



National Load Despatch Centre
POWER SYSTEM OPERATION CORPORATION LIMITED
(A wholly owned subsidiary of POWERGRID)
CIN No.: U40105DL2009GOI188682
B-9, QUTUB INSTITUTIONAL AREA, KATWARIA SARAI, NEW DELHI -110016

Ref: POSOCO/NLDC/SO/Weekly Report

Date: 05th July 2019

To,

1. कार्यपालक निदेशक, पू. क्षे. भा. प्रे. के., 14, गोल्फ क्लब रोड, कोलकाता - 700033
Executive Director, ERLDC, 14 Golf Club Road, Tolleygunge, Kolkata, 700033
2. कार्यपालक निदेशक, ऊ. क्षे. भा. प्रे. के., 18/ ए, शहीद जीत सिंह सनसनवाल मार्ग, नई दिल्ली - 110016
Executive Director, NRLDC, 18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi - 110016
3. कार्यपालक निदेशक, प. क्षे. भा. प्रे. के., एफ-3, एम आई डी सी क्षेत्र, अंधेरी, मुंबई - 400093
Executive Director, WRLDC, F-3, M.I.D.C. Area, Marol, Andheri (East), Mumbai-400093
4. कार्यपालक निदेशक, ऊ. पू. क्षे. भा. प्रे. के., डोंगतिह, लोअर नोंग्रह, लापलंग, शिलोंग - 793006
Executive Director, NERLDC, Dongteih, Lower Nongrah, Lapalang, Shillong - 793006, Meghalaya
5. कार्यपालक निदेशक, द. क्षे. भा. प्रे. के., 29, रेस कोर्स क्रॉस रोड, बंगलुरु - 560009
Executive Director, SRLDC, 29, Race Course Cross Road, Bangalore-560009

Sub: Weekly Status Report 24th June 2019 to 30th June 2019.

महोदय/Dear Sir,

आई०ई०जी०सी०-2010 की धारा स.- 5.5.1 के प्रावधान के अनुसार, 24 जून 2019 से 30 जून 2019, सप्ताह की अखिल भारतीय प्रणाली की ग्रिड निष्पादन रिपोर्ट रा०भा०प्रे०के० की वेबसाइट पर निम्न लिंक पर उपलब्ध है :-

As per article 5.5.1 of the Indian Electricity Grid Code, the weekly status report pertaining power supply position report of All India Power System for the week 24th June 2019 to 30th June 2019, is available at the NLDC website.

Thanking You.

Yours faithfully,

DGM (SO)

पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड
राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

साप्ताहिक रिपोर्ट (24 जून से 30 जून 2019 तक)

रिपोर्टिंग तिथि:-

5-Jul-19

(आई० ई० जॉ० सी० की धारा संख्या-5.5.1 के अंतर्गत)

1. अधिकतम मांग आपूर्ति और अधिकतम कमी (मे०वा०)

दिनांक	उत्तरी क्षेत्र		पश्चिमी क्षेत्र		दक्षिणी क्षेत्र		पूर्वी क्षेत्र		पूर्वोत्तर क्षेत्र		कुल	
	अधिकतम मांग आपूर्ति (मे०वा०)	अधिकतम कमी (मे०वा०)	अधिकतम मांग आपूर्ति (मे०वा०)	अधिकतम कमी (मे०वा०)	अधिकतम मांग आपूर्ति (मे०वा०)	अधिकतम कमी (मे०वा०)	अधिकतम मांग आपूर्ति (मे०वा०)	अधिकतम कमी (मे०वा०)	अधिकतम मांग आपूर्ति (मे०वा०)	अधिकतम कमी (मे०वा०)	अधिकतम मांग आपूर्ति (मे०वा०)	अधिकतम कमी (मे०वा०)
24-06-2019	54587	531	47271		41707		20658		2687	276	166910	807
25-06-2019	57920	1183	47941		41490		22369		2684	266	172404	1449
26-06-2019	60446	842	47082		40660		21073		2608	251	171869	1093
27-06-2019	60858	1037	47305		41658		20873		2696	171	173390	1208
28-06-2019	61992	1085	44798		42562		20944		2512	248	172808	1333
29-06-2019	60121	2260	44841		41010		21404		2832	98	170208	2358
30-06-2019	59498	1206	41420		36707		19793		2739	158	160157	1364

2. ऊर्जा आपूर्ति और पनबिजली उत्पादन (मि०यू०)

क्षेत्र / तिथि	उत्तरी क्षेत्र		पश्चिमी क्षेत्र		दक्षिणी क्षेत्र		पूर्वी क्षेत्र		पूर्वोत्तर क्षेत्र		कुल	
	ऊर्जा आपूर्ति (मि०यू०)	पनबिजली उत्पादन (मि०यू०)	ऊर्जा आपूर्ति (मि०यू०)	पनबिजली उत्पादन (मि०यू०)	ऊर्जा आपूर्ति (मि०यू०)	पनबिजली उत्पादन (मि०यू०)	ऊर्जा आपूर्ति (मि०यू०)	पनबिजली उत्पादन (मि०यू०)	ऊर्जा आपूर्ति (मि०यू०)	पनबिजली उत्पादन (मि०यू०)	ऊर्जा आपूर्ति (मि०यू०)	पनबिजली उत्पादन (मि०यू०)
	24-06-2019	1318	341	1096	12	929	47	477	87	54	17	3874
25-06-2019	1362	352	1117	12	963	36	496	89	53	17	3991	505
26-06-2019	1423	358	1118	10	952	32	470	93	47	18	4011	511
27-06-2019	1439	349	1115	11	960	26	463	96	50	22	4027	505
28-06-2019	1472	352	1060	9	966	28	462	97	49	23	4008	509
29-06-2019	1482	338	1034	12	949	35	457	94	51	25	3974	504
30-06-2019	1447	350	988	7	879	34	444	90	53	22	3812	502

3. आवृत्ति (प्रतिशत समय में)

तिथि	49.8-49.9	<49.9	49.9-50.05	>50.05	Average	FVI
	ऑ० ई० ग्रिड	ऑ० ई० ग्रिड	ऑ० ई० ग्रिड	ऑ० ई० ग्रिड	ऑ० ई० ग्रिड	ऑ० ई० ग्रिड
24-06-2019	5.27	5.73	78.02	16.25	50.00	0.033
25-06-2019	6.92	8.40	76.12	15.47	50.00	0.038
26-06-2019	0.84	0.84	68.24	30.91	50.03	0.034
27-06-2019	1.93	1.93	74.39	23.68	50.02	0.026
28-06-2019	0.38	0.38	75.31	24.31	50.02	0.023
29-06-2019	11.49	12.81	76.88	10.31	49.98	0.049
30-06-2019	4.59	4.75	66.32	28.94	50.01	0.042

*NEW & SR grid running in synchronisation.

4. NEW ELEMENTS COMMISSIONED

1. 765 kV spare unit of ICT-II at darliparli first time charged on 24-06-2019 at 13:24 hrs.

5. Maximum Demand Met during the day & Peak Hour Shortage in States (in MW)

Region	Date	24-06-2019		25-06-2019		26-06-2019		27-06-2019		28-06-2019		29-06-2019		30-06-2019	
	States	Max. Demand Met during the day	Peak hr Shortage	Max. Demand Met during the day	Peak hr Shortage	Max. Demand Met during the day	Peak hr Shortage	Max. Demand Met during the day	Peak hr Shortage	Max. Demand Met during the day	Peak hr Shortage	Max. Demand Met during the day	Peak hr Shortage	Max. Demand Met during the day	Peak hr Shortage
NR	Punjab	11561	0	11355	0	12478	0	12584	0	12621	0	12461	0	12876	0
	Haryana	9123	0	9611	0	10029	0	9970	0	9976	0	10185	0	9939	195
	Rajasthan	11035	0	11114	0	11164	0	11565	0	11660	0	11671	0	11393	0
	Delhi	5876	0	6393	0	6553	0	6469	0	6567	0	6664	0	6623	0
	UP	19038	180	18914	0	19963	1130	20339	1540	20560	1040	20399	940	20914	0
	Uttarakhand	1868	0	2097	0	2115	0	2045	0	2163	0	2141	0	2020	0
	HP	1397	0	1379	0	1489	3	1472	0	1472	0	1534	0	1299	0
	J&K	2189	386	2033	508	2151	538	2111	528	2374	593	2252	563	2116	529
	Chandigarh	328	0	331	0	343	0	325	0	351	0	355	0	322	0
WR	Chhattisgarh	3826	0	3971	0	3883	0	3784	0	3784	0	3827	0	3759	0
	Gujarat	15833	0	14804	0	14926	0	15676	0	14949	0	14979	0	14577	0
	MP	8291	0	8778	0	8395	0	8504	0	8257	0	8097	0	7753	0
	Maharashtra	19213	0	20047	0	20395	0	20036	0	18028	0	17431	0	16471	0
	Goa	541	0	541	0	541	0	541	0	541	0	541	0	541	0
	DD	318	0	335	0	345	0	344	0	337	0	326	0	300	0
	DNH	804	0	806	0	812	0	824	0	791	0	746	0	743	0
	Essar steel	329	0	356	0	330	0	316	0	373	0	325	0	304	0
SR	Andhra Pradesh	8450	0	8521	0	8246	0	8121	0	8450	0	8292	0	8029	0
	Telangana	7287	0	7475	0	7316	0	7689	0	7435	0	6701	0	6359	0
	Karnataka	10114	0	10373	0	10260	0	10302	0	10182	0	9951	0	8590	0
	Kerala	3656	0	3619	0	3730	0	3831	0	3789	0	3788	0	3546	0
	Tamil Nadu	15111	0	15022	0	14038	0	14609	0	15600	0	15048	0	14313	0
	Pondy	404	0	429	0	411	0	408	0	416	0	411	0	387	0
ER	Bihar	5363	0	5579	0	5399	0	5510	0	5428	0	5760	0	5166	0
	DVC	3359	0	3110	0	3029	0	3156	0	3239	0	3273	0	2920	0
	Jharkhand	1172	0	1284	0	1000	0	999	0	1197	0	1269	0	1068	0
	Odisha	4360	0	4410	0	5055	0	4477	0	3991	0	4093	0	3689	0
	West Bengal	9135	0	9326	0	9147	0	9041	0	8887	0	8613	0	8211	0
	Sikkim	99	0	95	0	92	0	96	0	92	0	93	0	87	0
NER	Arunachal Pradesh	123	1	137	2	132	2	130	2	128	3	134	2	130	1
	Assam	1678	172	1689	162	1634	186	1693	180	1661	48	1759	81	1756	95
	Manipur	174	2	161	3	139	2	142	1	158	3	177	3	171	2
	Meghalaya	304	0	316	0	319	0	319	2	313	4	340	0	315	0
	Mizoram	99	2	94	1	95	0	93	0	88	7	94	1	86	1
	Nagaland	136	1	126	2	129	2	127	1	115	6	130	2	125	2
Tripura	289	16	284	3	283	1	291	2	248	10	286	0	267	11	

6. Energy Consumption in States (MUs)

Region	States	24-06-2019	25-06-2019	26-06-2019	27-06-2019	28-06-2019	29-06-2019	30-06-2019
NR	Punjab	249.8	250.6	274.1	269.4	282.7	281.5	286.0
	Haryana	197.7	209.8	219.4	219.1	219.7	224.5	211.8
	Rajasthan	240.6	242.9	248.5	249.5	254.7	255.7	246.4
	Delhi	123.2	126.1	135.1	135.2	133.5	136.7	136.0
	UP	383.0	407.9	416.9	435.1	446.8	452.6	445.1
	Uttarakhand	40.1	44.4	46.5	46.7	47.2	48.6	44.9
	HP	28.7	29.1	30.8	31.3	31.7	31.5	28.5
	J&K	48.5	44.8	45.8	46.0	48.8	44.6	42.3
	Chandigarh	6.2	6.2	6.5	6.4	6.7	6.8	6.1
WR	Chhattisgarh	85.2	91.1	90.5	89.6	87.3	89.7	86.3
	Gujarat	340.6	334.7	330.8	340.2	331.8	328.2	319.5
	MP	190.4	195.1	192.8	191.7	188.4	187.4	171.4
	Maharashtra	436.2	451.0	458.8	448.7	407.6	388.5	371.1
	Goa	12.4	12.4	12.4	12.4	12.4	10.9	10.0
	DD	7.2	7.4	7.7	7.8	7.5	7.2	6.8
	DNH	18.6	18.7	18.9	19.1	18.5	17.1	17.4
	Essar steel	5.6	6.3	6.0	5.2	6.5	5.4	5.7
SR	Andhra Pradesh	176.2	178.1	179.0	178.2	185.0	184.6	174.3
	Telangana	151.8	156.6	162.2	165.6	163.5	147.0	136.3
	Karnataka	191.5	199.2	198.1	198.2	195.2	191.8	170.3
	Kerala	71.4	73.2	74.2	75.9	76.1	77.2	70.3
	Tamil Nadu	329.9	347.7	330.3	334.0	337.3	339.7	319.5
	Pondy	8.4	8.8	8.6	8.5	8.6	8.6	8.1
ER	Bihar	109.3	113.8	99.1	95.6	103.1	101.1	100.3
	DVC	66.7	67.7	66.1	66.1	67.8	62.6	66.5
	Jharkhand	25.3	25.6	24.3	21.6	25.2	25.3	25.7
	Odisha	91.1	92.9	97.7	96.4	88.4	90.4	88.4
	West Bengal	183.4	195.2	181.6	182.4	175.9	176.3	162.5
	Sikkim	1.2	1.1	1.2	1.3	1.3	1.2	1.0
NER	Arunachal Pradesh	2.4	2.3	2.3	2.2	2.2	2.3	2.2
	Assam	33.2	32.7	27.7	28.4	29.6	31.1	32.7
	Manipur	2.6	2.5	2.4	2.6	2.6	2.8	2.7
	Meghalaya	5.6	5.7	5.3	5.8	5.4	5.8	6.0
	Mizoram	1.9	1.5	1.8	2.0	1.7	1.7	1.7
	Nagaland	2.4	2.5	2.5	2.3	2.2	2.2	2.2
	Tripura	5.7	5.4	5.1	6.6	5.5	5.4	5.5
ALL INDIA TOTAL		3873.7	3990.9	4010.6	4026.7	4008.4	3973.6	3811.6

पॉवर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड
राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली

साप्ताहिक रिपोर्ट (24 जून से 30 जून 2019 तक)

(आई० ई० जी० सी० की धारा संख्या-5.5.1 के अंतर्गत)

7. अंतर्क्षेत्रीय विनिमय [प्रथम क्षेत्र से द्वितीय क्षेत्र को आयात (+) / निर्यात (-)]

दिनांक	24-06-2019	25-06-2019	26-06-2019	27-06-2019	28-06-2019	29-06-2019	30-06-2019
East to North	-62.3	-50.5	-66.4	-80.6	-78.2	-96.0	-83.6
East to West	63.5	72.8	68.2	64.2	59.5	61.8	66.2
East to South	-50.7	-56.1	-48.2	-54.5	-56.5	-61.2	-52.3
East to North-East	-11.2	-12.7	-8.8	-3.1	-3.4	-7.3	-9.8
North-East to North	-11.9	-12.2	-12.3	-12.0	-14.0	-16.5	-14.4
West to North	-205.6	-203.1	-222.8	-219.1	-239.4	-243.7	-214.8
West to South	-14.2	-12.2	16.6	-5.7	-2.6	-4.3	-1.9

**भूटान , नेपाल एव बाग्लादेश के साथ अतरराष्ट्रीय विद्युत विनिमय INTERNATIONAL
EXCHANGE WITH BHUTAN, NEPAL AND BANGLADESH**

साप्ताहिक रिपोर्ट (24 जून से 30 जून 2019 तक)

अंतरराष्ट्रीय विद्युत विनिमय [भारत से दूसरे देश को आयात (+) / निर्यात (-)] Transnational Exchange from India (Import=(+ve) /Export =(-ve))

दिनांक Date	भूटान BHUTAN		नेपाल NEPAL			बाग्लादेश BANGLADESH		
	Energy Exchange	Day Average (MW)	Energy Exchange	Day Peak (MW)	Day Average (MW)	Energy Exchange	Day Peak (MW)	Day Average (MW)
24-06-2019	10.3	429	-11.0	-570	-458	-26.2	-1118	-1091
25-06-2019	10.0	418	-9.4	-560	-393	-25.8	-1106	-1077
26-06-2019	21.8	910	-8.9	-462	-371	-26.1	-1113	-1089
27-06-2019	20.9	870	-7.9	-484	-327	-25.9	-1113	-1080
28-06-2019	26.8	1118	-7.9	-511	-328	-25.1	-1118	-1046
29-06-2019	21.7	904	-7.4	-443	-309	-25.8	-1106	-1075
30-06-2019	18.5	773	-8.3	-514	-347	-25.4	-1080	-1057
कुल Total	130.1		-60.8			-180.4		

8). Major Grid Incidences (Provisional):-

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event (As reported)	Generation Loss(MW)	Load Loss(MW)	Category as per CEA Grid Standards
1	NR	1) 220KV Bus I & II at 400/220 kV Bareilly(UP) 2) 315MVA ICT-1, II & III at 400/220 kV Bareilly(UP) 3) 220KV Bareilly(UP)-Dohna(UP) ckt-1 & 2 4) 220KV Bareilly(UP)-CB Ganj(UP) ckt-1 & 2 5) 220KV Bareilly(UP)-Pantnagar(Utt) 6) 220KV Bareilly(UP)-Shahjahanp	UP, Utt & POWERGRID	24-Jun-19	10:31	24-Jun-19	11:04	00:33	due to damage of wave trap of 220KV Bareilly(UP)-CB Ganj(UP) ckt-2 at Bareilly(UP), all 220 kV lines and 315 MVA ICT-1, II & III tripped. At the same time, both 220KV Bareilly(UP)-Dhauliganga(Utt) and 220 KV Dhauliganga(Utt)-Pithoragarh(Utt) tripped and three running unit (70*3) at Dhauliganga tripped on loss of Power evacuation path. As per PMU, R-N fault followed by Y-N fault is observed. In antecedent conditions, 315 MVA ICT-1 & II carrying 40MW & 39MW respectively.	210	200	GD-1
2	NR	1) 220 kV Badarpur(NTPC)-Alwar(Raj) 2) 220 kV Badarpur(NTPC)-Ballabgarh(BBMB) ckt-1 3) 220 kV Badarpur(NTPC)-Tughlakabad(PG) ckt-1 4) 220 kV Badarpur(NTPC)-Okhla(DTL) ckt-1 5) 220 kV Badarpur(NTPC)-Sarita Vihar(DTL) ckt-2 6) 220kV Bus coupler at Badarpur	NTPC, Delhi, BBMB, Rajasthan & POWERGRID	24-Jun-19	18:26	24-Jun-19	19:20	00:54	R-N fault occurred in 220 kV Badarpur(NTPC)-Alwar(Raj), 51.3km from Badarpur end. The tripping from the protection relay was executed but due to non/delayed quenching of arc in the R phase pole of circuit breaker, the current in R phase existed for more than 200ms, which resulted in the LBB trip initiation to BUSBAR-1. As per PMU, R-N fault with delayed clearance is observed. In antecedent conditions, 220 kV Badarpur(NTPC)-Ballabgarh(BBMB) ckt-1, 220 kV Badarpur(NTPC)-Tughlakabad(PG) ckt-1 & 220 kV Badarpur(NTPC)-Okhla(DTL) ckt-1 carrying 18MW, 21MW & 28MW respectively.			GI-2
3	NR	1) 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 2) 220kV Delina(JK)-Kishanganga(NHPC) ckt-2 3) 220kV Delina(JK)-Amargarh(NRSS29) 4) 220kV Delina(JK)-Ziankote(JK) 5) 110MW Unit#1 at 220kV Kishanganga(NHPC) 6) 110MW Unit#2 at 220kV Kishanganga(NHPC) 7) 110	NHPC, J&K & POWERGRID	25-Jun-19	19:11	25-Jun-19	19:40	00:29	220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 tripped due to tripping of 220kV Delina(JK)-Amargarh(NRSS29)(Tripped on overcurrent protection) & 220kV Delina(JK)-Ziankote(JK). Unit#1, #2 & #3 at 220kV Kishanganga(NHPC) tripped due to loss of evacuation path. As per PMU, R-Y fault is observed in the system. In antecedent conditions, 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 carrying 156MW each.	330	70	GD-1
4	NR	1) 220kV Auraiya(NTPC)-Sikandr(UP) ckt-1 2) 220kV Auraiya(NTPC)-Sikandr(UP) ckt-2 3) 220kV Agra(UP)-Sikandr(UP) ckt-1 4) 220kV Agra(UP)-Sikandr(UP) ckt-2 5) 220kV Agra(PG)-Sikandr(UP)	UP, NTPC & POWERGRID	26-Jun-19	14:07	26-Jun-19	18:01	03:54	220kV Auraiya(NTPC)-Sikandr(UP) ckt-1 & 2 tripped due to DT received at Sikandr(UP). At the same time, 220kV Agra(UP)-Sikandr(UP) ckt-1 & 2, 220kV Agra(PG)-Sikandr(UP) also tripped. As per PMU, B-N fault is observed. In antecedent conditions, 220kV Auraiya(NTPC)-Sikandr(UP) ckt-1 & 2, 220kV Agra(UP)-Sikandr(UP) ckt-1 & 2, 220kV Agra(PG)-Sikandr(UP) carrying 33MW, 33MW, 58MW, 55MW & 17MW respectively.		60	GD-1
5	NR	1) 400kV Orai(UP)-Orai 765(PG) ckt-2 2) 400kV Banda(UP)-Orai(UP) ckt-2 3) 400kV Rewa Road(UP)-Banda(UP) ckt-2	UP	26-Jun-19	16:33	26-Jun-19	17:53	01:20	400kV Banda(UP)-Orai(UP) ckt-2 tripped on R-N fault. At the same time, 400kV Orai(UP)-Orai 765(PG) ckt-2 & 400kV Rewa Road(UP)-Banda(UP) ckt-2 also tripped. As per PMU, Multiple R-N fault is observed in the system. In antecedent conditions, 400kV Orai(UP)-Orai 765(PG) ckt-2, 400kV Banda(UP)-Orai(UP) ckt-2 & 400kV Rewa Road(UP)-Banda(UP) ckt-2 carrying 297MW, 38MW & 14MW respectively.			GI-2
6	NR	1) 400kV Dadri(NTPC)-Panipat(BBMB) ckt-1 2) 400kV Dadri(NTPC)-Panipat(BBMB) ckt-2	POWERGRID, NTPC & BBMB	27-Jun-19	8:23	27-Jun-19	09:09	00:46	400kV Dadri(NTPC)-Panipat(BBMB) ckt-1 tripped on B-N fault, 88.19km from Dadri end. At the same time, 400kV Dadri(NTPC)-Panipat(BBMB) ckt-2 also tripped. In antecedent conditions, 400kV Dadri(NTPC)-Panipat(BBMB) ckt-1 & 2 carrying 104MW each.			GI-2
7	NR	1) 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 2) 220kV Delina(JK)-Kishanganga(NHPC) ckt-2 3) 110MW Unit#2 at 220kV Kishanganga(NHPC)	NHPC, J&K & POWERGRID	27-Jun-19	17:21	27-Jun-19	18:04	00:43	220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 tripped from Delina end only due to pole discrepancy in Delina-Ziankote line. Unit#2 at 220kV Kishanganga(NHPC) generating 102MW tripped due to loss of evacuation path. As per PMU, No fault is observed. At 2026Hrs, 220kV Delina(JK)-Kishanganga(NHPC) ckt-2 tripped on R-Y fault, 15.7km from kishanganga end. At the same time, 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 also tripped from Delina end only due to problem in relay setting at Delina end. As per PMU, R-Y fault is observed in the system. In antecedent conditions, 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 carrying 156MW each. Unit#2 at 220kV Kishanganga(NHPC) generating 110MW tripped due to loss of evacuation path.	110		GD-1

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event (As reported)	Generation Loss(MW)	Load Loss(MW)	Category as per CEA Grid Standards
8	NR	1) 400kV Bawana(DTL)-Mundka(DTL) ckt-2 2) 400kV Jhajjar(APCPL)-Mundka(DTL) ckt-1	POWERGRID	27-Jun-19	17:47	27-Jun-19	18:39	00:52	400kV Bawana(DTL)-Mundka(DTL) ckt-2 tripped on R-N fault, 48km from Mundka end. At the same time, 400kV Jhajjar(APCPL)-Mundka(DTL) ckt-1 also tripped on Phase to earth fault, 50 Km from Jhajjar end. As per PMU, R-N fault with no auto-reclosing is observed in the system. In antecedent conditions, 400kV Bawana(DTL)-Mundka(DTL) ckt-2 & 400kV Jhajjar(APCPL)-Mundka(DTL) ckt-1 carrying 101MW & 87MW respectively.			GI-2
9	NR	1) 315 MVA ICT 1 at 400/220kV Kishenpur(PG) 2) 315 MVA ICT 2 at 400/220kV Kishenpur(PG) 3) 220kV Kishenpur(PG)-Barn(JK) ckt-1 4) 220kV Kishenpur(PG)-Barn(JK) ckt-2	POWERGRID & J&K	28-Jun-19	15:20	28-Jun-19	15:34	00:14	220kV Kishenpur(PG)-Barn(JK) ckt-1 & 2 tripped. At the same time, 315 MVA ICT 1 & 2 tripped due to Mal-operation of Back-Up impedance protection relay. As per PMU, R-Y fault followed by B-N fault with delayed clearance is observed. In antecedent conditions, 315 MVA ICT 1 & 315 MVA ICT 2 carrying 107MW each.		220	GD-1
10	NR	1) 220kV Salal(NHPC)-Jammu(JK) ckt-1 2) 220kV Salal(NHPC)-Jammu(JK) ckt-2 3) 115MW Unit#1 at 220kV Salal(NHPC) 4) 115MW Unit#3 at 220kV Salal(NHPC)	NHPC, POWERGRID & J&K	29-Jun-19	16:44	29-Jun-19	18:06	01:22	220kV Salal(NHPC)-Jammu(JK) ckt-2 tripped due to Y Phase CT blast at salal end. At the same time, 220kV Salal(NHPC)-Jammu(JK) ckt-1, 115MW Unit#1 & #3 also tripped. As per PMU, three phase fault is observed in the system. In antecedent conditions, 220kV Salal(NHPC)-Jammu(JK) ckt-1 & 2 carrying 153MW & 136MW respectively.	230	290	GD-1
11	NR	1) 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 2) 220kV Delina(JK)-Kishanganga(NHPC) ckt-2 3) 220kV Delina(JK)-Amargarh(NRSS29) 4) 220kV Delina(JK)-Ziankote(JK) 5) 110MW Unit#1 at 220kV Kishanganga(NHPC) 6) 110MW Unit#2 at 220kV Kishanganga(NHPC)	NHPC, J&K & POWERGRID	29-Jun-19	21:21	29-Jun-19	23:17	01:56	220kV Delina(JK)-Amargarh(NRSS29) tripped on Y-B fault, 16.73 km from Delina(JK) end. Unit#1 & #2 at 220kV Kishanganga(NHPC) tripped due to loss of evacuation path. As per PMU, Y-B fault is observed in the system. In antecedent conditions, 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 carrying 107MW each.	220		GD-1
12	NR	1) 400kV Alaknanda HEP(UP)-Srinagar(UTT) ckt-2 2) 400kV Alaknanda HEP(UP)-Vishnuprayag ckt-2 3) 400kV Alaknanda HEP(UP)-Muzaffarnagar(UP) ckt-2 4) 82.5MW Unit#1 at 400kV Alaknanda HEP(UP) 5) 82.5MW Unit#2 at 400kV Alaknanda HEP(UP) 6) 82.5MW Unit#3 at 400kV	UP & Uttarakhand	30-Jun-19	14:59	30-Jun-19	15:44	00:45	400kV Alaknanda HEP(UP)-Muzaffarnagar(UP) ckt-2 tripped on Y-N fault, 13.57km from Alakanada end. At the same time, 400kV Alaknanda HEP(UP)-Vishnuprayag ckt-2, 400kV Alaknanda HEP(UP)-Srinagar(UTT) ckt-2 & all units also tripped. As per PMU, Multiple Y-N faults are observed.. In antecedent conditions, Unit#1,2,3&4 generating 85MW each.	350		GD-1
13	WR	Tripping of 1.220 kV Boisar-Boisar(PG) 1 2.220 kV Boisar-Boisar(PG) 2 3.220 kV Boisar-Boisar(PG) 3 4.220 kV Boisar-Versova 5.220/132 kV 150 MVA Boisar ICT 6.220/132 kV 200 MVA Boisar ICT 1	MSECTCL	28-Jun-19	06:52	28-Jun-19	07:35	00:43	At 220kV Boisar(MH), Y phase of 220 kV Boisar-Boisar(PG) 2 did not open during the fault. LBB operated causing tripping of 220 kV main bus 2. After the tripping of two ICTs, load on ICT 2 (200MVA) increased and led to the LTS operation, tripping associated 33 kV feeders. After 200 ms internal LBB in the same relay operated causing tripping to 132 kV Bus 1.	Nil	Nil	GI-1
14	ERLDC	400 kV Kharagpur Chaibasa-II 400 kV bus II at Chaibasa	ISTS	27-Jun-19	11:19	27-Jun-19	13:36	02:17	Tie CB of 400 kV Kharagpur Chaibasa-II was working as main CB of bus II at Chaibasa. while taking shutdown of 400 kV Kharagpur Chaibasa-II, Tie CB LBB of 400 kV Kharagpur Chaibasa-II operated at Chaibasa resulting bus bar II dead at Chaibasa	0	0	GI-II

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event (As reported)	Generation Loss(MW)	Load Loss(MW)	Category as per CEA Grid Standards
15	ERLDC	220 kV JLHEP - New Melli D/C 400/132 kV ICT at Dikchu 400 kV Dikchu - Rangpo S/C 400 kV Teesta III - Dikchu S/C (Hand tripped to facilitate charging of 400 kV Dikchu - Rangpo S/C)	ISTS	30-Jun-19	09:56	30-Jun-19	11:51	01:55	At 09:56 hrs, 400 kV Dikchu Rangpo tripped on Y-B -N fault from both ends. It is suspected that 400/132 KV ICT at Dikchu tripped possibly due to overreach in overcurrent protection. As a result, both running units at Dikchu tripped on loss of evacuation. At same time 220 kV JLHEP - New Melli D/C tripped from JLHEP ends resulting tripping of both the running units and total power failure at JLHEP. 400 kV level of Dikchu HEP was in charged condition as 400 kV Teesta III - Dikchu S/C was in service. Charging attempt of 400 kV Dikchu - Rangpo S/C was taken from both Dikchu and Rangpo ends. But it could not be done because angle difference between Dikchu and Rangpo S/S was more than 15 deg which was the limit of synchronizer relay at both S/S. To facilitate charging operation of 400 kV Dikchu - Rangpo S/C, 400 kV Teesta III - Dikchu S/C was hand tripped and total power failure occurred at Dikchu S/S. Then 400 kV Dikchu - Rangpo S/C was charged to synchronize Dikchu S/S. Finally 400 kV Teesta III - Dikchu was synchronized after reducing the generation and voltage at Teesta III.	200	0	GD-I
16	NER	132 kV Dimapur -Kohima line	POWERGRID,DoP , Nagaland	24-Jun-19	10:09	24-Jun-19	10:48	00:39	Capital area of Nagaland Power System and Karong area of Manipur Power System were connected with rest of NER Grid through 132 kV Dimapur - Kohima line. 132 kV Wokha - Kohima line was under outage since 20:22 Hrs of 23.06.2019 and 132 kV Imphal (MA) - Karong Line was under planned shutdown for maintenance work. At 10:09 Hrs on 24.06.2019, 132 kV Dimapur -Kohima line tripped. Due to tripping of this element, Capital area of Nagaland Power System and Karong area of Manipur Power System were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.	0	22	GD 1
17	NER	132 kV Loktak-Ningthoukhong line & 132 kV Loktak-Rengpang line.	MSPDCL	26-Jun-19	17:13	26-Jun-19	18:10	00:57	Rengpang & Ningthoukhong areas of Manipur Power System were connected with rest of NER Grid through 132 kV Loktak-Ningthoukhong line & 132 kV Loktak-Rengpang line. 132 kV Imphal(PG)-Ningthoukhong line & 132 kV kakching-Kongba line kept open for overloading of 132 kV Loktak-Ningthoukhong line, 132 kV Jiribam (MA) - Rengpang line is under long outage. At 17:13 Hrs on 26.06.2019, 132 kV Loktak-Ningthoukhong line & 132 kV Loktak-Rengpang line tripped. Due to tripping of these elements, Rengpang & Ningthoukhong areas were separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	45	GD 1
18	NER	132 kV Palatana - S M Nagar line,132 kV AGTCCPP-Agartala 1 & 2 lines, 132 kV Agartala - Rokhia 1 & 2 lines, 132 kV Agartala - Budhjungnagar line and 132 kV Agartala - Dhalabil line.	TSECL, POWERGRID	27-Jun-19	03:01	27-Jun-19	03:16	00:15	Tripura Power System except part of Tripura Power System [Dhalabil, Kamalpur, P.K Bari, Budhjungnagar, Jirania, Baramura, Gamaitilla, Ambassa, Kailashahar & Dharmanagar] was connected with rest of NER Grid through 132 kV Palatana - S M Nagar line,132 kV AGTCCPP-Agartala 1 & 2 lines, 132 kV Agartala - Rokhia 1 & 2 lines, 132 kV Agartala - Budhjungnagar line and 132 kV Agartala - Dhalabil line.(132kV Palatana - Udaipur line was under shutdown). At 03:01 hrs on 27.06.19, all 132 kV lines connected to 132 kV Agartala substation was tripped on Distance Protection, Zone-2 from remote end or Zone-1V at Agartala except for 132 kV Agartala - Surajmaninagar - I line which tripped on Distance Protection, Zone-I. Along with these lines, 132 kV Palatana- Surajmaninagar line tripped at Palatana on tripped on Distance Protection, Zone-2. Subsequently Agartala ,Surajmaninagar , Monarchak and Rokhia substations got blackout. Due to tripping of these elements, Tripura Power System except part of Tripura Power System [Dhalabil, Kamalpur, P.K Bari, Budhjungnagar, Jirania, Baramura, Gamaitilla, Ambassa, Kailashahar & Dharmanagar] was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	182	110	GD 1
19	NER	132 kV Rokhia-Agartala 1 & 2 lines and 132 kV Rokhia-Monarchak line	TSECL	28-Jun-19	05:29	28-Jun-19	05:55	00:26	Rokhia Power Station of Tripura was connected with rest of NER Grid through 132 kV Rokhia-Agartala 1 & 2 lines and 132 kV Rokhia-Monarchak line. At 05:29 hrs on 28.06.19, 132 kV Rokhia-Agartala 1 & 2 line and 132 kV Rokhia-Monarchak line tripped resulting in bus dead of Rokhia substation. Due to tripping of these elements, Rokhia Power Station of Tripura was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	56	32	GD 1
20	NER	132 kV Badarpur - Kolasib line and 132 kV Aizawl - Kolasib line	POWERGRID	30-Jun-19	07:06	30-Jun-19	07:21	00:15	Kolasib area of Mizoram Power System was connected with rest of NER Grid through 132 kV Badarpur - Kolasib line and 132 kV Aizawl - Kolasib line. At 07:06 hrs on 30.06.19, 132 kV Badarpur - Kolasib line and 132 kV Aizawl - Kolasib line tripped. Due to tripping of these elements, Kolasib area of Mizoram Power System was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	39	2	GD 1

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event (As reported)	Generation Loss(MW)	Load Loss(MW)	Category as per CEA Grid Standards
21	NER	132 kV Monarchak - Udaipur line	TSECL	30-Jun-19	10:58	30-Jun-19	11:02	00:04	Rabindranagar area of Tripura Power System was connected with rest of NER Grid through 132 kV Monarchak - Udaipur line. 132 kV Rokhia-Monarchak line was under outage since 10:00 Hrs on 30.06.2019. At 10:58 hrs on 30.06.19, 132 kV Monarchak - Udaipur line tripped. Due to tripping of this element, Rabindranagar area of Tripura Power System was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	68	6	GD 1