North Eastern Regional Power Committee

Agenda

For

107th OCC Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 21st March, 2015 (Saturday)

Venue : "State Guest House", Agartala.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 106th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 106th meeting of Operation Sub-committee held on 24th February, 2015 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2015/4556-4591 dated 5th March, 2015.

NERTS has made an observation in **Item C.11** as below:

Recorded:

Sr. Manager, NEEPCO informed that all the necessary formats have already been furnished to NERLDC.

To be Recorded:

NERLDC gave a presentation on the formats for first time synchronization of new elements during the meeting.

Further, NERLDC informed that data from HVDC, Bishwanath Chariali has not been received till date.

NERTS informed that they will look into the matter and informed to NERLDC at the earliest.

Sr. Manager, NEEPCO informed that all the parameters like telemetry, metering, machine data has already been sent to NERLDC & NERPC. The Connectivity Agreement with Tripura has already been prepared and is likely to be signed by Tripura soon.

GM, NERLDC suggested that it would be better if all the constituents nominate their nodal officers so that they can follow up the matter with utilities (Transmission licensee as well Generators).

The sub-committee requested all the constituents to furnish the name of Nodal Officers to NERLDC with a copy to NERPC within March, 2015. Further, all the concerned utilities are requested to furnish all the information as per formats & requirements to NERLDC at least one week in advance before charging of new elements and to resolve all the issues like telemetering, protection, interface meter, statutory clearance etc., before charging of new elements.

No other observations or comments were received from any of the constituents. The Sub-committee may discuss & confirm minutes of 106th OCCM of NERPC.

ITEMS FOR DISCUSSION

B. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING FEB, 2015

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

NER PERFORMANCE DURING FEBRUARY, 2015

	Energy Met (MU)			Energy Reqr. (MU)		
States	**Feb-15**	**Jan-15**	**% inc(+)/dec(-)**	**Jan-15**	**Dec-14**	**% inc(+)/dec(-)**
Ar. Pradesh	51	**53**	-3.7	53	**65**	-18.3
Assam	561	**655**	-14.4	588	**690**	-14.7
Manipur	55	**65**	-15.3	58	**70**	-17.3
Meghalaya	146	**164**	-10.7	170	**195**	-12.9
Mizoram	33	**38**	-12.9	35	**41**	-15.1
Nagaland	59	**59**	-0.7	60	**60**	0.5
Tripura	77	**83**	-7.4	80	**125**	-35.9
Region	**982**	**1118**	-12.1	**1044**	**1246**	-16.2

	Demand Met (MW)			Demand in (MW)		
States	**Jan-15**	**Dec-14**	**% inc(+)/dec(-)**	**Jan-15**	**Dec-14**	**% inc(+)/dec(-)**
Ar. Pradesh	115	**120**	-4.2	130	**115**	13.0
Assam	1215	**1380**	-12.0	1380	**1220**	13.1
Manipur	136	**150**	-9.3	140	**144**	-2.8
Meghalaya	316	**370**	-14.6	320	**343**	-6.7
Mizoram	88	**90**	-2.2	89	**88**	1.1
Nagaland	120	**130**	-7.7	120	**123**	-2.4
Tripura	212	**245**	-13.5	235	**210**	11.9
Region	**2155**	**2455**	-12.2	**2318**	**2202**	5.3

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	**Jan-15**	**Dec-14**
Total Generation in NER (Gross)	713	847
Total Central Sector Generation (Gross)	482	567
Total State Sector Generation (Gross)	230	280
Inter-Regional Energy Exchange		
(a) NER-ER	14.48	18.40
(b) ER-NER	328.52	327.40
© Net Import	314.04	309.00

AVERAGE FREQUENCY (Hz)

Month---->	**Jan-15**	**Dec-14**
	% of Time	% of Time
Below 49.9 Hz	11.96	17.46
Between 49.9 to 50.05 Hz	60.11	53.73
Above 50.05 Hz	27.93	28.81
Average	50	50
Maximum	50.55	50.56
Minimum	49.58	49.55

From the above table, it is seen that energy requirement met (MU) and energy requirement of the region decreased considerably from the previous month due to less nos. of days in the month

C.1 Synchronization of Palatana Module -I

During 106th OCC meeting, representative from OTPC informed that CoD of Unit-II is expected to be commissioned by March, 2015.

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

SN	Items	Status as given in 106th OCC Meeting	Status as on 107th OCC
1	Trial operation and CoD of Unit -II of Palatana	*Status as given below.	
2	Trial operation and CoD of Unit -I of NTPC at Bongaigoan	• Expected Date for Synchronization of Unit -# I by 31st March, 2015. • ICT relay testing completed. • Diff relay at their side completed, except at ASEB side. • COD is expected by June, 2015	
3	Trial operation and CoD of STG -II of AGTPP	Metering, telemetry, machine data, Connectivity agreement completed. STG-II test charged on 13.02.2015	
4	Trial operation and CoD of Monarchak GBPP		
5	400KV D/C Silchar - Melriat line	March, 2015	
6	400KV D/C Silchar - Imphal line	June, 2015	
7	220KV D/C Mariani (New) – Mokokchung	March, 2015	
8	400KV D/C Byrnihat-Bongaigaon line	March, 2015	

*The detail programme for synchronization of Pallatana Unit - #2 is given below:

As per programme received from BHEL, they desire to do the IDLN tuning on Unit-2 in Combined Cycle full load Mode between 5-6 February, 2015. After this, a shutdown will be taken on Unit – 2 for removal of precision instruments and Unit will be restarted on 12 February, 2015 for 15 days Trail Run and PPA Test during which, again full loading of the machine in Unit-2 will be performed.

POWER BLOCK - 2: TRIAL RUN, RELIABILITY RUN & PPA TEST				
DATE: 03.03.15 Rev - 001				
Sl No	Description	Start	Completion	Remarks
1	Pre discussion on Trial Run between BHEL & OTPC	03.03.15	03.03.15	Held on 03.03.15
2	Box up of HRSG		04.03.15	Installation of Extra Baffle plates completion. By 03.03.05
3	Filling / Signing of all docs. required before start of Trial Run as per Procedure	02.03.15	05.03.15	Protocols-prior to commencement of Trial Operation
4	Readiness of Water system/ Water filling	0	05.03.15	
5	Start of GBC	06.03.15	06.03.15	Start: 15:00 hr
6	Start of GT & Synch	06.03.16	06.03.16	Start: 16:00/ Synch-16:45 hr
7	STG Synch	06.03.17	06.03.17	Synch-22:00 hr
8	Declaration of start of Trial Run	07.03.05	07.03.05	From-00:00 hrs/ 07.03.15
9	Start of 7 days Reliability Run	12.03.15	18.03.14	
10	Start of 3 days PPA Test (Part of Trial Run)	19.03.15	21.03.15	OTPC is to invite their Power Purchase to witness PPA Test
11	Declaration of complete Trial Run		21.03.16	24:00 hrs
12	Joint meeting and record of observations during Trial Run	22.03.15	22.03.15	
13	COD	22.03.15	22.03.15	By OTPC
14	PG Test	15.04.15	22.04.15	
	NOTE:			
1	*Trial Run will be at available load*			
2	*For Reliability run and PPA test, OTPC is to arrange gas/ load for base load. Combined Gas flow of Power Block-1 and 2 should not be more than 110, 000 CM/ Hr to maintain gas quality.*			
3	*OTPC is to provide Desk Operators during Trial Run free of cost.*			
4	*OTPC is to arrange Hydrogen with required purity during Trial Run.*			
5	*Date of Reliability Run and PPA Test can be changed if OTPC desires keeping duration as per contact.*			
6	*During Trial Run, BHEL- R&D Division will conduct experiment for high dB noise.*			
7	*PG Test will start from 15th April 2015 and OTPC is to release the unit for preparing the Test.*			

Concerned constituents may kindly intimate the status.

C.3 Details of Installations and self-certification (by STUs and CTUs) in respect of operationalization of Under Frequency Relays (UFRs) in NER systems and additional requirement of UFR and df/dt relays:

The OCC regularly review the status of UFR based load shedding in the region. The following details are confirmed in 105th OCC meeting.

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

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

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

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

Arunachal Pradesh: EE, SLDC informed that UFRs based load shedding for 20MW have been implemented by them for all stages. S.E (O) requested Ar. Pradesh to send the list of feeders and also to send the report to NERLDC regularly.

Mizoram: EE, SLDC, Mizoram informed that UFR based load shedding for Stages I has been completed. Stage - II is under consideration which may be expected to be implemented by December 2014. Stage - III & IV is likely to be completed by February, 2015. Mizoram is sending the UFR reports regularly for the implemented stages.

SE(O) informed that as per guidelines by CEA its mandatory to inspect at least one third of UFRs in the region during the year. In view of the above, inspection will be carried out in the month of January, 2015. The itinerary will be intimated in due course. The list of UFRs is given at **Annexure – C.3**

Concerned constituents may kindly intimate the status.

C.4 CT Ratio of Transmission Lines in NER & Enhancement of Loadability of Lines:

During 104th OCC meeting, DGM, NERTS stated that NERLDC should first study the load-ability and quantum of the power flow requires on each line so that concerned utilities can upgrade the required CT for the particular line instead of generalizing the issue. Moreover, NERLDC should clearly specify if the proposed ratings of the CTS are assessed on the basis of metering core or protection core.

NERLDC confirmed that the ratios are based on load-ability of lines and hence based on metering core.

The Sub-committee requested NERLDC to prepare the fresh list of feeders where load-ability of the line is necessary for enhancement along with corresponding CT ratio.

During 106th OCC meeting, SE (O) requested NERLDC to prepare the complete lists of feeders where CTs are to be enhanced along with line loading as per requirement of NERLDC, so that necessary correction can be taken up by the constituents.

In the meantime, NERLDC informed that as per Operational Guidelines of NRCE, CEA, Panther and Zebra conductor should be able to carry current up to 495 and 771 Amps approximately [Ambient /Max Conductor capacity 20º/75º respectively]. The equivalent AAAC conductor would also be capable more or less the same loading if not more. States, POWERGRID and ISGS may please confirmed that the existing terminal equipment associated with the above type of conductors can cater to the current level indicated above.

NERLDC may kindly intimate the status and members may deliberate.

C.5 Single Line Diagram of Sub-stations, Switching Stations & Power Stations of NER:

During 104th OCC meeting, NERLDC informed that NEEPCO, NHPC, Ar. Pradesh, Assam, Manipur, Meghalaya, Nagaland & Tripura have not furnished geographical co-ordinates of the nodes as per **Annexure – C.5.**

Now NERLDC informed that

NEEPCO (as per list at **Annexure-C.5)**, NHPC (**for Lower Subansiri**), AEGCL (as per list **at Annexure-C.5)**, MSPCL **(**as per list at **Annexure- C.5)**, MePTCL (as per list at **Annexure- C.5)**, P&E, Mizoram **(for Sihmuii)**, DoP, Nagaland **(**as per list **at Annexure – C.5)**, and TSECL **(**as per list at **Annexure- C.5)** are requested to furnish Single Line Diagram of nodes as these diagrams are required for system studies, outage coordination etc.

During 106th OCC meeting, the Sub-committee has decided that all the remaining constituents should furnish the information as per list mentioned in **Annexure – C.5** by March, 2015 positively.

NERLDC may kindly intimate the status.

C.6 Finalization of Annual Load Generation Balanced Report (LGBR) for peak as well as off-peak scenarios and the Annual outage plan for 2015-2016 by 31.12.2014 as per IEGC:

As per IEGC, each SLDC shall submit LGBR for its control area, for peak as well as off-peak scenario, **by 31st October** for **the next financial year**, to respective RPC Secretariat. The annual plans for managing deficits/surpluses in respective control areas shall clearly be indicated in the LGBR submitted by SLDCs.
As per IEGC, all SEBs/STUs, Transmission Licensees, CTU, ISGS, IPPs, MPPs and other generating stations shall provide to the respective RPC Secretariat their proposed outage plan in writing for **the next financial year** by **31st October of each year**. These shall contain identification of each generating unit/transmission line/ICT etc., the preferred date for each outage and its duration and where there is flexibility, the earliest start date and latest finishing date.

During 106th OCC meeting, SE (O) informed that draft LGBR for 2015-2016 has been prepared by NERPC. He requested all the constituents to go through the draft LGBR attached at **Annexure – C.6** and give their comments/observations at the earliest so that the same can be finalized by **31.01.2015**. He further requested that all the generators and transmission utilities to give their plan shutdown for FY 2015-16.

Constituents may please intimate the status & discuss.

C.7 Latest status of FGMO/RGMO implementation in different generating stations:

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

During 104th OCC meeting, NERLDC highlighted the present status available with them as attached at **Annexure – C.7**, members agreed to send the updated status to NERLDC at the earliest.

During 106th OCC meeting, the Sub-committee has decided that all the remaining constituents should furnish the information as per list mentioned in Annexure – C.7 by March, 2015 positively.

NERLDC may kindly intimate the status.

C.8 Submission of list of feeders connected to essential load:

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

During 104th OCC meeting, all SLDCs were requested to prepare restoration procedure in respect of concerned states and intimate essential loads to be restored on priority to NERLDC at the earliest.

During 106th OCC meeting, NERLDC informed that above list of feeders have been received from Ar. Pradesh, Assam, Meghalaya & Tripura. NERLDC requested the remaining constituents to submit the above information latest by March, 2015.

Other Constituents may please furnish the above information.

C.9 Progress Report of Ongoing Projects:

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

During 104th OCC meeting, members agreed to send the required information as per format attached given by NERLDC.

During 106th OCC meeting, SE (O) informed that as per decision of the sub-committee, NERPC vide letter dated 13.02.2015 has written to all the constituents to furnish the status of ongoing projects to NERLDC at the earliest.

NERLDC informed that information has now been received from NTPC, NEEPCO, Meghalaya, Assam & OTPC. NERLDC requested the remaining constituents to furnish the same at the earliest.

NERLDC may kindly intimate the status.

C.10 Submission of formats for charging/first time synchronization of new elements:

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

NEEPCO is requested to furnish the information/data of **Monarchak Unit I & II** at the earliest as per the formats formulated by NERLDC.

It has been observed that some of the undertakings submitted by concerned utilities (Transmission licensee as well Generators) for first time synchronization of unit or charging/trial operation of new transmission elements are not satisfying the

requirement at the time of synchronization/charging.(like tele-metering issues, inter-face meters etc.).

During 106th OCC meeting, the sub-committee requested all the constituents to furnish the name of Nodal Officers to NERLDC with a copy to NERPC within March, 2015. Further, all the concerned utilities are requested to furnish all the information as per formats & requirements to NERLDC at least one week in advance before charging of new elements and to resolve all the issues like telemetering, protection, interface meter, statutory clearance etc., before charging of new elements.

Members may like to discuss.

C.11 Assessment of Inter State Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) by SLDC on respective Inter-State Transmission Corridor:

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

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

SLDCs are requested to send study results for Peak (Export & Import) & Off Peak (Export & Import) along with assumptions in details and 6 nos. *.sav case files (Base Case for Peak & Off Peak, Off Peak & Peak Export & Off Peak & Peak Import) to NERLDC by 15th of the month for the fifth month. All India *.sav case files have been sent to SLDCs which may be used while computing TTC, ATC & TRM for their state control area.

After discussion in the 105th & 106th OCCM, the Sub-committee requested all SLDCs to send study results for Peak (Export & Import) & Off Peak (Export & Import) along with assumptions in details and 6 nos *.sav case files (Base Case for Peak & Off Peak, Off Peak & Peak Export & Off Peak & Peak Import) to NERLDC by 15th of the month for the fifth month.

The latest .sav case files of Off Peak & Peak Cases have been mailed to SLDCs of NER on **5th March, 2015.**

The study results for assessment of Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) have not been received from any SLDC of NER.

Constituents may kindly update the status.

C.12 Requirement of Reactor at Balipara & Bongaigoan:

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

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

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

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

It was discussed during 105th OCC Meeting of NERPC that this issue is to be resolved at the earliest. Latest status is to be intimated by NERTS, POWERGRID.

C.13 Severe Over Voltage problems in NER grid during off-peak hours:

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

The matter has been deliberated on several occasions that NER grid experiencing very high voltage condition during off-peak hours resulting in opening of numbers of 400 kV circuits to contain over voltage especially at RHEP. 400 kV Balipara-RHEP D/C link is operated thro' single circuit only in most of the time sacrificing reliability of the system. Similar is the condition in other corridors including IR link. To address the problem conversion of line reactors as Bus reactors for 400 kV Bongaigaon-Balipara D/C line and installation of additional bus reactors at Balipara have been proposed [please see SL no C.12 above].

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

Members may like to deliberate.

C.14 Low Voltage at Manipur & Mizoram:

During 104th OCC meeting, representative from Loktak informed that low voltage still persist in Loktak sub-station and requested the forum to look into the matter.

The Sub-Committee requested NHPC to install the capacitor bank in order to arrest the low voltage.

Meanwhile, NHPC vide letter dated 30.12.2014 has intimated that still low voltage is persisting. They also mentioned that Loktak power station is trying to feed maximum MVAR up to the extent of the capability of generator and on 29.12.2014 they have to run their second unit unscheduled to meet the reactive power requirement by injecting maximum MVAR, but after all effort the grid voltage was found to be in order of 90kV or even lower sometimes. Due to low grid voltage on 30.12.2014, the generating unit tripped on excitation fault and Loktak power station is not able to run the generating unit as per schedule.

Further, NERLDC informed that severe low voltage problem at Imphal (PG), Loktak and nodes of Manipur system has been observed during outage of 132 kV Dimapur – Imphal line or 132 kV Loktak – Jiribam line. It was informed by P&E, Mizoram that low voltage problem at nodes of Mizoram system has also been observed.

It is required to install capacitor banks in 33 kV nodes of Manipur & Mizoram system to improve voltage profile of these nodes. Study results for installation of capacitor banks at nodes of Manipur & Mizoram system are already furnished by NERLDC.

During 105th OCC meeting, NERLDC gave a presentation on the above and it can be clearly seen that very low voltage is prevailing in Aizawl, Lunglei & Loktak. They suggested that necessary capacity bank should be installed at the earliest to maintain the voltage level as per IEGC.

After detailed deliberation, the Sub-committee requested NERPC to write to Mizoram & NHPC to change the transformer tap position accordingly and NERLDC may observe the voltage profile for one-two months and if the problem still persists, the Sub-committee may review again and find out the alternative solution.

During 106th OCC meeting, SE(O) informed that NERPC vide letter dated 13.02.2015 has already written to NHPC & Mizoram to set the tap position at the maximum.

The Sub-committee suggested that since 400kV Silchar- Imphal & Silchar-Melriat are on the verge of charging and expected that the voltage will improve accordingly. Further, NERLDC may monitor the voltage profile in Loktak & Mizoram if the voltage has improved after changing the tap position of transformers.

Meanwhile, Manipur informed that low voltage will still prevail even after charging of Silchar – Imphal line and hence requested NERPC to suggest installation of capacitor bank.

NERLDC/Constituents may kindly intimate the status.

C.12 Monthly MU requirement & availability of each state of NER as per format:

The following figures of state wise MU requirement and availability were taken from draft LGBR 2015-16 of NERPC. State wise MU requirement and availability for these months are to be checked. Constituents may kindly verify if the above data are correct.

Requirement:

Name of State	Mar15	Apr15	May15	Jun15	Jul15
Ar. Pradesh	48	66	70	67	67
Assam	570	640	745	790	845
Manipur	51	65	65	75	75
Meghalaya	175	165	170	160	170
Mizoram	40	40	40	40	42
Nagaland	50	60	60	65	65
Tripura	120	115	125	125	130
NER	**1054**	**1151**	**1275**	**1322**	**1394**

Availability:

Name of State	Mar15	Apr15	May15	Jun15	Jul15
Ar. Pradesh	40	50	57	68	89
Assam	413	520	554	635	748
Manipur	47	66	69	79	101
Meghalaya	110	146	188	221	294
Mizoram	32	43	49	55	66
Nagaland	31	47	43	51	67
Tripura	150	197	211	212	234
NER	**823**	**1069**	**1171**	**1321**	**1599**

C.17 Monthly MW requirement & availability of each state of NER:

The following figures were taken from LGBR 2015-16 of NERPC. These figures are to be reviewed.

A. Peak Demand in MW

Name of State	Mar15	Apr15	May15	Jun15	Jul15
Ar. Pradesh	120	138	138	133	133
Assam	1320	1371	1382	1439	1469
Manipur	140	132	148	138	143
Meghalaya	360	400	400	400	400
Mizoram	84	85	85	90	90
Nagaland	119	120	120	120	135
Tripura	260	280	300	300	305
NER	**2403**	**2526**	**2573**	**2620**	**2675**

B. Peak Availability in MW

Name of State	Mar15	Apr15	May15	Jun15	Jul15
Ar. Pradesh	100	115	126	149	148
Assam	826	961	990	1164	1151
Manipur	106	127	129	154	162
Meghalaya	200	266	335	387	470
Mizoram	70	86	92	108	113
Nagaland	64	101	87	103	108
Tripura	272/230	374/230	377/230	396/230	403/230
NER	**1636**	**2030**	**2136**	**2461**	**2555**

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

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

Name of State	Mar15	Apr15	May15	Jun15	Jul15
Ar. Pradesh	70				
Assam	800				
Manipur	80				
Meghalaya	232				
Mizoram	50				
Nagaland	74				
Tripura	155				
NER	**1461**				

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

Name of State	Mar15	Apr15	May15	Jun15	Jul15
Ar. Pradesh	101				
Assam	799				
Manipur	97				
Meghalaya	220				
Mizoram	70				
Nagaland	65				
Tripura	270				
NER	**1622**				

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

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

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

Hydro generation planning for lean hydro period - Proper planning is required to utilize the available water for entire lean hydro period, say upto May, 2015.

NHPC vide letter dated 07.03.2015 has requested for shutdown of Loktak Unit #2 w.e.f. 01.04.2015 to 30.04.2015 (AMC). During the above shutdown two units will remain available.

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

D.2 Water level and spillage data of Hydro Stations

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

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

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

Water level format:

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

Water spillage format:

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

During 105th OCC meeting, NERLDC informed that Assam, NEEPCO & NHPC has furnished the above information but not as per the format given by NERLDC.

The Sub-committee once again requested all the constituents to furnish the data as per data available with them to NERLDC at the earliest.

D.3 Outage Planning Transmission elements

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

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

The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for March - April, 2015 as enclosed at Annexure- D.3 (I, II & III).

D.4 Hourly Demand data in MW & Daily MU Requirement:

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

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

These data are being furnished by Me. PTCL & TSECL. Other States are requested for similar actions.

D.5 20th Transmission Planning:

SE (O) NERPC informed that a joint Standing Committee meeting on Power System Planning for all regions was convened by Chairperson, CEA on 22nd September, 2014 at NRPC, New Delhi. In the meeting the 20-year Transmission Perspective Plan (2014-34) for all the five regions were discussed.

He requested that the following information/data is currently required from each State/Utility of each region may kindly be furnished at the earliest.

Sl. No	Plan	By end of 12th Plan (upto 2017)			By end of 13th Plan (upto 2022)		
State/Utility:							
1	Peak Demand (MW)						
2	Demand Behaviour (profile for season-wise & Annual)	Summer (Peak & Off-peak)	Monsoon (Peak & Off-peak)	Winter (Peak & Off-peak)	Summer (Peak & Off-peak)	Monsoon (Peak & Off-peak)	Winter (Peak & Off-peak)
3	Generation Project target schedule						
4	Transmission Projects (220 kV & above) target schedule						
5	Transformer Capacity addition (220/132 kV & above) target schedule						

D.6 Second In-feed for NER-ER Corridor:

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

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

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

Members my like to discuss

D.7 Long Outage of important Lines:

Makokchung Mariani and Jiribam Rengpang line are out since long.

Nagaland, Manipur and Assam may give a realistic target for re commissioning of these lines.

D.7 Opening of Breaker from Agartala end:

On 10.03.15 while giving shutdown of 132 KV R C Nagar- 79 Tilla Grid line on getting opening code from NERLDC control room, R C Nagar has given Earth switch on charged line (from Agartala end) only after opening the breaker from their end. Even they did not take/consult any clearance of opening the breaker from Agartala end.

As a result partial system disturbance occurred in Tripura System with 48 MW of Generation loss and 60 MW of Load loss along with cascaded tripping of several lines and the state is suffered a lot. This is a mal-practice and is a threat to the Grid security.

Members my like to discuss

D.8 Estimated Transmission Availability Certificate (TAC) for the month of February, 2015.

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

Any other item:

Date and Venue of next OCC

It is proposed to hold the 108th OCC meeting of NERPC on second week of April, 2015. The date & exact venue will be intimated in due course.

****

Annexure - C. 3

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

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

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

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

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

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

STATUS OF UFR IMPLEMENTATION IN NER

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

Annexure - C.5

List of SLDs of Substations/ Power Stations which not yet submitted by contituents

Sl. No.	Name of Substations/ Power Stations
I. नीपको / NEEPCO	
1	Khandong
2	Khupi
3	Ranganadi
II. एनएचपीसी / NHPC	
1	Lower Subansiri
III. असम / Assam	
1	Bihaiting
2	BRPL
3	Ghoramari
4	HPC,Jagiroad
5	HPC,Panchgram
6	Star Cement
7	CALCOM
IV. मणिपुर / Manipur	
1	Chandel
2	Churachandpur
3	Hundung
4	Imphal (Yurembam)
5	Jiribam
6	Kakching
7	Karong

Sl. No.	Name of Substations/ Power Stations
IV. मणिपुर / Manipur	
8	Kongba
9	Ningthoukhong
10	Rengpang
11	Thanlon
12	Yaingangpokpi
V. मेघालय / Meghalaya	
1	Adhunik Cement
2	CMCL
3	Hill Cement
4	Leshka
5	Nalari
6	Sai Prakash
7	Sonapani
VI. मिज़ोरम / Mizoram	
1	Sinhmui
VII. नागालैंड / Nagaland	
1	Chumukedima
2	Dairy Farm
3	Ganeshnagar
4	Mon
5	Nagnimora
6	Nito Farm

Sl. No.	Name of Substations/ Power Stations
VII. नागालैंड / Nagaland	
7	Power House
8	Tizit
9	Tuensang
10	Tuli
11	Zunheboto
VIII. त्रिपुरा / Tripura	
1	Amarpur
2	Badarghat
3	Bagafa
4	Baramura
5	Baxanagar
6	Belonia
7	Bishramganj
8	Gokulnagar (Bishalgarh)
9	Gumti
10	Jatanbari
11	Ompi
12	Rabindranagar
13	Rokhia
14	Sabroom
15	Satchand
16	Teliamura (Gamaitilla)

Annexure- C.6

DRAFT

ABSTRACT OF STATEWISE/SYSTEMWISE/CONSTITUENTWISE PEAK DEMAND- vs- AVAILABILITY IN NORTH EASTERN REGION FOR THE PERIOD FROM APRIL-2015 TO MARCH-2016

(ALL FIGURES IN MW & NET)

SL.NO	PARTICULARS	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16
1	ARUNACHAL PRADESH												
	i) NET MAX DEMAND	138	138	133	133	138	143	139	128	128	133	133	143
	ii) NET POWER AVAILABILITY- Own Source	2	2	2	6	6	6	4	4	2	2	2	2
	- Central Sector	113	123	147	142	136	137	132	114	111	106	108	115
	iii) SURPLUS(+)/DEFICIT(-)	-23	-12	17	16	5	0	-2	-10	-14	-25	-22	-25
2	ASSAM												
	i) NET MAX DEMAND	1371	1382	1439	1469	1510	1428	1408	1464	1479	1407	1259	1408
	ii) NET POWER AVAILABILITY- Own Source	211	211	271	271	271	271	271	211	211	211	211	211
	Central Sector	751	779	893	880	842	848	853	772	744	713	720	767
	iii) SURPLUS(+)/DEFICIT(-)	-410	-392	-275	-318	-397	-309	-284	-481	-524	-484	-328	-430
3	MANIPUR												
	i) NET MAX DEMAND (OWN)	132	148	138	143	149	149	154	149	149	165	148	154
	ii) NET POWER AVAILABILITY- Own Source	5	5	5	5	5	5	5	5	5	5	5	5
	- Central Sector	121	124	149	157	153	152	151	127	128	119	120	126
	iii) SURPLUS(+)/DEFICIT(-)	-6	-19	17	19	10	9	2	-16	-15	-41	-23	-22
4	MEGHALAYA												
	i) NET MAX DEMAND	400	400	400	400	395	400	410	420	425	425	420	410
	ii) NET POWER AVAILABILITY- Own Source	50	110	121	216	244	265	183	109	83	69	70	55
	Central Sector	216	225	257	254	244	246	248	224	215	206	208	221
	iii) SURPLUS(+)/DEFICIT(-)	-134	-65	-22	70	93	111	21	-87	-127	-150	-142	-134
5	MIZORUM												
	i) NET MAX DEMAND	85	85	90	90	90	90	90	95	85	85	85	95
	ii) NET POWER AVAILABILITY- Own Source	14	17	20	25	25	25	20	15	15	14	13	12
	Central Sector	72	75	88	88	84	84	84	74	72	68	70	74
	iii) SURPLUS(+)/DEFICIT(-)	1	7	18	23	19	19	14	-5	2	-2	-2	-9
6	NAGALAND												
	i) NET MAX DEMAND	120	120	120	135	130	135	140	130	130	135	125	135
	ii) NET POWER AVAILABILITY- Own Source	9	12	15	20	20	20	15	10	10	9	8	7
	Central Sector	92	75	88	88	84	84	84	74	72	68	70	74
	iii) SURPLUS(+)/DEFICIT(-)	-19	-33	-17	-27	-26	-31	-41	-46	-48	-58	-47	-54
7	TRIPURA												
	i) NET MAX DEMAND	280	300	300	305	305	300	340	295	275	270	260	300
	ii) NET POWER AVAILABILITY- Own Source	94	109	109	114	114	114	114	114	109	109	109	109
	Central Sector	265	268	287	289	284	285	284	269	267	260	263	268
	iii) SURPLUS(+)/DEFICIT(-)	78	77	96	98	93	99	58	88	101	99	112	77
8	NORTH EASTERN REGION												
	i) NET MAX DEMAND	2526	2573	2619	2675	2716	2644	2681	2680	2670	2620	2430	2644
	ii) SIMULTANEOUS MAX.DEMAND	2477	2523	2568	2623	2663	2592	2629	2627	2618	2568	2383	2592
	CONSIDERING 1.02 AS DIVERSITY FACTOR												
	iii) NET POWER AVAILABILITY- Own Source	385	466	543	657	685	706	612	468	435	419	418	401
	Central Sector	1630	1670	1909	1898	1828	1836	1836	1654	1610	1540	1559	1645
	SURPLUS(+)/DEFICIT(-)	-512	-437	-166	-120	-203	-101	-233	-557	-625	-661	-453	-598

DRAFT

ABSTRACT OF STATEWISE/SYSTEMWISE/CONSTITUENTWISE ENERGY REQUIREMENT- vs- AVAILABILITY IN NORTH EASTERN REGION FOR THE PERIOD FROM APRIL-2015 TO MARCH-2016

(ALL FIGURES IN MU & NET)

SL.NO	PARTICULARS	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	TOTAL 2014-15
1	ARUNACHAL PRADESH													
	i) NET ENERGY REQUIREMENT	66	70	67	67	72	72	72	67	67	67	57	72	816
	ii) NET ENERGY AVAILABILITY- Own Source	5	5	4	6	6	6	6	4	4	3	3	4	56
	- Central Sector	45	52	64	83	80	73	60	50	46	44	39	44	679
	iii) SURPLUS(+)/DEFICIT(-)	-16	-13	1	22	14	7	-6	-13	-17	-20	-14	-24	-81
2	ASSAM													
	i) NET ENERGY REQUIREMENT	640	745	790	845	845	840	800	675	690	700	625	725	8920
	ii) NET ENERGY AVAILABILITY- Own Source	116	128	148	178	184	180	154	133	132	106	96	103	1658
	- Central Sector	404	426	487	570	554	516	490	438	430	414	375	422	5523
	iii) SURPLUS(+)/DEFICIT(-)	-120	-191	-156	-97	-106	-144	-157	-104	-128	-180	-155	-201	-1738
3	MANIPUR													
	i) NET ENERGY REQUIREMENT	65	65	70	75	75	75	75	75	75	80	65	70	865
	ii) NET ENERGY AVAILABILITY- Own Source	4	4	4	4	4	4	4	4	4	4	4	4	43
	- Central Sector	62	65	75	97	97	92	86	76	72	68	58	64	911
	iii) SURPLUS(+)/DEFICIT(-)	1	4	8	26	26	20	15	4	0	-9	-3	-3	89
4	MEGHALAYA													
	i) NET ENERGY REQUIREMENT	165	170	160	170	170	165	180	190	200	210	180	185	2145
	ii) NET ENERGY AVAILABILITY- Own Source	29	64	70	128	145	153	109	63	50	41	37	32	921
	- Central Sector	117	124	141	166	162	151	144	129	126	121	109	122	1612
	iii) SURPLUS(+)/DEFICIT(-)	-19	18	51	124	137	139	73	2	-25	-48	-33	-30	388
5	MIZORUM													
	i) NET ENERGY REQUIREMENT	40	40	40	42	42	40	45	45	42	43	37	44	500
	ii) NET ENERGY AVAILABILITY- Own Source	6	10	10	11	11	10	10	7	6	7	6	7	100
	- Central Sector	37	39	45	55	54	50	46	41	39	37	34	38	514
	iii) SURPLUS(+)/DEFICIT(-)	2	9	15	24	23	20	11	2	4	1	3	1	115
6	NAGALAND													
	i) NET ENERGY REQUIREMENT	60	60	65	65	65	65	65	65	65	65	65	65	770
	ii) NET ENERGY AVAILABILITY- Own Source	1	4	6	12	16	16	12	8	5	4	3	2	89
	- Central Sector	46	39	45	55	54	50	46	41	39	37	34	38	524
	iii) SURPLUS(+)/DEFICIT(-)	-12	-18	-14	2	5	1	-7	-16	-21	-24	-28	-25	-157
7	TRIPURA													
	i) NET ENERGY REQUIREMENT	115	125	125	130	130	130	130	120	130	135	110	135	1512
	ii) NET ENERGY AVAILABILITY- Own Source	28	35	31	34	35	32	36	30	34	35	22	34	385
	- Central Sector	169	176	181	200	198	190	189	177	179	175	159	175	2167
	iii) SURPLUS(+)/DEFICIT(-)	83	86	87	104	103	92	94	87	83	75	71	74	1039
8	NORTH EASTERN REGION													
	i) NET ENERGY REQUIREMENT	1151	1274	1316	1394	1399	1387	1367	1237	1269	1300	1139	1296	15528
	ii) NET ENERGY AVAILABILITY- Own Source	190	248	272	373	400	401	330	248	234	199	171	185	3253
	- Central Sector	879	920	1037	1226	1200	1121	1061	951	931	896	807	903	11931
	iii) SURPLUS(+)/DEFICIT(-)	-82	-106	-7	205	201	135	25	-38	-104	-205	-160	-209	-344
	MU/DAY	38	41	44	45	45	46	44	41	41	42	41	42	43

ANNEXURE-C.7

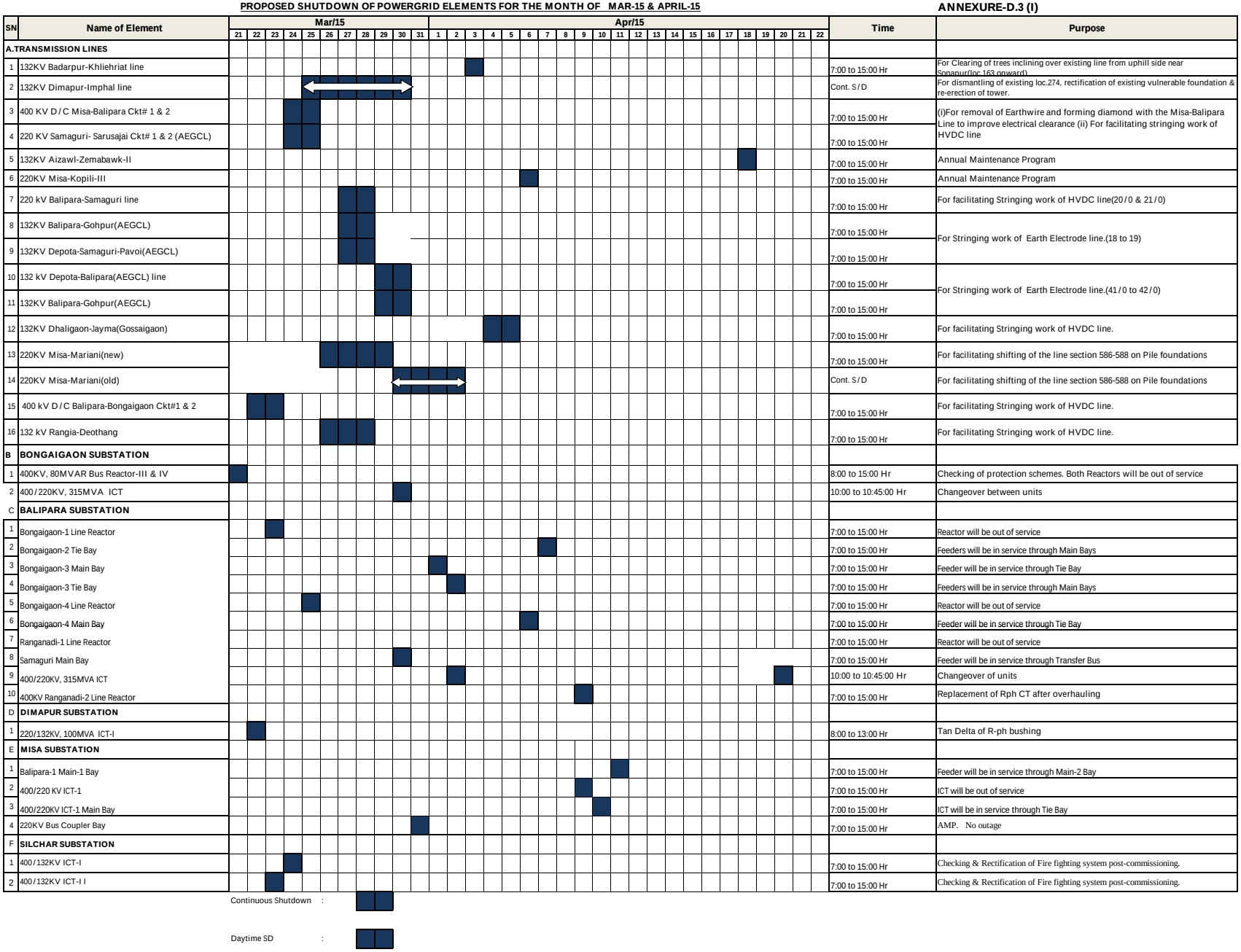
Unit Wise RGMO Status Details (Participating in RGMO)

Sl No	Utility	Power Station to be under RGMO	Hydro/ Thermal	Unit No	Capacity	Declared by Plant that Unit under RGMO		Telemetry Status
						PARTICIPATING	PARTICIPATING Response/Test Not Observed	
NORTH EASTERN REGION								
104	NEEPCO	RHEP	H	1	135	YES	Not tested	ok
105				2	135	YES	Not tested	ok
106				3	135	YES	Not tested	ok
107		KOPILI	H	1	50	No		ok
108				2	50	No		ok
109				3	50	No		ok
110				4	50	No		ok
111		KHANDONG	H	1	25	No		ok
112				2	25	No		ok
113		KOPILI STG-II	H	1	25	No		ok
114		DOYANG	H	1	25	No		ok
115				2	25	No		ok
116				3	25	No		ok
117	ASEB	LANGPI	H	1	50	No		Not Available
118				2	50	No		Not Available
	MeECL	UMIUM STG III	H	1	30	No		0k
				2	30	No		0k
		UMIUM STG IV	H	1	30	YES	Not tested	0k
				2	30	YES	Not tested	0k
		MLHEP	H	1	42	YES	Not tested	Not Available
				2	42	YES	Not tested	Not Available
NORTH EASTERN REGION-ISGS								
211	NHPC	LOKTAK	H	1	35	No		ok
212				2	35	No		ok
213				3	35	No		ok
IPP								

PROPOSED SHUTDOWN OF POWERGRID ELEMENTS FOR THE MONTH OF MAR-15 & APRIL-15

ANNEXURE-D.3 (I)

SN	Name of Element	Time	Purpose
A.	**TRANSMISSION LINES**		
1	132KV Badarpur-Khliehriat line	7:00 to 15:00 Hr	For Clearing of trees inclining over existing line from uphill side near Sonapur(loc 163 onward)
2	132KV Dimapur-Imphal line	Cont. S/D	For dismantling of existing loc.274, rectification of existing vulnerable foundation & re-erection of tower.
3	400 KV D/C Misa-Balipara Ckt# 1 & 2	7:00 to 15:00 Hr	(i)For removal of Earthwire and forming diamond with the Misa-Balipara Line to improve electrical clearance (ii) For facilitating stringing work of HVDC line
4	220 KV Samaguri- Sarusajai Ckt# 1 & 2 (AEGCL)	7:00 to 15:00 Hr	
5	132KV Aizawl-Zemabawk-II	7:00 to 15:00 Hr	Annual Maintenance Program
6	220KV Misa-Kopili-III	7:00 to 15:00 Hr	Annual Maintenance Program
7	220 kV Balipara-Samaguri line	7:00 to 15:00 Hr	For facilitating Stringing work of HVDC line(20/0 & 21/0)
8	132KV Balipara-Gohpur(AEGCL)	7:00 to 15:00 Hr	For Stringing work of Earth Electrode line.(18 to 19)
9	132KV Depota-Samaguri-Pavoi(AEGCL)	7:00 to 15:00 Hr	
10	132 kV Depota-Balipara(AEGCL) line	7:00 to 15:00 Hr	For Stringing work of Earth Electrode line.(41/0 to 42/0)
11	132KV Balipara-Gohpur(AEGCL)	7:00 to 15:00 Hr	
12	132KV Dhaligaon-Jayma(Gossaigaon)	7:00 to 15:00 Hr	For facilitating Stringing work of HVDC line.
13	220KV Misa-Mariani(new)	7:00 to 15:00 Hr	For facilitating shifting of the line section 586-588 on Pile foundations
14	220KV Misa-Mariani(old)	Cont. S/D	For facilitating shifting of the line section 586-588 on Pile foundations
15	400 kV D/C Balipara-Bongaigaon Ckt#1 & 2	7:00 to 15:00 Hr	For facilitating Stringing work of HVDC line.
16	132 kV Rangia-Deothang	7:00 to 15:00 Hr	For facilitating Stringing work of HVDC line.
B	**BONGAIGAON SUBSTATION**		
1	400KV, 80MVAR Bus Reactor-III & IV	8:00 to 15:00 Hr	Checking of protection schemes. Both Reactors will be out of service
2	400/220KV, 315MVA ICT	10:00 to 10:45:00 Hr	Changeover between units
C	**BALIPARA SUBSTATION**		
1	Bongaigaon-1 Line Reactor	7:00 to 15:00 Hr	Reactor will be out of service
2	Bongaigaon-2 Tie Bay	7:00 to 15:00 Hr	Feeders will be in service through Main Bays
3	Bongaigaon-3 Main Bay	7:00 to 15:00 Hr	Feeder will be in service through Tie Bay
4	Bongaigaon-3 Tie Bay	7:00 to 15:00 Hr	Feeders will be in service through Main Bays
5	Bongaigaon-4 Line Reactor	7:00 to 15:00 Hr	Reactor will be out of service
6	Bongaigaon-4 Main Bay	7:00 to 15:00 Hr	Feeder will be in service through Tie Bay
7	Ranganadi-1 Line Reactor	7:00 to 15:00 Hr	Reactor will be out of service
8	Samaguri Main Bay	7:00 to 15:00 Hr	Feeder will be in service through Transfer Bus
9	400/220KV, 315MVA ICT	10:00 to 10:45:00 Hr	Changeover of units
10	400KV Ranganadi-2 Line Reactor	7:00 to 15:00 Hr	Replacement of Rph CT after overhauling
D	**DIMAPUR SUBSTATION**		
1	220/132KV, 100MVA ICT-I	8:00 to 13:00 Hr	Tan Delta of R-ph bushing
E	**MISA SUBSTATION**		
1	Balipara-1 Main-1 Bay	7:00 to 15:00 Hr	Feeder will be in service through Main-2 Bay
2	400/220 KV ICT-1	7:00 to 15:00 Hr	ICT will be out of service
3	400/220KV ICT-1 Main Bay	7:00 to 15:00 Hr	ICT will be in service through Tie Bay
4	220KV Bus Coupler Bay	7:00 to 15:00 Hr	AMP. No outage
F	**SILCHAR SUBSTATION**		
1	400/132KV ICT-I	7:00 to 15:00 Hr	Checking & Rectification of Fire fighting system post-commissioning.
2	400/132KV ICT-I I	7:00 to 15:00 Hr	Checking & Rectification of Fire fighting system post-commissioning.



ANNEXURE-D.3(II)

ASSAM ELECTRICITY GRID CORPORATION LIMITED

Regd. Office : 1st Floor, AEGCL, Bijulee Bhawan, Paltan Bazar, Guwahati-01
CIN : U4010AS2003SGC007238
Phone – 0361 2739520 / Fax : 0361 2739513 : Website : www.aegcl.co.in

NO :- AEGCL/AGM/SARU/Tech-162/13/ 391 Date :- 16/03/2015

To
The Secretary,
NERPC, Shillong.

Sub :- Approval for planned Shutdown of 220/132kV Txn-3 & 220kV Main Bus.

Sir ;

With reference to the above, I have the honour to request you kindly to approve the proposed shutdown as per the following schedule :-

Sl.No	Name of the Line/Bus	Date of Shutdown	Period of Shutdown	Purpose
1	100MVA,220/132kV Txn-3	05/04/2015	05:00 hrs. to 18:00 hrs.	To replace the old 220kV CB by New one.
2	220KV Main Bus.	12/04/2015	05:00 hrs. to 07:30 hrs.	Routine Check for jumpers, tightness of bolts of various clamps, etc.

This is for favour of your kind information and necessary action. action.

Yours faithfully,

16/3/15

Assistant General Manager
220kV EHV Grid Sub-Station
AEGCL : Sarusajai : Guwahati-40

NO.AEGCL/AGM/SARU/T-162 /13/ Date :- 16/03/2015

Copy to :-
1. The CGM (HQ), AEGCL, Bijuli Bhawan, Paltanbazar, Guwahati-1
2. The CGM, SLDC, AEGCL, Kahilipara, Guwahati-19.
3. The DGM, LATTC, AEGCL, Narangi, Guwahati-26.
4. The DGM, MRTC, AEGCL, Narangi, Guwahati-26.
   → For favour of kind information.
5. The DM, SSCSD, Sarusajai, AEGCL, Lokhora, Guwahati-40.
   → for kind information and action.

Assistant General Manager
220kV EHV Grid Sub-Station
AEGCL : Sarusajai : Guwahati-40

Annexure – D.3 (III)

Propose Shutdown Program of TSECL:

Pre-Monsoon Shutdown Programme for the year -2015 (9 am to 3pm)

DATE	SL NO	NAME OF LINE/SUB-STN	REMARKS
02/04/2015	1	132 KV Baramura switch yard with Unit : V	
	2	132 KV Baramura -Jirania	
	4	132 KV Jirania S/S in/c all 11 KV o/g fdrs.	
03/04/2015	1	132KV, 33KV & 11KV Bus of Ambassa S/S	
	2	132 KV Gournagar S/S Main Bus & all 11 KV O/G fdrs.	
	3	132 KV PKB S/Stn Main Bus in/c all 11 KV O/G fdrs.	
	4	132 KV PKB- Dharmanagar line.	Dharmanagar will receive power from Durllavcherra
04/04/2015	1	132 KV Bodhjungnagar - Jirania	
	2	132KV Kamalpur-Ambassa	
05/04/2015	1	132 KV Grid Section-1(L1 & L 2 of Rokhia) 132KV GSS, 79 Tilla except 11KV I.T.I (to be used for backfeed of Power)	
	2	Rokhia GT Unit - VIII.	
	3	132 KV PKB - Dharmanagar line.	Dharmanagar will receive power from Durllavcherra
06/04/2015	1	132KV Rokhia to Agt. L- I	
	2	132KV Kamalpur - Dhalabill	
09/04/2015	1	132KV PK Bari-Kamalpur	
	2	132 KV PKB - Dharmanagar line.	Dharmanagar will receive power from Durllavcherra

10/04/2015	1	132 KV Agartala - Dhalabil	
	2	132 KV PKB-KGT PG line.	
	3	132 KV Udaipur S/S (66 KV Bus)	
11/04/2015	1	R.C.Nagar Line-2 & Dharmanagar Fdr .(Section - 3) of 132 KV GSS, 79 Tilla.	
	2	132 KV Dharmanagar S/S	
	3	132 KV Ambassa-Gamaitilla	Affect
	4	132 KV Gamaitilla S/S & all 11 KV O/G fdrs.	Affect
	5	132 KV Udp - Palatana	No Affect
12/04/2015	1	132 KV Main Bus Udaipur Sub-station.	Affect
	2	132 KV Dhalabil S/S and Main Bus in/c all o/g fdrs.	Affect
	3	132 KV Agartala - Dhalabil.	No affect
13/04/2015	1	132 KV PK Bari - Ambassa	No affect
	2	132 KV Surjamaninagar - Grid L 1	No affect
	3	132 KV Dharmanagar - Churaibari (Durllavcherra)	No affect
14/04/2014	1	132 KV Agartal - Bodhjungnagar line.	No affect
	2	132 KV Bodhjungnagar S/Stn.	Affect
	3	132 KV Rokhia-Monarchak	No affect
	4	132 KV Monarchak - Udaipur	No affect
17/04/2015	1	132 KV Kamalpur - PK Bari Line	No affect
	2	132 KV Agartala - Rokhia Line -II	No affect
	3	Rokhia GT Unit- IX	No affect
19/04/2015	1	132 KV old Switchyard of Rokhia with Unit- VII	Affect
	2	132 KV Kamalpur S/S & all O/G 11 KV fdrs	Affect
	3	132 KV Kamalpur - PK Bari Line	No affect
	4	132 KV Agartala - Rokhia Line-I	No affect
20/04/2015	1	132 KV Baramura -Jirania line	No Affect
	2	132 KV Ambassa -Kamalpur line	No Affect
	3	132 KV Surjamaninagar - Grid L 1	No affect
	4	132 KV Dharmanagar - Churaibari (Durllavcherra)	No affect

22/04/2015	1	132 KV Gamaitilla - Ambassa line	No affect
23/04/2015	1	132 KV Baramura -Gamaitilla line	No affect
	2	132 KV Dharmanagar - Churaibari (Durllavcherra)	No affect
	3	132 KV Surjamaninagar - Bodhjungnagar L1	No affect
25/04/2015	1	132 KV PK Bari - Ambassa	No affect
	2	132 KV PKB - Gournagar line	Affect
	3	132 KV Surjamaninagar - Bodhjungnagar L2	No Affect
26/04/2015	1	132 KV Main bus Section 2 with Dhalabil and R.C.Nagar Line-1 of 132KV GSS,79 Tilla.	Affect
	2	132 KV Line Bodhjungnagar -Jirania	No affect
27/04/2015	1	132 KV Jirania - Bodhjungnagar	No affect

-sd-
U Debbarma
Dy. General Manager
SOD, TSECL