North Eastern Regional Power Committee

Agenda
For
102nd OCC Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 16th October, 2014 (Thursday)

Venue : "Hotel Nandan", Guwahati.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 101st MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 101st meeting of Operation Sub-committee held on 10th September, 2014 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2014/1982-2017 dated 22nd September, 2014.

No observations or comments were received from the constituents. The Sub-committee may discuss & confirm minutes of 101st OCCM of NERPC.

ITEMS FOR DISCUSSION

B. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING SEP, 2014

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

NER PERFORMANCE DURING SEPTEMBER, 2014

	Energy Met (MU)			Energy Reqr. (MU)		
States	**Sep-14**	**Aug-14**	**% inc(+)/dec(-)**	**Sep-14**	**Aug-14**	**% inc(+)/dec(-)**
Ar. Pradesh	53.95	52.96	1.9	70.00	55.21	26.8
Assam	688.04	732.62	-6.1	825.00	795.61	3.7
Manipur	59.79	56.18	6.4	65.00	58.36	11.4
Meghalaya	131.21	131.27	-0.1	145.00	152.17	-4.7
Mizoram	34.46	35.42	-2.7	36.00	37.08	-2.9
Nagaland	54.64	53.48	2.2	60.00	55.20	8.7
Tripura	92.98	94.98	-2.1	120.00	103.81	15.6
Region	**1115.06**	**1156.9**	-3.6	**1321.00**	**1257.44**	5.1

	Demand Met (MW)			Demand in (MW)		
States	**Sep-14**	**Aug-14**	**% inc(+)/dec(-)**	**Sep-14**	**Aug-14**	**% inc(+)/dec(-)**
Ar. Pradesh	115	116	-0.9	139	118	18.1
Assam	1207	1242	-2.8	1350	1379	-2.1
Manipur	126	138	-8.9	135	141	-4.5
Meghalaya	280	280	0.0	310	288	7.7
Mizoram	78	81	-3.7	86	85	0.9
Nagaland	116	116	0.0	117	121	-3.0
Tripura	256	235	8.9	260	240	8.1
Region	**2112**	**2053**	2.9	**2380**	**2356**	1.0

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	**Sep-14**	**Aug-14**
Total Generation in NER (Gross)	1214.34	1199.5
Total Central Sector Generation (Gross)	807.99	831.5
Total State Sector Generation (Gross)	406.35	367.9
Inter-Regional Energy Exchange		
(a) NER-ER	117.37	80.58
(b) ER-NER	49.29	65.61
© Net Import	-68.08	-14.97

AVERAGE FREQUENCY (Hz)

Month---->	**Sep-14**	**Aug-14**
	% of Time	% of Time
Below 49.9 Hz	28.68	39.38
Between 49.9 to 50.05 Hz	55.3	48.33
Above 50.05 Hz	16.02	12.29
Average	49.95	49.92
Maximum	50.37	50.34
Minimum	49.34	49.36

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

C.1 Synchronization of Palatana Module -I

During 101st OCC meeting, representative from OTPC informed that CoD of Unit-II is expected to be commissioned by October / November 2014.

The Sub-committee also reviewed the status of commissioning of second unit of OTPC at Pallatana, following Transmission lines of POWERGRID and substation at Azara of Assam. The status as informed by OTPC, Assam and POWERGRID is as follows:

SN	Items	Status as given in 101st OCC Meeting	Status as on 102nd OCC
1	Trial operation and CoD of Unit -II of Palatana	Trial run is expected in October, 2014 and CoD is expected in Oct-Nov, 2014	
2	400KV D/C Silchar - Melriat line	March, 2015	
3	400KV D/C Silchar - Imphal line	November, 2014	
4	220KV D/C Mariani (New) – Mokokchung	October, 2014	
5	400KV D/C Byrnihat-Bongaigaon line	Byrnihat – Azara section charged on 28.07.2014. Azara–Bongaigaon section is expected by December, 2014	
6	400kV Balipara – Bongaigaon D/C line 3 & 4 with FSC	August, 2014 subject to availability of forest clearance for 5.2 kms of the line.	
7	400/220 kV sub-station at Azara of Assam	Completed	

C.2 SPS scheme for Pallatana

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

Case 1: Tripping of generating unit of OTPC at Palatana

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

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

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

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

Case I & Case IV: Already implemented.

Case II & III: GM, OTPC stated that implementation of SPS -2 & 3 mentioned

above was discussed in detail and the scheme was finalized in the meeting held with BHEL at Palatana on 17.01.2014. Subsequently some modification has been carried out by BHEL and same will be circulated to all. The offer of BHEL is intimated by OTPC but the required schematic diagram as agreed in the 97th OCC meeting is unavailable.

OTPC had requested POWERGRID to look into following issues:

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

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

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

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

The Sub-committee agreed to refer the issue to system study group to study the special protection schemes associated with Palatana in detail. NERPC will convene a meeting shortly at NERLDC, Shillong to discuss for early implementation of the SPS Case II & III as well as other issues of Islanding Schemes etc.

The sub-group may like to discuss the issue just after the 101st OCC meeting is over.

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

The OCC regularly review the status of UFR based load shedding in the region. The following details are confirmed in 101st OCC meeting.

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

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

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

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: 1st stage completed. 2nd stage is under consideration, exact status will be intimated in next OCC. 3rd and 4th stages implementation will take more time.

Mizoram: Status could not be updated as no representative from Mizoram was present.

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

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

Quote

We have heard the parties and perused the pleadings. We are in agreement with the petitioner that there is a need to review and estimate the actual load on the feeders and the constituents should consider average load in the feeders for computation of target relief on identified feeders. As sufficient load relief has not been achieved, the

respondents are directed to identify more feeders for installation of UFR and df/dt relays and submit the details to SRPC.

Unquote

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

Regarding the CERC order mentioned above to compute average load and fulfillment of target, the sub-committee agreed that more feeders need to be identified for sufficient load relief and the status may be monitored in OCC/PCC forum. However, system study is required to identify the amount of load relief before finalization of additional feeders.

The committee may like to discuss.

C.4 Lines under long outages

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

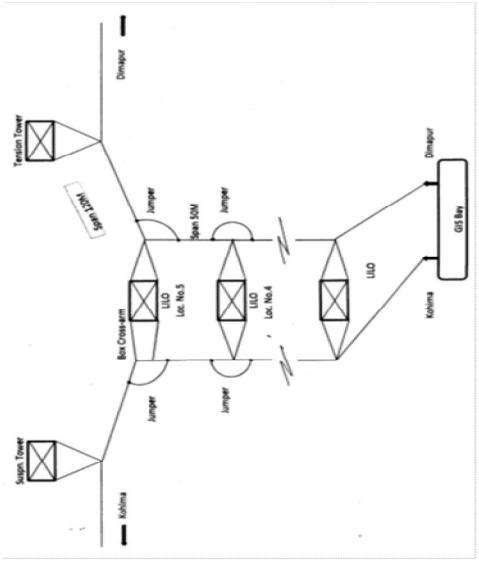
a) 39km of 132kV Rengpang – Jiribam line – [Since Oct'02]

Manipur representative informed that towers are faulty in locations 90 and 91 due to constructions railway line and road by Ministry of Railway and BRTF. Compensation for the same is awaited from the 2 parties and repairing work may be completed after 2 months from receipt of the compensations. The line is expected to be restored by October 2014.

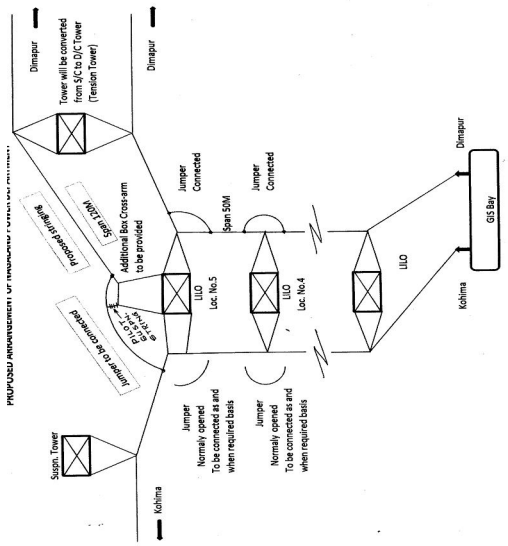
Manipur may like to inform the status.

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

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



Before Modification



After Modification

EE, DoP, Nagaland informed that towers have been erected and stringing is about to start. The work is likely to be completed by September 2014.

Nagaland may intimate the latest status.

C.6 <u>CT Ratio of Transmission Lines in NER</u>:

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

During 101st OCC meeting, ***the sub-committee requested NERLDC to finalize the list of lines and highlight the restricting/constraints in the power flow on those lines with the existing CT ratio, so that if required, enhancement of CTs would be carried out by the concerned constituents accordingly. It was also suggested that details of CTs which are not being sent to NERLDC may also be highlighted. The required enhancement detail may be furnished by NERLDC in next OCC***

NERLDC may kindly intimate the current status.

C.7 <u>Furnishing Geographic Co-ordinates of Nodes of NER Grid:</u>

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

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

Now NERLDC informed that NEEPCO (Khupi S/S), POWERGRID (Mariani, Mokokchung, Melriat, Namsai, Tezu & Roing), NHPC (Loktak HEP & Lower Subhansiri HEP), OTPC (Palatana GBPP) and NTPC (Bongaigaon TPP) have not furnished these data till date.

Concerned constituents may intimate the current status.

C.8 Up-dated Operating Procedures of NER 2014:

As decided in last OCCM of NERPC, Operating Procedures of NER 2014 in MS Word format & MS Excel format uploaded in NERLDC website and also e-mailed to regional entities of NER to furnish comments/suggestion of this document by 20th September, 2014.

No comments/suggestion of this document received by 20th Sep'14. Operating Procedures of NER 2014 finalized and uploaded in website of NERLDC.

The subcommittee may like to note

C.9 Single Line Diagram of Sub-stations, Switching Stations & Power Stations of NER:

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

During 101st OCC meeting, DGM, NERLDC informed that only NERTS, Mizoram have submitted the required information. All other constituents are requested to submit the same at the earliest.

SE(O) stated that SLD of sub-stations, switching & power stations is one of the requisite information relating to preparation of DPR for R&U scheme for funding from PSDF and he mentioned that the revised formats as desired by NLDC/ CEA have been circulated to all the beneficiaries and requested them to furnish the updated status by 15th September 2014 so that the same may be pursued with NLDC/ CEA. He requested all the constituents to submit the DPR to NLDC and CEA with a copy to NERPC at the earliest.

AEGCL informed that Single Line Diagrams (SLDs) of some sub-stations in which the equipments required to be replaced may take some time. However, they assured that the same will be prepared and sent as early as possible. Further, AEGCL informed that DPR for R&U scheme has already sent by them to NLDC & CEA with a copy to NERPC.

Meghalaya & Nagaland have assured that the DPR for above scheme will be sent within one week.

Constituents may kindly furnish the information at the earliest.

C.11 Monthly MU requirement & availability of each state of NER as per format:

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

Requirement:

Name of State	Oct14	Nov14	Dec14	Jan15	Feb15
Ar. Pradesh	70	65	65	65	55
Assam	790	660	680	690	615
Manipur	65	65	65	70	55
Meghalaya	170	175	175	195	175
Mizoram	43	43	40	41	35
Nagaland	65	55	55	60	55
Tripura	120	110	120	125	100
NER	**1323**	**1173**	**1201**	**1246**	**1090**

Availability:

Name of State	Oct14	Nov14	Dec14	Jan15	Feb15
Ar. Pradesh	58	47	43	40	31
Assam	534	461	454	439	385
Manipur	72	64	59	56	47
Meghalaya	231	158	148	133	111
Mizoram	46	39	36	36	31
Nagaland	52	38	34	32	27
Tripura	147	134	138	137	112
NER	**1130**	**941**	**914**	**873**	**744**

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

Constituents may kindly furnish the data to NERLDC.

C.12 Monthly MW requirement & availability of each state of NER:

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

A. Peak Demand in MW

Name of State	Oct14	Nov14	Dec14	Jan15	Feb15
Ar. Pradesh	136	125	125	130	130
Assam	1380	1435	1450	1380	1235
Manipur	140	135	135	150	135
Meghalaya	335	350	345	390	385
Mizoram	87	90	80	79	78
Nagaland	140	120	125	130	120
Tripura	310	270	250	245	235
NER	**2528**	**2525**	**2460**	**2455**	**2318**

B. Peak Availability in MW

Name of State	Oct14	Nov14	Dec14	Jan15	Feb15
Ar. Pradesh	130	120	118	110	101
Assam	993	874	867	835	816
Manipur	134	115	118	109	105
Meghalaya	415	290	276	246	192
Mizoram	91	80	79	75	71
Nagaland	86	75	75	70	66
Tripura	295	285	281	275	272
NER	**2145**	**1839**	**1814**	**1719**	**1623**

A. Off Peak Demand in MW

Name of State	Oct14	Nov14	Dec14	Jan15	Feb15
Ar. Pradesh	75	69	69	72	72
Assam	856	890	899	856	766
Manipur	84	81	81	90	81
Meghalaya	201	210	207	234	231
Mizoram	57	59	52	51	51
Nagaland	84	72	75	78	72
Tripura	202	176	163	159	153
NER	**1485**	**1555**	**1470**	**1465**	**1426**

B. Off Peak Availability in MW

Name of State	Oct14	Nov14	Dec14	Jan15	Feb15
Ar. Pradesh	121	115	114	107	100
Assam	914	831	835	817	796
Manipur	114	104	105	102	98
Meghalaya	390	276	264	240	216
Mizoram	84	76	76	73	69
Nagaland	78	70	71	68	64
Tripura	284	279	274	271	268
NER	**1910**	**1751**	**1740**	**1465**	**1611**

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

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

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

Hydro generation planning for lean hydro period - On the onset of winter season reservoir levels in all the hydro stations have started depleting. Specially level of Loktak reservoir is very low and requires immediate reduction of generation. NERPC issued one letter to NHPC in this respect but no action is noticed. Proper planning is required to utilize the available water for entire lean hydro period, say upto May, 2015.

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

D.2 Water level and spillage data of Hydro Stations

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

During 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.

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

D.3 Outage Planning Transmission elements

It was agreed in the 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 October - December, 2014 as enclosed at Annexure- D.3

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

Subsequent to the commissioning of Azara S/s and associated transmission lines etc, it has been observed from system study that sensitivity towards BTPS has increased and accordingly the credible contingency for calculation of TTC of NER-ER Corridor under present condition is taken as collapse of tower of 220kV BTPS Salakati line [i.e. N-1-1 Criteria] and the TTC is 780/600 MW during Off-peak/Peak considering N-1 of Misa ICT also. Further as per detailed procedure for relieving congestion in real time operation of CERC, size of largest generating unit in the control area/ group of control area/Region will be import transmission reliability margin (TRM) of the corridor. Import TRM of NER-ER corridor is presently taken as 50 MW. However now 363 MW of Palatana is largest size of machine in NER Grid and being located in southern part of the region the TRM is directly related to the outage of this unit. Accordingly import TRM of NER-ER corridor needs to be revised; around 300 MW considering SPS based load relief is considered.

During 100th OCC meeting, the forum did not agree to import TRM of NER-ER corridor and revision of 300 MW load relief SPS. The forum requested NERPC Secretariat to take up the matter with NLDC on the matter.

During 101st OCC meeting, DGM, NERLDC further informed that as per detailed procedure for relieving congestion in real time operation of CERC, size of largest generating unit in the control area/ group of control area/Region is import transmission reliability margin (TRM) of the corridor. Installed capacity of Palatana Module 1 which is largest size machine of NER and located in southern part of the region is 363 MW. Import TRM is directly related to the outage of this machine.

Import TRM of NER-ER corridor was revised to 300 MW considering SPS based load relief. However, Import TRM of NER-ER corridor will be 35/50 MW during the period of outage of Module of Palatana.

NERLDC gave presentation on system studies, carried out by them, elaborating the methods to arrive at the TRM of 300 MW. The issues of sensitivities of different corridors in case of tripping of Palatana units which result in enhanced TRM were appreciated by the constituents.

The forum requested NERPC Secretariat to take up the matter with higher authorities on the matter so that some special relaxation for TRM may be given to NER states considering insufficient transmission corridors. In the meantime, system study group will finalize the amount of SPS related load relief for each state so that TRM may be reduced to desirable amount.

The sub-Committee may like to discuss.

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

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

During 100th OCC meeting, OTPC representative informed that the matter will be taken up by them with the manufacturer and the status would be intimated in the next OCC meeting.

The unit was under shut down w.e.f 20.08.14 to 01.09.14 and it is understood that OTPC carried out several activities in presence of manufacturer's representative.

During 101st OCC meeting, OTPC representative informed that the run-back frequency is set at 50.7 Hertz and re-setting frequency is set at 50.5 Hertz. The machine settings are yet to be confirmed by GE which may be intimated in the next OCC meeting.

OTPC may intimate the current status.

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

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

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

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

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

During 100th OCC meeting, SE, Me. ECL informed that the DPR for the same is almost ready and the same will be sent to NERPC Secretariat for further action in this regard. But till date no information has been received.

During 101st OCC meeting, the forum requested NERLDC to carryout system study to assess the required loadability of the above line and intimate the Operation & Protection sub-committee responsible for system security & reliability so that the concerned constituents may take appropriate action as per recommendation of the committee.

Me. ECL/NERLDC may kindly intimate the current status.

D.7 Power Demand of Manipur:

Manipur vide letter dated 4th October, 2014 has requested NERLDC to conduct a load flow studies along with feasibility report for drawing 130 MW and 110 MW to meet the peak and off-peak demand of Manipur as MSPDCL have completed agreements and formalities with PTC and other registered traders to supply and make up the shortfall of power between demand and scheduled entitlement for November, 2014 to June, 2015.

NERLDC may kindly intimate the current status.

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

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

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

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

After detailed deliberation, the sub-committee in the 101st OCC meeting have decided that Ar. Pradesh should ensured that first priority of power supply should be extended to their local domestic consumers, then uninterrupted construction power supply to Kameng HEP of NEEPCO and whatever surplus after meeting these two loads, they can extend power supply to the other bulk consumer at Bhalukpong.

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

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

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

During 100th OCC meeting, AGM, NTPC stated that test charging of Bongaigoan ICT is done. 2 bays will be test charged from Balipara end in the 2nd week of September 2014.

NTPC may kindly intimate the status.

D.10 Ramp up & Ramp down of Gas thermal stations:

The gas thermal stations have expressed their difficulty in maintaining generation as per the revisions issued by RLDC, on the requests of constituents, due to the fact that the ramp up or ramp down rates for initial as well as final blocks are not in line with the prescribed rates furnished by them. To solve this problem it is proposed to prepare the schedules considering this aspect which may result in some variations w.r.t. the desired revisions by the states in the initial & final 2/3 blocks.

Committee may like to discuss & finalize the procedure.

D.11 Revision of requisition & DC for the next day:

As per stipulations of IEGC final requests for revision for requisition as well as for generation (DC), for the next day, by states & generators respectively should be furnished to RLDC by 22:00 hrs so that RLDC can issue R1 by 23:00hrs for implementation w.e.f. 00:00 hrs of next day. It is observed that this procedure is not being followed on many occasions resulting in difficulty.

Committee may like to discuss & constituents are requested to follow the procedure of IEGC to avoid any confusion.

D.12 Finalization of Annual Load Generation Balannced Report (LGBR) for peak and off-peak scenerios and the Annual outage plan for 2015-16 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.

Committee may like to discuss.

D.13 Automatic Demand Management Scheme (ADMS):

Assam stated that the Honorable Commission in its order dated 25.04.2014 in Petition No. SM/005/ 2014 has directed all Officer In Charge of the respondents State Transmission Utilities/ SLDCs to Show cause latest by 15.05.2014, as to why action under Section 142 of the Electricity act 2003 should not be taken against them for non compliance with CERC's direction and the provisions of the Act and the Grid Code with regard to implementation of the Automatic Load Management Scheme.

In this regard a reply was given by Assam to Hon'ble commission that due to non availability of in house expert, the ADMS could not be implemented in Assam. However the other schemes like installation of UFR, Islanding scheme, SPS etc. were intimated to the commission. But the petitioner NLDC in the hearing intimated that the ADMS scheme is basically to restrict the over drawl of power from the system and every State/Distribution Licensees should install ADMS without any delay in order to maintain the security of the grid.

During 98th OCC meeting, SE(O) informed that ADMS was discussed in other RPCs also and stated that none of the States have implemented ADMS fully. However, some states in SR are in the progress of using ToD metering for bulk consumers and tariff is different for different time so as to encourage them to shift part of their overall electricity use from peak demand where the tariff is high. By using this mechanism overdrawl especially during peak hours is reduced. He also mentioned that best way to implement this ADMS is by integrating through SCADA which constituents can explore the possibility. Further, he stated that many new schemes proposed by POWERGRID viz., GSES, WAMS etc., are in the offing but the logic, technology and so on are yet to be fully understood. He requested constituents to send their views to CERC about the difficulties faced by them.

AGM, SLDC, Assam stated that issue has been taken up by them with CERC and they have explained to them about the action taken by Assam like UFR based load shedding and the GSES scheme of POWERGRID etc.,, but the same was not agreed by CERC.

The sub-committee unanimously decided that they will request NLDC or POWERGRID to arrange the seminar in this regard so that the logic, technology, communication facilities etc., need to be understood first before they can proceed further.

During 101st OCC meeting, SE(O) informed that he has discussed the matter with other RPCs and only WRPC is in advance stage for implementation of ADMS. However, a presentation on ADMS related issue was given by TATA Power in OCC meeting of NRPC and stated that he will take up the matter with them and request to give a presentation in next OCC meeting.

However, considering the seriousness of the matter, the constituents may kindly inform the current status & Committee may like to discuss.

D.14 Estimated Transmission Availability Certificate (TAC) for the month of September, 2014.

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

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

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

During 101st OCC meeting, SE (O) informed that as per Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014-19, the Transmission System Availability factor for a calendar month (TAFM) w.e.f. 1st April, 2014 shall be calculated by the respective transmission licensee, got it verified by the concerned RLDC and certified by the Member Secretary, Regional Power Committee of the concerned region, separately for each AC and HVDC transmission system. He highlighted some of the important points on the regulation regarding transmission availability calculations as follows:

- For Ac system, two trippings per year shall be allowed.

- After two trippings in a year, additional 12 hours outage shall be considered in addition to the actual outage
- In case of outage of a transmission element affecting evacuation of power from the generating station, outage hour shall be multiplied by a factor of 2.
- The weightage factor for each category of transmission elements shall be calculated as per regulation.

The procedure for finalizing certification by NERLDC was deliberated in detail and the following points were agreed: -

Planned Outages: -

1. In all cases of outages, RLDC will certify the actual outage period. The outage period will be cross-checked with the approved outage period in OCC forum. All planned outages should be availed by the executing agency as approved in the OCC forum.

2. Any deferment from approved outage hours and approved outage days may be intimated by the agency to NERPC with a copy to NERLDC, justifying the reason of deferment. The deferred hours/ days without proper justification will be deducted from the availability period.

Emergency Outages: -

1. Outages beyond the control of the agency when neither RPC nor RLDC could be informed earlier and immediate remedial actions are required.
2. Outages planned in OCC forum but are of emergency in nature like tower in danger; CBs need immediate replacement, etc. However, the agency has to intimate RPC with a copy to RLDC.
3. Outages that cannot be delayed till next OCC forum for proper approval.
4. However, the agency has to intimate RLDC with the reason of outage for all the above cases which may be approved in OCC forum.

Transient Outages: -

1. Outages that are of transient in nature due to lightning, mal-operation of relays, etc.
2. Transient Earth Fault, Auto-reclosure, phase-to-phase fault, etc.
3. Outages due to infringements.
4. However, the agency has to intimate RLDC with the reason of outage for all the above cases which may be approved in OCC forum.

Outages due to others: -

1. Outages due to fault in the downstream protection.
2. Outages as per direction of RLDC for desired system condition.
3. Outages due force majeure/ Acts of God.
4. However, the agency has to intimate RLDC with the reason of outage for all the above cases which may be approved in OCC forum.

Force Majeure: -

1. Act of God including lightning, drought, fire and explosion, earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, geological surprises, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred years; **or**
2. Any act of war, invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action; **or**
3. Industry wide strikes and labour disturbances having a nationwide impact in India;
4. However, the agency has to intimate RLDC with the reason of outage for all the above cases which may be approved in OCC forum.

Conditions given in SoR: -

1. Only 2 trippings per annum allowed for each AC system, additional 12 hours may be added for each tripping in case of trippings more than 2 in a year.
2. Further, in case of outage of a transmission element affecting evacuation of power from a generating station, outage hours shall be multiplied by a factor of **2**.

Further suggestions of PCC/ OCC: -

1. In case of force majeure due to lightning, the agency may send DR waveform to RLDC/ RPC for further studies.
2. Option of installing lightning mapping was suggested.
3. NERTS was requested to give presentation in next OCC to highlight the DR waveform nature so that same can be used for certification.
4. Two trippings per year is allowed for each AC system.
5. In case of trippings attributable to other agency, system study group may find out the cause of tripping, only tripping attributable to the concerned agency may be considered for 2 trippings per annum.

6. In case of trippings affecting evacuation of power from a generating station, ***the same may be reviewed in next OCC/ PCC to finalize: -***

   a) Whether lines directly connected to the station should be considered? **Or**

   b) Lines not directly connected to the station but also affecting the generation should also be considered?

Further, sub-committee discussed the issue for understanding of trippings of line due to lightening.

DGM, POWERGRID informed that the lightening phenomenon can be understood by some of the methods below:

(a) DR Record

(b) Installation of Lightning mapping equipment

(c) Enquiring whether condition of particular locality.

The sub-committee requested POWERGRID to give presentation in next OCC of lightning phenomenon and also to have better understanding of all the issues before finalization. POWERGRID agreed.

The Sub-Committee may like to discuss.

Any other item:

Date and Venue of next OCC

It is proposed to hold the 103rd OCC meeting of NERPC on second week of November, 2014. The exact venue will be intimated in due course.

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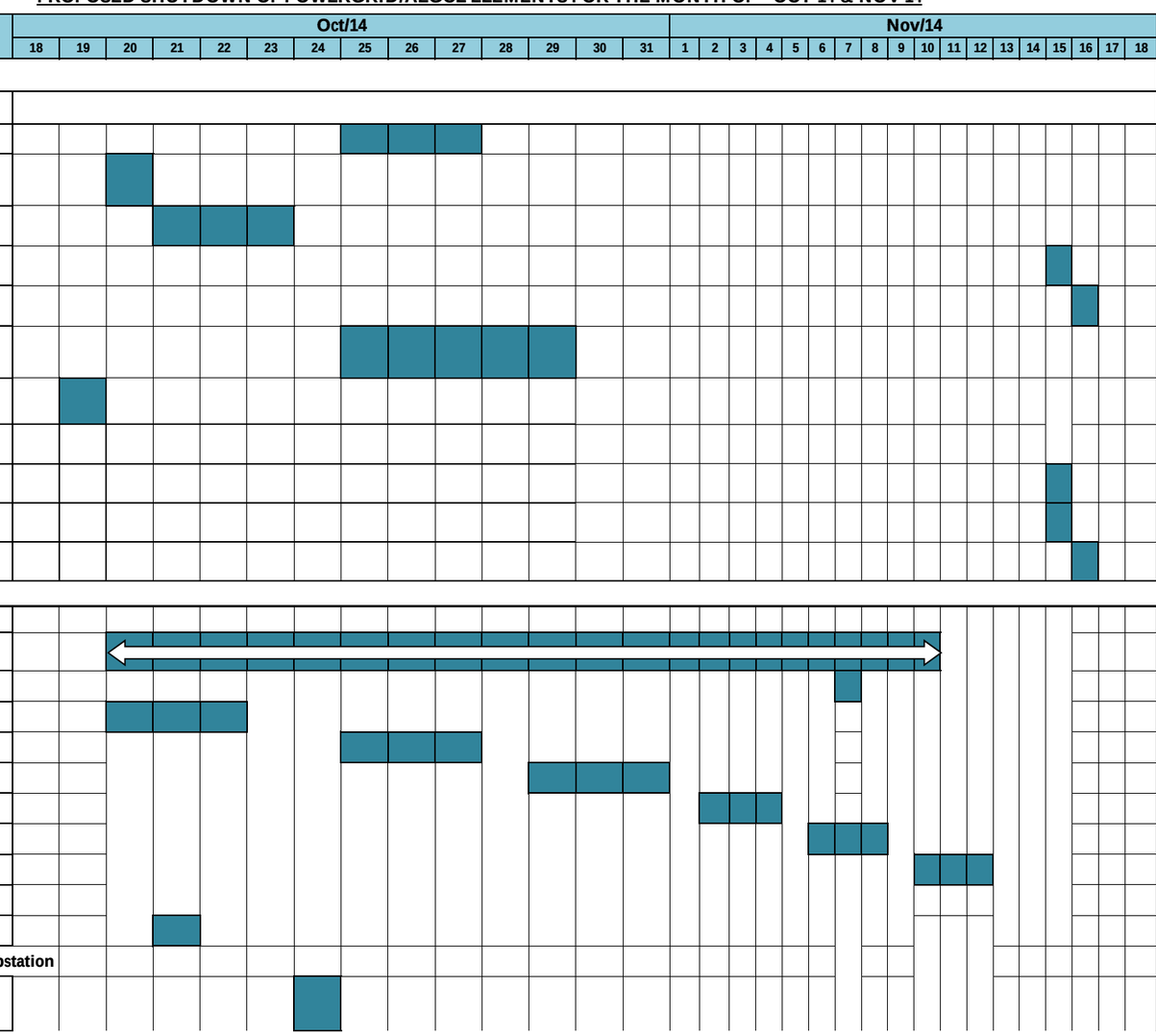
ANNEXURE D.3

PROPOSED SHUTDOWN OF POWERGRID/AEGCL ELEMENTS FOR THE MONTH OF OCT-14 & NOV'14

SN	Name of Element	Time	Purpose
A.TRANSMISSION LINES			
	PGCIL		
1	132KV Badarpur-Jiribam line	7:00 to 15:00 Hrs	For facilitating stringing work of 400KV D/C Silchar-Imphal line
2	132KV Badarpur-Badarpur(ASEB)	7:00 to 15:00 Hrs	For mass-replacement of existing Insulators in the line(passing through heavily polluted zone) with Polymer Insulators.
3	132KV Poilapool-Jiribam line	7:00 to 15:00 Hrs	For facilitating stringing work of 400KV D/C Silchar-Imphal line
4	400KV Misa-Balipara-1	7:00 to 15:00 Hrs	For facilitating re-stringing work of Earthwiire in Diamond config in 220KV Samagiuri-Sarusajai at loc.95-96 for enhanced electrical clearance
5	400KV Misa-Balipara-2	7:00 to 15:00 Hrs	
6	400KV Ranganadi-Balipara-II	7:00 to 15:00 Hrs	Erection of new tower at loc.37N in connection with Diversion of theline on account of Railway track construction.
7	132KV Silchar-Dullavcherra	7:00 to 15:00 Hrs	For facilitating safe working clearance in Bay erection works at 132KV Hailkanadi Substation
	AEGCL		
1	220KV Mirza-Sarusajai-I	12.00 to 14.00 Hrs	Tightening clamp connectors
2	220KV Mirza-Agia	12.00 to 14.00 Hrs	Tightening clamp connectors
3	400KV Silchar - Mirza	10.00 to 16.00 Hrs	Detection & rectification of DC earth fault relay
B. SUBSTATION			
1	**400KV BALIPARA SUBSTATION**		
	400KV, 50MVAR Bus Reactor-I	Cont SD up to 10.11.14(16:00 Hr)	For Gasket replacement work
	220/132KV , 50MVAR ICT(NEEPCO)	7:00 to 15:00 Hrs	For C & Tan delta measurement & other AMP activities.
	400KV, 50MVAR Bus Reactor-I Main Bay	7:00 to 15:00 Hrs	Fixing alignment of existing Isolators. No effect on feeder
	400KV, 50MVAR Bus Reactor-I Tie Bay	7:00 to 15:00 Hrs	Fixing alignment of existing Isolators. No effect on feeder
	400KV Misa-II Main Bay	7:00 to 15:00 Hrs	Fixing alignment of existing Isolators. No effect on feeder
	400KV Misa-II Tie Bay	7:00 to 15:00 Hrs	Fixing alignment of existing Isolators. No effect on feeder
	400KV Misa-I Main Bay	7:00 to 15:00 Hrs	Fixing alignment of existing Isolators. No effect on feeder
	400KV Misa-I Tie Bay	7:00 to 15:00 Hrs	Fixing alignment of existing Isolators. No effect on feeder
2	**400KV SILCHAR SUBSTATION**		
	400KV, 50MVAR ,Pallatana-I Line Reactor	7:00 to 15:00 Hrs	For C & Tan delta measurement & other AMP activities.
3	**132KV Biswanath Chariali(Pavoi) AEGCL Substation**		
	132KV Main Bus	10:00 to 15:00 Hr	For facilitating Bay extension works assoc iated with 132KV D/C B'Chariali-B'Chariali line



Daytime SD

: Continuous Shutdown

Shutdown for 102nd OCCM