

# North Eastern Regional Power Committee

## Agenda For

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

Time of meeting : 10:00 Hrs.

Date of meeting : 14<sup>th</sup> November, 2018 (Wednesday)

Venue : "Hotel Nandan", Guwahati.

#### A. CONFIRMATION OF MINUTES

##### CONFIRMATION OF MINUTES OF 149<sup>th</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 149<sup>th</sup> meeting of Operation Sub-committee held on 11<sup>th</sup> October, 2018 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 30<sup>th</sup> October, 2018.

*The Sub-committee may confirm the minutes of 149<sup>th</sup> OCCM of NERPC as no comments/observations were received from the constituents.*

#### ITEMS FOR DISCUSSION

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

##### 1. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:

The status as informed in 149<sup>th</sup> OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**
Arunachal Pradesh	10% fund requisition by Oct'18. Tender by Oct'18	Revised DPR submitted	-	DPR submitted for Techno-Economic Appraisal.
Nagaland	Pack-A: Completed Pack-B: Dec'18 Pack-C: Dec'18 Pack-D: Completed.	Revised DPR yet to be submitted	To re-submit proposal to NERPC for Study.	DPR submitted for Techno-Economic Appraisal
Mizoram	LOAs completed. 2nd installment of funds received. Quantity variation submitted 20.09.18. Erection complete by Dec'18.	Revised DPR submitted	Appraisal Committee is yet to approve	DPR submitted for Techno-Economic Appraisal

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Manipur	LOAs issued. Completion by Oct'18.	Revised DPR submitted	Submitted to NERPC for Study before sending to NPC/NLDC.	DPR submitted for Techno-Economic Appraisal
Tripura	Tentative Completion by 31.12.2018	Revised DPR submitted	To submit proposal to NERPC for Study.	DPR submitted for Techno-Economic Appraisal
Assam	Substation auxiliary and diagnostics tools - Tendering in process. LOA by Sep'18.	Revised DPR submitted	-	DPR submitted for Techno-Economic Appraisal
Meghalaya	MePTCL Balance items LOA by Oct'18 MePGCL - Erection complete by Mar'19	Revised DPR submitted. Query referred to DISCOM	-	DPR submitted for Techno-Economic Appraisal

The status of implementation of the above schemes (physical as well as financial progress) may please be reviewed and the entities are requested to expedite implementation of the schemes. The entities may also be advised to furnish status as per format by first week of every month on regular basis to Member Convener, PSDF Project Monitoring Group (AGM, NLDC, POSOCO) with a copy to NPC & NERPC. The LOAs of R&M Scheme are to be furnished to NERLDC/NERPC regularly.

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

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

Name of the Element	Name of Utility	Status as informed in 149th OCC	Latest Status
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	7 <sup>th</sup> SCM MoM to be revised. MePTCL may initiate preparation of bid documents etc for the tendering process.	
Repairing of R-ph bushing of 63MVAR L/R at Balipara for 400kV Balipara-Bongaigaon -II (out since 17.02.18)	NERTS	By Oct'18	

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Outage of 420kV 80MVAR L/R for 400kV Bongaigaon-NSLG-I at Bongaigaon - (out since 04.07.18)	NERTS	By Jan'19 (Regional Spare will be utilized for restoration)	
132kV Dimapur - Imphal (out since 25.07.18)	NERTS	Expected restoration by Oct'18**	
63 MVAR B/R-4 at 400kV Biswanath-Chariali (out since 27.04.18)	NERTS	Internal failure. By Nov'18	
132 kV, 20MVAR Bus Reactor at Roing out of service since 08:00 Hrs of 16.08.18 (Shutdown approved till 1600 Hrs of 31st August'18)	NERTS	By 15/11/2018	

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

**3. Furnishing of various data for reliable grid operation:**

Data regarding	Status as of 149th OCC		Latest status
DAS output for FRC calculation	Event date: 30.10.2018: Khandong, Palatana, Kopili, Ranganadi, Doyang submitted the data.		
Operating Procedures	<b>Items</b>	<b>Data submitted by</b>	
	OP of States	Submitted by AEGCL, MePTCL, TSECL, DoP Nagaland and P&E, Mizoram	
	OP of Transmission System	Not submitted by any constituents	
	OP of Generating Stations	Submitted by Doyang, Khandong and Kopili	
	OP of GIS	NERTS to submit	
	Agenda may be dropped for the time being. Review of the same will be taken up on quarterly basis.		
Data related to Power Map.	<b>Items</b>	<b>Data submitted by</b>	
	Communication (PLCC/OPGW/ GPRS/SAT/Satellite)	NERTS, Meghalaya, Assam & Mizoram provided the data.	
Agenda may be dropped for the time being. Review of the same will be taken up on quarterly basis.			

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Patrolling report(s) for T/L**.	Patrolling report and vegetation clearance self-certification to be immediately submitted for 132kV Balipara-Khupi, 132kV Dimapur-Kohima & 132kV Aizawl - Kumarghat	
Submission of Capability Curve	It was decided that NERLDC would prepare the capability curve (based on available data) for each of the generating stations and get it ratified from owner of the respective station.	

**NERLDC may please inform the status.**

**5. DIFFERENCE IN ACTUALS VS LGBR:**

**Energy Requirement:**

Name of State	Jun 18 (actual)	Jun18 (LGBR)	Jul 18 (actual)	Jul18 (LGBR)	Aug 18 (actual)	Aug 18 (LGBR)	Sep 18 (actual)	Sep 18 (LGBR)
Ar. Pradesh	70.76	65.89	72.49	66.28	76.34	77.02	74.16	71.19
Assam	913.96	864.22	998.64	952.10	1039.01	970.21	950.19	934.64
Manipur	67.74	64.86	72.38	65.08	70.53	76.98	69.88	69.64
Meghalaya	143.28	142.00	169.75	155.00	162.17	159.00	150.14	164.00
Mizoram	43.66	42.44	46.53	45.43	58.96	44.80	58.04	39.37
Nagaland	78.16	76.55	82.22	80.84	80.88	79.25	80.49	76.88
Tripura	121.77	123.16	144.97	123.51	179.61	127.98	192.00	125.18

**Energy Availability:**

Name of State	Jun18 (actual)	Jun18 (LGBR)	Jul18 (actual)	Jul18 (LGBR)	Aug 18 (actual)	Aug 18 (LGBR)	Sep 18 (actual)	Sep 18 (LGBR)
Ar. Pradesh	74.78	83.78	77.75	99.88	81.81	96.23	81.12	82.62
Assam	898.04	892.17	975.84	992.22	991.95	967.37	987.64	859.96
Manipur	101.66	102.23	111.82	129.88	109.25	126.69	177.79	110.48
Meghalaya	236.66	254.18	293.16	312.29	285.36	322.71	276.17	308.96
Mizoram	79.19	82.67	85.38	97.31	92.74	99.89	111.76	89.77
Nagaland	78.35	83.84	79.00	99.30	84.88	99.50	81.24	87.96
Tripura	255.49	242.47	294.08	308.19	312.05	294.40	309.44	268.15

**Demand:**

Name of State	Jun18 (actual)	Jun18 (LGBR)	Jul18 (actual)	Jul18 (LGBR)	Aug 18 (actual)	Aug 18 (LGBR)	Sep 18 (actual)	Sep 18 (LGBR)
Ar. Pradesh	138.12	131.00	130.38	136.00	135.88	148	131.92	143
Assam	1782.35	1761.14	1862.54	1761.36	1833.85	1752.66	1865.26	1787.60
Manipur	179.48	163.70	174.16	162.83	177.32	173.10	184.39	168.04
Meghalaya	325.51	298.94	333.95	308.22	325.43	314.92	317.42	328.18
Mizoram	102.57	85.16	100.77	92.62	99.09	92.62	95.47	95.23
Nagaland	129.40	152.90	132.89	153.75	134.32	139.63	142.07	148.77
Tripura	280.66	307.24	298.12	322.71	291.86	327.32	296.01	359.46

**B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING OCTOBER, 2018**

As per the data made available by NERLDC, the grid performance parameters for October, 2018 are given below:

**NER PERFORMANCE DURING OCTOBER, 2018**

States	Energy Met (MU)		w.r.t. Sep,18 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Sep,18 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In Oct,18
	Oct-18	Sep-18		Oct-18	Sep-18		
Ar. Pradesh	66.14	69.06	-4.23	66.76	69.79	-4.34	-0.93
Assam	809.08	939.37	-13.87	833.04	975.15	-14.57	-2.88
Manipur	70.86	67.60	4.82	71.55	68.31	4.74	-0.96
Meghalaya	146.70	156.29	-6.14	146.70	156.32	-6.15	0.00
Mizoram	62.20	49.85	24.77	62.71	50.51	24.15	-0.81
Nagaland	67.23	69.95	-3.89	75.57	78.29	-3.47	-11.04
Tripura	129.05	136.76	-5.64	130.28	137.94	-5.55	-0.94
<b>Region</b>	<b>1351.26</b>	<b>1488.88</b>	<b>-9.24</b>	<b>1386.60</b>	<b>1536.31</b>	<b>-9.74</b>	<b>-2.55</b>

States	Demand Met (MW)		w.r.t. Sep,18 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Sep,18 % inc (+) /dec (-)	% inc (+) /dec (-) of Demand vs met. In Oct,18
	Oct-18	Sep-18		Oct-18	Sep-18		
Ar. Pradesh	125	130	-3.85	138	138	0.00	-9.42
Assam	1704	1809	-5.80	1785	1865	-4.29	-4.54
Manipur	185	182	1.65	187	184	1.63	-1.07
Meghalaya	336	317	5.99	336	317	5.99	0.00
Mizoram	97	93	4.30	99	95	4.21	-2.02
Nagaland	131	138	-5.07	134	142	-5.63	-2.24
Tripura	269	293	-8.19	269	296	-9.12	0.00
<b>Region</b>	<b>2700</b>	<b>2850</b>	<b>-5.26</b>	<b>2790</b>	<b>2921</b>	<b>-4.48</b>	<b>-3.23</b>

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

Month---->	Oct-18	Sep-18
Total Generation in NER (Gross)	1592.154	1662.196
Total Central Sector Generation (Gross)	1156.509	1219.719
Total State Sector Generation (Gross)	397.224	442.477
<b>Inter-Regional Energy Exchange</b>		
(a) NER-ER	<b>1.00</b>	<b>51.53</b>
(b) ER-NER	<b>405.33</b>	<b>531.26</b>
(c)NER-NR	<b>478.92</b>	<b>464.63</b>
(d)NR-NER	<b>0.00</b>	<b>3.56</b>
© Net Import	-74.59	18.66

**AVERAGE FREQUENCY (Hz)**

Month---->	Oct-18	Sep-18
	% of Time	% of Time
Below 49.9 Hz	11.71	13.21
Between 49.9 to 50.05 Hz	79.34	80.23
Above 50.05 Hz	8.95	6.05
Average	49.97	49.97
Maximum	50.20	50.20
Minimum	49.69	49.57

**C. OLD ITEMS**

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

During 149<sup>th</sup> OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 149 <sup>th</sup> OCC Meeting		Status as given in 150 <sup>th</sup> OCC Meeting	
		Timeline for completion	Timeline for completion	Timeline for completion	Furnishing of detail parameters
<b>a. New Elements</b>					
1	400/220kV, 315 MVA ICT-1 of NTPC at Bongaigaon	By Nov'18	To be submitted to NERLDC.		
2	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	To be reviewed	Already submitted.		
3	400 kV D/C Silchar - Melriat line of PGCIL	Oct'18	To be submitted to NERLDC.		
4	132kV Monarchak – Surjamaninagar D/C of TSECL	By Dec'18	To be submitted to NERLDC		
5	SLDCs (Ar. Pradesh, Manipur, Mizoram, Nagaland)	Completed for all SLDC except Nagaland. Nagaland - DoCO By 15.01.2019.	Not applicable.		
6	400/220 kV 315 MVA ICT-II at Bongaigaon	Dec'18	Already submitted		
7	220/132 kV, 160MVA ICT-II at Balipara	ICT#II - by Dec'18	To be submitted to NERLDC.		
8	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	Dec'18	To be submitted to NERLDC.		

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9	33kV bay at 220kV Mariani(AS) S/Sn	Demand note for CTPT unit pending from Assam. To be expedited by APDCL. Latest status to be submitted ASAP.	Not applicable.		
10	33kV bay for 132kV Badarpur(PG) S/Sn	To be expedited by APDCL. Latest status to be submitted ASAP.	Not applicable.		
11	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	By Oct'18	Not applicable.		
12	Construction of 132 kV Imphal (PG) - Yurembam III lines with high capacity conductor by MSPCL	RoW problem not resolved. Tentative Completion: Oct'18. NERPC to take up with MD, MSPCL.	To be submitted to NERLDC.		
13	LILO of 132kV Aizawl-Jiribam at Tipaimukh by MSPCL	NERPC to take up with MD, MSPCL.	To be submitted to NERLDC.		

**b. Elements under breakdown/upgradation**

14	Up-gradation of 132 kV Lumshnong-Panchgram line	Consent of AEGCL received by MePTCL. Scheme renamed as Upgradation of 132kV Khliehriat-Panchgram line with HTLS conductor.	Not applicable.		
15	Switchable line Reactors at 400kV Balipara & Bongaigoan Ckt # 1 & 2	Completed except Bong#2 LR of Balipara which is under restoration	Not applicable		
16	PLCC Panels at Loktak end of Loktak - Ningthoukhong	Oct'2018	Not applicable.		

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	132 kV feeder and Loktak - Rengpang 132 kV feeder				
17	Upgradation of 132kV Silchar-Imphal to 400kV	Matching with schedule of MSPCL.	with of	To be submitted to NERLDC	
18	Replacement of CTs and installation of Bus Bar Protection at 220kV Misa	By Dec'18		Not applicable	
19	Upgradation of 132kV Bus bar at Umiam Stg-III to ACSR Zebra	MePGCL to send proposal to NLDC/NPC.		Not applicable	

\*\* Only elements with target of completion till Dec'18 included in the above list. Rest shall be monitored in subsequent OCCM.

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

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

a. Present per day MU and projected number of days of operation.

Plants	Reservoirs level in meter as on 31-10-18	MU content	Present DC (in MU)	No of days as per current generation
Khandong + Kopili stg II	716.65	17.08	0.462 + 0.0735 = 0.53550	32
Kopili	606.67	96.969 + 4x17.08 = 165.289	4.49600	40
Doyang	315.65	12.65	0.16175	78
Loktak	768.23	179	1.0970	163

b. Proposed DC

Plants	Reservoirs level in meter as on 31-10-18	MU Content	Proposed DC (MU)	No of days as per current Generation (Upto March'19)



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Khandong + Kopili STG II	716.65	17.08	0.113867	150
Kopili	606.67	(96.969+ 4x17.08)	1.101927	150
		165.289		
Doyang	315.65	12.65	0.084333	150
Loktak	768.23	179	1.193333	150

Thus, for maintaining the generation availability of NER Region it is requested to all hydro generations to judiciously plan the utilization of water and furnish the day ahead declared MU such that NER Region does not face lack of generation availability in the upcoming lean hydro season.

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

***The Committee may discuss and approve the proposed shutdown by Generating Stations as given in Annexure - D.2 which is available in NERPC website.***

#### **D.2 Outage Planning Transmission elements**

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

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

***The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for November,2018 - December,2018 which is available in the website of NERPC.***

#### **D.3 Estimated Transmission Availability Certificate (TAC) for the month of July, 2018 - September, 2018:**

NETC and POWERGRID have submitted the outage data for the month of July, 2018 - September, 2018. So the attributability of outage of the said elements may please be finalized.

***Members may please discuss.***

**D.4 Assessment of Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) by SLDC on respective Inter-State Transmission Corridor**

Updated PSS/E Base Cases have been **mailed to all the SLDCs on 02.11.18**. All SLDCs are requested to assess the Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) for the month of December'18 using these cases and submit the study cases and results to NERLDC by **22.11.18**.

NERLDC has assessed the state control area wise, state subsystem wise and group of control-area wise TTCs for NER Grid. The study results will be presented during the meeting. SLDCs are requested to check the TTC of their control areas as computed by NERLDC and **give comments, if any, by 22.11.18**.

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

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

*Members may discuss.*

**D.5. Update on Real Time Energy Assessment for Effective Grid Management:**

NERLDC has provided public IP of its server.

b) Following list of location for meters replacement / installation were submitted for the CDAC project -

SL NO	FEEDER NAME	STATUS	METER TO BE REPLACED/INSTALLED BY PGCIL
1	SRIKONA END OF 132kV SILCHAR FDR -1	REPLACE	1
2	SRIKONA END OF 132kV SILCHAR FDR -2	REPLACE	1
3	DEOMALI END OF 220 KV KATHALGURI FEEDER	REPLACE	1
4	PK'BARI -1 END OF 132 KV SILCHAR-1	REPLACE	1
5	PK'BARI -1 END OF 132 KV SILCHAR-2	REPLACE	1
6	PAVOI END OF 132 KV BNC-1	REPLACE	1
7	MOKOK(S) END OF DOYANG	REPLACE	1
8	MOKOK(S) END OF MOKOK-MOKOK-1	REPLACE	1
9	MOKOK(S) END OF MOKOK-MOKOK-2	REPLACE	1
10	KHUPI END OF 132 KV BALIPARA	INSTALL	1
11	LEKHI END OF 132 KV PARE	INSTALL	1
12	KHUPI END OF 132 KV KAMENG	INSTALL	1
13	ZUANGTUI END OF MELRIAT	INSTALL	1
14	LUANGMOL END OF AIZAWL	INSTALL	1

M/s CDAC has informed that pilot testing of Meter data acquisition of L&T Energy meters (2 No.) has been planned during 12<sup>th</sup> – 16<sup>th</sup> Nov 2018. The location identified for Pilot Testing is 400kV Azara Grid Sub-station, Assam

No. Of meters: 2 No.

AZARA END OF 400kV SILCHAR FDR

AZARA END OF 400kV BONGAIGAON FDR

***NERPC/AEGCL/CDAC may please update the status.***

**D.6. Recording of operational instructions over VOIP in RLDC:**

In 149<sup>th</sup> OCCM NERTS informed that LOA already placed. Supply by 1month. Details of LOA shared with NERLDC.

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

**D.7. Ensuring proper functioning of Under Frequency Relays(UFR) & df/dt Relays:**

In 7<sup>th</sup> NPC meeting held on 08.09.17 it was agreed that mock test is good enough to test the healthiness of the UFR & df/dt relays. The frequency of site inspection was proposed to be upto six months. RPC may carry out periodic inspection, in line with provisions of IEGC and furnish inspection reports to NPC.

Discussions as per previous meetings:-

- Inspection for Mawphlang completed.
- Inspection for Baghjap, Sankardevnagar and Sipajhar under Assam would be tentatively done in the first week of November, 2018.

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

**D.8 Non-availability of SOE records of Biswanath Chariali, Ranganadi, Dimapur:**

Latest status

HVDC Biswanath Chariali :

All signals were integrated as per project approved list. The same was also jointly checked with RLDC end during commissioning. Thus, additionally SOE and other signals apart from approved list needs approval of competent authority.

POSO to confirm availability of any document regarding communication with POWERGRID LD&C.

Dimapur: Fire incident. By Nov'18.—present status/target: Dec'18  
For RHEP RTU integration works complete by Dec'18.

***NERTS/NERLDC may please intimate the status.***

**D.9. VSAT for power system communications in NER:**

As per discussion in previous meetings:

- Leased Line Connectivity has been explored by NERTS for Roing, Tezu & Namsai with recurring expenditure amounting to INR 28 lakhs.

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- VSAT Pilot project to be executed at Byrnihat station. The data would be transmitted from Byrnihat to KPTCL (via satellite) to SRLDC to NLDC to NERLDC. This would be kept in monitoring mode in the interim.
- NERPC to take up with proper authorities for funding of VSAT in NER from suitable sources.

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

**D.10. DIMAPUR PG Voice communication and telemetry out since Feb'18.**

In 148<sup>th</sup> OCCM DGM(AM), NERTS informed that Dimapur substation phone is working OK since March'18 (VOIP number 23640213). The same was restored along with power system restoration. Under urgency in March18, NERTS had collected one telephone from SLDC end and same was later replenished. For data, he informed that the same would be corrected by Nov'18.

In 149<sup>th</sup> OCCM NERTS informed that Dimapur communication would be restored by Dec'18.

***NERTS may please intimate the status.***

**D.11 Update on PDMS:**

In 149<sup>th</sup> OCCM M/s PRDC presented the high level design document. Also the following were decided:-

- All utilities to inform the name and details of SPOC (Single Point of Contact).
- Assam would be the Pilot state.

***NERPC may please deliberate.***

**D.12 Checking of RTU at RHEP:**

Inspite of being healthy RTU in RHEP end, there is a repetitive communication from NERLDC for checking of RTU in our side. The problem may lies in the communication link.

In 149<sup>th</sup> OCCM DGM(SL), NERLDC clarified that S900 RTU has intermittent data transmission. The same was confirmed when team from NERLDC, NERTS visited RHEP. The bays have to be transferred to the existing C264 RTUs for 132kV RHEP-Chimpu D/C. For this MFTs are to be procured by NEEPCO. This has to be accelerated.

Director (O&P), NERPC requested NEEPCO to extend data upto the nearest wideband location through PLCC. Sr.Manager, NEEPCO informed that if ABB person is present with help of NERTS PLCC issue may be resolved. DGM(AM), NERTS agreed to extend all possible support.

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

**D.13 Telemetry Availability Status at NERLDC from Constituents (as on 31-10-2018):**

Sl. No.	Name of the Constituents	Total Analogue Data points	Total Digital Data points	Total Data Points	Analogue Data points Reporting	Digital Data Points Reporting	Total Reporting	Total Percentage of data Availability
1	Arunachal Pradesh	106	152	258	7	11	18	6.97%

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2	Assam	1217	1731	2948	509	523	1038	35.00%
3	Manipur	180	255	435	60	93	125	35.17%
4	Meghalaya	409	388	797	238	57	295	37.01%
5	Mizoram	79	50	129	9	7	16	12.40%
6	Nagaland	237	270	507	13	2	15	2.95%
7	Tripura	524	715	1239	133	133	266	21.46%
8	PGCIL	616	1052	1668	388	688	1076	64.51%
9	NEEPCO	202	286	488	109	136	245	50.20%
10	NTPC	31	49	80	23	49	72	90%
11	OTPC	41	85	126	40	81	121	96.8%
12	NHPC	18	29	47	17	28	45	95.74%
13	<b>NER</b>	<b>3671</b>	<b>5092</b>	<b>8763</b>	<b>1555</b>	<b>3557</b>	<b>3357</b>	<b>38.31%</b>

***NERLDC may please deliberate.***

**D.14 Maintaining Healthiness of +/- 800 kV Multi-Terminal HVDC BNC-Alipurduar-Agra**

During the last three months it has been observed that frequent tripping of HVDC poles are taking place for +/- 800 kV Multi-Terminal HVDC BNC-Alipurduar-Agra.

400 kV Kishenganj-Patna D/C and 400 kV Purnea- Bihar shariff D/C lines are on prolonged outage due to tower collapse and there is high hydro power generation in Sikkim and North Eastern Region. An account of the above, reliability of +/- 800 kV Multi-Terminal HVDC BNC-Alipurduar-Agra is very important. Any incident involving further tripping in the corridor may become a cause for major grid disturbance and system separation affecting Cross- Border transaction of power.

It is requested to share a copy of Frequency Controller settings adopted at Biswanath Chariali.

In 149<sup>th</sup> OCCM NERTS agreed to submit Frequency Controller Settings to NERLDC.

***NERLDC may please intimate the status.***

**AGENDA ITEMS FROM NERLDC:**

**D.15 Ratification of projected demand and generation for Q4 of 2018-19 (Jan'19 to Mar'19)**

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

Projected demand and generation of NER constituents to be considered in the base case for POC transmission charge and loss calculations for Q4 (Jan'19 to Mar'19) will be presented in the meeting (also attached at **Annexure-D.15**) for ratification by the constituents.

DoP Arunachal Pradesh, DoP Nagaland and TSECL is yet to submit the data for Q4 (Jan'19 to Mar'19).

***Members may please discuss.***

**D.16 Frequent tripping of NETC lines in the month of Oct'18**

Frequent tripping of lines owned by NETC observed in the month of Oct'18. Details are as follows:

SI No	Element Name	Outage Date & Time	Revival Date & Time	Outage Duration
1	400 kV Palatana - Silchar 1 Line	06-10-18 12:06	06-10-18 12:17	0:11:00
2	400 kV Bongaigaon - Byrnihat Line	09-10-18 14:23	09-10-18 15:29	1:06:00
3	400 kV Azara - Silchar Line	15-10-18 2:11	15-10-18 2:22	0:11:00
4	400 kV Palatana - Silchar 1 Line	17-10-18 9:00	17-10-18 10:04	1:04:00
5	400 kV Palatana - Silchar 2 Line	17-10-18 9:00	17-10-18 9:26	0:26:00
6	400 kV Azara - Silchar Line	27-10-18 11:49	27-10-18 12:07	0:18:00
7	400 kV Byrnihat - Silchar Line	28-10-18 7:36	28-10-18 8:04	0:28:00
8	400 kV Azara - Silchar Line	31-10-18 13:19	31-10-18 13:38	0:19:00

Prima facie, it appears that the faults were due to vegetation infringement in all the events mentioned except for tripping of 400 kV Bongaigaon – Byrnihat line on 9<sup>th</sup> Oct'18.

For safe and secure operation of NER grid, and specifically the southern part of NER and Bangladesh (South Comilla), healthiness of entire link of 400 kV Palatana – Silchar – Bongaigaon to be ensured.

NETC is requested to intimate the root cause of events mentioned and action taken.

**Members may please discuss.**

**D.17 Connectivity of capital area of Nagaland through 132 kV Kohima – Wokha – Sanis – Doyang link**

Frequent tripping of 132 kV Dimapur – Kohima line was observed in the month of Oct'18. Details are as follows:

ID	Element Name	Outage Date & Time	Revival Date & Time	Reason End1	Reason End2	Length_Capacity
1	132 kV Dimapur (PG) - Kohima Line	15-10-18 9:52	15-10-18 10:01	DP, Z-I, B-E	B-E, 44.53 km	44.5
2	133 kV Dimapur (PG) - Kohima Line	20-10-18 3:56	20-10-18 4:20	DP, Z-I, B-E	N/A	44.5
3	134 kV Dimapur (PG) - Kohima Line	22-10-18 10:15	22-10-18 10:34	DP, Z-I, B-E	DP, Z-I, B-E	44.5

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4	135 kV Dimapur (PG) - Kohima Line	22-10-18 11:25	22-10-18 11:40	DP, Z-I, B-E	Earth Fault, B-E	44.5
5	136 kV Dimapur (PG) - Kohima Line	22-10-18 12:26	22-10-18 15:25	DP, Z-I, B-E	DP, Z-I, B-E, FD =37 KM	44.5

Due to tripping of this line, power supply to the capital area of Nagaland is affected as 132 kV Kohima – Wokha line and 132 kV Karong – Kohima lines are normally kept open.

DoP Nagaland is requested to keep 132 kV Kohima – Wokha – Sanis – Doyang link in service for reliable operation of capital area of Nagaland power system.

***NERLDC may please deliberate.***

**D.18 Coal Availability Declaration by BgTPP:**

During the on-going coal shortage condition in NTPC BgTPP, it has been observed that BgTPP reduces the DC on day ahead basis or takes out one unit stating the reason as coal shortage. In such a condition it becomes very difficult for NERLDC for managing power availability in NER Region and planning for meeting the demand of the region in a very short period of time. It is therefore requested to BgTPP to do proper planning for efficient utilization of the coal available.

It is also requested to furnish the coal availability on weekly basis to NERLDC atleast 5 days in advance for proper planning and utilization of the available coal.

***NERLDC may please deliberate.***

**D.19 Wrong Shortfall (MU) Data in Night Data of SLDC Assam and SLDC Tripura**

The daily shortfall energy (MU) in the Night Data excel file furnished by SLDC Assam (cell no. AH26) and SLDC Tripura (cell no. Y26) is regularly shown as zero, although shortfall in peak/off-peak hours (MW) is non-zero value.

As the PWC Reporting Software is live at NERLDC, with wrong Shortfall (MU) Data, the NERLDC control room is facing issues in making the various reports sent to various offices including Ministry of Power.

***NERLDC may please deliberate.***

**D.20 Multiple tripping of important transmission lines:**

Following lines have tripped multiple number of times in Oct-18:

- i. 132kV Dharmanagar (TSECL) –Dullavcherra (AEGCL)

Outage Date	Outage Time	Revival Date	Revival Time	Reason End1	ReasonEnd2
08-Oct-18	08:07:00	08-Oct-18	17:32:00	E/F	E/F
09-Oct-18	07:55:00	10-Oct-18	07:44:00	E/F	O/C B-ph, 19.2 km
10-Oct-18	09:51:00	10-Oct-18	13:15:00	E/F	N/A

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14-Oct-18	13:13:00	15-Oct-18	17:41:00	E/F	Z-2, Dir. O/C,B Phase, FD=16 KM
16-Oct-18	10:57:00	16-Oct-18	16:47:00	E/F	E/F
17-Oct-18	10:07:00	18-Oct-18	07:11:00	E/F	E/F
18-Oct-18	09:24:00	30-Oct-18	07:42:00	No Trip	B- ph,Z1,36.3km

ii. 220 kV Mariani (PG)Mokokchung – (PG) I

Outage Date	Outage Time	Revival Date	Revival Time	Reason End1	Reason End2
07-Oct-18	06:02:00	07-Oct-18	07:01:00	DT received	Over Voltage Stage-I
08-Oct-18	02:52:00	08-Oct-18	06:14:00	DT received	Over Voltage Stage-I
13-Oct-18	12:43:00	13-Oct-18	13:37:00	DT received	Over Voltage Stage-I
20-Oct-18	03:58:00	20-Oct-18	08:52:00	DT received	Over Voltage Stage-I
21-Oct-18	21:25:00	22-Oct-18	07:05:00	DT received	Over Voltage Stage-I
22-Oct-18	23:30:00	23-Oct-18	06:26:00	DT received	Over Voltage Stage-I

***NERLDC may please deliberate.***

**D.21 Sudden change in DC of BgTPP and Kopili on 2<sup>nd</sup> November'18.**

On 02-Nov-18, NERLDC have experienced huge difficulty in managing the over drawl of Assam/Tripura /NER during full day. The reason for the same is related to abrupt change in DC by BgTPP & Kopili.

In case of BgTPP, it has been observed that the day ahead DC declared during entitlement by BgTPP was 465 MW. However, in R1 they have suddenly reduced their DC to 232 MW which is half of their previous day DC. In such a situation it becomes difficult for the beneficiaries to manage their schedule as well as load pattern.

In case of Kopili, it has been observed that they have suddenly changed their DC due to non -revival of shutdown of Kopili Unit-4. As a result, 41 MW of deviation occurred in NER region which could have been controlled if the shutdown were planned properly.

***Members may please discuss.***

**METERING RELATED ITEMS**

**D.22. Procurement of additional 70 Laptops:**

NERTS informed the following in 149<sup>th</sup>. OCC meeting:

**(a) Laptop:**

Laptop received at all the Locations (as detailed below):-

- Misa (Assam - 30 Nos.),



- Nirjuli (Arunachal Pradesh - 08 Nos),
- Kumarghat (Tripura - 08 Nos),
- Khliehriat (Meghalaya - 06 Nos),
- Aizawl (Mizoram - 04 Nos),
- Dimapur (Nagaland - 06 Nos),
- Imphal (Manipur - 08 Nos.)

**(b) Paper License:**

- Under Tendering:
- Completion in all respect by December 2018

***NERTS may intimate status of tendering / placement of LOA.***

**D.23. Installation of new L&T SEMs in NER:**

NERTS informed the following in 149<sup>th</sup>. OCC meeting:

- **Khandong:** Completed
- **Mizoram:** Installation after replacement of existing C&R Panels by Mizoram as discussed in last OCCM.
- **Loktak:** Status to be updated by NHPC Loktak.
- **NTPC-BgTPP:** As per the communication of NERTS on 24.09.18, six nos. of SEM is under diversion for replacement by October 2018.

***Status of Loktak and NTPC may be discussed.***

**D.24. Procurement of DCD:**

NERTS informed the following in 149<sup>th</sup>. OCC:

Schedule for procurement:

- **Placement of Award: 25.11.2018**
- **Tentative Delivery : 31.12.2018**

NERLDC has already provided state-wise (location specific) distribution as below:

SN	State	Storage Location	Qty.	Stations to be covered
1	Assam	Misa (PG) SS	5	BNC (PG), SONABIL (S), SILCHAR (PG), GOHPUR (S), NTPC-BgTPP (U)
2	Assam	Misa (PG) SS	9	To be kept as Spares
3	Meghalaya	AM (PG), Shilling	1	Byrnihut (S)
4	Manipur	Imphal (PG) SS	2	Imphal (PG) & Thoubal (S) SS
5	Mizoram	Aizawl (PG) SS	1	Aizawl (PG)
6	Tripura	Kumarghat (PG) SS	2	AGTPP-NEEPCO & Agartala T/L Office
7	Nagaland	Dimapur (PG) SS	2	Kohima S/S & Mokokchang S/S
8	Arunachal	Nirjuli (PG) SS	3	KAMENG-NEEPCO, PARE-NEEPCO & CHIMPU S/S

***Status may be discussed.***

**D.25. Time drift in SEMs.**

NTPC reported vide e-mail dated 30/08/18 that time drift correction at BgTPP end could not be done due to DCD issue. Since all 3 main meters have drifted by more than 5 minutes new L&T make meters may be installed.

It was intimated by NERTS in 148<sup>th</sup>. OCC meeting that Communication in regard to replacement of SEM received from NERLDC on 06.09.2018/12.09.2018 through mail. Same has been taken up. Replacement planned by 25-09-2018(SEM meter to be diverted from Misa to Bongaigaon S/S).

***Status may be discussed.***

**D.26 Replacement of SEMs.**

NERTS informed the status in 149<sup>th</sup> OCC:

SN	LOCATION	FEEDER NAME	STATUS
1	BNC	BNC END OF PAVOI-I	Meters already made available at site. Replacement by 15.10.18
2	BNC	BNC END OF PAVOI-II	
3	BNC	PAVOI END OF BNC-I	
4	BNC	33 KV BNC-1	
5	BNC	33 KV BNC-2	
6	PK BARI	PK'BARI end of 132 kV Silchar I	Replacement by October'18
7	PK BARI	PK'BARI end of 132 kV Silchar II	
8	NTPC	NTPC END OF 400 KV NTPC(B'GAON)-B'GAON(PG)-I (M)	Already discussed in Item No. D.32
9	NTPC	NTPC END OF 400 KV NTPC(B'GAON)-B'GAON(PG)-II (M)	
10	NTPC	NTPC END OF 400 KV NTPC(B'GAON)-B'GAON(PG)-I (C)	
11	NTPC	NTPC END OF 400 KV NTPC(B'GAON)-B'GAON(PG)-II (C)	
12	GOHPUR	GOHPUR END OF 132 NIRJULI FEEDER	Meter under diversion. Replacement by 31.10.18

***Status may be discussed.***

**D.27 Utilization of Laptop for Metering**

TSECL intimated that the problem of Laptop has been resolved and they would start sending data using Laptop.

***Status may be discussed.***

**D.28 Non-receipt of SEM data:**

SL.NO	LOCATION	FEEDER NAME
	ASSAM	
1	TINSHUKIA	TINSUKIA END OF 220KV KTG FDR-I

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2	TINSHUKIA	TINSUKIA END OF 220KV KTG FDR-II
4	SONABIL	SONABIL END OF 220 KV BALIPARA-1 FDR
5	SONABIL	SONABIL END OF 132KV BALIPARA FDR
6	KAHILIPARA	KAHELIPARA END OF UMTRU-1 FDR
7	KAHILIPARA	KAHELIPARA END OF UMTRU-2 FDR
8	BTPS (AS)	220 BTPS(ASSAM) - NTPC LINE
9	UMRANGSOO	UMRANGSOO END OF 132 KV KHANDONG
10	UMRANGSOO	UMRANGSOO END OF 132 KV HAFONG
	<b>ARUNACHAL PRADESH</b>	
11	DEOMALI	DEOMALI END OF 220KV KATHALGURI FDR
	<b>TRIPURA</b>	
12	UDAIPUR	UDAIPUR END OF PALATANA
	<b>NAGALAND</b>	
13	KOHIMA	KOHIMA END DIMAPUR (PG)
14	KOHIMA	KOHIMA END OF KARONG
15	SANIS	SANIS END OF DOYANG
16	MOKUKCHANG	MOKUKCHANG END OF DOYANG
	<b>MANIPUR</b>	
17	RENGPANG	RENGPANG END OF LOKTAK

**WEEKLY SEM data from above locations not sent to NERLDC.**

Status as informed by various utilities in 149<sup>th</sup>. OCC meeting:

SL.NO	LOCATION	FEEDER NAME	Status
	<b>ASSAM</b>		
1	TINSHUKIA	TINSUKIA END OF 220KV KTG FDR-I	Tinsukia visited on 09.10.18, DCD display problem
2	TINSHUKIA	TINSUKIA END OF 220KV KTG FDR-II	
4	SONABIL	SONABIL END OF 220 KV BALIPARA-1 FDR	DCD defective
5	SONABIL	SONABIL END OF 132KV BALIPARA FDR	
6	KAHILIPARA	KAHELIPARA END OF UMTRU-1 FDR	No display in DCD. Already intimate to NERLDC.
7	KAHILIPARA	KAHELIPARA END OF UMTRU-2 FDR	
8	BTPS (AS)	220 BTPS(ASSAM) - NTPC LINE	Old CMRI defective
9	UMRANGSOO	UMRANGSOO END OF 132 KV KHANDONG	CMRI not available. Also NERTS does not collect data from Umrangso
10	UMRANGSOO	UMRANGSOO END OF 132 KV HAFONG	
	<b>ARUNACHAL PRADESH</b>		
11	DEOMALI	DEOMALI END OF 220KV KATHALGURI FDR	DCD not available

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	<b>TRIPURA</b>		
12	UDAIPUR	UDAIPUR END OF PALATANA	Software issue. After laptop is received.
	<b>NAGALAND</b>		
13	KOHIMA	KOHIMA END DIMAPUR (PG)	No representative
14	KOHIMA	KOHIMA END OF KARONG	
15	SANIS	SANIS END OF DOYANG	
16	MOKUKCHANG	MOKUKCHANG END OF DOYANG	
	<b>MANIPUR</b>		
17	RENGPANG	RENGPANG END OF LOKTAK	ICT put in service one week back. Start to SEND data after receipt of laptop

*NERLDC may please deliberate.*

Any other item:

Date and Venue of next OCC

It is proposed to hold the 151<sup>st</sup> OCC meeting of NERPC on second week of December, 2018. The date & exact venue will be intimated in due course.

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## Generation Projection (Jan 2019 - Mar 2019)

				Generation declared Commercial from 1st Apr'18 to 30th Sep'18					Generation declared/expected to be declared Commercial from 1st Oct'18 to 31st Dec'18								
Sl. No.	Entities	Region	Projections based on 3 Years Data	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	Bus Name	Unit No.	Installed Capacity	Gen. considered	Sub Total	TOTAL	Comments From DICs /Others (if any)	Figure as per Comments/PoC Data	Projected Generation before normalization w.r.t projected All India Peak Demand
			(MW)			(MW)	(MW)	(MW)			(MW)	(MW)	(MW)	(MW)			(MW)
1	AGTPP, NEEPCO	NER	87											87	AS per NEEPCO	94	94
2	Doyang, NEEPCO	NER	44											44		51	51
3	Kopili, NEEPCO	NER	172											172		182	182
4	Kopili 2, NEEPCO	NER	25											25		20	20
5	Khandong, NEEPCO	NER	35											35		38	38
6	Ranganadi, NEEPCO	NER	405											405		401	401
7	AGBPP_Kathalguri	NER	231											231		220	220
8	Loktak, NHPC	NER	105											105		105	
9	Palatana GBPP	NER	578											578	As per OTPC	680	680
10	Bongaigaon_NTPC	NER	468											468			468
11	Pare HEP NEEPCO	NER		Pare HEP	1	55	38	76						76	AS per NEEPCO	110	110
				Pare HEP	2	55	38										
12	Tuirial HEP NEEPCO			Tuirial HEP	1	60	42	42						42		54	
13	Arunachal Pradesh	NER	0											0			0
14	Assam	NER	349											349	As per data given by Assam	211	211
15	Manipur	NER	0											0			0
16	Meghalaya	NER	206											206	As per data given by Meghalaya	261	261
17	Nagaland	NER	15											15			15
18	Tripura	NER	56											56			56
19	Mizoram	NER	11											11	As per data given by Mizoram	8	8
	<b>TOTAL</b>		<b>2786</b>					<b>118</b>					<b>0</b>	<b>2904</b>			<b>2974</b>

**Note:**

1. Projections are based on monthly maximum injection in the last 3 years from actual metered data.
2. Generation forecast has been done based on the following criteria
  - (i) If there is an increasing trend then last year average generation has been considered
  - (ii) Otherwise average of past three year average generation has been considered
3. In case of new generators where past data was not available following has been assumed
  - (i) 0.7 plf for hydro generators
  - (ii) 0.7 plf for thermal generators.
  - (iii) 0.3 plf for gas stations

DEMAND FORECAST USING PAST 3 YEARS DATA (Jan 2019 - Mar 2019)														Data given by DICs	Comments
2015-16			2016-17			2017-18			1	2	3	4			
Jan-16	Feb-16	Mar-16	Jan-17	Feb-17	Mar-17	Jan-18	Feb-18	Mar-18	2015-16 Average	2016-17 Average	2017-18 Average	Projected Demand for (Jan 2019 - Mar 2019) before normalization			
Arunachal Pradesh	117	135	113	120	135	138	134	128	124	122	131	129	134		
Assam	1,330	1,327	1,316	1,464	1,396	1,391	1,510	1,481	1,446	1,324	1,417	1,479	1,561	1625	As per data given by Assam
Manipur	166	158	155	163	162	158	195	191	178	160	161	188	198	221	As per data given by Manipur
Meghalaya	377	322	315	331	300	298	331	311	307	338	310	316	300	370	As per data given by Meghalaya
Mizoram	101	99	84	98	93	94	96	94	91	95	95	94	93	94	As per data given by Mizoram
Nagaland	122	118	114	121	147	122	124	122	120	118	130	122	127		
Tripura	219	227	248	223	223	228	262	273	256	231	225	264	272		

**Notes**

1. Projections are based on the past 3 years' monthly Peak Demand Met data available on the website of CEA
2. The above projections are being done for financial year 2018-2019 (Q4) i.e Jan 2019- Mar 2019
3. Projections are being done based on the forecast function available in MS Office Excel
4. CEA Reports can be accessed from the following links:  
[http://www.cea.nic.in/reports/monthly/powersupply/2018/psp\\_peak-01.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2018/psp_peak-01.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2018/psp\\_peak-02.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2018/psp_peak-02.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2018/psp\\_peak-03.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2018/psp_peak-03.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2017/psp\\_peak-01.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2017/psp_peak-01.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2017/psp\\_peak-02.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2017/psp_peak-02.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2017/psp\\_peak-03.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2017/psp_peak-03.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2016/psp\\_peak-01.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-01.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2016/psp\\_peak-02.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-02.pdf)  
[http://www.cea.nic.in/reports/monthly/powersupply/2016/psp\\_peak-03.pdf](http://www.cea.nic.in/reports/monthly/powersupply/2016/psp_peak-03.pdf)