of RTU
2	Ziro	ABB has done site visit. Report awaited.
3	Kopili	LOA for installation of RTU placed on 30.12.2016
4	Doyang	LOA for installation of RTU placed on 30.12.2016
5	Khandong	LOA for installation of RTU placed on 30.12.2016
6	Kathalguri	Link working.
7	Haflong	PLCC panel shifted. Link yet to be established. Will be complete by 31.01.17.
8	Itanagar	Link available. Site check in service. DB to be updated by NERLDC

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

**D.14. Strengthening of capacity of Khandong Bus as per grid requirement:**

The normal life of 2x25MW Khandong Power Station is going to be completed in April'2019. We are in the process of R&M of the Power Station for life extension. Accordingly, order has been placed with M/s CPRI for field study and DPR preparation.

Though the generation from Khandong & Kopili Stage-II Power Station in peak hydro season is hardly 70MW and Khandong Bus is well equipped for evacuation of that quantum of energy. But In Kopili Power Station SY there is already one 220/132KV, 160MVA autotransformer is there and one more similar transformer is under installation. There are two 132KV lines from Khandong to Kopili. The new lines is having Zebra conductor and it is leant that the conductor of old line will also be changed to higher capacity.

As you are aware that Khandong SY is having double Bus with transfer facility and bus conductor is single Zebra and all the jack buses and jumpers are single panther.

In this scenario, NEEPCO may be informed whether any strengthening of Khandong Bus is required. Same shall be included in the scope of study and suitable decision shall be taken subject to the strength of the existing structures.

In 128<sup>th</sup> OCCM, DGM, AEGCL suggested that SC level for Khandong Bus needs to be calculated taking into consideration addition of 160MVA 220/132kV transformer at Kopili and HTLS conversion of 132kV Kopili-Khandong-II. The forum approved the suggestion.

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

**D.15. High voltage issues at 220 KV sides of Tinsukia and Namrup:**

NRPP commissioning activities are going on and they are facing high voltage problem at 220 KV side which hampering the commissioning activities. As Kathalguri Generating Station is the only available source of voltage regulation. So, necessary action may be initiated in order to regulate the voltage for smooth running of commissioning activities of NRPP.

In 128<sup>th</sup> OCCM, Sr. Manager, NEEPCO informed that AGBPP alone cannot regulate the voltage, the maximum 2kV relief may be obtained by lowering the excitation. He also suggested that line reactor installation may provide higher relief. Members also requested NERPC to explore options whether compensating device installation for the benefit of grid may be funded from PSDF.

AGM, NERLDC informed the forum that NERLDC had received letter No. AEGCL/CGM/SLDC/T-12/16/68 dated 31.12.16 regarding frequent tripping of 220 kV NRPP- Tinsukia line on Over Voltage at NRPP end. They replied back vide letter no. User\_NE/2016-17/5 dated 09.01.17. NERLDC also conducted studies and AGBPP was requested to absorb Reactive Power as per their Capability Curve.

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

**D.16. Frequent tripping of units of AGBPP (NEEPCO) due to tripping of Gas Compressor:**

During the period from October'16 to December'16, there has been multiple tripping of units of Assam Gas Based Power Plant (AGBPP) of NEEPCO, resulting in lower availability of power for NER Grid. The list of trippings of units of AGBPP on account of tripping of Gas Compressor are listed below:

Sl. No.	Date of tripping	Time of tripping in Hrs	Unit tripped	Reason for tripping
1	15.10.2016	11:43	6	Due to tripping of GC # 2
2	15.10.2016	20:20	7	Due to tripping of GC#1 on valve sequence failed
3	15.10.2016	20:20	8	
4	16.10.2016	20:30	2	Due to tripping of GC # 3
5	16.10.2016	20:30	4	
6	16.10.2016	20:30	7	
7	17.10.2016	08:58	2	Due to tripping of GC#1
8	17.10.2016	08:58	7	
9	17.10.2016	08:58	3	
10	17.10.2016	08:58	4	
11	17.10.2016	08:58	8	
12	13.12.2016	00:56	2	Due to tripping of GC#3
13	13.12.2016	00:56	7	
14	16.12.2016	17:10	2	Due to tripping of GC#3
15	16.12.2016	17:10	4	
16	16.12.2016	17:10	7	
17	18.12.2016	08:17	2	Due to tripping of GC#3
18	18.12.2016	08:17	7	
19	23.12.2016	11:16	2	Due to tripping of GC#3
20	23.12.2016	11:16	7	
21	25.12.2016	11:42	4	Due to tripping of GC#2

In 128<sup>th</sup> OCCM, Sr. Manager, NEEPCO informed that due to microprocessor problem in circuitry of CR panel for GC#3 the problem is persisting, however this does not affect generation. The matter is being addressed locally and status would be intimated to the forum.

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

**AGENDA ITEMS FROM POWERGRID:**

**D.17. Providing of Bank Protection of Dikrong River at Ranga De Reserve Village, Bihpuria Circle, Dist: Lakhimpur, Assam due to erosion of land on account of discharge of Ranganadi HEP:**

The Ranga De Reserve Village is situated under Bihpuria Circle of Lakhimpur District in Assam at the left bank of Dokrong River where continuous erosion river bank is going on due discharge of Ranganadi Hydro Generation. At present, the fate of the villagers is in uncertainty. Earlier NEEPCO had provided river bank protection of Dikrong River from Bihari Basti to a part of Ranga De Reserve Village leaving around 2 KM bank unprotected which is suffering erosion endangering the life and property of the villagers.

In fact due to indiscriminate erosion of Dikrong River Bank, POWERGRID is shifting all the Towers of 400kV D/C Balipara-Ranganadi Line to pile foundation as per the approval of NERPC. Presently, the construction of those Pile foundations is in progress.

Now, the villagers of Ranga De Reserve Village are not allowing POWERGRID to carry out pile foundation in Location No. 48 & 49 which falls in said stretch of 2KM unprotected bank and pressing hard for providing River Bank Protection.

NEEPCO may extend the Bank Protection in unprotected 2 KM stretch in line with earlier execution of River Bank Protection as the river bank erosion is mainly on account of downstream discharge of Ranganadi HEP.

***NERTS may please deliberate.***

**D.18. Providing of Insulation Sleeve in 33kV Tertiary System of Misa, Balipara, Bongaigaon and Silchar Sub Station:**

Network reliability is a priority for electrical utilities. Supply interruptions add to maintenance costs and affect customer service. Substation faults are particularly expensive: equipment is often damaged and difficult to repair or replace; specialized post-fault maintenance may be required, and significant customer "supply" lost. Thus protecting of substations and overhead distribution/transmission networks by insulating vulnerable bare metalwork is of utmost importance.

Birds and animals often enter substations and interfere with overhead lines causing faults by bridging air clearances. Outages occur especially on distribution equipment, where conductor spacing allows relatively small birds and animals to bridge phases. The insulated tubes, tapes, sheets, preformed covers and barriers provide a proven, cost-effective and easy-to-install retrofit solution to bird and animal outages.

The tertiary of 400kV Sub Stations viz. Misa, Balipara, Bongaigaon and Silchar is at 33kV Level and the possibility of bridging the conductors by small birds and animals is high which is likely to cause substation fault. In fact, there is an instance of animal fault created by monkey at Tertiary System of 400/220/33kV Balipara Sub Station for which 400/220/33kV ICT got tripped.

In view of above, it is essential to enhance the insulation of Tertiary System of above sub stations by providing insulation sleeves in bare metallic conductors. The tentative expenditure for carrying out the jobs will be around **Rs. 4.00 Crores (Rupees Four Crores Only)** which POWERGRID proposes to execute and realize the expenditure through PoC Mechanism against System improvement.

***NERTS may please deliberate.***

**D.19. Reimbursement of Security Expenditure for Deployment of AISF & CISF security personnel CISF engaged at ± 800kV HVDC Biswanath Chariali Sub Station:**

The ± 800KV HVDC Biswanath Chariali Substation is one of the largest substations in the country & a project of national importance. The station is under operation & maintenance by POWERGRID, NER w.e.f. Sept'2015.

The station is located in a sensitive area with history of frequent breakdown in law & order conditions & is therefore susceptible severe security threat. Even during its constructional phase, frequent sabotages have occurred & damages have been caused to assets in the station. In view of criticality of the station, maintaining adequate security is of utmost importance since any act of damage/ sabotage is likely to cause colossal loss to this station & the National power system as a whole.

In view of the above, 63 nos. Assam Industrial Security Force (AISF) in and 21 nos. Central Industrial Security Force (CISF) personnel have been granted by concerned State Government & Ministry of Home Affair (GOI) for ensuring security of the station. The total additional expenditure incurred by POWERGRID for deployment of special security force at ± 800KV HVDC Biswanath Chariali Substation is **Rs. 3.25 Crore (Rupees Three Crores Twenty Five Lakhs Only) per annum.**

Now, since the expenditure is additional on grounds of uncongenial Law and Order situation beyond the control of POWERGRID, the same is proposed for reimbursement from CERC under PoC Mechanism in line with the reimbursement being provided to POWERGRID for deployment of CISF Security Personal in at Bongaigaon & Salakati Sub Station.

***NERTS may please deliberate.***

**D.20. Additional Security Expenditure for Maintenance of 132KV Jiribam-Loktak-II line in the State of Manipur:**

The following Transmission Lines of POWERGRID traverses through the state of Manipur.

- a) 132KV Jiribam-Loktak-II line
- b) 132KV Aizawl-Jiribam line
- c) 132KV Haflong Jiribam line
- d) 400KV D/C Silchar-Imphal line
- e) 132KV Loktak-Imphal-II line
- f) 132KV Dimapur-Imphal line

Normal patrolling & maintenance of all the above lines in the state of Manipur often gets affected due to uncongenial law & order situation. But, as experienced, sabotage by the miscreants in 132KV Jiribam-Loktak-II line is more. There is history of frequent sabotage/ damage by miscreants to this transmission line towers including causing harm to transmission Line personnel. Considering the criticality of the line as linked with Loktak Generation, POWERGRID is constrained to carry out maintenance under security coverage provided by the State Administration, for which an amount of **Rs. 1.00 Crore (Rupees One Crore Only)** is additionally incurred every year by POWERGRID.

Now, since the expenditure is additional on grounds of uncongenial Law and Order situation beyond the control of POWERGRID, the same is proposed for reimbursement from CERC under PoC Mechanism.

***NERTS may please deliberate.***

**AGENDA ITEMS FROM NERPC:**

**D.21. SPS for transfer of 160 MW to Bangladesh through Tripura-Bangladesh link:**

POWERGRID vide. C/CTU-PIg/NE/02/Bangladesh dated. 07.02.2017 has informed that in the 12<sup>th</sup> India-Bangladesh JWG &JSC meeting decision was taken to enhance power transfer through 400kV SMNagar-South Comilla link (charged at 132 kV). In this regard a SPS needs to be in place to increase reliability in power supply. Following SPS action has been suggested by POWERGRID:

Sl. No.	Contingency	SPS Action
1	Outage of one ICT out of 400/132kV 2x125MVA ICTs at Palatana	Limit transfer to 100MW on Cross-Border link, followed by shifting of 60MW load from Indian grid to Bangladesh grid.
2	Outage of 132 kV Palatana-SMNagar line	Tripping of Cross border link followed by shifting of entire 160MW load from India to Bangladesh grid.
3	Outage of one circuit of SMNagar-South Comilla line	Limit transfer to 130MW on Cross-Border link, followed by shifting of 30MW load from Indian grid to Bangladesh grid.

***Members may please discuss.***

**D.22 Procurement of ERS for NER from PSDF funding:**

PSDF Secretariat (NLDC, New Delhi) vide. NLDC-PSDF/NPC-CEA/2016-17/60 dtd. 21st April 2016 has intimated that submission and approval of the schemes is governed in accordance with the guidelines for disbursement of funds from PSDF approved by MoP on 18.9.2014. Guidelines are available on <http://psdfindia.in/>. The schemes have to be submitted as per formats prescribed in guidelines.

During 124<sup>th</sup> OCCM, DGM(AM),NERTS stated that detailed clarification is required with regard to the following:

1. Status of funding from PSDF
2. Ownership of Asset and location of storage.
3. Signing authority for consultancy agreement.

During 124<sup>th</sup> OCCM, S.E(O),NERPC requested NERTS to carry out the works on behalf of the NER constituents at the earliest and the issue of ownership of asset will be discussed in due course of time. Further, he requested NERTS that all the queries can be sorted out by NERPC & NERTS so that procurement shall not be delayed.

In 125<sup>th</sup> OCCM, DGM, SLDC, AEGCL opined that signing of consultancy agreement implies consultancy fees to POWERGRID for procurement and objected to payment of any such charges. DGM(AM),NERTS agreed to revert back with the details.

In 126<sup>th</sup> OCCM, DGM(AM),NERTS informed that consultancy charges would be waived off in case signing authority is NERPC. OCC forum mandated NERPC to be the signing authority and recommended that the matter be put up in the next TCC/RPC meeting for information.

***Action: POWERGRID/ NERPC.***

**AGENDA ITEMS FROM NERLDC:**

**D.22. Change of E-mail ids of NERLDC:**

As per the guidelines of POSOCO Corporate Centre, NERLDC is migrating to POSOCO domain. So all the constituents are requested to kindly take a note of the following email ids

Sl. No.	Name of Department/Activities	Email Ids
1	Control Room	<a href="mailto:nerldccr@posoco.in">nerldccr@posoco.in</a>
2	Open Access	<a href="mailto:nerldcoa@posoco.in">nerldcoa@posoco.in</a>
3	System Operation- II	<a href="mailto:nerldcso2@posoco.in">nerldcso2@posoco.in</a>
4	NERLDC RTSD	<a href="mailto:rtsdnerldc@posoco.in">rtsdnerldc@posoco.in</a>
5	Outage Related activities	<a href="mailto:nerldcoutage@posoco.in">nerldcoutage@posoco.in</a>
6	Protection Related activities	<a href="mailto:nerldcprotection@posoco.in">nerldcprotection@posoco.in</a>
7	Market Operation	<a href="mailto:nerldcmo@posoco.in">nerldcmo@posoco.in</a>
8	SEM data	<a href="mailto:monerldc@posoco.in">monerldc@posoco.in</a>

***For kind information only.***

**D.23. CT Ratio of Transmission Lines & Enhancement of Loadability of lines in NER:**

As deliberated in 125<sup>th</sup> OCC meeting held on 14<sup>th</sup> September, 2016 at Guwahati double jumpering of bay and line before the CT upgradation work was to be completed, so that full capacity of CTs can be utilized for loading the lines.

Sl. No.	Name of the line	CT Ratio at either end (current)		CT Ratio at either end (required)		No. Of CTs required		Current Status
		Stn A	Stn B	Stn A	Stn B	Stn A	Stn B	
1	132 kV AGTPP-Agartala-I	600/1	400/1	800/1	800/1	3 by PGCIL	4 by PGCIL	
2	132 kV AGTPP-Agartala-II	600/1	400/1	800/1	800/1	3 by PGCIL	4 by PGCIL	
3	132 kV Jiribam-Aizwal	400/1	400/1	600/1	600/1	3 by PGCIL	4 by PGCIL	
4	132 kV Jiribam-Haflong	400/1	400/1	600/1	600/1	3 by PGCIL	4 by PGCIL	
5	132 kV Khandong - Umrangso-Haflong	300/1	400/1	600/1	600/1	3 at Khandong by NEEPCO, 3 at Umrangso by AEGCL	3 at Umrangso by AEGCL, 3 at Haflong by PGCIL	
6	132 kV Loktak - Imphal-II	400/1	600/1	600/1	600/1	3 by NHPC		
7	132 kV D/C Doyang - Dimapur	300/1	600/1	300/1	600/1	3 by PGCIL & 6 by NEEPCO		

PGCIL, AEGCL, NHPC & NEEPCO to inform the current status of double jumpering of bay and line & also status of upgradation of CT Ratios.

*Members may discuss.*

**D.24. Implementation of New Environmental Norms at BgTPP, NTPC, Palatana, OTPC, AGTCCPP, NEEPCO & AGBPP, NEEPCO:**

As per new Environmental Norms for Thermal Power Plants (TPP) issued by Ministry of Environment, Forest & Climate Change (MoEF&CC) dated 07<sup>th</sup> December'15, available at

<http://www.moef.gov.in/sites/default/files/Thermal%20plant%20gazette%20scan.pdf>

Agenda for 129<sup>th</sup> OCC Meeting to be held on 17<sup>th</sup> February, 2017  
 new guidelines regarding water consumption limit, SO<sub>2</sub>, NO<sub>x</sub> emission etc is mentioned.

The new guidelines are as follows:

Emission parameter	TPPs (units) installed before 31 <sup>st</sup> Dec'03	TPPs (units) installed after 31 <sup>st</sup> Dec'03 and upto 31 <sup>st</sup> Dec'16	TPPs (units) to be installed from 1 <sup>st</sup> Jan'17
Particulate Matter	100 mg/Nm <sup>3</sup>	50 mg/Nm <sup>3</sup>	30 mg/Nm <sup>3</sup>
Sulphur Dioxide (SO <sub>2</sub> )	600 mg/Nm <sup>3</sup> for units less than 500MW capacity 200 mg/Nm <sup>3</sup> for units 500MW and above capacity	600 mg/Nm <sup>3</sup> for units less than 500MW capacity 200 mg/Nm <sup>3</sup> for units 500MW and above capacity	100 mg/Nm <sup>3</sup>
Oxides of Nitrogen (NO <sub>x</sub> )	600 mg/Nm <sup>3</sup>	300 mg/Nm <sup>3</sup>	100 mg/Nm <sup>3</sup>

As per guidelines, TPPs shall have to meet the limits within Two (2) years from the date of publication of the Gazette Notification i.e. 07.12.15.

**NTPC, OTPC & NEEPCO are requested to kindly inform about the status of implementation of the new Environmental Guidelines along with the implementation of Flue Gas Desulphurization (FGD).**

*Members may discuss.*

#### **D.25. Status of Implementation of URTDMS Project in NER:**

At present 8 Nos PMUs installed in NER at Bongaigaon, Balipara, Sarusajai, Misa, Badarpur, Agartala, NEHU and Imphal as part of Pilot Project. Under URTDSM Scheme around 90 numbers of PMUs are expected to be installed at various locations across NER along with visualization stations and state of the art analytical tools

***NERTS, POWERGRID may provide the current status.***

#### **D.26. Workshop on 'Restoration procedure of NER Grid':**

The "Restoration Procedure of NER Grid" has been finalized & uploaded in NERLDC website.

A workshop on restoration procedure will be organized by NERLDC in Guwahati one day before or after the 130<sup>th</sup> OCC to be held in March, 2017. The exact date will be communicated after finalization date of OCC. All the SLDCs are requested to give small presentations (10-20 minutes) in the seminar regarding their own system for the

Agenda for 129<sup>th</sup> OCC Meeting to be held on 17<sup>th</sup> February, 2017  
knowledge of all other utilities. All the utilities of NER are requested to please nominate at least two participants, for the workshop

***Members may please deliberate & extend their help to make the workshop successful.***

**D.27. Delay in restoration of Manipur system after partial collapse:**

On 03/02/2017 at 10.05 hrs Manipur system collapsed partially affecting around 50 MW of load in surrounding areas of Imphal(MA). Ningthoukhong, Jiribam(MA) loads were not affected. As reported by SLDC, Imphal, the reason for the disturbance was bursting of one 33kV Cable & Bus PT at Imphal S/S of Manipur. This fault resulted in tripping of following lines-

- 1) 132 kV Dimapur – Imphal(PG) from Dimapur end
- 2) 132 kV Loktak – Imphal(PG)from Loktak end
- 3) 132 kV Silchar – Imphal(PG) I & II from Silchar end
- 4) 132 kV Dimapur – Imphal from Dimapur end

Despite of best efforts the system restoration took considerable time and only at 1144 Hrs power could be extended to Imphal(MA) from Imphal(PG).

Concerned authorities are requested to please elaborate the reasons for delay as well as unwarranted trippings of above lines due to internal faults in Manipur system.

***Members may discuss.***

**D.28. Long outage of Bongaigaon end Line reactor(63 MVAR) of 400 kV Bongaigaon-Balipara ckt-III:**

The Line reactor (63 MVAR) of 400 kV Bongaigaon-Balipara ckt-III is out of service since 12.11.2016 resulting in high voltage in the system and due to this problem only two out of four circuits in this corridor can be kept in service during off peak hours. Early restoration of this reactor is urgently required.

***NERTS may please intimate the restoration plan.***

**AGENDA ITEMS FROM MSPCL:**

**D.29. Status of 132kV Kohima – Karong Circuit Breaker at Kohima End:**

The Circuit Breaker of 132kV Karong-Kohima line at Kohima end is nonoperational since October 2016, due to which the alternate supply to Karong is affected. Currently, 132kV Karong-Kohima line is kept idle charged from Karong end and isolated at Kohima end. Last November, SLDC Nagaland informed that a new circuit breaker is under installation and expected to be commissioned by the end of November 2016 (copy of e-mail attached at **Annexure-D.29**).

132kV Yurembam-Karong line is highly fault prone and it is always difficult to reach the fault area and rectify due to law and order problems. As such it is highly essential to keep the alternate supply line operational for 132/33/11 kV Karong Sub-Station from Kohima end.

In this regard, the Forum may kindly deliberate and ensure availability of alternate power to Karong from Kohima end, in view of the upcoming 11th Manipur Assembly election.

***Members may discuss.***

**Any other item:**

**Date and Venue of next OCC**

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

\*\*\*\*\*

### Reporting Format to the Project Monitoring Group

1. Name of the Scheme			
1.1 Name of the substation and its Location			
1.2 Executing Agency			
1.3 State/Region			
2. Date of Sanction order			
2.1 Date of Agreement of Entity with State Govt./NLDC			
2.2 Total Approved Cost of the Scheme			
2.3 Approved Grant by Monitoring Committee ( Rs. In Lakhs)			
2.4 Date of Requisition by the Entity			
2.4.a) date and Reference of LOA			
2.4.b) Amount of LOA			
2.5 Date of Disbursement and amount			
2.5.1 : Ist Installment			
2.5.2: IInd installment			
2.5.3: IIIrd installment			
2.6 Date of Scheduled completion of Work			
2.7 Date of handing over of Site to entity (in case of turnkey projects)			

Report for the Month of <u>MM / YY</u>							
No.	Supply Description	Qty. AS PER LOA	Quantity Received during Month	CUMMULATIVE PROGRESS Till date		BALANCE	Remarks
				Sch.	Act.		
1	item Details						
1.1							
1.2							
....							
2	Erection Description	works as per LOA	Progress During Month	CUMMULATIVE PROGRESS Till date		Balance	
2.1	work details						
2.2							
....							
3	Others						

Signature of the Nodal Officer



## Generation Projection (Apr 2017 - June 2017)

				Generation declared Commercial from 1st July '16 to 31st Dec'16					Generation declared/expected to be declared Commercial from 1st Jan'17 to 31st Mar'17								
Sl. No.	Entities	Region	Projections based on 3 Years Data	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	TOTAL	Comments From DICs /Others (if any)	Figure as per Comments/PoC Data	Projected Generation before normalization w.r.t projected All India Peak Demand
			(MW)			(MW)	(MW)	(MW)			(MW)	(MW)	(MW)	(MW)			(MW)
1	AGTPP, NEEPCO	NER	124											124			124
2	Doyang, NEEPCO	NER	47											47			47
3	Kopili, NEEPCO	NER	126											126			126
4	Khandong, NEEPCO	NER	40											40			40
5	Ranganadi, NEEPCO	NER	429											429			429
6	AGBPP_Kathalgu ri	NER	228											228			228
7	TGBP	NER		TGBP	1	65	18	18						18			18
8	Loktak, NHPC	NER	101											101	As per NHPC	105	105
9	Palatana GBPP	NER	585											585	As per OTPC	547	547
10	Bongaigaon_NTPC	NER	234											234			234
11	Arunachal Pradesh	NER	0											0			0
12	Assam	NER	353											353			353
13	Manipur	NER	0											0			0
14	Meghalaya	NER	175											175			175
15	Nagaland	NER	13											13	As per data given by Nagaland	18	18
16	Tripura	NER	117											117			117
17	Mizoram	NER	6											6	As per data given by Mizoram	8	8
	<b>TOTAL</b>		<b>2578</b>					<b>18</b>					<b>0</b>	<b>2596</b>			2596

**Note:**

1. Projections are based on monthly maximum injection in the last 3 years from actual metered data.

2. Generation forecast has been done based on the following criteria

(i) If there is an increasing trend then last year average generation has been considered

(ii) Otherwise average of past three year average generation has been considered

3. In case of new generators where past data was not available following has been assumed

(i) 1.0 p/f for hydro generators

(ii) 0.7 p/f for thermal generators.

(iii) 0.3 p/f for gas stations

4. In case of the re-organized states of Andhra Pradesh and Telangana Generation is divided in the ratio 53.89% for Telangana and 46.11% for Andhra Pradesh for FY 2012-13 and 2013-14. This is as per letter No.CE/COMML/APPCC/DE-COMML/POC-DATA-15-16/D.No/15 dtd. 09.10.15 as received from APTRANSCO.

DEMAND FORECAST USING PAST 3 YEARS DATA (Apr 2017 - June 2017)														Data given by DICs	Comments
	2014-15			2015-16			2016-17			1	2	3	4		
	Apr-14	May-14	Jun-14	Apr-15	May-15	Jun-15	Apr-16	May-16	Jun-16	2014-15 Average	2015-16 Average	2016-17 Average	Projected Demand for (Apr 2017 - June 2017) before normalization		
Arunachal Pradesh	104	111	110	114	109	108	141	119	130	108	110	130	138		
Assam	1,230	1,212	1,215	1,282	1,260	1,324	1,356	1,423	1,458	1,219	1,289	1,412	1,500		
Manipur	112	109	117	148	153	147	146	144	151	113	149	147	171		
Meghalaya	272	296	289	312	295	295	295	282	311	286	301	296	304		
Mizoram	76	73	74	80	84	81	82	88	80	74	82	83	89	93	As per data given by Mizoram
Nagaland	95	102	105	107	101	105	110	105	119	101	104	111	116	126	As per data given by Nagaland
Tripura	246	233	230	238	254	249	264	249	273	236	247	262	274		
<b>N. Eastern Region</b>	<b>2,045</b>	<b>1,986</b>	<b>1,998</b>	<b>2,114</b>	<b>2,185</b>	<b>2,190</b>	<b>2,358</b>	<b>2,401</b>	<b>2,475</b>						

**Notes**

1. Projections are based on the past 3 years' monthly Peak Demand Met data available on the website of CEA
2. The above projections are being done for financial year 2017-2018 (Q1) i.e. Apr 2017 to June 2017
3. Projections are being done based on the forecast function available in MS Office Excel
4. In case of the re-organized states of Andhra Pradesh and Telangana Maximum Demand is divided in the ratio 53.89% for Telangana and 46.11% for Andhra Pradesh for FY 2012-13 and 2013-14. This is as per letter No.CE/COMML./APPCC/DE-COMML/POC-DATA-15-16/D.No/15 dtd. 09.10.15 as received from APTRANSCO.
4. CEA Reports can be accessed from the following links:  
[http://www.cea.nic.in/reports/monthly/powersupply/2016/psp\\_peak-06.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-06.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2016/psp\\_peak-05.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-05.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2016/psp\\_peak-04.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-04.pdf)  
[http://cea.nic.in/reports/monthly/powersupply/2014/psp\\_peak-05.pdf](http://cea.nic.in/reports/monthly/powersupply/2014/psp_peak-05.pdf)  
[http://cea.nic.in/reports/monthly/powersupply/2014/psp\\_peak-06.pdf](http://cea.nic.in/reports/monthly/powersupply/2014/psp_peak-06.pdf)  
[http://cea.nic.in/reports/monthly/powersupply/2015/psp\\_peak-04.pdf](http://cea.nic.in/reports/monthly/powersupply/2015/psp_peak-04.pdf)  
[http://cea.nic.in/reports/monthly/powersupply/2015/psp\\_peak-05.pdf](http://cea.nic.in/reports/monthly/powersupply/2015/psp_peak-05.pdf)  
[http://cea.nic.in/reports/monthly/powersupply/2015/psp\\_peak-06.pdf](http://cea.nic.in/reports/monthly/powersupply/2015/psp_peak-06.pdf)

**Open cycle generation of AGBPP from 01.04.2015 to 31.03.2016: -**

Financial Year 2015 -2016		
Month	Open cycle generation percentage	OCC Approval
July 2015	3.3415 %	101 <sup>st</sup> OCC
February 2016	0.7702%	-

**Month: June'15**

Sl. No.	Date	GT No.	Start Time in O/C	Stop Time in O/C	Duration of O/C (hr:min)	Actual generation in O/C as per NEEPCO(MU)	Certified generation in O/C (MU)
1	01/06/2015	GTG#1	13:13	14:48	01:35	0.04510	0
		GTG#2	13:20	14:48	01:28	0.04120	0
		GTG#5	13:31	18:42	05:11	0.13970	0
		GTG#6	13:30 17:10	15:25 18:42	03:27	0.09400	0
<b>TOTAL (MU)</b>						<b>0.32</b>	<b>0</b>

Gross generation for the month(MU)= 127.985  
 Certified open cycle generation(MU)= 0  
 Open cycle percentage = 0.0000

**Month: July'15**

Sl. No.	Date	GT No.	Start Time in O/C	Stop Time in O/C	Duration of O/C (hr:min)	Actual generation in O/C as per NEEPCO(MU)	Certified generation in O/C (MU)
1	01/07/2015	-	-	-	-	0	0
2	02/07/2015	3	11:50	24:00	12:10	0.2730	0
3	03/07/2015	3	00:00	24:00	24:00	0.5220	0.5053
4	04/07/2015	3	00:00	24:00	24:00	0.5456	0.5288
5	05/07/2015	3	00:00	18:48	18:48	0.3598	0.3488
6	06/07/2015	3	22:02	24:00	01:58	0.0544	0.0520
7	07/07/2015	3	00:00	24:00	24:00	0.6291	0.6102
8	08/07/2015	3	00:00	24:00	24:00	0.6047	0.5883
9	09/07/2015	3	00:00	24:00	24:00	0.6670	0.6513
10	10/07/2015	3	00:00	24:00	24:00	0.7143	0.6637
11	11/07/2015	3	00:00	00:50	00:50	0.0727	0.0225
12	12/07/2015	1	21:43	24:00	02:17	0.0500	0
13	13/07/2015	1,2&5	-	-	-	0.1061	0
14	14/07/2015	1&2	-	-	-	0.1578	0
15	15/07/2015	1	-	-	-	0.0223	0
		3	12:11 16:55	16:18 17:10	04:22	0.0986	0
<b>TOTAL (MU)</b>						<b>4.8775</b>	<b>3.9709</b>

Gross generation for the month (MU): **118.8366**

Certified open cycle generation (MU): **3.9709**

Certified % of open cycle generation : **3.3415**

**Month: February'16**

Sl. No.	Date	GT No.	Start Time in O/C	Stop Time in O/C	Duration of O/C (hr:min)	Actual generation in O/C as per NEEPCO(MU)	Certified generation in O/C (MU)
1	25/02/2016	GTG# 1	10:25	11:05	00:40:00	0.0200	1.284429
		GTG# 3	10:22	12:03	01:41:00	0.0505	
		GTG# 4	11:15	12:25	01:10:00	0.0362	
		GTG# 6	10:39	10:55	00:16:00	0.0080	
<b>TOTAL (MU)</b>						<b>0.1147</b>	<b>1.284429</b>

Gross generation for the month(MU)= **166.7722**

Certified open cycle generation(MU)= **1.284429**

Open cycle percentage = **0.7702**

## STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF APRIL 2015

Date	Mod/unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
02-Apr-15	GTG# 2	13:13	14:18	01:05:00	0.0300	Tripping of GC # 3 & GTG load reduced. <b>Startup process to match the required parameters of boiler .</b>	
04-Apr-15	GTG# 2	12:36	15:45	03:09:00	0.1404	Tripping of GC # 3 & WHRB # II start up process	
		18:25	19:10	00:45:00		Tripping of GC # 3 & WHRB # II start up process	
		23:08	23:55	00:47:00		Tripping of GC # 4 & WHRB # II start up process	
05-Apr-15	GTG# 2	14:57	16:35	01:38:00	0.0428	Tripping of GC # 1 & 4, GTG load reduced due to low gas pressure. Startup process to match the required parameters of boiler .	
	GTG# 5	23:15	23:45	00:30:00	0.0182	Tripping of STG # 3 due to reverse power & WHRB # V start up process	
06-Apr-15	GTG# 2	21:15	21:59	00:44:00	0.0211	Tripping of GC # 1 & WHRB # II start up process	
07-Apr-15	GTG# 4	19:40	20:05	00:25:00	0.0084	Load transfer from GTG# 4 to GTG # 6	
	GTG# 6	19:29	20:31	01:02:00	0.0397	LGP& GTG low load condition due to low gas pressure. MS temperature problem to operate required parameters.	
		21:58	24:00	02:02:00		LGP& GTG low load condition due to low gas pressure. MS temperature problem to operate required parameters.	
08-Apr-15	GTG# 3	08:22	20:31	12:09:00	0.3582	Due to low gas pressure; low load of GTG , STG # 2 withdrawn.	L2 br. Problem at Moriani 12:30 hrs to 13:35 hrs , 16:46 V.....,problem
	GTG# 4	00:15	00:23	00:08:00	0.0025	GTG # 4 withdrawn due to low gas pressure & WHRB # IVstart up process	
	GTG# 6	11:45	13:15	01:30:00	0.0129	GTG # 6 tripped due to vibration problem. MS temperature problem to operate required parameter.	
09-Apr-15	GTG# 2	21:06	22:30	01:24:00	0.0287	Shutdown of GC # 4 & GTG low load condition due to low gas pr.	
10-Apr-15	GTG# 2	22:56	23:45	00:49:00	0.0168	Shutdown of GC # III & WHRB # II start up process	
12-Apr-15	GTG# 2	16:13	16:20	00:07:00	0.0116	GTG # 2 manually withdrawn due to Shutdown of GC # I & WHRB # II start up process	15:05 hrs Tsk -1 tripped ( LA y-phase ) B.C tripped
		18:48	19:10	00:22:00		GTG # 2 manually withdrawn due to Shutdown of GC # I & WHRB # II start up process	
14-Apr-15	GTG# 2	09:05	09:30	00:25:00	0.0173	Due to low gas pressure; low load of GTG, WHRB # II withdrawn	
		13:43	14:10	00:27:00		GTG # 2 manually withdrawn due to Shutdown of GC # III & WHRB # II start up process	
17-Apr-15	GTG# 2	11:55	12:10	00:15:00	0.0084	GTG # 2 manually withdrawn as C & I personnel were checking cables & testing as master control panel as on going R & M works of GBS.	
18-Apr-15	GTG# 2	08:31	18:45	10:14:00	0.2809	WHRB # II manually withdrawn due to low level of raw water reservior.	
	GTG# 6	17:17	20:40	03:23:00	0.0871	GTG # 6 tripped due to auxiliary power fail & MS temperature problem to operate required parameter	
20-Apr-15	GTG# 4	19:50	19:53	00:03:00	0.0495	Unit under startup process	
	GTG# 5	20:17	21:45	01:28:00	0.0264	Shifting of GTG # 5 to GTG # 4 & Unit under startup process	
	GTG# 6	19:25	20:05	00:40:00	0.0200	Unit under startup process	
21-Apr-15	GTG# 2	06:33	07:20	00:47:00	0.0337	Tripping of GC # III & WHRB # II start up process	
		19:02	19:32	00:30:00		Tripping of GC # III & WHRB # II start up process	
	GTG# 3	16:55	18:19	01:24:00	0.0377	Tripping of GC # III & WHRB # III start up process	
22-Apr-15	GTG# 4	01:47	10:35	08:48:00	0.2354	<b>LSD &amp; Low Raw Water level.</b>	LSD
	GTG# 5	16:46	17:15	00:29:00	0.0016	Unit under startup process	LSD
24-Apr-15	GTG# 5	12:05	12:20	00:15:00	0.0014	GTG # 5 withdrawn & WHRB # V start up process	LSD, Tsk -II tripped 04:20 to 16:04 hrs
25-Apr-15	GTG# 2	13:31	15:01	01:30:00	0.0436	Due to low gas pressure; low load of GTG ,Withdrawal of WHRB	
	GTG# 5	00:05	01:10	01:05:00	0.0282	Unit under startup process	LSD 230/174 MW

28-Apr-15	GTG# 2	13:45	13:53	00:08:00	0.0031	Withdrawal of WHRB	
	GTG# 5	11:41	13:40	01:59:00	0.0496	Charging of WHRB	
29-Apr-15	GTG# 1	08:05	08:15	00:10:00	0.0077	S/D of STG # 1 at 8:05 hrs for attending APRDS leakage	
		20:31	20:36	00:05:00		GTG # 1 desynd due to GC # I S/D & tripped due to over speed and STG on S/D.	LSD 220/175 MW
	GTG# 2	21:35	23:43	02:08:00	0.0491	GTG # 2 desynd due to LGP & S/D of STG # 1 at 8:05 to 23:43 hrs for attending APRDS leakage & startup process	
30-Apr-15	GTG# 1	21:17	22:23	01:06:00	0.0297	GTG # 1 desynd due to LGP & WHRB # I startup process	LSD 198/187
	GTG# 2	22:24	22:38	00:14:00	0.007	Withdrawal of WHRB due to low gas pressure of GTG	LSD 200/192
<b>TOTAL</b>					<b>1.7487</b>		

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF MAY 2015**

Date	Unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks	
		From	To	Total hrs				
02-May-15	GTG# 3	22:01	23:12	01:11	0.00670	Tripping of STG # 2		
03-May-15	GTG#2	03:05	03:35	00:30	0.01430	Tripping of GC # III	LSD	
	GTG#5	01:36	03:25	01:49	0.05460	Tripping of GC # III		
05-May-15	GTG#3	08:31	20:24	11:53	0.23770	STG # 2 manually withdrawn to attend APRDS leakage		
05-May-15	GTG#5	12:22	12:42	00:20	0.01000	STG # 3 tripped on low vacuum ,Unit under start up process	LSD (200/195)	
	GTG#6	12:22	12:42	00:20	0.01000	STG # 3 tripped on low vacuum ,Unit under start up process		
06-May-15	GTG#4	11:32	14:20	02:48	0.08400	Unit under start up process		
	GTG#5	12:09	13:30	01:21	0.03920	Unit got desynchronised due to GC # II ,Unit under start up process		
08-May-15	GTG#2	01:50	02:25	00:35	0.01420	GC # II tripped due control vibration ( ,Unit under start up process		LSD 200/162 ( 08.05.15 to 14.05.15 pre-commissioning of BCPL(OIL))
13-May-15	GTG#2	13:32	15:20	01:48	0.04680	Tripping of GC # III		
	GTG#3	00:00	00:35	00:35	0.01700	Charging of WHRB (LSD 230/171.25 MW)		
15-May-15	GTG#2	01:14	02:35	01:21	0.02030	WHRB #VI under start up process		
		14:42	14:50	00:38	0.02130	S/D of GC # III	LSD ( NERLDC Request due to import in L - 1 )	
	19:15	19:45	LSD					
17-May-15	GTG#2	11:28	11:40	00:51	0.00930	Due to minimum GTG load and WHRB start up	LSD	
		13:40	14:19				LSD	
19-May-15	GTG#2	08:56	11:22	05:36	0.15020	S/D of WHRB # II	Emrgy s/d of GC # 3 , oil leakage , GC # 2 s/d	
		18:30	18:50					
		21:10	24:00					
20-May-15	GTG#2	00:00	05:05	12:45	0.35770	S/D of WHRB # II		
		09:40	17:20					
21-May-15	GTG#2	19:55	20:25	00:30	0.00750	Unit got desynchronised due to tripping of GC # III	LSD 153/142MW	
22-May-15	GTG#2	08:14	08:46	00:56	0.02340	Unit got desynchronised due to tripping of GC # III	LSD 174/145 MW	
		20:06	20:30					
23-May-15	GTG#2	17:55	18:56	01:01	0.02470	Tripping of GC # III & IV	LSD 210/101 MW	
24-May-15	GTG#2	00:58	01:28	00:30	0.01260	Tripping of GC # III	LSD 160/151.21 MW	
25-May-15	GTG#2	11:20	11:28	01:13	0.00330	S/D of GC # IV	LSD 220/182 MW	
		21:15	22:20					
27-May-15	GTG#2	09:35	09:42	00:37	0.00720	Emergency S/D of GC # III for high defferential pr.	LSD 177/139 MW AT 6:30 HRS	
		23:10	23:40					
28-May-15	GTG#1	12:40	15:45	03:05	0.09100	Tripping of GC # IV	LSD (153/148 MW)	
	GTG#2	12:28	15:15	03:06	0.05470	Tripping of GC # III & IV		
		18:51	19:10					
	GTG#3	18:45	21:20	02:35	0.04820	Tripping of GC # IV		
29-May-15	GTG#2	20:50	22:15	01:25	0.03540	Tripping of GC # II	LSD 181/165 MW 21:30 HRS	
	GTG#3	20:25	21:23	00:58	0.00030	Charging of WHRB		
<b>TOTAL</b>					<b>1.40160</b>			

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF JUNE 2015**

Date	Unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks	
		From	To	Total hrs				
01-Jun-15	GTG#1	13:13	14:48	01:35	0.04510	Tripping of Line 2 (Grid disturbance)	Kath -marioni line tripped at 12:40 hrs, dist.154 km	
	GTG#2	13:20	14:48	01:28	0.04120	Tripping of Line 2 (Grid disturbance)		
	GTG#5	13:31	18:42	05:11	0.13970	Tripping of Line 2 (Grid disturbance)		
	GTG#6	13:30	15:25	03:27	0.09400	Tripping of Line 2 (Grid disturbance)		
	17:10	18:42						
02-Jun-15	GTG#2	11:05	11:12	00:47	0.04900	GTG#2 withdrawn due to S/D of GC # I	LSD 212/168.43 MW AT 00:02 hrs	
		17:54	18:34					
03-Jun-15	GTG#2	01:25	01:37	01:42	0.03900	Outage of GTG# 2 due to tripping of GC # III		
		19:45	21:15					
	GTG#3	12:25	15:05	03:51	0.12120	Outage of GTG# 3		
	19:54	21:05						
	GTG#5	14:17	15:50	01:33	0.01930	GTG# 5 withdrawn for syn of GTG # 1		
04-Jun-15	GTG#2	11:36	12:36	02:03	0.04990	Outage of GTG# 2 & 3 ( GC # 2 tripped at 10:10 hrs " Low suction pr. at 15:05 , 20:15 E/ stall, Gcs tripped five times as suction controler valve of individual GC ogt choked by Condensate & water )	Condensate & water	
		16:25	16:58					
		21:40	22:10					
05-Jun-15	GTG#1	10:34	13:10	02:36	0.06750	Tripping of GC # IV	Heavy Condensate	
05-Jun-15	GTG#2	01:05	01:32	01:34	0.04150	Tripping of GC # III		
			12:31					13:38
	GTG#3	09:31	11:15	01:44	0.04340	Tripping of GC # IV		
09-Jun-15	GTG#3	00:06	00:36	00:30	0.01300	Tripping of STG# 2, tripping of WHRB # III ( Drum level high),	LSD 210/166 MW	
10-Jun-15	GTG#3	07:06	07:07	00:01	0.00910	S/D of GTG # 3 due to speed fluctuation of GC # II		
		20:02	23:33	03:31		S/D of GTG # 3 for air filter replacement		
14-Jun-15	GTG#2	02:50	03:10	01:20	0.04000	Tripping of GC # III twice	13.06.15 OIL blocked by local people	
			15:05					16:05
	GTG#5	12:05	12:22	00:17	0.00650	Tripping of STG # 3 & start up of WHRB # V		
	GTG#6	12:05	12:22	00:17	0.00650	Tripping of STG # 3 & start up of WHRB # VI		
15-Jun-15	GTG#2	18:57	19:30	00:33	0.01500	Tripping of GC # III		
17-Jun-15	GTG#2	13:15	13:58	00:43	0.02100	S/D of GC # III		
18-Jun-15	GTG#2	19:31	20:32	01:01	0.02530	S/D of GC # IV		
19-Jun-15	GTG#2	23:55	24:00	00:05	0.00240	Tripping of GC # III		
20-Jun-15	GTG#2	00:00	00:25	01:16	0.03537	Tripping of GC # III	LSD 204/1910 MW ( 01:00 hrs)	
			19:14					19:25
			20:45					21:25
21-Jun-15	GTG#2	08:17	09:28	01:11	0.03117	Tripping of GC # III	LSD 202/188 MW 02:00 hrs	
22-Jun-15	GTG#1	15:25	18:41	03:16	0.03600	tripping of GC # II	LSD 155/149 MW	
23-Jun-15	GTG#3	23:50	24:00	00:10	0.00000	Tripping of GC # II	GC # I & III under S/D, LSD 150/133 MW	
24-Jun-15	GTG#1	00:19	08:55	10:24	0.28632	Outage of GC # I, II, III and low load	LSD 157/124 MW at 10:30 hrs	
			19:52					21:40
	GTG#2	23:40	24:00	00:20	0.00500	Start up of WHRB		
	GTG#3	00:00	02:35	02:35	0.07050	Tripping of GC # II		
GTG#5	16:02	16:05	01:13	0.03500	Due to emergency stop of GC # IV and start up of WHRB			
	19:25	20:35						
25-Jun-15	GTG#2	10:45	11:05	01:03	0.02900	Due to minimum GTG load and WHRB start up	LSD 192/162 MW at 08:30 hrs	
			16:02					16:45
27-Jun-15	GTG#2	18:44	19:50	01:06	0.03190	Tripping of GC # III & Start up of WHRB	LSD 210/161 MW at 14:00 hrs	
29-Jun-15	GTG#5	10:02	15:25	05:23	0.14775	S/D of STG # 3	LSD 210/166 MW at 07:00 hrs	

Verified from log sheet  
Verified from log sheet  
Verified from log sheet  
Verified from log sheet  
Verified from log sheet

GTG#6	10:02	16:40	06:38	0.17244	S/D of STG # 3	
<b>TOTAL</b>				<b>1.7701</b>		

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF JULY 2015**

Date	Unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
02-Jul-15	GTG#3	11:50	24:00	12:10	0.27300	<b>STG # 2 under S/D w.e.f.11:50 hrs of 02.07.15 to 18:53 hrs of 15.07.15 for Condenser cleaning .</b>	<b>Approved in 110th OCC Meeting</b>
03-Jul-15	GTG#3	00:00	24:00	24:00	0.52220		
04-Jul-15	GTG#3	00:00	24:00	24:00	0.54560		
05-Jul-15	GTG#3	00:00	18:48	18:48	0.35980		
06-Jul-15	GTG#3	22:02	24:00	01:58	0.05440		
07-Jul-15	GTG#3	00:00	24:00	24:00	0.62910		
08-Jul-15	GTG#3	00:00	24:00	24:00	0.60470		
09-Jul-15	GTG#3	00:00	24:00	24:00	0.66700		
10-Jul-15	GTG#1	00:23	01:45	01:22	0.03700	S/D of GTG # 1 for electrical works & Start up of WHRB	
	GTG#3	00:00	24:00	24:00	0.67730	STG # 2 under S/D	
11-Jul-15	GTG#2	22:18	22:50	00:32	0.01500	GTG # 2 tripped due to tripping of GC # 4 & Start up of WHRB	
	GTG#3	00:00	00:50	00:50	0.02170	<b>STG # 2 under Planned S/D</b>	
	GTG#5	21:55	23:10	01:15	0.03600	GTG # 5 desynd due to tripping of GC # 4, & Start up of WHRB	
12-Jul-15	GTG#1	21:43	24:00	02:17	0.05000		
13-Jul-15	GTG#1	00:00	02:25	02:25	0.06770	Tripping of GC # III due to Engine stall.	
	GTG#2	03:01	03:35	00:34	0.01590		
	GTG#5	03:47	04:35	00:48	0.02250	GTG # 5 tripped due to high exhaust temp. spread & Start up of WHRB	
14-Jul-15	GTG#1	00:45	03:42	02:57	0.08246	Tripping of GC # III	
	GTG#2	00:58	03:40	02:42	0.07533		
15-Jul-15	GTG#1	12:01	12:09	00:48	0.02232	To facilitate synchronisation of GTG # 3	
		23:20	24:00				
	GTG#3	12:11	16:18	04:22	0.09864	<b>Start up process of STG # 2 after restoration from Planned S/D.</b>	
16-Jul-15	GTG#1	00:00	00:30	19:00	0.55740	Start up process of WHRB # I.	
		05:30	24:00			<b>STG # 1 under Planned S/D for condenser cleaning</b>	<b>Approved in 110th OCC Meeting</b>
	GTG#5	18:20	18:58	00:38	0.00950	GTG #V under S/D due to tripping of high exhaust temp. spread trip, STG # 3 under start up process	
17-Jul-15	GTG#1	00:00	24:00	24:00	0.65400	<b>STG # 1 under Planned S/D for condenser cleaning</b>	
18-Jul-15	GTG#1	00:00	09:34	14:59	0.43600	<b>STG # 1 under Planned S/D for condenser cleaning</b>	
		18:35	24:00			<b>STG # 1 under Planned S/D for condenser cleaning</b>	
	GTG#5	18:18	19:38	01:20	0.03770	WHRB # V under start up	
19-Jul-15	GTG#1	00:00	24:00	24:00	0.72100		
20-Jul-15	GTG#1	00:00	24:00	24:00	0.59920		
21-Jul-15	GTG#1	00:00	24:00	24:00	0.61530		
22-Jul-15	GTG#1	00:00	24:00	24:00	0.72710		
	GTG#2	19:55	24:00	04:05	0.11480		
23-Jul-15	GTG#1	00:00	24:00	24:00	0.58240	<b>STG # 1 under Planned S/D for condenser cleaning</b>	
	GTG#2	00:00	05:10	08:36	0.17820		
20:34		24:00					
24-Jul-15	GTG#1	00:00	24:00	24:00	0.68130		
	GTG#2	00:00	01:02	01:02	0.02150		
25-Jul-15	GTG#1	00:00	21:05	21:05	0.49480		
		08:30	22:10			13:56	0.22140
23:44	24:00						

	GTG#3	22:47	22:52	00:05	0.00080	Withdrawal of WHRB	
	GTG#4	18:30	22:45	04:15	0.08500	Charging of WHRB	
26-Jul-15	GTG#1	12:30	24:00	11:30	0.28190	<b>STG # I under Planned S/D for condenser cleaning</b>	
	GTG#2	00:00	24:00	24:00	0.63190		
27-Jul-15	GTG#1	00:00	23:02	23:02	0.54290		
	GTG#2	00:00	17:47	17:47	0.45550		
	GTG#3	23:04	24:00	00:56	0.15000	GTG # 3 under test run	
	GTG#4	15:02	15:07	01:12	0.03740	STG # 2 withdran and then WHRB under start up process	
	17:10	18:17					
30-Jul-15	GTG#2	16:10	21:22	07:47	0.21390	S/D of STG # I & start up process	
		21:25	24:00				
	GTG#4	11:01	11:10	01:00	0.03621	S/D of STG # 2	
		15:25	16:25				
31-Jul-15	GTG#1	10:14	11:58	01:41	0.00130	Outage of GTG # 1	
	GTG#2	00:00	01:35	02:10	0.00300	Outage of GTG # 2	
		21:45	22:20				
	GTG#3	23:40	24:00	00:20	0.01000	Outage of GTG # 3	
GTG#6	10:03	10:09	00:06	0.00090	Outage of GTG # 6		
<b>TOTAL</b>					<b>14.34676</b>		

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF AUGUST 2015**

Date	Unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
01-Aug-15	GTG#2	18:25	19:15	00:50	0.02400	Tripping of GC # III	
	GTG#3	07:25	08:40	02:00	0.05200		
		17:45	18:30				
03-Aug-15	GTG#4	03:47	04:45	00:58	0.02930	Tripping of GTG # 4	
04-Aug-15	GTG#1	11:20	11:26	00:06	0.00320	STG # 1 manually withdrawn to optimise generation in module-II due to only 1 no. Running GC	
	GTG#3	11:27	12:57	01:30	0.04270	WHRB # III under start up process	
06-Aug-15	GTG#1	15:16	17:40	02:24	0.06720	GTG # 1 under start up process	
	GTG#2	14:20	17:40	03:20	0.09352	GTG # 2 under start up process	
08-Aug-15	GTG#5	13:18	24:00	10:42	0.29420	Under S/D of STG # 3	
09-Aug-15	GTG# I	02:45	03:45	01:00	0.02500	Charging of WHRB	
	GTG#5	11:40	00:00	12:20	0.34670	S/D of STG # 3	
10-Aug-15	GTG#5	00:00	24:00	24:00	0.56300		
11-Aug-15	GTG#2	12:20	12:38	00:18	0.00860	Tripping of GC # II	
	GTG#5	00:00	12:18	12:18	0.22620	S/D of STG # 3	
13-Aug-15	GTG#2	09:02	10:10	01:08	0.01500	Tripping of GC # II	
	GTG# 5	06:33	08:50	02:17	0.03990		
20-Aug-15	GTG#2	06:40	06:50	00:37	0.04400	Tripping of GC # IV	
		10:50	11:17				
	GTG#4	10:55	11:05	00:10	0.00530	WHRB # IV in start up process	
	GTG# 5	14:05	23:34	09:51	0.27810		
23:38		24:00					
21-Aug-15	GTG # 4	13:18	17:08	03:50	0.11600	Start up process of STG (GTG# 5 & 6 on stand by due to S/d of GC # 1 &2.)	
	GTG# 5	00:00	13:20	15:43	0.38930		
		20:15	22:38				
22-Aug-15	GTG#2	13:27	14:25	00:58	0.02900	Desynd due to tripping of GC # 2 & start up process ofWHRB # 2	
	GTG # 5	11:35	18:45	07:10	0.19880	STG generator cooler outlet temp problem	
24-Aug-15	GTG#2	16:42	16:54	00:52	0.02430	Emergecny S/D of GC # IV	
		20:25	21:05				

**Pre Commissioning of BCPL for two weeks w.e.f 16.08.15 to 26.08.15 .**

25-Aug-15	GTG#2	08:01	08:07	00:56	0.02613	Emergency S/D of GC# IV
		14:30	15:20			
26-Aug-15	GTG#1	11:55	12:30	00:35	0.01516	Due to tripping of STG#1
	GTG#2	19:09	19:45	00:36	0.01800	Manually desynchronised due to low gas pressure
	GTG#5	10:25	10:42	00:17	0.00784	Due to tripping of STG#II
	GTG#6	16:54	19:37	02:43	0.05220	Manually desynchronised due to low gas pressure
28-Aug-15	GTG#2	17:40	18:12	00:32	0.01510	Tripping of GC # III
29-Aug-15	GTG#6	15:32	17:15	01:43	0.05160	<b>Unit under start up process of WHRB</b>
30-Aug-15	GTG#2	17:29	19:05	01:36	0.02400	<b>Unit under start up process of WHRB</b>
	GTG#3	15:07	17:15	02:08	0.06420	Tripping of STG#2
31-Aug-15	GTG#2	07:05	07:56	02:23	0.06615	Tripping of GC # III & IV
		18:01	18:33			
		22:55	23:55			
	GTG#3	08:52	10:15	01:23	0.03883	Tripping of GC # III
	GTG#5	05:15	05:45	00:30	0.01360	Tripping of GC # III
<b>TOTAL</b>					<b>3.30813</b>	

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF SEPTEMBER 2015**

Date	Mod/unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
01-Sep-15	GTG# 2	20:30	20:44	00:29:00	0.0124	Tripping of GC # II	
		23:45	24:00				
02-Sep-15	GTG# 2	00:00	00:25	00:25:00	0.0125	Charging of WHRB& S/D of GC # I & IV	
	GTG # 4	13:05	14:28	01:23:00	0.0345		
	GTG#5	18:05	18:30	02:00:00	0.0500		Due to tripping of STG # 3
		18:58	20:33				
GTG#6	09:33	09:46	00:13:00	0.0066	Due to tripping of STG # 3	<b>(Low Gas Pressure due to National strikecalled by Trade Union)</b>	
03-Sep-15	GTG# 5	19:32	23:17	03:45:00	0.0938		S/D of STG # 3
	GTG# 6	16:15	23:45	07:30:00	0.1395	S/D of STG # 3	
04-Sep-15	GTG# 1	10:07	14:45	05:18:00	0.1290	S/D of STG # 1	
		16:55	17:35				
	GTG# 2	10:07	10:15	03:08:00	0.0714	S/D of STG # 1	
		11:45	14:45				
05-Sep-15	GTG# 2	08:25	09:10	00:45:00	0.0194	Less gas	
07-Sep-15	GTG# 2	04:58	05:20	00:42:00	0.0105	Tripping of GC # III & IV	
		23:12	23:32				
08-Sep-15	GTG#2	04:01	04:22	00:31:00	0.0135	Tripping of GC # IV	
		10:17	10:27				
	GTG# 6	17:39	18:40	01:01:00	0.0286	Tripping of GC # III	
09-Sep-15	GTG# 4	05:43	05:50	01:12:00	0.0368	Emergency s/d of GC # IV	
		09:03	10:08				
10-Sep-15	GTG# 2	04:32	05:25	00:53:00	0.0194	Less gas availability	
	GTG#3	02:22	04:30	09:53:00	0.2866	Tripping of STG # 2 & S/D of WHRB	
		12:55	20:40				
	GTG#4	02:22	03:47	04:12:00	0.1344	Tripping of STG # 2 & S/D of WHRB	
		15:22	17:45				
		18:48	19:12				
11-Sep-15	GTG# 3	00:02	01:45	01:43:00	0.0499	WHRB withdrawn for rectification works.	<b>12 hrs Bondh on 12.09.15</b>
15-Sep-15	GTG# 2	13:43	15:37	01:54:00	0.0108	Tripping of GC # III	<b>12hrs Bondh by Tai Assom on 16.09.15</b>
	GTG#4	16:18	17:15	00:57:00	0.0143	Tripping of GC # III	

17-Sep-15	GTG#2	16:54	16:58	00:47:00	0.0205	Tripping of GC # I & III	
		20:12	20:55				
	GTG#4	20:15	21:00	00:45:00	0.0239	Tripping of GC # I	
	GTG# 6	12:39	13:30	00:51:00	0.0227	GTG # 6 got de-syn. due to Breaker 52 min oil press lock out	
18-Sep-15	GTG# 1	07:02	09:35	02:33:00	0.0740	WHRB withdrawn due to sudden increase of boiler water level	
	GTG# 2	15:30	16:00	00:30:00	0.1250	Tripping of GC # III & IV	
	GTG#4	15:32	16:02	00:30:00	0.0155	Tripping of GC # III & IV	
19-Sep-15	GTG# 2	00:12	00:36	00:50	0.0208	Emergency S/D of GC # IV & tripping of GC # III	
		11:22	11:50				
	GTG#4	00:12	00:45	01:11	0.0366	Emergency S/D of GC # IV & tripping of GC # III	
		11:21	11:59				
	GTG#5	11:14	11:20	01:05	0.0303	S/D of STG # 3(Manually withdrawn due to s/d of BFP # 3A).	
		18:21	19:20				
GTG#6	11:14	11:21	1.09	0.0311	S/D of STG # 3		
	17:33	18:35					
22-Sep-15	GTG#2	17:46	18:45	:59	0.03	Tripping of GC # 2	
	GTG# 4	17:50	18:50	01:00	0.032	Tripping of GC # 2	
23-Sep-15	GTG# 4	15:38	16:20	00:42	0.021	Unit tripped due to Grid disturbance	
25-Sep-15	GTG#2	08:09	08:13	00:28	0.0128	S/D of GC # IV	
		20:16	20:40				
28-Sep-15	GTG# 3	14:54	17:36	02:42	0.0783	Tripping of STG # 2	
	GTG# 4	14:54	17:36	02:42	0.0864	Tripping of STG # 2	
<b>TOTAL</b>					<b>1.8347</b>		

Could not be verified either from logsheet or from grid disturbance report

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**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF OCTOBER 2015**

Date	Unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
01-Oct-15	GTG# 2	20:29	24:00	03:31:00	0.0528	S/D of WHRB # 2(boiler problem)	
	GTG#4	20:03	21:01	00:58:00	0.0155	S/D of GTG # 4	
02-Oct-15	GTG# 2	00:00	24:00	00:00:00	0.2722	S/D of WHRB # 2 ,(boiler problem)	
03-Oct-15	GTG # 2	00:00	02:35	02:35:00	0.0132		
04-Oct-15	GTG# 2	08:10	08:45	00:35:00	0.0090	Less gas availability	
09-Oct-15	GTG# 3	10:02	10:15	00:13:00	0.0028	S/D of STG # 2 to attend APRDS leakage problem	
	GTG# 4	09:47	09:55	02:00:00	0.0300		
		16:23	18:15				
10-Oct-15	GTG#4	11:38	12:40	01:02:00	0.0340		
11-Oct-15	GTG#1	21:20	22:45	01:25:00	0.0959	Tripping of all running GCs	
	GTG# 2	20:25	21:44	01:19:00	0.0723	Less gas availability & Tripping of all running GCs	
	GTG#3	09:50	11:55	02:58:00	0.1275		
			18:51	19:44			
	GTG#4	21:25	22:46	01:21:00	0.1047	Tripping of all running GCs	
	GTG # 5	20:45	21:50	01:05:00	0.0718		
	GTG#6	17:22	18:34	01:12	0.0348		
13-Oct-15	GTG#2	22:57	23:05	00:08:00	0.0040	S/D of GC # IV	
	GTG#4	22:57	23:05	00:23:00	0.0111		
		23:45	24:00				
14-Oct-15	GTG#4	00:00	00:36	01:23:00	0.0419		
		12:40	13:27				

16-Oct-15	GTG#2	09:30	10:32	02:00:00	0.0300	Less gas & emergency S/D of GC # IV	
		16:12	16:20				
		18:49	19:39				
	GTG# 4	16:10	16:17	00:51:00	0.0170	Emergency S/D of GC # IV	
		16:31	17:15				
17-Oct-15	GTG#2	20:10	20:18	00:08:00	0.0040	S/D Of GC # IV	
		20:10	20:20	01:03	0.0265		
	20:27	21:20					
18-Oct-15	GTG#2	11:10	12:05	00:55	0.0261	S/D of GC # III & IV	
22-Oct-15	GTG#2	22:14	22:45	00:31	0.01440	Tripping of GC # I	Bandh by Moran Students on 20.10.2015
	GTG#4	22:15	23:10	00:55	0.02950		
25-Oct-15	GTG#5	09:30	09:37	00:07	0.00280	Less gas availability	
30-Oct-15	GTG#2	05:25	05:40	00:46	0.02240	Tripping of GC # IV	
		18:19	18:50				
31-Oct-15	GTG#2	12:17	12:45	00:27	0.01280		
<b>TOTAL</b>					<b>1.17900</b>		

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF NOVEMBER 2015**

Date	Unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
04-Nov-15	GTG#2	11:16	11:26	00:39	0.0188	Emergency S/D of GC # IV	
		15:01	15:30				
	GTG#4	11:16	11:22	01:01	0.0327		
	11:42	12:37					
07-Nov-15	GTG#2	10:18	10:25	01:03	0.0259	Tripping of GC # IV	
		15:15	16:14				
		23:56	24:00:00				
08-Nov-12	GTG#4	00:45	03:40	06:12	0.1779	Got desynd due to tripping of GC # IV,S/D of WHRB	
		04:40	07:57				
10-Nov-15	GTG#1	13:52	15:15	01:23	0.0207	Less availability of gas	
	GTG#2	15:20	15:28	00:08	0.0033		
	GTG#4	06:35	09:15	02:40	0.09078		WHRB S/D due to level transmitter problem
11-Nov-15	GTG#2	17:59	18:35	00:36	0.0183	Less availability of gas	
12-Nov-15	GTG#2	09:35	10:10	00:35	0.0174	Tripping of GC # IV	
	GTG# 3	12:55	24:00:00	11:05	0.2435	STG # 2 S/d taken by STA Division for repairing of steam/water leakage in drum line & APRDS line, there after WHRB under start up process	
	GTG#4	11:08	15:28	04:20	0.1295	S/D of WHRB # IV & Tripping of GC # IV	
13-Nov-15	GTG#3	00:00	15:50	15:50	0.336	STG # 2 S/d taken by STA Division for repairing of steam/water leakage in drum line & APRDS line, there after WHRB under start up process	
14-Nov-15	GTG#6	11:50	11:57	00:07	0.0029	Emergency S/D of GC # IV	
15-Nov-15	GTG#6	13:03	16:25	03:22	0.0976	STG Governor & synchronizing problem	
16-Nov-15	GTG#2	05:33	05:47	00:14	0.0075	Less availability of gas	Bandh by ATTASA on 16.11.2015.
17-Nov-15	GTG#1	11:38	17:15	06:02	0.1461	Station Blackout ( Bus coupler trip), L#3 & Station Transformer # 1 were at 220 KV Bus # 2, BC ckt breaker tripped due to O/C & E/F. 220 KV Bus # 2 become dead. Station load ware from Station Transformer # 1. Station blackout occurred. STG tripped due to station blackout.	
	GTG#2	11:38	17:15	06:02	0.1574		
	GTG#3	11:38	19:24	08:17	0.2098		
	GTG#4	11:38	19:24	08:17	0.2176		
	GTG#6	11:38	13:45	02:12	0.0657		
18-Nov-15	GTG#2	10:05	10:15	00:17	0.0048	Less availability of gas	

20-Nov-15	GTG#2	11:41	12:20	00:39	0.0115	Charging of WHRB (LGP)	
	GTG#3	13:31	13:35	00:04	0.0012	S/D of STG # 2	
	GTG#4	11:55	12:05	00:10	0.0031		
	GTG#5	00:21	01:30	02:23	0.0445	Charging of WHRB(Steam leakage in DR-77)	
		03:20	03:24			Less availability of gas	
13:18		14:28	Charging of WHRB				
21-Nov-15	GTG#1	11:28	14:10	02:42	0.07	Tripping of GC # II	
	GTG#2	12:01	14:20	02:19	0.06		
	GTG#5	08:26	10:20	01:54	0.045	Tripping of GC # I & II	
	GTG#6	09:02	10:48	01:46	0.045		
22-Nov-15	GTG#1	17:50	19:30	01:40	0.042	Tripping of STG # 1	
	GTG#2	17:50	19:30	01:40	0.042		
24-Nov-15	GTG#4	22:50	24:00	01:10	0.0256	Poor quality of Gas	
25-Nov-15	GTG#4	00:00	01:56	01:56	0.06	Poor quality of Gas	
26-Nov-15	GTG#3	09:55	24:00:00	14:05	0.2307	Less availability of gas	
27-Nov-15	GTG#3	00:00	11:31	11:31	0.2157	S/D of STG # 2 ,Poor quality of Gas	
<b>TOTAL</b>					<b>2.92048</b>		

2.96088

## STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF DECEMBER 2015

Date	Unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
04-Dec-15	GTG# 3	17:06	17:10	00:04	0.0188	Emergency S/D of GC # III	
	GTG# 4	16:01	17:05	01:04			
		11:42	12:37	00:55			
13-Dec-15	GTG#2	20:08	20:45	00:37	0.0115	Tripping of GC # II	
	GTG#4	20:06	21:35	01:29			
14-Dec-15	GTG# 3	07:21	10:15	02:54	0.0644	Less availability of gas	
15-Dec-15	GTG#2	14:35	15:05	00:30	0.015	Tripping of GC # II	
	GTG#3	14:40	17:50	02:54	0.435		
	GTG#4	18:30	19:40	01:10	0.035		
	GTG#6	13:50	19:20	05:30	0.165		
16-Dec-15	GTG#1	16:03	17:05	01:02	0.0331	S/D of GC # I	
	GTG#2	08:35	08:44	00:41	0.0205		
		15:25	15:57				
	GTG#3	12:50	13:30	00:40	0.0127	Tripping of GC # IV	
GTG#4	12:45	13:30	00:45	0.018			
18-Dec-15	GTG#1	08:25	13:38	08:07	0.203	Tripping of all running GCs	Due to heavy flow of condensated Crude Oil w.e.f. 17.12.2015 (U#3 tripped at 02:23 hrs on 18.12.15 for low suction pressure S/D upto 21.12.2015.
		21:05	23:59				
	GTG#2	05:25	13:38	08:13	0.2395		
	GTG#3	05:50	08:10	02:20	0.0723		
	GTG#4	04:04	08:15	04:11	0.1437		
GTG#6	04:11	05:50	01:39	0.0471			
20-Dec-15	GTG#6	05:00	07:40	02:40	0.0791	Tripping of STG # 3 due to reverse power	
21-Dec-15	GTG#6	10:20	13:40	12:30	0.2533	STG # 3 S/D for repairing of DR -68 & MS -36 valves leakage.	
		14:23	23:33				
22-Dec-15	GTG#2	00:35	01:15	01:45	0.0443	Tripping of GC # III & S/D of GC # I & II	
		16:17	16:24				
		21:37	22:35				
	GTG#3	00:17	02:36	02:19	0.0747		

22-Dec-15	GTG#4	00:22	02:36	03:45	0.0975	Tripping of GC # III & S/D of GC # I & II	
		16:16	16:22				
		22:05	23:30				
	GTG#6	01:36	13:02	11:26	0.1195	STG # 3 S/D for repairing of DR -68 & MS -36 valves leakage.	
23-Dec-15	GTG#1	09:52	09:56	00:58	0.03	S/D of GC # II	
		14:31	15:25				
	GTG#4	09:46	09:55	00:54	0.0288		
		15:25	16:10				
GTG#5	15:35	19:57	04:22	0.1092	S/D of GC # II & condensate with gas		
24-Dec-15	GTG#4	03:15	03:25	01:20	0.0235	Heavy flow of condensate with gas	
		20:25	21:35				
30-Dec-15	GTG#5	02:05	12:40	10:35	0.2857	STG # 3 S/D due to Ckt bkr problem	
<b>TOTAL</b>					<b>2.6802</b>		

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF JANUARY ,2016**

Date	Mod/unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
06-Jan-16	GTG# 2	11:58	12:32	00:34:00	0.0186	Tripping of GC # 4 & WHRB start up process	
	GTG# 5	13:51	15:58	02:07:00	0.0593	Tripping of GC # 4 & GTG load reduced. Delayed to startup STG due to MS temperature problem to operate required parameters	
	GTG# 6	12:25	14:20	01:55:00	0.0288	Tripping of GC # 4 & GTG low load condition. Delayed to startup STG due to MS temperature problem to operate required parameters	
10-Jan-16	GTG # 5	09:15	10:35	01:20:00	0.0250	Unit tripped due to turbine air inlet diff. pr. Switch fault thereafter due to low gas pr. GTG load reduced. MS #1 opened at 10:35 hrs	
11-Jan-16	GTG# 2	04:43	05:01	00:18:00	0.0090	Tripping of GC # 2 & WHRB start up process	
	GTG# 5	10:07	10:45	00:38:00	0.0181	Tripping of GC # 2 & WHRB start up process	
12-Jan-16	GTG# 2	05:22	06:01	00:39:00	0.0000	Tripping of GC # 3 & WHRB start up process	
	GTG# 4	15:51	17:05	01:14:00	0.0186	Tripping of GC # 3 & due to capacity of running GCs GT load could not raise to start WHRB	
	GTG# 5	15:31	15:50	00:19:00	0.0000	To replace Inlet air filter.	
13-Jan-16	GTG# 2	08:46	16:15	07:29:00	0.2245	Tripping of GC # 2 & SGT Shutdown due to transformer oil leakage from gasket 'O' ring van	
	GTG# 3	08:45	09:28	00:43:00	0.0130	Tripping of GC # 2 & WHRB start up process	
		15:31	15:40	00:09:00		Tripping of GC # 2 & WHRB start up process	
	GTG# 4	09:02	09:54	00:52:00	0.0130	Tripping of GC # 2 & WHRB start up process	
GTG# 5	16:22	17:25	01:03:00	0.0300	To replace Inlet air filter.GTG low load due to less gas pr. Delayed to startup STG due to MS temperature problem to operate required parameters		
14-Jan-16	GTG# 3	06:55	08:10	01:15:00	0.0114	Low gas pressure, GTG low load condition	
17-Jan-16	GTG# 2	12:08	12:20	00:12:00	0.0250	Low gas pressure	
		20:57	21:45	00:48:00		Low gas pressure	
23-Jan-16	GTG# 3	19:43	19:48	00:05:00	0.0018	Low gas pressure	
24-Jan-16	GTG# 3	13:43	15:37	01:54:00	0.0110	Low gas pressure, WHRB manually opened due to low gas pressure	
		19:50	19:53	00:03:00		Low gas pressure	
	GTG# 5	14:20	16:45	02:25:00	0.0678	STG # 3 tripped due to turbine front brg. Temp. high	
		14:20	14:30	00:10:00		0.0300	STG # 3 tripped due to turbine front brg. Temp. high
19:40	20:30	00:50:00					
30-Jan-16	GTG# 3	08:33	09:50	01:17:00	0.0244	Low gas pressure, GTG low load condition, MS temperature problem.	
31-Jan-16	GTG# 1	14:03	15:12	01:09:00	0.0416	STG # 1 tripped due to low forwarded power	
	GTG# 2	02:10	02:20	00:10:00	0.0004		
<b>TOTAL</b>					<b>0.6713</b>		

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF FEBRUARY 2016**

Date	Mod/unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
01-Feb-16	GTG# 2	20:01	21:42	01:41:00	0.0255	Unit under startup process	

04-Feb-16	GTG# 2	19:20	19:33	00:13:00	0.0009	Unit under startup process
05-Feb-16	GTG# 2	21:12	22:30	01:18:00	0.0200	Unit under startup process
07-Feb-16	GTG# 2	20:12	20:35	00:23:00	0.0110	Unit under startup process
	GTG# 4	23:25	24:00	00:35:00	0.0185	Unit under startup process
08-Feb-16	GTG# 4	00:00	00:15	00:15:00	0.0349	Emergency S/D of GC # II & Unit under startup process
		05:40	05:45	00:05:00		
		08:13	09:01	00:48:00		
14-Feb-16	GTG# 4	09:05	09:10	00:05:00	0.0002	LGP & Unit under startup process
20-Feb-16	GTG# 2	08:58	10:05	01:07:00	0.0365	GTG on standby due to low gas pressure & WHRB # II start up process
		23:54	24:00	00:06:00		GTG got desynd without any reason & WHRB # II start up process
23-Feb-16	GTG# 2	14:50	15:28	00:38:00	0.0180	Starting process of WHRB # II ( Due to tripping of GC# III).
	GTG# 4	22:37	23:32	00:55:00	0.0293	Starting process of WHRB # II ( Due to tripping of GC# III).
25-Feb-16	GTG# 1	10:25	11:05	00:40:00	0.0200	WHRB # I out due to grid dist. & high frequency.
	GTG# 3	10:22	12:03	01:41:00	0.0505	GTG # 3 desynd due to grid dist. & WHRB start up process
	GTG# 4	11:15	12:25	01:10:00	0.0362	GTG # IV desynd due to grid dist. & GTG low load condition due to Low gas pr. Delayed to startup WHRB # IV due to MS temperature problem to operate required parameters
	GTG# 6	10:39	10:55	00:16:00	0.0080	WHRB # VI out due to grid dist. & high frequency.
26-Feb-16	GTG# 1	04:53	07:38	02:45:00	0.0825	GTG #1 tripped due to GC # II tripped & WHRB withdrwan due to less gas supply.
	GTG# 2	04:45	07:38	02:53:00	0.0865	GTG # 2 tripped due to GC # II tripped & WHRB withdrwan due to less gas supply.
	GTG# 3	05:38	08:43	03:05:00	0.0617	GTG # 3 tripped due to GC # II & III tripped & WHRB withdrwan due to less gas supply.
	GTG# 4	20:42	21:30	00:48:00	0.0176	WHRB withdrwan due to less gas supply.
29-Feb-16	GTG# 3	10:25	18:18	07:53:00	0.2930	WHRB withdrawn due to low gas pressure.
		19:19	23:10	03:51:00		STG tripped due to BFP -2B tripping & hot well level & Deareator level problem
	GTG# 4	10:25	15:45	05:20:00	0.3092	WHRB withdrawn due to low gas pressure.
		16:22	18:48	02:26:00		S/d of WHRB # III & IV for maintenance by div.
		19:19	23:55	04:36:00		STG tripped due to BFP -2B tripping & hot well level & Deareator level problem
	GTG# 5	07:03	10:05	03:02:00	0.0780	Diverter damper problem of both WHRB # V & VI . Sec oil pr. fluctuation & speed fluctuation of STG # III.
GTG# 6	07:03	10:05	03:02:00	0.0720	Diverter damper problem of both WHRB # V & VI . Sec oil pr. fluctuation & speed fluctuation of STG # III.	
<b>TOTAL</b>					<b>1.3100</b>	

Verified from FLASH REPORT

Verified from FLASH REPORT

Verified from FLASH REPORT

Verified from FLASH REPORT

**STATEMENT OF OPEN CYCLE GENERATION OF AGBP FOR THE MONTH OF MARCH, 2016**

Date	Mod/unit	Opened Cycle Hrs			Total MU	Reason for GTG tripping & Open cycle generation	Remarks
		From	To	Total hrs			
02-Mar-16	GTG# 2	11:32	11:40	00:08:00	0.0038	WHRB # II manually withdrwan due to low gas pressure	
06-Mar-16	GTG# 1	02:45	04:31	01:46:00	0.04	Got Desynd due to tripping of GC # 2 and load rising problem of GTG # I.	
	GTG# 3	02:42	03:45	01:03:00	0.035	Got Desynd due to tripping of GC # 2 & GTG low load condition due to Low gas pr.	
	GTG# 4	03:06	03:50	00:44:00	0.017	Got Desynd due to tripping of GC # 2 & Starting process of WHRB# IV	
11-Mar-16	GTG# 1	14:30	14:40	00:10:00	0.0035	WHRB # I withdrawn for replacement of Inlet Air Filter	
	GTG# 2	12:08	14:01	01:53:00	0.031	WHRB # II withdrwan due to low gas pressure & Unit under startup process.	
16-Mar-16	GTG# 5	14:43	15:09	00:26:00	0.0065	GTG # 5 manually desynd and stopped for maintenance works , WHRB withdrawn.	From 12.03.16 to 19.03.16, gas production suffered due to miscreant activities in East Beach Area
17-Mar-16	GTG# 2	00:55	01:20	00:25:00	0.0063	Got desynd due to tripping of GC # 2 & Starting process of WHRB# II .	
19-Mar-16	GTG# 4	16:30	17:12	00:42:00	0.0233	GTG tripped due to fire fighting detector maloperation & Starting process of WHRB# IV .	
22-Mar-16	GTG# 2	11:52	12:15	00:23:00	0.0057	Tripping of GC # 2 & Unit under startup process.	
23-Mar-16	GTG# 2	07:40	08:05	00:25:00	0.0029	WHRB# I manually withdrwan due to low gas pressure & Unit under startup process.	
	GTG# 5	07:23	08:30	01:07:00	0.0223	WHRB # V manually withdrwan due to low gas pressure & Unit under startup process.	

24-Mar-16	GTG# 2	07:30	08:55	01:25:00	0.0212	WHRB # II manually withdrwan due to low gas pressure & Unit under startup process.	
	GTG# 5	09:10	09:29	00:19:00	0.0047	WHRB # V manually withdrwan and GTG stopped for installation of gas flow meter.	
26-Mar-16	GTG# 4	10:39	10:47	00:08:00	0.0041	WHRB # IV manually withdrwan due to low gas pressure & Unit under startup process.	
	GTG# 5	08:12	10:36	02:24:00	0.025	WHRB # V manually withdrwan due to low gas pressure & Unit under startup process.	
27-Mar-16	GTG# 1	08:58	09:07	00:09:00	0.0401	WHRB # 1 manually withdrwan due to low gas pressure & Unit under startup process.	
		15:18	16:31	01:13:00			
	GTG# 3	16:10	16:15	00:05:00	0.0024	Starting process of WHRB# III	
	GTG# 4	07:58	08:56	00:58:00	0.0297	Starting process of WHRB# IV	
28-Mar-16	GTG# 3	14:28	15:45	01:17:00	0.0269	WHRB # III manually withdrwan due to low gas pressure & Unit under startup process.	
	GTG# 6	14:40	14:46	00:06:00	0.003	WHRB # VI manually withdrwan due to low gas pressure & Unit under startup process.	
30-Mar-16	GTG# 2	12:40	12:50	00:10:00	0.0372	WHRB # VI manually withdrwan due to low gas pressure & Unit under startup process.	
		13:35	15:05	01:30:00			
	GTG# 5	13:30	13:44	00:14:00	0.0016	WHRB # VI manually withdrwan due to low gas pressure & Unit under startup process.	
	GTG# 6	12:38	13:20	00:42:00	0.014	WHRB # VI manually withdrwan due to low gas pressure & Unit under startup process.	
Total					0.4072		
<b>Ttotal for the year</b>					<b>33.57811</b>		



MSPCL MANIPUR <slcmanipur@gmail.com>

**Fwd: Inability to Charge 132 kV Kohima-Karong Line.**

1 message

nerldc shillong <nerldccontrolroom@gmail.com>

Fri, Nov 4, 2016 at 11:11 AM

To: SLDC Manipur <slcmanipur@yahoo.in>, MSPCL MANIPUR <slcmanipur@gmail.com>

Please find SLDC/Dimapur mail w r t the non availability of 132 kV Kohima-Karong line CB at Kohima end for your kind information

**सादर/Regards,**

पाली प्रभारी

**Shift-In-Charge**

**North Eastern Load Despatch centre**

**Shillong-793006**

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

**Fax- 0364- 2537486/2537470**

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

----- Forwarded message -----

From: SLDC Nagaland <slc.ngl@gmail.com>

Date: Fri, Nov 4, 2016 at 11:06 AM

Subject: Inability to Charge 132 kV Kohima-Karong Line.

To: nerldc control room <nerldc\_cr@yahoo.co.in>, nerldc shillong <nerldccontrolroom@gmail.com>

Cc: Manipur Slc <slcmanipur@yahoo.in>

Sir,

It is regretted to inform that the 132 kV Kohima- Karong Circuit Breaker at Kohima End is still not ready as it has become necessary to install a new breaker, which is still under installation. The Breaker is expected to be commissioned by the end of November 2016. For till such time it is requested to bear with the inconvenience.

**Regards,**

Shift-in-Charge,

SLDC, Nagaland.

On Thu, Nov 3, 2016 at 4:10 PM, nerldc control room <nerldc\_cr@yahoo.co.in> wrote:

Sir,

For information and necessary action Please.

**A.N.Pal.**

**Shift - in-Charge,**

**North Eastern Regional Load Despatch Centre**

**Dongtiah, Lower Nongrah, Lapalang,**

**Shillong - 793006, Meghalaya**

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

**Fax- 0364- 2537486/2537470**

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