

North Eastern Regional Power Committee

MINUTES OF THE 121st OPERATION COORDINATION

SUB-COMMITTEE MEETING OF NERPC

Date : 05/05/2016 (Thursday)
Time : 10:00 hrs
Venue : "Hotel Nandan", Guwahati.

The List of Participants in the 121st OCC Meeting is attached at **Annexure - I**. Shri P.K. Mishra, Member Secretary, NERPC welcomed all the participants to the 121st OCC meeting. He noted the absence of members of P&E Dept. Mizoram, P&E Dept. Nagaland and NHPC with concern. He then requested all the members to actively participate in the meeting. Shri R. Kumar, GM (OS), NTPC congratulated all the constituents on the successful start of commercial operation of Bongaigaon Thermal Power Plant- Unit I. He informed that in case there is deficit of power, power should not be surrendered. Upon beneficiaries voicing that power surrendering is due to high energy cost from BgTPP, he assured that the matter has been noted by them and necessary action to reduce the costs is being looked into with optimization of fuel etc. He also hoped that as soon as other two units are commissioned fixed cost would be reduced.

Thereafter, Member Secretary requested Shri B. Lyngkhoi, Director/SE(O) to take up the agenda items for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 120th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

SE (O) informed that minutes of 120th meeting of Operation Sub-committee held on 6th April, 2016 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2015/4556-4591 dated 12th April, 2016.

The Sub-committee confirmed the minutes of 120th OCCM of NERPC as no comments/observations were received from the constituents.

ITEMS FOR DISCUSSION

B. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING MARCH, 2016

As per the data made available by NERLDC, the grid performance parameters for March, 2016 are given below:

NER PERFORMANCE DURING APRIL, 2016

States	Energy Met (MU)		w.r.t. Mar,16 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Mar,16 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In Apr, 16
	Apr-16	Mar-16		Apr-16	Mar-16		
Ar. Pradesh	53.17	61.47	-13.50	54.38	62.19	-12.56	-2.28
Assam	578.78	667.81	-13.33	634.10	693.58	-8.58	-9.56
Manipur	50.76	69.44	-26.90	53.97	70.51	-23.46	-6.32
Meghalaya	119.57	142.73	-16.23	119.57	142.73	-16.23	0.00
Mizoram	39.97	41.05	-2.63	41.29	41.85	-1.34	-3.30
Nagaland	51.21	60.67	-15.59	52.86	61.81	-14.48	-3.22
Tripura	142.32	120.45	18.16	145.37	123.41	17.79	-2.14
Region	1035.77	1163.62	-10.99	1101.55	1196.08	-7.90	-6.35

States	Demand Met (MW)		w.r.t. Mar,16 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Mar,16 % inc (+) /dec (-)	% inc (+) /dec (-) of Demand vs met. In April, 16
	Apr-16	Mar-16		Apr-16	Mar-16		
Ar. Pradesh	139	113	23.01	141	115	22.61	-1.44
Assam	1356	1316	3.04	1446	1343	7.67	-6.64
Manipur	146	155	-5.81	146	155	-5.81	0.00
Meghalaya	295	315	-6.35	295	315	-6.35	0.00
Mizoram	82	84	-2.38	83	86	-3.49	-1.22
Nagaland	110	114	-3.51	110	114	-3.51	0.00
Tripura	264	248	6.45	272	251	8.37	-3.03
Region	2358	2367	-0.38	2479	2442	1.52	-5.13

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	Apr-16	Mar-16
Total Generation in NER (Gross)	1626.52	1019.18
Total Central Sector Generation (Gross)	1380.45	783.60
Total State Sector Generation (Gross)	246.07	235.58
Inter-Regional Energy Exchange		
(a) NER-ER	327.38	152.77
(b) ER-NER	402.07	283.69
(c)NER-NR	11.70	101.91
(d)NR-NER	301.20	53.84
© Net Import	364.2	82.85

AVERAGE FREQUENCY (Hz)

Month---->	Apr-16	Mar-16
	% of Time	% of Time
Below 49.9 Hz	12.74	8.69
Between 49.9 to 50.05 Hz	69.92	70.02
Above 50.05 Hz	17.34	21.29
Average	49.98	50.00
Maximum	50.32	50.35
Minimum	49.64	49.68

The Sub-committee noted as above.

FOLLOW UP ACTION

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

During 121st OCC meeting, the status as informed by NTPC, NEEPCO, POWERGRID and DOP, Nagaland is as follows:

SN	Items	Status as given in 121 st OCC Meeting	Status as given in 120 th OCC Meeting
a. New Projects			
1	Trial operation and CoD of Unit -I of Bongaigoan TPS of NTPC	CoD on 00:00 Hrs of 02.04.2016.	CoD on 01.04.2016.
2	400/220kV, 2x315 MVA ICT of NTPC at Bongaigaon	Testing is going on. ICT-1 will be commissioned within 30 th June, 2016. System study required to assess loading.	No representative
3	Trial operation and CoD of Monarchak GBPP of NEEPCO	November, 2016 (subject to gas availability)	November, 2016
4	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	The project is under review of Internal Committee of NEEPCO. Date(s) would be as per Committee Report.	November, 2016 March, 2017
5	Pare HEP of NEEPCO (2 x 55 MW)	June, 2017	June, 2017
6	400 kV D/C Silchar - Melriat line of PGCIL	Existing Contract has been terminated. Retendering in process.	December, 2016
7	220kV Rangia - Salakati of AEGCL	June, 2016	June, 2016
8	132kV Monarchak - Surjamaninagar D/C of TSECL	October, 2016	No representative
9	400/132 kV, 2nd 125 MVA ICT at Pallatana	June, 2016	June, 2016
10	132kV Pasighat - Aalong of Ar. Pradesh	December, 2016	No representative
11	132kV Doyang- Wokha	No representative	July 2016
12	220 kV Line Reactor Bay at AGBPP	May,2016	May,2016
13	220 kV, 20 MVAR Bus Reactor at AGBPP	May,2016	May,2016

14	132kV Surjamaninagar Bay at OTPC	July, 2016	July, 2016
15	400kV D/C Balipara – Kameng of Ar. Pradesh	June,2016	June,2016
16	RHEP 80 MVAR Bus Reactor	Referred to next SCM of CEA.	Referred to next SCM of CEA.
17	Balipara 315 MVA 400/220 kV ICT	May,2016	May,2016
18	SLDCs (Ar. Pradesh, Manipur, Mizoram, Nagaland)	Sept/Oct, 2016 (Building hand over by respective state by June16). For Manipur-July16 & for Meghalaya-June,16	Sept/Oct, 2016 (Building hand over by respective state by June16). For Manipur-July16
b. Elements under breakdown/ up-gradation			
20	63MVAR Reactor at Byrnihat of Me.PTCL	June 2016	Order placed, Commissioning by June 2016
21	Up-gradation of 132 kV Lumshnong-Panchgram line	Line Survey Work(s) going on.	Tendering in process
22	Switchable line Reactors at 400kV Balipara & Bongaigaon	Balipara- July 2016 Bongaigaon- September, 2016	April 2016 (at Balipara end) Bongaigaon end by September, 2016.
23	PLCC Panels at Loktak end of Loktak – Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	July 2016	July 2016
24	LILO of 132kV Ranganadi – Nirjuli at Pare of NEEPCO	May 2016	May 2016
25	LILO of 132kV Ranganadi – Itanagar (Chimpu) at Pare of Ar. Pradesh	LILO of T/L completed at Pare. However 132 kV Bay at RHEP not done.	No representative

Deliberation of the Sub-Committee

DGM (AM), POWERGRID reiterated that the delay of commissioning of Kameng Generation will cause longer mismatch of Generation and Transmission as POWERGRID will construct the 400kV Kameng – Balipara Line much ahead of generation. S.E (O) informed that the matter has been taken up with NEEPCO for early commissioning of Kameng HEP.

The Sub-committee noted as above.

Action: NEEPCO.

C.2 CT Ratio of Transmission Lines & Enhancement of Loadability of lines in NER:

The latest status as informed in the 120th OCC is given in **Annexure - C.2.**

As indicated by DGM (AM), POWERGRID, procurement of 21 nos. CTs for all lines up-gradation of CT ratios of POWERGRID, including 132 kV Doyang – Dimapur D/C, will take at least 6 months time.

Deliberation of the Sub-Committee

DGM (AM), POWERGRID informed that requisition for the new CTs have been given. It would take at least six months for their delivery/installation. AGM, SLDC, AEGCL proposed that 132 kV Khandong-Umrangso may be included to the list keeping in view the forecasted load on that feeder.

The Sub-Committee noted as above.

C.3 Finalization of Operating Procedures of State Grid of NER:

As per clause no 5.1.g of IEGC, detailed operating procedures for each state grid shall be developed and maintained by the respective SLDC.

Deliberation of the sub-Committee:

Status as intimated during 121st OCC forum of NERPC is as follow:-

SI No	Description	Status of approval from OCC forum of NERPC
1	Operating Procedure of Ar. Pradesh 2015	By 31.05.2016
2	Operating Procedure of Assam 2015	Submitted
3	Operating Procedure of Manipur 2015	By 15.05.2016
4	Operating Procedure of Meghalaya 2015	Submitted
5	Operating Procedure of Mizoram 2015	Submitted
6	Operating Procedure of Nagaland 2015	Submitted
7	Operating Procedure of Tripura 2015	By 31.05.2016

NERLDC informed that for finalization of operating procedures of NER, Updated Communication Network of POWERGRID, Assam, MeECL and Tripura are required. Also the procedure followed by Tripura for power supply to Bangladesh should be duly provided to NERLDC.

The Sub-committee noted as above.

Action: DoP Ar .Pradesh, MSPCL & TSECL.

C.4 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 2016-17 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	Apr16	May16	Jun16	Jul16	Aug16	Sep16
Ar. Pradesh	67	71	68	73	73	73
Assam	775	791	816	872	872	847
Manipur	82	77	76	80	80	80
Meghalaya	170	175	165	175	175	170
Mizoram	42	42	42	45	45	45
Nagaland	65	68	72	77	77	72
Tripura	112	122	122	122	128	122
NER	1313	1346	1361	1424	1450	1409

Name of State	Oct16	Nov16	Dec16	Jan17	Feb17	Mar17
Ar. Pradesh	73	68	68	68	59	74
Assam	816	714	714	714	648	740
Manipur	85	88	95	92	88	90
Meghalaya	185	195	210	220	185	190
Mizoram	46	46	48	48	42	42
Nagaland	74	68	71	69	68	68
Tripura	133	112	122	128	102	128
NER	1412	1291	1328	1339	1192	1332

Availability:

Name of State	Apr16	May16	Jun16	Jul16	Aug16	Sep16
Ar. Pradesh	46	58	82	92	79	74
Assam	483	544	649	737	703	682
Manipur	58	69	85	108	102	99
Meghalaya	100	149	191	250	258	258
Mizoram	38	44	54	63	59	57
Nagaland	42	51	66	83	79	77
Tripura	185	204	204	222	213	208
NER	950	1119	1330	1557	1493	1455

Name of State	Oct16	Nov16	Dec16	Jan17	Feb17	Mar17
Ar. Pradesh	67	52	54	51	45	55
Assam	648	567	580	567	502	564
Manipur	95	81	76	71	61	69
Meghalaya	209	150	138	125	115	123
Mizoram	54	48	44	43	39	45
Nagaland	71	55	54	50	45	50
Tripura	225	211	224	222	190	217
NER	1370	1163	1171	1130	997	1121

Deliberation of the Sub-Committee

NERLDC stated that quantum of power against Bangladesh drawal should be reflected in the table either in Tripura drawal figure or separately. Members agreed to that.

The Sub-committee noted as above.

C.5 Monthly MW requirement & availability of each state of NER:

The following figures were taken from LGBR 2016-17 of NERPC. These figures are to be reviewed.

A. Peak Demand in MW

Name of State	Apr16	May16	Jun16	Jul16	Aug16	Sep16
Ar. Pradesh	142	142	137	137	142	147
Assam	1451	1472	1498	1508	1560	1539
Manipur	168	168	168	163	168	163
Meghalaya	320	320	320	320	320	320
Mizoram	90	90	95	90	90	90
Nagaland	125	125	125	140	140	140
Tripura	270	291	296	296	301	291
NER	2651	2693	2724	2739	2801	2775

Name of State	Oct16	Nov16	Dec16	Jan17	Feb17	Mar17
Ar. Pradesh	143	132	132	137	137	147
Assam	1513	1508	1518	1456	1352	1466
Manipur	163	179	184	179	179	173
Meghalaya	370	380	390	390	370	340
Mizoram	95	95	101	101	90	95
Nagaland	140	135	135	135	125	125
Tripura	321	275	260	250	250	281
NER	2790	2749	2760	2688	2558	2707

B. Peak Availability in MW

Name of State	Apr16	May16	Jun16	Jul16	Aug16	Sep16
Ar. Pradesh	127	144	195	165	140	138
Assam	1012	1134	1305	1249	1170	1222
Manipur	131	173	184	196	179	181
Meghalaya	257	304	373	433	455	482
Mizoram	83	100	123	117	108	111
Nagaland	109	129	145	142	134	137
Tripura	324	355	369	365	350	357
NER	2043	2340	2695	2675	2534	2627

Name of State	Oct16	Nov16	Dec16	Jan17	Feb17	Mar17
Ar. Pradesh	154	140	129	128	127	179
Assam	1251	1202	1169	1152	1108	1278
Manipur	188	175	147	151	142	188
Meghalaya	442	360	340	312	346	386
Mizoram	117	109	99	98	101	120
Nagaland	142	129	124	122	120	141
Tripura	386	369	373	370	355	392
NER	2681	2484	2381	2331	2298	2682

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

Name of State	Apr16	May16	Jun16	Jul16	Aug16	Sep16
Ar. Pradesh	78	78	75	75	78	81
Assam	943	898	944	950	952	939
Manipur	109	109	109	106	109	106
Meghalaya	223	230	230	230	230	230
Mizoram	59	59	62	59	59	59
Nagaland	75	75	75	84	84	84
Tripura	184	198	201	201	205	198
NER	1670	1639	1689	1698	1706	1689

Name of State	Oct16	Nov16	Dec16	Jan17	Feb17	Mar17
Ar. Pradesh	79	73	73	75	75	81
Assam	983	935	956	932	852	909
Manipur	106	116	120	116	116	112
Meghalaya	230	235	240	240	230	230
Mizoram	62	62	66	66	59	62
Nagaland	84	81	81	81	75	75
Tripura	218	187	177	170	170	191
NER	1760	1687	1708	1677	1581	1661

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

Name of State	Apr16	May16	Jun16	Jul16	Aug16	Sep16
Ar. Pradesh	40	50	99	122	102	100
Assam	734	824	1014	1126	1048	1068
Manipur	65	87	119	168	152	148
Meghalaya	198	230	305	416	428	445
Mizoram	50	61	88	102	93	93
Nagaland	72	84	105	123	115	116
Tripura	362	303	326	345	331	335
NER	1420	1640	2054	2402	2269	2304

Name of State	Oct16	Nov16	Dec16	Jan17	Feb17	Mar17
Ar. Pradesh	81	56	59	57	72	69
Assam	982	927	956	935	927	985
Manipur	132	115	92	84	94	102
Meghalaya	377	295	290	261	303	318
Mizoram	86	75	72	69	78	82
Nagaland	103	89	92	89	93	95
Tripura	343	317	335	329	322	339
NER	2104	1875	1896	1824	1888	1989

Deliberation of the sub-Committee:

AGM, SLDC, AEGCL opined that 100 MW power supply to Bangladesh should be included in the LGBR of 2016-17. Bangladesh should be treated as internal customer of Tripura for this purpose. The forum agreed.

The Sub-Committee noted as above.

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

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

Generating Station	Units running	MW	MU	Reservoir
Khandong	1	25	1.176	719.45
Kopili-II	1	25		
Kopili	0	0	0.000	605.97
Ranganadi	3	405	Subject to inflow	
Doyang	3	75	0.09675	306.4
Loktak	3	105	2.478	767.09
AGBPP	-	-	-	-
AGTPP	-	-	-	-

Hydro planning

Sr. Mgr. NEEPCO informed that tunnel filling started from 30th April 2016 and it is expected that Unit-I would resume generation from 15th May 2016. Regarding low water level at Doyang HEP, DGM(SO-II), NERLDC stated that in case water level falls below MDDL no DC should be given by the power plant.

The Committee discussed and approved the proposed shutdown by Generating Stations and the same is given in Annexure - D.2 (along with trans-element).

D.2 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.

Deliberation in the meeting

The sub-Committee discussed and approved the proposals received from the constituents regarding transmission elements for May, 2016 - June, 2016 and the same has already been uploaded in website of NERPC.

D.3 Furnishing Reactive Power Absorption Data for last one year:

As per Para no. 9.9.1 of Recommendations of Enquiry Committee on Grid Disturbance, the regulatory provisions regarding absorption of reactive power by generating units needs to be implemented.

It is requested that you may please furnish instances when Reactive Power support was provided by Generators for last one year.

The latest Capability Curve of each generator in Soft Copy may also be provided.

In 118th OCCM, NERLDC requested NEEPCO to furnish reactive power absorption data of their generators as per format circulated by NERLDC, centrally from NEEPCO Control Room, Shillong, for ease of co-ordination between NERLDC and ISGS generators of NEEPCO. NEEPCO agreed to the same.

NERLDC also requested NHPC to furnish the reactive power absorption data of Loktak HEP as per format. NHPC agreed to start furnishing data from March 2016 onwards.

In 119th OCCM, NEEPCO informed the forum that data is being submitted for AGTPP regularly and every effort is being made to submit for the other stations. NERLDC informed the forum that the data received from OTPC is intermittent and NHPC data of Mar'16 onwards has not been sent. Forum advised the concerned CSGs' to kindly conform. NERLDC requested the concerned utilities to furnish monthly data by 10th of next month which has been agreed by the utilities.

During 120th OCCM, NERLDC informed that daily report in the desired format is being submitted by AGTPP (RC Nagar) regularly. The forum requested other power plants to kindly submit the same.

Deliberation in the meeting

NTPC informed that the data would be submitted by 21st to 30th of the month. NEEPCO plants (other than AGTCCPP) were requested to submit the necessary data.

Action: NEEPCO, NTPC & NHPC.

D.4 Furnishing of Technical and Commercial data for computation of PoC Charges and Losses for Q2 of 2016-17 (July 2016 – September 2016):

As per provisions of the CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time, the following data are required for Computation of PoC Charges & Losses for 2nd Quarter of 2016-17 (July 2016 – September 2016):

- Yearly Transmission Charges (YTC) – As per Format I
- Technical details of new transmission elements & generating units which are expected to commence commercial operation during July 2016 - September 2016 (As per Format-II)
- Details of Long term and Medium term contracts (As per Format IIIA)
- Nodewise Forecast maximum withdrawal and injection data (As per Format IIIB)
- Maximum Injection and Withdrawal data for corresponding quarter of last 3 years (As per Format IIIC)

Letter in this regard from NLDC, POSOCO and Approved Formats for furnishing the relevant data (Format I, Format II, Format III) have been emailed to all DICs of NER on 05th April 2016. Formats for data submission are also available on website of NLDC at the following link: http://posoco.in/transmission_pricing/formats.

The requisite data/information may please be forwarded to NLDC at implementingagency@posoco.in with a copy to NERLDC at nerldc@yahoo.co.in latest by **30th April 2016**.

AEGCL, MePTCL and TSECL are requested to indicate the YTC data for July-September 2016 period of their transmission lines approved by CERC for inclusion in PoC Computations. The YTC data must be submitted as per Format-I only (Approved Format).

AEGCL, NEEPCO, DoP, Nagaland and MSPCL has already submitted the data.

DoP, Arunachal Pradesh, MePTCL, P&E, Mizoram, TSECL, NTPC, NHPC and OTPC is requested to submit the data.

Deliberation in the meeting

During 121st OCCM, members deliberated and reviewed the generation and demand data for **Q2(2016-17)** as furnished by NLDC and the same is attached at **Annexure –**

D.4.

Figures to be discussed and modifications as follows:

- a) Ranganadi => Restrict to 401 MW (Installed – Auxiliary Consumption)
- b) AGTCCPP(RCNagar, NEEPCO) => 124 MW

- c) Kopili NEEPCO => 198 MW
- d) Khandong NEEPCO => 66 MW
- e) AGBPP(Kathalguri, NEEPCO) => 200 MW
- f) TGBP(Monarchak, NEEPCO) => Due to unavailability of gas figure kept at 0MW
- g) Palatana => 547 MW.
- h) Loktak => 100 MW.
- i) BgTPP(NTPC) => 228 MW.
- j) Meghalaya => Generation figure is to be 295 MW and demand figure 280 MW.
- k) Assam => Demand of Assam to be changed to 1306 MW and generation figure to 284 MW.
- l) Manipur => Demand to be kept as 160 MW
- m) Ar. Pradesh => Demand to be taken as 130 MW
- n) Mizoram => Generation figure is to be 4 MW and demand figure 88 MW.
- o) Nagaland => Generation figure is to be 24 MW and demand figure 120 MW.
- p) Tripura => Generation figure is to be 90 MW and demand figure 365 MW.

Sr. Engr, NERLDC once again requested the concerned constituents to submit the YTC data. Sr. Mgr, TSECL requested that intimation regarding Validation Committee be given to TSECL at least 4/5 days in advance.

The Sub-committee noted as above.

D.5 Estimated Transmission Availability Certificate (TAC) for the month of March, 2016 & Proposed Methodology from April, 2016 onwards:

NETC and POWERGRID have submitted TAC data of March, 2016 in the first/second week of April, 2016. This will enable issuance of verification by NERLDC and certification by NERPC on monthly basis within stipulated time frame. Both NETC and POWERGRID are advised to follow the agreed time schedule in future to avoid accumulation of reports and corresponding delay.

The following procedure is presently being followed for verification of outage of transmission elements of POWERGRID till date:

1. The outage data for month 1 is submitted to NERLDC by the utility by 2nd week of month 2 for verification. NERLDC verifies the same & forwards the observations/ comments to NERPC by end of month 2. Trippings & other critical outages for month 1 are discussed in the succeeding PCC meeting (i.e. in month 3).

2. Based on comments/observations of NERLDC & PCC (if any), certification of system availability for month 1 is carried out by NERPC by end of Month 3 & TAC is issued accordingly.

Now, since it is decided to convene PCC every three months, hence modification of the above procedure is required for facilitating timely issuance of TAC by NERPC. The following revised procedure is therefore proposed in connection with certification of availability of POWERGRID elements.

1. The outage data of elements for month 1 shall be submitted by POWERGRID to NERLDC/NERPC by 2nd/3rd of Month 2 for discussion in the succeeding OCC meeting (to be held in 1st or 2nd week of month - 2). Observations/comments on the outage data (for month - 1) shall be submitted by all constituents to NERPC by end of month.
2. Based on observation/comments received from NERLDC & constituents & justifications/supporting data submitted by POWERGRID, NERPC shall issue TAC for month 1 by 1st week of month 3.

Deliberation in the meeting

The forum agreed in-principle to the revised methodology and suggested the following changes:

- STEP - 1: Submission of outage details by 6th/7th of the month-2 for the previous month-1 to NERLDC for verification.
- STEP - 2: NERLDC to complete by 25th of the month-2 and submit to NERPC.
- STEP - 3: NERPC will circulate the same to all constituents within 2 days for comments, if any.
- STEP - 4: Outage data will be frozen during OCCM of Month-3 and accordingly TAC issued within 2 days.

The Sub-Committee noted as above.

D.6 Accountability of Outage of \pm 800KV HVDC BNC-Agra link during the period from 01.02.2016 to 13.03.2016

The \pm 800KV HVDC BNC-Agra Link was out of service w.e.f., 01.02.2016 to 13.03.2016 due to:

- 1) Failure of Converter Transformer Bushing at BNC end,
- 2) Subsequently, due to outage of line on account of damage and theft by miscreants.

The converter transformer of Pole-1 at HVDC Biswanath Chariali tripped on 01.02.2016 at 02:07 Hrs. due to operation of DC Differential and Buchholz protection of R-Phase Y-Y Transformer of Pole-1. Subsequently, during testing / investigation, it was found that secondary line side bushing failed completely at bottom portion. The restoration of the transformer by replacement of failed Bushing and subsequent Oil Filling and Filtration was done on 27.02.2016. Finally, the transformer was made ready for service on 29.02.2016 after allowing stabilization time and oil testing.

Meanwhile, during patrolling of the \pm 800KV HVDC BNC-Agra Line prior to charging it was found that miscreants had damaged the line conductors by removing top layers of Aluminium strands in the line section from loc. 838 to 843 (NER Portion) involving a sectional length of 1.72KM. Further, there was theft of conductor in the line at different locations during the outage. The restoration of the line, however, got delayed due to non-concurrence of shut down of 132KV Dhaligaon - Gossaigaon Line by AEGCL on account of Election related meetings under Aegis of the District Administration. Finally, the line could be restored with the help of District Administration on 13.03.2016 at 23:02 Hrs.

The availability of the said asset is accounted in Northern Region. However, the outage of the asset during the entire period from 01.02.16 to 13.03.16 was mainly due to issues pertaining to NER Portion. Hence, this agenda is placed for consideration of accountability of the entire outage as below for enabling certification of availability of the Asset during the month of February 2016 and March 2016:

- 1) The \pm 800KV HVDC BNC-Agra Link was out of service during the period from 01.02.16 to 29.02.16 due to outage of Converter Transformer at Biswanath Chariali. **Hence, the outage during the period from 01.02.2016 to 29.02.2016 will be Attributable to POWERGRID.**
- 2) Further, the \pm 800KV HVDC BNC-Agra Link remained out of service from 01.03.16 to 13.03.16 due to outage of the Transmission Line on account of sabotage & theft in the transmission line caused by miscreants. This is a Force Majeure Condition which is beyond the control of POWERGRID. **Hence the outage during the period from 01.03.2016 to 13.03.2016 is not attributable to POWERGRID** and proposed to be booked under the **Category LMAC** (Line outage caused by miscreants).

Deliberation in the meeting

The forum unanimously agreed to the above.

The Sub-Committee noted as above.

D.7 Assessment of Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) by SLDC on respective Inter-State Transmission Corridor

SLDCs of NER are requested to assess the above on monthly basis, 5 months in advance (eg: TTC/TRM/ATC for the month of July to be calculated by 26th of March), for further assessment of TTC, ATC and TRM of NER-ER corridor, group of control areas, individual control areas with the region and state-control-area to state-control-area by NERLDC, if required.

SLDCs are also 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 10th of the month for the fifth month. All India ".sav" case files have been sent to SLDCs. SLDCs are requested to use this ".sav" case files while computing TTC, ATC & TRM for their state control area.

The study results conducted by NERLDC is attached in **Annexure-D.7**.

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.

Updated Base Cases have been already mailed to all the SLDCs on 02.05.16. All SLDCs are requested to assess the Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) and submit the cases to NERLDC for the month of September'16 by 10th May, 2016.

Deliberation in the meeting

Members once again requested NERPC to initiate action for return of laptops to the designated persons. S.E.(O) assured that the matter would be taken up with the highest authorities and all constituent should return within 30.05.2016.

Action: NERPC.

The Sub-Committee noted as above.

D.8 Implementation of Automatic Demand Management Scheme (ADMS)

Hon'ble CERC directed vide order in Petition No. 113/MP/2014 on 31.12.15 to submit PERT charts & action plans for Implementation of Automatic Demand Management Scheme (ADMS) by SLDCs of NER and to implement ADMS by

30.06.16. Hon'ble CERC directed RLDCs to submit the report of status of implementation of Automatic Demand Management Scheme (ADMS) by SLDCs of NER by 31.08.16.

SLDCs of NER are requested to furnish monthly report of status of implementation of Automatic Demand Management Scheme (ADMS) by SLDCs of NER.

In 117th OCCM, AGM SLDC, Assam suggested that since ADMS involves connectivity to 33kV substations, a separate meeting with the DISCOMS is required. The forum agreed and requested NERPC to kindly convene the meeting at a suitable date.

NERLDC requested SLDCs of NER to submit the report of status of implementation of Automatic Demand Management Scheme (ADMS) by SLDCs of NER by 15.08.16.

During 118th OCCM, SE(O) informed that during the recent workshop on RTUs, some of the firms have intimated that they can help the NER constituents related to implementation of Automatic Demand Management Scheme (ADMS) by giving some presentation on the issue.

The Sub-committee requested NERPC to conduct a workshop/seminar on ADMS by calling some of the reputed firms viz. ABB, ALSTOM, WIZIMAX, SCHENIDER etc. and also to request all the DISCOMS (dealing with R-APRDP), SLDCs for the benefit of the constituents.

The SLDCs of NER agreed to submit the report of status of implementation of ADMS to NERLDC by 15.08.2016.

In 117th OCCM after the brief presentation by C-DAC, SE(O) suggested that C-DAC may help with the software implementation of ADMS at SLDC level. He also informed the forum that workshop on ADMS would be organized very soon.

The workshop on ADMS was conducted on 07.04.2016.

Deliberation in the meeting

S.E.(O), NERPC informed that the minutes of the ADMS workshop was issued on 07.04.2016. He suggested that the following works are to be carried out by constituents at the earliest as decided in the ADMS workshop.

1. Identifying minimum two substations from each state to enabled ADMS functionalities on pilot basis.
2. Surveying those substations which are identified for ADMS function to understand the actual status of those stations.

3. Preparing the Bill of materials (BOM) and get the cost estimation from suppliers.

Further, he suggested that software development regarding integration of ADMS with existing SCADA system at SLDC level may be included in SLDC Upgradation Project of POWERGRID. Members agreed to the proposal and confirmed the minutes of the workshop.

Action: All state utilities, POWERGRID.

The Sub-committee noted as above.

D.9 Rectification of phase notations in NER grid:

It has been found that PMUs are showing different phasors w.r.t different nodes of same grid. It is suspected that there are change in phase notations in NER grid & connectivity.

During 1st NETeST meeting, the forum advised that mixing of Phases (change in phase reference w.r.t. one utility is sometimes different from another) as reflected by PMU data in regional grid is to be corrected. Forum requested that the same may be taken up OCC forum of NERPC.

In 118th OCCM, DGM, POWERGRID informed that the problem is at Agartala end and the same will be rectified soon.

NERLDC informed that due to mismatch in phase notations, angles reported by PMUs are erroneous and Agartala PMU was reporting wrong at the time of the OCC meeting. Also, due to mismatch in phase markings in some places like 400 kV Azara, DR prints received from two ends of the 400 kV lines from Azara showed mismatch in phases. AEGCL was requested to take up correction in phase notations at the earliest.

In 119th OCCM, DGM(AM), POWERGRID informed that work at Surjamaninagar would be completed within 16.03.2016.

In 120th OCCM, DGM(AM), POWERGRID informed that work at Surjamaninagar has been completed. The forum requested AEGCL to kindly expedite the work at Azara.

Deliberation in the meeting

AGM, AEGCL suggested that physical connections may have to be changed at Azara. DGM (AM), POWERGRID suggested that a joint visit by POWERGRID/AEGCL to Azara would be fruitful. The forum agreed.

The Sub-committee noted as above.

Action: AEGCL.

D.10 Transformer Tap optimization

System study was conducted by NERLDC considering load, generation and network pattern of May, 2016 during Peak & Off Peak periods. Suggested taps position of important transformers in NER for maintaining bus voltages within permissible limit as well as to minimize system losses are attached at **Annexure – D.10**.

During 118th OCCM, NERLDC circulated the results of tap-optimisation study for discussion. NERLDC also circulated the scatter plots at 400/220 kV Bongaigaon (PG), 400/220 kV Balipara (PG), 400/220 kV Misa (PG), 400/132 kV Ranganadi (NEEPCO), 400/132 kV Silchar (PG) and 400/132 kV Palatana (OTPC) to depict the pattern of voltages for the months of October 2015 – January 2016, to aid in tap optimization. It was iterated that due to non-availability of correct data in SCADA system from 400/220 kV Azara, 400/220 kV Byrnihat, 132 kV Biswanath Chariali (PG), scatter plots could not be developed for these substations. NERLDC requested to ensure proper data from all 400 kV substations, considering their importance.

After detailed deliberation, the Sub-committee suggested that transformer tap position can be tested at Byrnihat sub-station first and the outcome can be monitored by NERLDC if the voltage will improve.

In 119th OCCM, SE, SLDC, MeECL informed that voltage profile at 400kV Byrnihat S/S would be supplied by MeECL periodically.

In 120th OCCM, DGM(SO-I), NERLDC informed that MeECL is sending the voltage profile regularly and requested to continue. The bus voltage profile of 400kV, 220kV & 132kV buses w.r.t. tap positions as recommended with the help of offline system study are required for assessment of effectiveness of tap change and its impact in voltage profile improvement. SE, SLDC, MeECL stated that to change tap positions regularly approval from competent authority is required and agreed to revert back to the forum.

Deliberation in the meeting

NERLDC was requested to write to MeECL regarding changing of tap positions as per voltage profile.

Action: NERLDC, MeECL.

The Sub-committee noted as above.

D.11 Issues related to mismatched figures of installed capacity of NER.

The figures of installed capacity of NER by CEA (As on 31.01.16) is not matching with figures of installed capacity of NER prepared by NERLDC based on data provided by SLDCs of NER. Ministry of Power (MOP) had requested NERLDC to resolve this issue.

The installed capacity of NER prepared by CEA and by NERLDC is attached in **Annexure - D.11.**

During 120th OCCM, DGM(SO-I), NERLDC informed that Mizoram, Meghalaya and Manipur have already submitted their installed capacity figures. MeECL said whatever they have furnished is final. NERLDC pointed that Bairabi Power Station has not been included in the statement furnished by Mizoram and requested for clarification in this regard. The forum requested all remaining constituents to submit their actual Installed Capacity figures as soon as possible. Moreover, the state utilities were requested to approach CEA formally for derating or deleting any generation capacity.

Deliberation in the meeting

Member Secretary, NERPC requested utilities to write to CEA for derating/decommissioning of units at their generating stations. TSECL informed that three units of Baramura GBPP was de-commissioned. DGM(MO), NERLDC informed that NERLDC is raising NERLDC Fees & Charges for AGTPP-Extn based on name-plate rating of 51 MW, however IC is 46 for all purposes. The forum requested NEEPCO to kindly clarify the same.

Action: All utilities, NEEPCO.

The Sub-committee noted as above.

D.12 Submission of data according to Standards of Performance of ISTS Regulations 2012, CERC

As per Standards of Performance of ISTS Regulations 2012, CERC, the following data are required on monthly basis for computation of Dependability Index, Security Index and Reliability Index:

1. Nc - Number of correct operations during the month
2. Nu - Number of unwanted operations during the month
3. Nf - Number of failures to operate at internal power system faults during the month
4. Ni - Number of incorrect operations during the month

In addition of above data, data of five or more tripping of a transmission element in a month are also required. These data are to be sent to CERC on monthly basis.

POWERGRID and NETC are requested to furnish these data on monthly basis by 10th of every month for the previous month.

During 120th OCCM, The forum requested POWERGRID to submit the data for NETC & POWERGRID lines.

Deliberation in the meeting

DGM(AM), POWERGRID informed that the above data is being sent by POWERGRID to Corporate POWERGRID on a regular basis. The members decided to drop the agenda item.

The Sub-committee noted as above.

D.13 Furnishing of Ramp-Up, Ramp-Down, Technical Minimum of Units :

A meeting of the Sub-Committee on 'Review of 12th Plan and Generation Planning' headed by Member (Planning), CEA was held on 7th March, 2016. During the meeting, CEA projected maximum ramping requirement of 30000-36000 MW/hour for about 60 hours (out of 8760 hours) during 2021-22 in view of increase in solar generation.

It is requested to furnish the unit-wise Ramp-Up, Ramp-Down, Technical minimum of Generating Units.etc based on data provided by manufacturer as per the attached format.

Format for submission of these data mailed to all ISGSof NER & SLDCs of NER on 9th March, 2016. OTPC has already submitted the details.

The format is attached as **Annexure-D.13**.

In 120th OCCM, the forum requested concerned generating stations to kindly submit the same.

Deliberation in the meeting

During the discussion, on the query of DGM (Commercial) OTPC, NERLDC confirmed that the scheduling has been done on the basis of requisition made by the beneficiaries until the technical minimum.

DGM (SO-I), NERLDC informed that the above information is required for modelling of all India base case for study of effect of RE integration in the system as per projected quantum of power RE sources. The forum once again requested that the above data may please be submitted for all the generating stations of NER, for both Central Sector as well as State Sector.

The Sub-committee noted as above.

Action: NEEPCO, NHPC.

D.14 High Voltage in Palatana:

During the month of January'16 -50 % of the time, February'16 -96% of the time & March'16 -61 % of the time the voltage of Palatana 400 kV bus was more than 420 kV. The Palatana Bus reactor was charged for the first time at 14:49 Hrs on 14.03.16. The bus reactor tripped at 16:11 hrs on 15.03.16. Bus Reactor at Palatana is under outage since 16:11 hrs of 15.03.16.

OTPC is requested to inform the status of Bus Reactor at Palatana.

In 120th OCCM, DGM(O&M), OTPC informed that the reactor might have developed some incipient faults. However exact cause can be ascertained after tests are conducted by OEM. He agreed to revert back to the forum.

Deliberation in the meeting

OTPC informed that repeated communication to M/s BHEL has been written by them but till date there was no response from BHEL. However, exact status would be informed after detailed analysis by M/s BHEL. The expected date of revival is 15.06.2016.

The Sub-committee noted as above.

Action: OTPC.

D.15 Disturbance in Bangladesh system fed from 132 kV Surjamaninagar, TSECL:

At 21:06 Hrs on 04th April 2016, there were multiple fault trippings in Tripura system, leading to tripping of 132 kV Surjamaninagar – Comilla D/C lines and disturbance in South Comilla and adjoining areas of Bangladesh.

Tripping of 132 kV AGTPP – Agartala I & II and 132 kV Palatana – Surjamaninagar S/C line occurred at 21:06 Hrs alongwith blackout of AGTPP.

The relay indication at Palatana end of 132 kV Palatana – Surjamaninagar S/C line shows tripping on DP, Zone-III, 45.7 km and relay indications at AGTPP end of 132 kV AGTPP – Agartala I & II lines show tripping on DP, Zone-III & DP, Zone-II respectively. These indicate fault within the Tripura power system that did not clear on time leading to this disturbance including Bangladesh loads. Relay indications of no lines have been received from TSECL.

Such incident involving International Connections is serious and needs to be investigated in detail to arrive at the root cause and prevent further occurrence.

NEEPCO, TSECL, OTPC, POWERGRID are requested to furnish details of tripping of lines, first information report, Disturbance Recorders, Event Loggers and any other relevant information to aid in analysis of the incidence.

In 120th OCCM, forum requested the concerned utilities furnish the details at the earliest.

Deliberation in the meeting

DGM (Commercial), OTPC has informed the forum that in spite of repeated requests by the highest forum of NERPC, TSECL has not taken any tangible actions for improvement of their protection system and requested forum for serious discussion and if required the matter may be brought to the notice of CERC. The Director/SE (Operation), NERPC insisted that TSECL should ensure availability / healthiness of main protection for all the lines connected to the Bus of Grid Sub Station viz. Surjamaninagar and 79-Tilla to avoid reflection of downstream fault in NER Grid. Further, forum has expressed to extend help to Tripura by sending experts from AEGCL, PGCIL & OTPC, if required, to assess the deficiency and correct settings to protect ICT and 132 kV system of Palatana.

TSECL was requested to take immediate action to improve the protection systems at Agartala, S M Nagar & Udaipur in particular and whole state system in general for the safe & secure grid operation. The matter regarding Protection System in Tripura was discussed in detail in 42nd PCC. TSECL was requested to comply with the decisions of the 42nd PCC forum.

Action: TSECL.

The Sub-committee noted as above.

D.16 Updated List of Important Grid Elements of NER May 2016 (Draft):

As per Clause No 5.2.c of IEGC, List of Important Grid Elements of NER May 2016 (Draft) prepared. Updated List of Important Grid Elements of NER May 2016 (Draft) e-mailed to regional entities of NER and also available in NERLDC website.

It is requested to furnish data required for finalization of List of Important Grid Elements May 2016 by 15th May'16. This document will be finalized by 20th May'16.

The document is password protected. Password may be collected from SOII department of NERLDC.

Deliberation in the meeting

Sr. Engr. NERLDC stated that Moreh (Manipur) to Tamu (Myanmar) Power Supply details (SLD, Sub-station, feeders) are required for up-dation of the above. MSPCL agreed to provide the same. NERLDC further requested all the utilities to check the list and intimate NERLDC by 15th May, 2016 for incorporation of any changes.

Action: MSPCL.

The Sub-committee noted as above.

D.17 Pre monsoon activity of transmission elements:

It was observed that number of tripping of transmission elements in NER increased during monsoon period of last year. For minimization of tripping transmission elements in NER, it is requested to complete all activities (like trimming of trees, vegetation issues etc) of transmission elements before monsoon.

Deliberation in the meeting

S.E.(O) requested all utilities to expedite vegetation clearance activities. Members agreed.

The Sub-committee noted as above.

Action: All utilities.

D.18 Design & implementation of SPS related to HVDC operation:

BNC-Agra +/- 800 kV HVDC Pole-I under operation since long and power, of the order of around 500 MW is flowing in either direction depending on the system requirement. Any problem in AC interregional links, especially during power flow from BNC to Agra, may result in disturbance in NER grid. To address the situation it is very much essential to design a SPS scheme and implement as early as possible. All the members are requested to please contribute in designing the SPS.

Other SPS and islanding schemes, which are in place at present, also need to be reviewed considering changes in network topology

Deliberation in the meeting

The matter was referred to the System-Study Sub-group.

The Sub-committee noted as above.

Action: NERPC/NERLDC.

D.19 Prior intimation regarding non-availing of approved shutdown:

It has been observed that on many occasions OCC approved shutdowns are not being availed by the utilities and intimation for most of the cases is communicated just before the schedule time for availing the shutdown [e.g. RHEP BNC recently]. This is creating problem in operational planning as well as other shutdown proposals of different utilities cannot be cleared. The matter has been deliberated in earlier OCC meetings also.

Deliberation in the meeting

S.E.(O) informed that henceforth shutdowns (except emergency) would not be granted if not applied within the stipulated timeframe. In case of non-availing of approved shutdown it is to be intimated to NERLDC at least before 24hrs of the schedule.

The Sub-committee noted as above.

Action: All utilities.

D.20 Procurement of ERS for NER from PSDF funding:

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

Deliberation in the meeting

POWERGRID agreed to submit the formats/DPR on behalf of NER constituents as soon as possible.

The Sub-committee noted as above.

Action: POWERGRID.

D.21 Submission of data regarding large scale integration of Renewable Energy:

MoP vide. 23/2/2005-R&R(Vol-XI) dated 22.03.2016 has forwarded communication of MNRE letter No. 11/7/2013-EFM dated 02.03.2016 wherein it was mentioned regarding compilation of data to meet renewable energy targets of 175 GW by 2020.

The following data are required for the said purpose:

- a) Data on the technical capacities of power plants such as minimum load, rate of change of generation, start-up time and down time, minimum standstill time, State-wise and region-wise.
- b) Thermal balancing potential of RE rich states today and upto 2020(region-wise also).
- c) Theoretical hydro balancing potential of states today and upto 2020(region-wise also).
- d) Pumped hydro projects capabilities today and upto 2020(region-wise also).
- e)Forecasting and scheduling regulations by States.

Deliberation in the meeting

All the utilities agreed to submit the above.

The Sub-committee noted as above.

Action: All utilities.

D.22 Schedule Revision of Palatana:

OTPC vide mail dated 27th April 2016 had requested for schedule revision for 11.04.2016 and 16.04.2016. On 11.04.2016 Block-1 Tripped at 20:11 Hrs on SPS-3 protection. So schedule revision equal to actual generation is requested for Block-81 to 85. On 16.04.2016 both Block Tripped due to NE Grid Failure at 12:03 Hrs on 16/04/2016, so schedule revision equal to actual generation required for Block 49&50.

Deliberation in the meeting

NERLDC quoted relevant clause of IEGC as below:

QUOTE:

6.5.17: In case of any grid disturbance, scheduled generation of all the ISGSs supplying power under long term / medium term shall be deemed to have been revised to be equal to their actual generation and the scheduled drawals of the beneficiaries/buyers shall be deemed to have been revised

accordingly for all the time blocks affected by the grid disturbance. Certification of grid disturbance and its duration shall be done by the RLDC.

UNQUOTE:

It was agreed that both the cases of OTPC would qualify under above clause of IEGC and hence revision would have to be carried out which was not done inadvertently due to wrong information given by Palatana.

However, NERLDC also quoted relevant provision of IEGC regarding mistake in schedule issued by RLDC.

QUOTE:

6.5.33. The procedure for scheduling and the final schedules issued by RLDC, shall be opened to all regional entities and other regional open access customers entities for any checking/verification, for a period of 5 days. In case any mistake/omission is detected, the RLDC shall forthwith make a complete check and rectify the same.

UNQUOTE:

It was agreed that henceforth, all corrections/revisions would have to be requested within the timeframe, otherwise same would be considered time barred.

Regarding query from NTPC on scheduling of BGTTPP during recent GD-5 in NER, it was clarified that 6.5.17 of IEGC was followed to make AG=SG and after tripping, as there was no actual generation, same was treated as zero.

Regarding allowing DC to NTPC after disturbance, it was clarified that hot start/warm start time starting from extension of power to the plant was considered for allowing full DC. It was agreed that details of timing and procedure will be given in next OCC meeting.

In addition to above, the DGM (Commercial), OTPC congratulated all the constituents, NERPC & NERLDC for successful third party sale of URS power on 6th April, 2016; in this connection he also requested the beneficiaries to plan well in advance about URS, so that Generator will get more time to sale it in the market.

The Sub-committee noted as above.

D.23 Frequent tripping of AGTCCPP units:

It has been reported that AGTCCPP units tripped on nos. of occasions in last couple of days due to heavy jerk in the grid/ Tripura system. This has resulted to heavy stress to the machines in addition to reduce the maintenance interval time. Tripura is requested to analyze the fault and rectify the same at the earliest.

Deliberation in the meeting

Please refer to discussion in Item. D.15.

The Sub-committee noted as above.

Action: TSECL.

D.24 Open-Cycle Generation Certification of NEEPCO:

As per discussion in previous CCMs of NERPC, Open Cycle Certification of AGBPP is to be prepared on the basis of OCC approved shutdowns. NEEPCO is currently providing open cycle generation as per power plant records. Also open cycle generation SEM data (GT/ST) is to be provided by NERLDC.

Deliberation in the meeting

After detailed deliberation it was decided that the details regarding cause (less requisition/OCC approved shutdown) of open cycle generation at AGBPP will be provided by NEEPCO.

The Sub-committee noted as above.

Action: NEEPCO.

D.25 Start up Power of Unit#2 of BgTPP of NTPC:

The commissioning activities of Unit-2/NTPC/Bongaigaon is going to start very soon. So, permission for drawl of start-up power for unit#2 and accordingly energy accounting for segregation of unit#1 firm power and start up power of unit#2 may please be included in the agenda item of forthcoming OCC for discussion and approval as per the existing regulations. SLD has already been given to NERLDC.

Deliberation in the meeting

DGM(MO), NERLDC informed that necessary meters are being installed as identified in Metering Meeting. He further stated that NTPC would be able to draw start-up power after completion of formalities as per CERC stipulations to obtain grant of drawal from NERLDC.

NTPC submitted the detailed SLD for metering purposes and the same is attached at **Annexure – D.25**

The Sub-committee noted as above.

Scheduling of generation from BgTPP-NTPC station

Director/SE (O), NERPC intimated that MOP vide letter no. 5/19/2005-ThII dated 13th. Oct, 2008 had allocated share from BgTPP, NTPC among NER States which has been implemented since COD of BgTPP U-1. Subsequently, MOP has allocated 2.5 MW to HVDC-Biswanath Chariali which has been implemented in scheduling w.e.f 02.05.2016 from Meghalaya share allocation.

It was further clarified that based on discussion in OCC meetings of NERPC, technical minimum of gas based stations in NER was decided as 65% (70% for AGBPP) and had been implemented in daily scheduling. All beneficiaries are deemed to have requisition of 65% of DC even if their actual requisition is less than that. This has been made effective for NTPC BgTPP as well and scheduling is being done accordingly.

On a query from TSECL regarding surrender of share from BgTPP, it was clarified that as per stipulations, surrender will be effective only after reallocation is done by MOP. Till any reallocation is made by MOP, beneficiary would be liable to pay capacity charges and for scheduled energy charges as per scheduling practice in vogue.

It was decided that NERPC Secretariat would issue a letter clarifying the facts and various provisions in this issue.

The Sub-committee noted as above.

ADDITIONAL AGENDA.

Grid Disturbance (GD-V) in NER on 16.04.16 at 1203 Hrs.

A major disturbance of category GD-V occurred in NER Grid on 16.04.16 at 1203 Hrs. Concerned persons of all constituents of NER are requested to participate in the meeting alongwith available data for fruitful discussion of the following disturbance.

NER Grid was in synchronism with ER Grid through 220 kV Birpara - Salakati I & II, 400kV Bongaigaon - New Siliguri I, II, III & IV lines and was connected with NR Grid through +/- 800 kV HVDC Biswanath Chariali - Agra Pole-I. At around 12:00:35.739 Hrs, 400 kV Bongaigaon - BgTPP line I tripped from Bongaigaon end on DP, B-phase, Zone II. At 12:01:03.001 Hrs, 400 kV Bongaigaon - Balipara line IV tripped on DP, B-phase, Zone II and fault cleared from Balipara end in 325 msec (as per DR data).

Around 12:03:07.272 Hrs, 400 kV Bongaigaon - New Siliguri line III tripped on Zone IV at Bongaigaon. 400 kV Bongaigaon - BgTTP line II tripped from both ends at 12:03:30.091 Hrs and 400 kV Bongaigaon - Azara line tripped at 12:03:30.464 Hrs on DP, B-phase, Zone II at Azara end. After that, 400/220kV 315 MVA ICT at Bongaigaon tripped on Back Up Over Current Protection on HV Side at around 12:03:36.784 Hrs. 400 kV Bongaigaon - New Siliguri line I tripped at 12:03:36.827 Hrs, 400 kV Bongaigaon - New Siliguri line II tripped at 12:03:37.964 Hrs from Bongaigaon end on over voltage. 400 kV Bongaigaon- New Siliguri line IV also tripped. Due to these trippings, NER grid desynchronized from rest of India grid and at 12:03:40.960 Hrs. AGTTP along with part of Tripura system separated from isolated NER Grid (from PMU). Sarusajai bus blacked out at 12:03:43.360 Hrs and at 12:03:45 Hrs, +/- HVDC BNC - Agra Pole I blocked. Subsequently major part NER grid collapsed due to load generation mismatch. 220 kV Salakati S/S remained connected with Birpara and Gelephu S/S. AGBPP, LTSPS and NTPS stations survived with generation of 150 MW, 90 MW and 60 MW respectively with upper Assam load due to successful operation of islanding scheme at around 12:05 Hrs (information taken from SLDC). The island was synchronized with main grid at Misa at 1406 Hrs. Tripura system initially survived along with AGTTP generation with demand of around 60 MW. Subsequently this island collapsed at due to load generation mismatch.

Load Loss: 973 MW

Generation Loss: 1125 MW

Category as per CEA Standards: GD-V

All utilities of NER are requested to furnish the details for fruitful discussion as mentioned below:

- a. Disturbance Recorders (In COMTRADE format), Relay Flags, Pickup distance of DP relays, Event Loggers, and SOE from all 400 kV and 220 kV Substations for all feeders
- b. Details of Operation of SPS during the disturbance on 16th April 2016
- c. Details of Operation of UFR during the disturbance on 16th April 2016 along with feeder-wise quantum of load relief.
- d. Detailed bus schemes indicating feeders connected in Main I and Main II at 400 kV Bongaigaon, 400 kV BgTTP (NTPC), 400 kV Balipara, 400 kV Silchar, 400 kV Azara, prior to the disturbance
- e. Observations from your end regarding the disturbance.

- f. Reason for pick-up of Backup O/C relays at HV side of ICT at Bongaigaon, even though fault was on HV side
- g. Relay flags for all Units and Lines tripping along with time of tripping and restoration.
- h. Loktak, AGBPP, AGTPP and Palatana may provide the bus frequency data at the time of disturbance (from 1200 Hrs to 1300 Hrs, on 16-04-2016).
- i. Time of formation of AGBPP Island along with details of tripping of lines.
- j. Review of Relay Setting
- k. Operation of HVDC Frequency controller during the disturbance.
- l. Time synchronisation of DR & EL
- m. Issues with timely submission of data
- n. Dynamic response of Machines.
- o. Second in-feed point of NER.

Deliberation in the meeting

NERLDC elaborated the incidence and requested all concerned to furnish all the details at the earliest for proper analysis. DGM(AM), NERTS requested to form a committee to analyze the disturbance thoroughly so that the root causes can be pinpointed and corrective measures can be suggested. On the basis of committee report only decision of approaching CERC can be finalized.

Members agreed to the suggestion.

The Sub-committee noted as above.

Date & Venue of next OCC meeting

It is proposed to hold the 122nd OCC meeting of NERPC on second week of June, 2016. However, the exact date and venue will be intimated in due course.

The meeting ended with thanks to the Chair.

Annexure-I**List of Participants in the 121st OCC Meetings held on 05.05.2016**

SN	Name & Designation	Organization	Contact No.
1.	Sh. N. Perme, EE, SLDC	Ar. Pradesh	09436288643
2.	Sh. T.N. Sarma, DGM, SLDC	Assam	09435007369
3.	Sh. J.K. Baishya, AGM	Assam	09435041494
4.	Sh. B.C. Borah, AGM,SLDC	Assam	09435119248
5.	Ms. Roseleena Parveen, AM (TRC)	Assam	08011842597
6.	Sh. G.K. Bhuyan, AGM (Commercial)	Assam	09854015601
7.	Sh. Themcham Woleng, Manager	Manipur	08731000143
8.	Sh. Leivon Nilemthang, Asst. Manager	Manipur	08131032269
9.	Sh. F.E Kharshiing, SE (SLDC)	Meghalaya	09863066960
10.	Sh. A. Kharpan, ACE (Com)	Meghalaya	09436117802
11.	Sh. R. Majaw, SE (E/M)	Meghalaya	09436110871
12.	Sh. B. Wankhar, EE (MO), SLDC	Meghalaya	09436105914
	No Representative	Mizoram	-
	No Representative	Nagaland	-
13.	Sh. Debabrata Pal, Sr. Manager	Tripura	09436500244
14.	Sh. P. Kanungo, DGM (AM)		PGCIL
15.	Sh. Bishwajit Medhi, Manager (SO-I)	NERLDC	09436335376
16.	Sh. R. Sutradhar, DGM (MO)	NERLDC	-
17.	Sh. N.R. Paul, DGM	NERLDC	09436302723
18.	Sh. Mintu Mandal, Sr. Engineer (SO-I)	NERLDC	09436335243
19.	Sh. Rahul Chakrabarti, Sr. Engr (SO-II)	NERLDC	09402507543
20.	Sh. Joypal Roy. Sr. Mgr (C/M)	NEEPCO	09435577726
21.	Sh. B.K. Chakraborty, DGM(E)	NEEPCO	09436309730
22.	Sh. D. Baishya, Sr. Manager (E/M)	NEEPCO	09435339966
23.	Sh. Prasenjit Phooban, DGM (E/M)	NEEPCO	09435380415
24.	Sh. Rakesh Kumar, GM (OS), ER.II,HQ	NTPC	09431011344
25.	Sh. J. Bhattacharyya, AGM (EMD)	NTPC	09435720036
26.	Sh. S.K. Dutta, Manager	NTPC	09435026764

	No Representative	ENICL	-
	No Representative	NHPC	-
27.	Sh. Arup Ch. Sarmah, DGM (Comml.)	OTPC	09871839502
28.	Sh. Tapash Karmakar, AM (Elect.)	OTPC	09435239313
29.	Sh. P.K. Mishra, MS	NERPC	
30.	Sh. B. Lyngkhoi, Director/S.E (O)	NERPC	09436163419
31.	Sh. S. Mukherjee, AD-I/AEE	NERPC	08794277306

