

Northern Region-Grid Event Report for June 2019

S.No.	Region	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Revival		Duration	Event (As reported)	Generation Loss(MW)	Load Loss(MW)	Category as per CEA Grid Standards
					Date	Time	Date	Time					
1	NR	1) 220kV AD Hydro(ADHY)-Phojal(HP) 2) 220kV Chhaur(MALN2)-Phojal(HP) 3) 220kV Chhaur(MALN2)-Nalagarh(PG) 4) 50MW Unit#1 at Malana2 5) 50MW Unit#2 at Malana2	Himachal Pradesh	AD Hydro, HP & Malana2	1-Jun-19	19:01	1-Jun-19	19:30	00:29	220kV Chhaur(MALN2)-Nalagarh(PG) tripped on Y-N fault, 69.2km from Chhaur(MALN2) end. At the same time, 220kV Chhaur(MALN2)-Phojal(HP) & 220kV AD Hydro(ADHY)-Phojal(HP) also tripped on Y-N fault. Two units of 50MW at Malana2 tripped due to tripping of 220kV lines. As per PMU, Y-N fault with no auto-reclosing is observed. In antecedent conditions, 220kV AD Hydro(ADHY)-Phojal(HP) & 220kV Chhaur(MALN2)-Phojal(HP) carrying 52MW & 92MW respectively.	98		GD-1
2	NR	1) 220kV AD Hydro(ADHY)-Nalagrah(PG) 2) 220kV Nalagarh(PG)-Nangal(HP) ckt-1 3) 220kV Nalagarh(PG)-Nangal(HP) ckt-2	Himachal Pradesh	POWERGRID, HP & AD Hydro	1-Jun-19	22:07	1-Jun-19	22:48	00:41	220kV Nalagarh(PG)-Nangal(HP) ckt-1 & 2 tripped on R-N fault, whereas 220kV AD Hydro(ADHY)-Nalagrah(PG) tripped due to relay mal function at AD Hydro. As per PMU, R-N fault with no auto-reclosing is observed. In antecedent conditions, 220kV Nalagarh(PG)-Nangal(HP) ckt-1 & 2 carrying 131MW each.		260	GD-1
3	NR	1) 765kV Anpara C(UP) - Anpara D(UP) 2) 765kV Anpara C(UP)-Unnao(UP)	Uttar Pradesh	UP	2-Jun-19	19:24	2-Jun-19	21:30	02:06	765kV Anpara C(UP)-Unnao(UP) tripped on R-Y fault due to high winds in the area. At the same time, 765kV Anpara C(UP) - Anpara D(UP) also tripped. As per PMU, B-N fault followed by Y-N fault is observed. In antecedent conditions, 765kV Anpara C(UP) - Anpara D(UP) & 765kV Anpara C(UP)-Unnao(UP) carrying 623MW & 1096MW respectively.			GI-2
4	NR	1) 315MVA ICT 1 at 400/220kV Obra TPS(UP) 2) 315MVA ICT 2 at 400/220kV Obra TPS(UP) 3) 240MVA ICT 3 at 400/220kV Obra TPS(UP)	Uttar Pradesh	UP	2-Jun-19	20:00	2-Jun-19	21:16	01:16	315MVA ICT 1 & ICT 2 at 400/220kV Obra TPS(UP) tripped due to heavy rain. From SCADA data, it seems that 240MVA ICT 3 also tripped on overload after 1min. As per PMU, No fault is observed in the system. In antecedent conditions, 315MVA ICT 1 & ICT 2 carrying 112MW & 108MW respectively.			GI-2
5	NR	1) 220kV Faridabad(NTPC)-Palla(HVPLN) ckt-1 2) 220kV Faridabad(NTPC)-Palla(HVPLN) ckt-2 3) 220kV Palla(HVPLN)-Palli(HVPLN) ckt-1 4) 220kV Palla(HVPLN)-Palli(HVPLN) ckt-2 5) 220/66kV ICT 1,2& 3 at 220kV Palla(HVPLN)	Haryana	Haryana & NTPC	3-Jun-19	1:38	3-Jun-19	02:45	01:07	Blast in Y-Phase CT (HV Side) of transformer T-7 (3rd ICT) (220/66KV) occurred which in turn lead to the operation of Bus-Bar protection at Palla substation. As per PMU, multiple Y-N faults is observed in the system. In antecedent conditions, 220kV Palla(HVPLN)-Palli(HVPLN) ckt-1 & 2 carrying 32MW each and 220kV Faridabad(NTPC)-Palla(HVPLN) ckt-1 & 2 carrying 45MW each.		100	GD-1
6	NR	1) 132kV Hiranagar-Sewa II ckt-1 2) 132kV Hiranagar-Sewa II ckt-2	Jammu & Kashmir	J&K, NHPC & POWERGRID	3-Jun-19	21:09	3-Jun-19	22:41	01:32	132kV Hiranagar-Sewa II ckt-1 tripped on R-N fault, 62.43km from Sewa-II end. At the same time, 132kV Hiranagar-Sewa II ckt-2 tripped on R-N fault, 63.45km from Sewa-II end. As per PMU, R-N fault with no autoreclosing is observed. In antecedent conditions, 132kV Hiranagar-Sewa II ckt-1 & 2 carrying 32MW each.			GI-2
7	NR	1) 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 2) 220kV Delina(JK)-Kishanganga(NHPC) ckt-2 3) 110MW Unit#1 at 220kV Kishanganga(NHPC) 4) 110MW Unit#2 at 220kV Kishanganga(NHPC)	Jammu & Kashmir	NHPC, J&K & POWERGRID	5-Jun-19	12:02	5-Jun-19	13:17	01:15	220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 tripped from Kishanganga end only and 110MW Unit#1 & #2 tripped due to loss of evacuation path. As per PMU, No fault is observed. In antecedent conditions, Unit#1 & #2 at 220kV Kishanganga(NHPC) generating around 99MW & 57MW respectively.	155		GD-1
8	NR	1) 220kV Nawada(HVPLN)-AS(Faridabad) ckt 1 2) 220kV Nawada(HVPLN)-AS(Faridabad) ckt 2 3) 315 MVA ICT-1 at 400/220kV Nawada(HVPLN) 4) 315 MVA ICT-2 at 400/220kV Nawada(HVPLN)	Haryana	Haryana	7-Jun-19	15:19	7-Jun-19	15:27	00:08	while charging 220kV side of ICT-3(newly commissioned) falsely LBB initiated of the breaker which leads to tripping of 220kV feeders along with ICT-1 & 2 on bus-bar protection. As per PMU, Rise in voltage of all three phases is observed. In antecedent conditions, 315 MVA ICT-1 & ICT-2 carrying 179MW & 146MW respectively.		260	GD-1
9	NR	1) 220kV Sitarganj(PG)-CB Ganj(UP) 2) 220kV Sitarganj(PG)-Tanakpur(NHPC)	Uttarakhand	UP, Uttarakhand, NHPC & POWERGRID	7-Jun-19	15:20	7-Jun-19	16:07	00:47	220kV Sitarganj(PG)-CB Ganj(UP) and 220kV Sitarganj(PG)-Tanakpur(NHPC) tripped on Y-N fault. 220kV Sitarganj(PG)-CB Ganj(UP) tripped due to fault in CBGanj(UP)-Badaun(UP) line on Zone-2. As per PMU, Y-N fault with delayed clearance is observed. In antecedent conditions, 220kV Sitarganj(PG)-Tanakpur(NHPC) carrying 110MW.		35	GD-1
10	NR	1) 100MVA ICT 1 at 220/33kV Masjid Moth(DTL) 2) 100MVA ICT 2 at 220/33kV Masjid Moth(DTL) 3) 100MVA ICT 3 at 220/33kV Masjid Moth(DTL)	Delhi	Delhi	7-Jun-19	16:28	7-Jun-19	18:03	01:35	Y phase bushing of 100MVA ICT 2 busted leads to tripping of multiple elements on Over current protection. As per PMU, Voltage dip in all three phases with delayed clearance is observed. As informed by DTL, total antecedent drawal at 220/33kV Masjid Moth(DTL) was around 220MW and load is being met from other sources till the charging of ICTs at 220/33kV Masjid Moth(DTL).		220	GD-1
11	NR	1) 400kV Lucknow(PG)-Sultanpur(UP) 2) 400kV Anpara(UP)-Obra(UP)-Sultanpur(UP) 3) 400kV Tanda(NTPC)-Sultanpur(UP) 4) 315 MVA ICT 1 at 400/220kV Sultanpur(UP) 5) 240 MVA ICT 2 at 400/220kV Sultanpur(UP) 6) 315 MVA ICT 3 at 400/220kV Sultanpur(UP)	Uttar Pradesh	UP, NTPC & POWERGRID	9-Jun-19	22:55	9-Jun-19	23:44	00:49	Bus-Bar protection operated at Sultanpur(UP) due to B-phase CT blast of 400kV Tanda(NTPC)-Sultanpur(UP). As per PMU, B-N fault followed by Y-N fault and R-N fault is observed. In antecedent conditions, 315 MVA ICT 1, 240 MVA ICT 2 & 315 MVA ICT 3 carrying 183MW, 134MW & 187MW respectively.		60	GD-1
12	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)	Jammu & Kashmir	NHPC, J&K & POWERGRID	10-Jun-19	23:03	11-Jun-19	00:19	01:16	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. 110MW Unit#1 & #2 tripped due to loss of evacuation path. As per PMU, R-Y fault is observed. In antecedent conditions, 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 carrying 77MW each.	150	40	GD-1
13	NR	1) 400kV Alaknanda HEP(UP)-Srinagar(UTT) ckt-2 2) 400kV Alaknanda HEP(UP)-Vishnuprayag ckt-2 3) 400kV Bus 1 at 400kV Alaknanda HEP(UP) 4) 82.5MW Unit#1 at 400kV Alaknanda HEP(UP) 5) 82.5MW Unit#2 at 400kV Alaknanda HEP(UP) 6) 82.5MW Unit#2 at 400kV Alakna	Uttarakhand	UP	11-Jun-19	18:42	11-Jun-19	20:22	01:40	400kV Alaknanda HEP(UP)-Srinagar(UTT) ckt-2 & 400kV Alaknanda HEP(UP)-Vishnuprayag ckt-2 tripped due to DC malfunction. At the same time, 400kV Bus 1 & all units also tripped. As per PMU, voltage dip in all three phases is observed. In antecedent conditions, Unit#1,2,3&4 generating 77MW each.	300		GD-1
14	NR	1) 315MVA ICT 1 at 400/220kV Obra TPS(UP) 2) 315MVA ICT 2 at 400/220kV Obra TPS(UP) 3) 240MVA ICT 3 at 400/220kV Obra TPS(UP)	Uttar Pradesh	UP	11-Jun-19	19:50	11-Jun-19	22:40	02:50	315MVA ICT 1, 315MVA ICT 2 & 240MVA ICT 3 at 400/220kV Obra TPS(UP) tripped due to B-phase CT blast at 220kV side of ICT-3. As per PMU, No fault is observed in the system. In antecedent conditions, 315MVA ICT 1, 315MVA ICT 2 & 240MVA ICT 3 carrying 140MW, 135MW & 104MW respectively.		340	GD-1
15	NR	1) 400kV Balia(PG)-Patna(PG) ckt-1 2) 400kV Balia(PG)-Patna(PG) ckt-4 3) 400 kV Bus 1 at Balia(PG)	Uttar Pradesh	POWERGRID	12-Jun-19	15:11	12-Jun-19	15:57	00:46	400kV Balia(PG)-Patna(PG) ckt-1 tripped on B-N fault, 145.3km from Balia end. At the same time, 400kV Balia(PG)-Patna(PG) ckt-4 tripped on R-N fault, 103.2km from Balia end. 400 kV Bus 1 at Balia(PG) tripped as Bus bar protection operated due to fault in Main breaker of 400kV Balia(PG)-Patna(PG) ckt-4. As per PMU, R-N fault & B-N fault is observed. In antecedent conditions, 400kV Balia(PG)-Patna(PG) ckt-1 & 4 carrying 137MW & 156MW respectively.			GI-2
16	NR	1) 400kV Agra(PG)-Sikar(PG) ckt-1 2) 400kV Agra(PG)-Sikar(PG) ckt-2	Uttar Pradesh	POWERGRID	12-Jun-19	17:01	20-Jun-19	13:43	10:04	400kV Agra(PG)-Sikar(PG) ckt-1 tripped on Y-N fault, 274km from Agra end. At the same time, 400kV Agra(PG)-Sikar(PG) ckt-2 also tripped on Y-N fault, 248km from Agra end. As per PMU, Y-N fault, Y-B fault & R-N fault is observed. In antecedent conditions, 400kV Agra(PG)-Sikar(PG) ckt-1 & 2 carrying 148MW & 154MW respectively.			GI-2
17	NR	1) 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 2) 220kV Delina(JK)-Kishanganga(NHPC) ckt-2 3) 110MW Unit#1 at 220kV Kishanganga(NHPC) 4) 110MW Unit#2 at 220kV Kishanganga(NHPC)	Jammu & Kashmir	NHPC, J&K & POWERGRID	15-Jun-19	14:07	15-Jun-19	14:54	00:47	220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 tripped on R-Y fault, 15.54km from Kishanganga end. Unit#1 & #2 at 220kV Kishanganga(NHPC) tripped due to loss of evacuation path. As per PMU, R-Y fault is observed. In antecedent conditions, 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 carrying 74MW each.	150		GD-1
18	NR	1) 400 kV Bus 1 at 400/220kV Banda(UP) 2) 400kV Banda(UP)-Rewa Road(UP) ckt-1 3) 400kV Banda(UP)-Rewa Road(UP) ckt-2 4) 400kV Banda(UP)-Orai(UP) ckt-2 5) 400kV Orai(UP)-Orai 765kV(PG) ckt-2	Uttar Pradesh	UP	16-Jun-19	15:13	16-Jun-19	17:06	01:53	400kV Banda(UP)-Rewa Road(UP) ckt-2 tripped on R-N fault. 400 kV Bus 1, 400kV Banda(UP)-Rewa Road(UP) ckt-1 & 400kV Banda(UP)-Orai(UP) ckt-2 also tripped. At the same time, 400kV Orai(UP)-Orai 765kV(PG) ckt-2 tripped on R-N fault, 31.2km from Orai(PG) end. As per PMU, two R-N faults are observed in the system. In antecedent conditions, 400kV Banda(UP)-Rewa Road(UP) ckt-1 & 400kV Banda(UP)-Orai(UP) ckt-2 carrying 25MW & 58MW respectively.			GI-2
19	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	Jammu & Kashmir	NHPC, J&K & POWERGRID	17-Jun-19	16:30	17-Jun-19	18:00	01:30	220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 tripped due to tripping of 220kV Delina(JK)-Amargarh(NRSS29) & 220kV Delina(JK)-Ziankote(JK). Unit#1, #2 & #3 at 220kV Kishanganga(NHPC) tripped due to loss of evacuation path. As per PMU, No fault is observed in the system. In antecedent conditions, 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 & 2 carrying 119MW each.	240		GD-1

S.No.	Region	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Revival		Duration	Event (As reported)	Generation Loss(MW)	Load Loss(MW)	Category as per CEA Grid Standards
					Date	Time	Date	Time					
20	NR	1) 800kV HVDC Champa(PG)-Kurukshetra(PG) pole-1 2) 800kV HVDC Champa(PG)-Kurukshetra(PG) pole-2	Haryana	POWERGRID	17-Jun-19	16:55	17-Jun-19	19:43	02:48	800kV HVDC Champa(PG)-Kurukshetra(PG) Pole-I blocked on Common Neutral Protection(CNAP) Operated at Champa(WR) end and 800kV HVDC Champa(PG)-Kurukshetra(PG) Pole-II due to T- zone Protection operated at Champa(WR) end. As per PMU, Fluctuations are observed in phase voltages. In antecedent conditions, 800kV HVDC Champa(PG)-Kurukshetra(PG) bipole carrying 2000MW.			GI-2
21	NR	1) 400 kV Bus 1 at 400/220kV Gurgaon(PG) 2) 315 MVA ICT 1 400/220kV Gurgaon(PG) 3) 315 MVA ICT 2 400/220kV Gurgaon(PG) 4) 500 MVA ICT 3 400/220kV Gurgaon(PG) 5) 400kV Gurgaon(PG)-Manesar(PG) ckt-1 6) 400kV Gurgaon(PG)-Ballabgarh(PG) 7) 400kV Gurgaon(PG)-D	Haryana	POWERGRID & Haryana	17-Jun-19	17:14	17-Jun-19	17:55	00:41	400 kV Bus 1 at 400/220kV Gurgaon(PG) tripped due to mal functioning of 220kV DC contactor of Bus 1 resulting in tripping of 400kV Gurgaon(PG)-Manesar(PG) ckt-1, 400kV Gurgaon(PG)-Ballabgarh(PG), 400kV Gurgaon(PG)-Daultabad(HVPLN) ckt-1, 315 MVA ICT 1, ICT2 & 500 MVA ICT 3 at 400/220kV Gurgaon(PG). As per PMU, Fluctuations are observed in phase voltages. In antecedent conditions, 315 MVA ICT 1, 315 MVA ICT 2 & 500 MVA ICT 3 carrying 161MW, 149MW & 255MW respectively.	550		GD-1
22	NR	1) 315 MVA ICT 1 at 400/220kV Mathura(UP) 2) 315 MVA ICT 2 at 400/220kV Mathura(UP) 3) 80 MVAR Bus Reactor 1 at 400/220kV Mathura(UP) 4) 400kV Bus 2 at 400/220kV Mathura(UP)	Uttar Pradesh	UP	18-Jun-19	16:03	18-Jun-19	19:24	03:21	315 MVA ICT 1, ICT 2, 400kV Bus 1 & 80 MVAR Bus Reactor 1 at 400/220kV Mathura(UP) tripped due to fault in D. C. system (Aux supply). As per PMU, No fault is observed in the system. In antecedent conditions, 15 MVA ICT 1 & ICT 2 carrying 108MW & 109MW respectively.	50		GD-1
23	NR	1) 60MW Unit#1 at 400kV Uri-II(NHPC) 2) 60MW Unit#2 at 400kV Uri-II(NHPC) 3) 60MW Unit#3 at 400kV Uri-II(NHPC) 4) 60MW Unit#4 at 400kV Uri-II(NHPC)	Jammu & Kashmir	NHPC & J&K	20-Jun-19	16:35	20-Jun-19	22:14	05:39	All running 04(four) units at Uri-2 HEP tripped due to fault in 11kV auxiliary supply (Unit Power controller hang due inverter supply failure) leading to generation loss of around 240MW. As per PMU, No fault is observed in the system. In antecedent conditions, all four units at Uri-2 HEP generating 60MW each.	240		GD-1
24	NR	1) 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 2) 220kV Delina(JK)-Kishanganga(NHPC) ckt-2 3) 110MW Unit#1 at 220kV Kishanganga(NHPC) 4) 110MW Unit#2 at 220kV Kishanganga(NHPC)	Jammu & Kashmir	NHPC, J&K & POWERGRID	20-Jun-19	16:41	20-Jun-19	17:41	01:00	220kV Delina(JK)-Kishanganga(NHPC) ckt-2 tripped due to R-Y fault, 15.45km from Kishanganga end. At the same time, 220kV Delina(JK)-Kishanganga(NHPC) ckt-1 also tripped. Unit#1 & #2 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 96MW each.	200		GD-1
25	NR	1) 400kV Hisar(PG)-Kaithal(PG) ckt-1 & 2 2) 400kV Hisar(PG) -Fatehabad(PG) 3) 400kV Hisar(PG)-Bhiwani(BBMB) 4) 400kV Hisar(PG)-Moga(PG) ckt-1, 2 & 3 5) 400kV Hisar(PG)-Bhiwadi(PG) ckt-1, 2 & 3 6) 400kV Hisar(PG)-Bhiwani(PG) ckt-1, 2 & 3 7) 315MVA ICT-1, 2	Haryana	POWERGRID & BBMB	22-Jun-19	10:16	22-Jun-19	11:22	01:06	R-Ph CVT and wave trap of Kaithal- Hisar line#2 blasted at Hisar(PG) sub-station leading to tripping of all other lines from other end. At the same time, 315 MVA ICT-I, II & III at 400/220kV Hisar(PG) also tripped. As per PMU, R-N fault followed by Y-N fault is observed. In antecedent conditions, 315 MVA ICT-I, II & III carrying 115MW, 116MW & 105MW respectively.	90		GD-1
26	NR	1) 400kV Singrauli(NTPC)-Vindhyachal BtB(PG) ckt-2 2) 400kV Rihand(NTPC)-Singrauli(NTPC) ckt-2 3) 200MW Unit#5 at 400/220kV Singrauli(NTPC)	Uttar Pradesh	NTPC & POWERGRID	22-Jun-19	11:57	22-Jun-19	12:37	00:40	400kV Rihand(NTPC)-Singrauli(NTPC) ckt-2 tripped due to R-N fault, 43km from Rihand(NTPC) end (LA blast at Singrauli end). At the same time, 400kV Singrauli(NTPC)-Vindhyachal BtB(PG) ckt-2 also tripped on R-N fault, 24.05km from Vindhyachal end. As per PMU, Multiple R-N faults are observed in the system. In antecedent conditions, 400kV Singrauli(NTPC)-Vindhyachal BtB(PG) ckt-2 & 400kV Rihand(NTPC)-Singrauli(NTPC) ckt-2 carrying 268MW & 155MW respectively. Unit#5 generating 168MW.	170		GD-1
27	NR	1) 220kV Pappankalan-(DTL)-Pappankalan-III(DTL) 2) 220kV Pappankalan-(DTL)-Naraina(DTL) 3) 220kV Bus coupler at Pappankalan-(DTL) 4) 220kV Bus coupler at Naraina(DTL)	Delhi	Delhi	23-Jun-19	13:51	23-Jun-19	13:59	00:08	Tripping of 220kV Pappankalan-(DTL)-Pappankalan-III(DTL) and Bus coupler at Pappankalan-(DTL) & Naraina(DTL) led to supply fail at Naraina(Bus-II), Pappankalan-(Bus-I), Ridge valley and Trauma Centre. In antecedent conditions, 100MVA ICT 1, 2 & 3 at 220kV Naraina(DTL) carrying 49MW, 46MW & 48MW respectively and 160MVA ICT 3 at 220kV Pappankalan-(DTL) carrying 78MW.	250		GD-1
28	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	Uttar Pradesh	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-I, 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-I & II carrying 40MW & 39MW respectively.	210	200	GD-1
29	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	Delhi	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
30	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	Jammu & Kashmir	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
31	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)	Uttar Pradesh	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
32	NR	1) 400kV Oraai(UP)-Orai 765(PG) ckt-2 2) 400kV Banda(UP)-Orai(UP) ckt-2 3) 400kV Rewa Road(UP)-Banda(UP) ckt-2	Uttar Pradesh	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 Oraai(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 Oraai(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
33	NR	1) 400kV Dadri(NTPC)-Panipat(BBMB) ckt-1 2) 400kV Dadri(NTPC)-Panipat(BBMB) ckt-2	Uttar Pradesh	OWERGRID, NTPC & BBM	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
34	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)	Jammu & Kashmir	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
35	NR	1) 400kV Bawana(DTL)-Mundka(DTL) ckt-2 2) 400kV Jhajjar(APCPL)-Mundka(DTL) ckt-1	Delhi	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
36	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	Jammu & Kashmir	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 & 2 carrying 107MW each.	220		GD-1

S.No.	Region	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Revival		Duration	Event (As reported)	Generation Loss(MW)	Load Loss(MW)	Category as per CEA Grid Standards
					Date	Time	Date	Time					
37	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)	Jammu & Kashmir	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
38	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)	Jammu & Kashmir	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
39	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 400	Uttarakhand	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

Western Region-Event Grid Report for June 2019

S.No	Region	Name of Elements	Owner/Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Category as per CEA standards	Energy Unreserved (MU)
				Date	Time	Date	Time	Time					
1	WR	Tripping of 1.220 kV Satpura-Betul 2.220 kV Satpura-Pandurna 3.220 kV Satpura-Satpura power house 1 4.220 kV Satpura-Satpura power house 2 5.220/132 kV 100 MVA Satpura ICT 1 6.220/132 kV 100 MVA Satpura ICT 2	MPPTCL	02-06-2019	04:33	02-06-2019	21:06	16:33	At 400/220 kV Satpura s/s, 220kV Satpura-Betul B-phase CT at Satpura end blasted. 220kV Satpura-Betul, 220kV Satpura-Pandurna, 220kV Satpura-Satpura Power House-I & II and 220/132 kV, 100MVA, Transformer-I & II tripped on BB protection operation.	Nil	Nil	GI-1	Nil
2	WR	Tripping of 1.400 kV GMR(EMCO)-Bhadrawati 1 2.400 kV GMR(EMCO)-Bhadrawati 2 3.300 MW GMR EMCO Unit 1 4.300 MW GMR EMCO Unit 2 5.400 kV Bhadrawati-Ramagundam 4 6.400 kV Bhadrawati-Chandrapur 4 7.500 kV HVDC Bhadrawati Pole 2	GMR/PGCIL	04-06-2019	20:53	04-06-2019	22:32	01:39	Earth wire of 400 kV Bhadrawati-Chandrapur- 4 snapped and created R and B phase faults on 400kV GMR EMCO-Bhadrawati 1&2 respectively. GMR EMCO Units 1&2 tripped due to loss of evacuation path.	550	Nil	GD1	Nil
3	WR	Tripping of 1.765 kV Wardha Bus 2 2.400 kV Mauda – Wardha 2 3.400 kV Wardha – Warora PS 1 4.400 kV Wardha-Akola 2 5.400 kV Warora (MSETCL) – Wardha 6.765kV Seoni-Wardha D/C 7.765 kV Wardha-Aurangabad 1 8.765kV Wardha-Nizamabad 2 9.765kV Wardha - Durg 3 10.765kV Wardha Aurangabad 4 11.765kV Wardha Aurangabad 3 12.765kV Wardha -Durg 2 13.400kV Wardha-Koradi	PGCIL	04-06-2019	16:46	04-06-2019	17:39	00:53	Due to inclement weather condition, multiple tripping occurred at 765/400 kV Wardha s/s.. 765kV Wardha-Aurangabad-1 reactor LA, Wardha-Aurangabad-2 isolator, Wardha-Aurangabad -4 LR dropper (detached) were damaged. Also 765kV Bus-2 side and Seoni-Wardha-1 tie bay side dropper conductor broken and fell on Bus-2 at Wardha causing R-phase fault on Bus bar.	Nil	Nil	GI-2	Nil
4	WR	Tripping of 1.400 kV Mansar-Bhachau 2.400 kV Mansar-Chorania 3.400/220 kV 315 MVA Mansar ICT 1 4.400/220 kV 315 MVA Mansar ICT 2 5.400 kV 63 MVA Mansar Bus reactor	GETCO	09-06-2019	08:29	09-06-2019	09:41	01:12	At 400/220 kV Mansar s/s, due to DC earth leakage 400 kV Bus 1 and 2 tripped along with the connected elements	Nil	Nil	GI-2	Nil
5	WR	Tripping of 1.220 kV Sujalpur-Sujalpur 2 2.220/132 kV 160 MVA Sujalpur ICT 1 3.220/132 kV 160 MVA Sujalpur ICT 2 4.220/132 kV 160 MVA Sujalpur ICT 3 5.132 kV Sujalpur Main Bus	MPPTCL	12-06-2019	22:02	12-06-2019	23:00	00:58	At 220/132 kV Sujalpur s/s, Y phase Post insulator between 132 kV Bus 2 and ICT 2 bay failed and resulted in tripping of 132 kV Bus 2. All the elements connected to the bus tripped. 220 kV Sujalpur 2 circuit tripped only at PGCIL end	Nil	13	GI-1	0.012566667
6	WR	Tripping of 1.400 kV Sholapur(MH)-Sholapur(PG) 2.400 kV Sholapur(MH)-Parli 3.400 kV 125 MVAR Sholapur(MH) Bus reactor	MSETCL	12-06-2019	06:11	12-06-2019	07:00	00:49	At 400/220 kV Sholapur(MH), 400 kV Bus 2 BB protection operated due to the blast of B phase Tie CB of 400 kV BR.	Nil	Nil	GI-2	Nil
7	WR	Tripping of 1.220 kV Ambewadi-Xeldem 2.220 kV Ponda-Xeldem 3.220 kV Mahalakshmi-Amona	Goa	13-06-2019	15:08	13-06-2019	22:08	07:00	220 kV Ponda-Xeldem tripped on B-E fault at 15:08 Hrs causing blackout in South Goa. 220 kV Ambewadi-Xeldem tripped at 12:58 Hrs on B-E fault and was out of service.	Nil	67	GD-1	0.45
8	WR	Tripping of 1.220 kV Sujalpur-Sujalpur 1 2.220 kV Sujalpur-Sujalpur 2 3.220/132 kV 160 MVA Sujalpur ICT 1 4.220/132 kV 160 MVA Sujalpur ICT 2 5.220/132 kV 160 MVA Sujalpur ICT 3 6.220 kV Sujalpur-Bhopal 2	MPPTCL	14-06-2019	11:36	14-06-2019	12:05	00:29	At 220/132 kV Sujalpur s/s, while shifting Sujalpur 2 to Transfer bus for attending Y phase broken Post insulator, LBB operated and all the 220 kV elements tripped.	Nil	Nil	GI-1	Nil
9	WR	Tripping of 1.400 kV Bilaspur Bus 1 2.400 kV Bilaspur-ACBIL	PGCIL	17-06-2019	17:34	17-06-2019	18:06	00:32	At 765/400 kV Bilaspur s/s, Malicious initiation was extended to Bus-1 from Peripheral Unit of LBB of 400 kV ACBIL-1 line and the line tripped along with 400kV Bus 1.	Nil	Nil	GI-2	Nil
10	WR	Tripping of 1.400 kV Aurangabad-Aurangabad(PG) 2 2.400 kV Aurangabad-Pune 2 3.400 kV Aurangabad-Deepnagar 1 4.400/220 kV 315 MVA Aurangabad ICT 1 5.400/220 kV 315 MVA Aurangabad ICT 1	MSETCL	19-06-2019	11:50	19-06-2019	12:50	01:00	At 400/220 kV Aurangabad(MH) s/s, 400 kV Bus 1 tripped along with the connected elements due to DC earth leakage.	Nil	Nil	GI-2	Nil

11	WR	Tripping of 1.400/21.75 kV 600 MVA Deepnagar GT-5 2.400/21.75 kV 600 MVA Deepnagar GT-4 3.400/11/6.6 kV Deepnagar ST 4 4.500MW Deepnagar Unit 4&5 5.400 kV Deepnagar Bus1	MSEGCL	23-06-2019	06:23	23-06-2019	08:21	01:58	At 400/220 kV Deepnagar station, LBB of ST 4 & GT 5 operated which resulted in tripping of 400 kV Deepnagar Bus 1	676	Nil	GI-2	Nil
12	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	28-06-2019	06:52	28-06-2019	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	Nil

Disclaimer : The Above details are based on the preliminary/flash report of the event and may change after finalisation of the detailed report.The quantum of load/generation loss is based on details given by SLDC and utility and may vary later with updated details.

Southern Region-Grid Event Report for June 2019

Sl. 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	Energy Unserved (MU)
				Date	Time (Hrs)	Date	Time (Hrs)	Time					
1	SR	1. 220kV Palakkad – Palakkad PG line-1, 2 and 3 2. 220kV Palakkad – Madakathara line 3. 220kV/ 110kV 160MVA Transformers- 1, 2 and 3	KSEB	4-Jun-19	14:02	4-Jun-19	14:10	8 mins	Complete outage of 220kV Palakkad SS of KSEB: During antecedent conditions, all elements were connected to Bus-2 and Bus coupler was in open condition. During testing of Bus Coupler CT, due to secondary current injection without isolation of trip inputs to LBB, LBB trip got initiated and Bus-2 Bus Bar Protection (BBP) operated. This resulted in the tripping all the connected elements at 220kV Palakkad Bus-2. Due to this, there was complete loss of supply at 220kV/110kV Palakkad SS.	----	268	GD-1	----
2	SR	1. 400kV NLC1EXP- NLC St-2 . 2. 400kV NLC1EXP- Nagapattinam 3. NLC1EXP U#1	NLC	5-Jun-19	18:51	5-Jun-19	20:13	1 hr 22 mins	Complete outage of 400kV NLC1 Expansion(NLC1EXP): Triggering incident was failure of Y-phase CT of GT-1 (Generator Transformer) at 400kV NLC1EXP. Bus-1 Bus bar protection operated resulting in the tripping of NLC1EXP U#1 and 400kV NLC1EXP- Nagapattinam line. At the same time, 400kV NLC1EXP- NLC St-2 also got tripped at NLC TS-2 end due operation of Main 2 micromho relay and remote signal was sent to NLC1EXP end. This resulted in complete outage of 400kV NLC1 Expansion station.	190	----	GD-1	----
3	SR	1. HVDC Talcher-Kolar Pole-1 2. HVDC Talcher - Kolar Pole-2	PGCIL	5-Jun-19	18:53 (Pole-1) 19:01 (Pole-2)	5-Jun-19	22:08	3 hrs 15 mins	Tripping of HVDC Talcher-Kolar bipole:HVDC Talcher-Kolar Pole-1 tripped on receipt of ESOF (Emergency Switch On to Fault) signal at Kolar from Talcher end. As reported, the 400kV converter transformer isolator (B-ph) had opened under load at Talcher end and ESOF signal sent to Kolar. Pole-2 went to metallic return mode with a power flow of 900MW at Kolar end. Subsequently at 19:02 Hrs, HVDC Talcher-Kolar Pole -2 also tripped due to operation of undervoltage protection at Kolar end.	----	700 MW Load Relief due to SPS operation.	GI-2	----
4	SR	1. 400kV Guttur - Dhoni-1 2. 400kV Guttur - Hiriyur 1&2 3. 400kV Guttur - JSW 4. 400kV Guttur - Kaiga-1 5. 400/220kV ICT-1 & 2 at Guttur	KPTCL	11-Jun-19	17:24	11-Jun-19	18:01	37 mins	Multiple trippings at 400/220kV Guttur station: As reported, during ground fault testing in bus bar panel at 400kV Guttur, trip command got extended to bus bar protection. All elements connected to 400kV Bus-1 and 2 tripped. 400kV Guttur - Dhoni-1 , 400/220kV ICT-1 & 2 tripped on overvoltage.	---	---	GI-2	---
5	SR	1. 220kV Nunna - KTPS 2. 220kV Nunna - Gunadala 1&2 3. 220kV Nunna - Bhimadole 4. 220kV Nunna - Gudivada 1&2 5. 400/220kV, 315 MVA ICT-1, 2 & 3 at Vijaywada (Nunna)	APTRANSCO	16-Jun-19	06:16	16-Jun-19	07:14	58 mins	Multiple trippings at 400/220kV Vijaywada (Nunna) station: Triggering incident: Failure of HV side B-Phase CT pertaining to 220/132KV 100MVA PTR-1 at 220kV Nunna SS. Bus bar protection operated leading to bus dead at 220kV Nunna.	----	157	GI-1	----

Eastern Region-Grid Event Report for June 2019

Sl. No.	Region	Name of major elements tripped	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid	Loss of Energy(in MU)
				Date	Time	Date	Time	Time					
1	ERLDC	400 kV Meramundali – Lapanga – II 400/220 kV ICT – I & II at Meramundali	OPTCL	3-Jun-19	01:15	3-Jun-19	03:15	02:00	At 01:15 hrs 400 kV Meramundali-Lapanga II tripped on B-N Fault (F/D 2 KM from Meramundali, F/C: 30.01 kA). At the same time, both the ICTs at Meramundali tripped on O/C without affecting 220 kV network. As reported, B phase bushing of 50 MVAR line reactor of 400 KV Meramundali-Lapanga II at Meramundali end failed after the event.	0	0	GI-II	0.0000
2	ERLDC	HVDC Talcher Kolar Pole I & II 400 kV Talcher (NTPC) - Talcher (HVDC) - Q/C	NTPC	5-Jun-19	19:01	5-Jun-19	21:39	02:38	At 18:53 hrs , 500 KV Talcher Kolar Pole 1 was hand tripped at 18:53 hrs due to heavy isolator sparking at Talcher end resulting sending SPS signal to GMR and JITPL. GMR & JITPL generation reduced by 85 MW and 55 MW respectively. Initial HVDC flow was around 1800 MW. At 19:01 hrs, jumper protection of 400 kV Talcher (NTPC) - Talcher (HVDC) Q/C operated at NTPC end due to breaking of R phase isolator pole along with BPL. Due to tripping of all incoming feeders, HVDC Talcher Kolar pole 2 at Talcher end got blocked resulting back down of Unit 5 by 160 MW. At 19:03 Talcher stg 2 unit 4 tripped on teed protection.	300	0	GD-I	0.0000
3	ERLDC	220 KV Budhipadar-Tarkera D/c 220 KV Budhipadar-Lapanga D/c 220 KV Budhipadar-Vedanta D/c 220 KV Budhipadar-BTTPS I, II 220 KV Budhipadar-BPSL D/c 220 KV Budhipadar-Raigadh 220 KV Budhipadar-Korba II, III 220 KV Budhipadar-Adityapur D/c	OPTCL	12-Jun-19	00:37	12-Jun-19	01:27	00:50	220 KV Budhipadar-BTTPS IIIIV and 220 KV Budhipadar-Concast I were out of service. At 00:37 Hrs, Y phase LA of 220 KV Budhipadar-Tarkera I @ Budhipadar failed. resulting tripping of all lines emanating from Budhipadar end	350	252	GD-I	0.2100
4	ERLDC	220 kV Maithon - Dumka D/C 132 kV Dumka - Lalmatia D/C	JUSNL	19-Jun-19	13:02	19-Jun-19	13:24	00:22	220 KV Maithon Dumka D/C tripped at 13:02 hrs on single phase to earth fault. At the same time 132 kV Dumka Lalmatia D/C tripped leading to the load loss of 120 MW at Paka, Dumka, Deogarh.	0	120	GD-I	0.0440
5	ERLDC	400 kV Darbhanga - Kishangunj D/C 400 kV bus I at Darbhanga	ISTS	22-Jun-19	19:17	Yet to be restored			400 kV Darbhanga - Kishangunj D/C along with bus I at Darbhanga tripped due to Y-N fault	0	0	GI-II	#VALUE!
6	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	0.0000
7	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. s 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	0.0000

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Sl. No.	Region	Name of Element	Owner / Agency	Date and Time of Tripping	Date and Time of Restoration	Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
1	NER	132 kV Balipara - Bhalukpong line	NEEPCO & DoP, Arunachal Pradesh	02-Jun-19 09:57	02-Jun-19 10:10	13 mins	Khupi area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Balipara - Bhalukpong line. At 09:57 Hrs on 02.06.2019, 132 kV Balipara - Bhalukpong line tripped. Due to tripping of this element, Khupi area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	17	0	0.004	GD 1
2	NER	132 kV Daporijo- Ziro line	DoP, Arunachal Pradesh	02-Jun-19 13:20	02-Jun-19 13:53	33 mins	Daporijo area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Daporijo- Ziro line. At 13:20 Hrs on 02.06.2019, 132 kV Daporijo- Ziro line tripped. Due to tripping of this element, Daporijo area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	15	0	0.008	GD 1
3	NER	132 kV Loktak- Ningthoukhong line	MSPDCL	02-Jun-19 13:43	02-Jun-19 14:04	21 mins	Ningthoukhong area of Manipur Power System was connected with the rest of NER Grid through 132 kV Loktak- Ningthoukhong line. 132 kV Imphal - Ningthoukhong line and 132 kV Kakching - Kongba line kept open for overloading of 132 kV Loktak - Ningthoukhong line. At 13:43 Hrs on 02.06.2019, 132 kV Loktak- Ningthoukhong line tripped. Due to tripping of these elements, Ningthoukhong area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	29	0	0.010	GD 1
4	NER	132 kV Melriat (PG) - Zuangtui line	POWERGRID	04-Jun-19 13:49	04-Jun-19 14:10	21 mins	Zuangtui area of Mizoram Power System was connected with the rest of NER Grid through 132 kV Melriat (PG) - Zuangtui line. At 13:49 Hrs on 04.06.2019, 132 kV Melriat (PG) - Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	30	0	0.011	GD 1
5	NER	132 kV Melriat (PG) - Zuangtui line	POWERGRID	04-Jun-19 14:41	04-Jun-19 15:04	23 mins	Zuangtui area of Mizoram Power System was connected with the rest of NER Grid through 132 kV Melriat (PG) - Zuangtui line. At 14:41 Hrs on 04.06.2019, 132 kV Melriat (PG) - Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	28	0	0.011	GD 1
6	NER	132 kV Ziro - Daporijo Line	DoP, Arunachal Pradesh	06-Jun-19 05:13	06-06-2019 05:43:00	30 mins	Daporijo area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Ziro - Daporijo Line. At 05:13 Hrs on 06.06.2019, 132 kV Ziro - Daporijo Line tripped. Due to tripping of this element, Daporijo area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	15	0	0.008	GD 1
7	NER	132 kV Aizawl - Kolasib line and 132 kV Badarpur - Kolasib line	POWERGRID	09-Jun-19 08:38	09-Jun-19 09:03	25 mins	Kolasib area of Mizoram Power System was connected with rest of NER Grid through 132 kV Aizawl - Kolasib line and 132 kV Badarpur - Kolasib line. At 08:38 Hrs on 09.06.2019, 132 kV Aizawl - Kolasib line and 132 kV Badarpur - Kolasib line tripped. Due to tripping of these elements, Kolasib area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	18	5	0.0075	0.002	GD 1

Sl. No.	Region	Name of Element	Owner / Agency	Date and Time of Tripping	Date and Time of Restoration	Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
8	NER	132 kV Dimapur-Kohima Line	DoP, Nagaland	11-Jun-19 11:13	11-Jun-19 11:25	12 mins	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur-Kohima line. (132 kV Kohima- Sanis-Wokha line was under shutdown, 132 kV Karong - Kohima line is idle charged from Kohima end as this line is quite old and due to weak jumper arrangement, 66 kV Tuensang - Likhimro line is kept open due to construction activities). At 11:13 Hrs on 11.06.19, 132 kV Dimapur-Kohima line tripped. Due to tripping of this element, Capital area of Nagaland Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	13	0	0.003	GD 1
9	NER	132 kV Dimapur-Kohima T/L	DoP, Nagaland	11-Jun-19 12:12	11-Jun-19 12:29	17 mins	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur-Kohima line. (132 kV Kohima- Sanis-Wokha line was under shutdown, 132 kV Karong - Kohima line is idle charged from Kohima end as this line is quite old and due to weak jumper arrangement, 66 kV Tuensang - Likhimro line is kept open due to construction activities.) At 12:12 Hrs on 11.06.19, 132 kV Dimapur-Kohima line tripped. Due to tripping of this element, Capital area of Nagaland Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area	0	13	0	0.004	GD 1
10	NER	400/132 kV, 360 MVA ICT-2 at Ranganadi, 132 kV Bus coupler at Ranganadi, 132 kV Pare-Ranganadi 1, 132 kV Pare- Itanagar line, 132 kV Ranganadi- Itanagar, Ranganadi Unit 1 & 3, Pare Unit 1& 2	NEEPCO and DoP, Arunachal Pradesh	11-Jun-19 17:21	11-Jun-19 18:55	1 hrs 34 mins	Ziro area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Ranganadi-Ziro line, Lekhi area was connected through 132 kV Pare-Lekhi line and Itanagar area was connected through 132 kV Itanagar-Ranganadi & 132 kV Itanagar-Pare line. 132 kV Itanagar-Lekhi line and 132 kV Gohpur-Nirjuli line were kept open due to system constraints. Before the incident, 132 kV feeders configuration at Ranganadi were- 132 kV Bus A: 360 MVA ICT-2, 132 kV Zero feeder, 132 kV Pare-2 feeder, Unit -1 & Unit-3 and 132 kV Bus B: 360 MVA ICT-1, 132 kV Pare -1 feeder, 132 kV Itanagar feeder & Unit-2. At 17:21:12 Hrs, 400/132 kV, 360 MVA ICT-2 tripped due to NVD relay operation. At 17:21:13 Hrs, 132 kV Bus coupler CB tripped due to O/C protection. 132 kV Pare- Ranganadi 1 and 132 kV Pare- Itanagar line tripped at Pare due to Dir O/C operation. 132 kV Itanagar- Ranganadi line also tripped at Itanagar. Due to tripping of these elements, Ziro, Itanagar, Lekhi & Nirjuli areas of Arunachal Pradesh Power System were seperated from rest of NER grid and subsequently collapsed due to load generation mismatch in these areas.	380	78	0.595	0.122	GD 2
11	NER	132 kV Melriat (PG)-Zuangtui line	POWERGRID	13-Jun-19 05:53	13-Jun-19 06:53	1 hrs 0 mins	Zuangtui area of Mizoram Power System was connected radially with the rest of NER Grid through 132 kV Melriat (PG) - Zuangtui line. At 05:53 Hrs on 13.06.2019, 132 kV Melriat (PG) - Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	32	0	0.032	GD 1
12	NER	132 kV Melriat (PG)-Zuangtui line	POWERGRID	13-Jun-19 15:20	13-Jun-19 15:41	21 mins	Zuangtui area of Mizoram Power System was connected with the rest of NER Grid through 132 kV Melriat (PG) - Zuangtui line. At 15:20 Hrs on 13.06.2019, 132 kV Melriat (PG) - Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	44	0	0.015	GD 1

Sl. No.	Region	Name of Element	Owner / Agency	Date and Time of Tripping	Date and Time of Restoration	Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
13	NER	132 kV Hailakandi - Panchgram line and 132 kV Badarpur - Panchgram line	POWERGRID & AEGCL	14-Jun-19 04:10	14-Jun-19 05:14	1 hrs 4 mins	Hailakandi area of Assam Power System was connected with the rest of NER Grid through 132 kV Hailakandi - Panchgram line and 132 kV Badarpur - Panchgram line. 132 kV Srikona - Panchgram Line is under long outage, 132 kV Panchgram - Lumshnong line was idle charged for system requirement. At 04:10 Hrs on 14.06.2019, 132 kV Hailakandi - Panchgram line and 132 kV Badarpur - Panchgram line tripped. Due to tripping of these elements, Hailakandi area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	33	0	0.035	GD 1
14	NER	132 kV Ranganadi - Ziro line	POWERGRID	14-Jun-19 18:55	14-Jun-19 19:04	9 mins	Ziro area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Ranganadi - Ziro line. At 18:55 Hrs on 14.06.2019, 132 kV Ranganadi - Ziro line tripped. Due to tripping of this element, Ziro area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	35	0	0.005	GD 1
15	NER	400 kV Biswanath Chariali - Ranganadi 1 & 2 lines	POWERGRID	15-Jun-19 00:53	15-Jun-19 01:09	16 mins	Arunachal Pradesh Power System (except Khupi and Deomali areas) was connected with the rest of NER Grid through 400 kV BNC- Ranganadi Line 1 & 2 Lines. 132 kV Nirjuli- Gohpur line was opened for over-loading of 132 kV Pare - Lekhi line. At 00:53 Hrs on 15.06.2019, 400 kV Biswanath Chariali - Ranganadi 1 & 2 lines tripped. Due to tripping of these elements, Arunachal Pradesh Power System (except Khupi and Deomali areas) was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	70	0	0.018	GD 1
16	NER	132 kV Imphal (PG)- Imphal (MA) line 1	POWERGRID	15-Jun-19 09:15	15-Jun-19 09:27	12 mins	Imphal area of Manipur Power System is connected with the rest of the NER Grid through 132 kV Imphal (PG)-Imphal (MA) 1 line. (132 kV Imphal (PG)-Imphal (MA) line 2 was under planned shutdown. 132 kV Imphal (MA)-Karong line is under outage due to construction work. 132 kV Kongba-Kakching line was kept opened for overloading of 132 kV Loktak - Ningthongkhong line. At 09:15 Hrs on 15.06.2019, 132 kV Imphal (PG)-Imphal (MA) line 1 tripped. Due to tripping of this element, Imphal area of Manipur Power System was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	52	0	0.010	GD 1
17	NER	132 kV Balipara- Khupi Line	NEEPCO & DoP, Arunachal Pradesh	17-Jun-19 15:31	17-Jun-19 15:51	20 mins	Khupi area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Balipara - Khupi line. At 15:31 Hrs on 17.06.2019, 132 kV Balipara - Khupi line tripped. Due to tripping of this element, Khupi area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	18	0	0.006	GD 1

Sl. No.	Region	Name of Element	Owner / Agency	Date and Time of Tripping	Date and Time of Restoration	Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
18	NER	132 kV AGTCCP - Kumarghat line, 132 kV Kamalpur - P.K Bari line and 132 kV Gamaitila - Baramura line.	TSECL, POWERGRID	18-Jun-19 11:44	18-Jun-19 12:02	18 mins	<p>Tripura Power System except part of Tripura Power System [Udaipur, Rokhia, Kailashahar, Dharmanagar, P.K Bari, Ambasa, Gamaitila] was connected with rest of NER Grid through 132 kV AGTCCP -Kumarghat line, 132 kV Kamalpur - P.K Bari line and 132 kV Gamaitila - Baramura line.</p> <p>At 11:32 Hrs on 18.06.19, fault initiated in 132 kV Agartala – Rokhia 1 line due to touching of bamboo. AGTCCPP Unit-1, 2 &3 tripped on under voltage stage-1 protection & STG-2 tripped subsequently due to tripping of GTGs. 132 kV Palatana - Surajmaninagar line tripped at Palatana in Distance Protection (DP), Zone-III. 132 kV Rokhia - Agartala I & 2 lines tripped and fault was cleared from the system. Tripping of GBCs at Palatana & subsequent tripping of Module-1 of Palatana, OTPC were also reported.</p> <p>At 11:43 Hrs, 132 kV Kamalpur – P.K Bari line tripped due to fault in this line (root cause analysis not submitted by TSECL). Subsequently, 132 kV Gamaitila - Baramura line tripped (root cause analysis not submitted) and 132 kV AGTCCP - Kumarghat line tripped at Kumarghat due to operation of Backup over current protection.</p> <p>Due to tripping of these elements, Tripura Power System except part of Tripura Power System [Udaipur, Rokhia, Kailashahar, Dharmanagar, P.K Bari, Ambasa, Gamaitila] was separated from rest of NER Grid and subsequently collapsed due to no source in this area.</p>	0	102	0	0.031	GD 1
19	NER	132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Doyang-Mokokchung line	POWERGRID & NEEPCO	20-Jun-19 11:52	20-Jun-19 12:24	32 mins	<p>Mokokchung area of Nagaland Power System was connected with rest of NER Grid through 132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Doyang-Mokokchung line.</p> <p>Prior to incident, 132 kV Doyang-Dimapur line-2 and 132 kV Doyang Mokokchung line were connected to 132 kV Bus-2 at Doyang.</p> <p>At 11:52 Hrs on 20.06.2019, 132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Dimapur -Doyang 2 Line along with Bus coupler bay tripped on E/F. Due to tripping of these elements, Mokokchung area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.</p>	0	28	0	0.015	GD 1
20	NER	132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Doyang-Mokokchung line	POWERGRID & NEEPCO	21-Jun-19 08:43	21-Jun-19 09:03	20 mins	<p>Mokokchung area of Nagaland Power System was connected with rest of NER Grid through 132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Doyang-Mokokchung line.</p> <p>Prior to incident, 132 kV Doyang-Dimapur 2 line and 132 kV Doyang Mokokchung line were connected to 132 kV Bus-2 at Doyang.</p> <p>At 08:43 Hrs on 21.06.2019, 132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Dimapur -Doyang 2 Line along with Bus coupler bay tripped on E/F. Due to tripping of these elements, Mokokchung area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.</p>	0	32	0	0.011	GD 1

Sl. No.	Region	Name of Element	Owner / Agency	Date and Time of Tripping	Date and Time of Restoration	Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
21	NER	132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Doyang-Mokokchung line	POWERGRID & NEEPCO	21-Jun-19 10:23	21-Jun-19 11:30	1 hrs 7 mins	Mokokchung area of Nagaland Power System was connected with rest of NER Grid through 132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Doyang-Mokokchung line. Prior to incident, 132 kV Doyang-Dimapur 2 line and 132 kV Doyang Mokokchung line was connected to 132 kV Bus-2 at Doyang. At 10:23 Hrs on 21.06.2019, 132 kV Mokokchung(PG)-Mokokchung (DoP, Nagaland) D/C line and 132 kV Dimapur -Doyang 2 Line along with Bus coupler bay tripped on E/F. Due to tripping of these elements, Mokokchung area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	26	0	0.029	GD 1
22	NER	132 kV Palatana - S M Nagar line, 132 kV Jirana - Budhjungnagar line, 132 kV Monarchak-Rokhia line, 132 kV Agartala- Dhalbill line, 132 kV Agartala - Rokhia I & II lines, 132 kV Agartala - AGTCCPP I & II lines	POWERGRID, TSECL	22-Jun-19 13:03	22-Jun-19 13:28	25 mins	Tripura Power System (Udaipur, Kailashahar, Dharmanagar, P K Bari, Kamalpur, Ambasa, Jirana, Baramura, Gamaitila, Monarchak, Rabindranagar) was connected with rest of NER Grid through 132 kV Palatana - Surajmaninagar line, 132 kV Jirana - Budhjungnagar line, 132 kV Monarchak - Rokhia line, 132 kV Agartala-Dhalbill line, 132 kV Agartala - Rokhia I & II lines, 132 kV Agartala - AGTCCPP I & II lines. At 13:03 Hrs on 22.06.2019, 132 kV Palatana - S M Nagar line, 132 kV Jirana - Budhjungnagar line, 132 kV Monarchak-Rokhia line, 132 kV Agartala- Dhalbill line, 132 kV Agartala - Rokhia 1 & 2 lines, 132 kV Agartala - AGTCCPP 1 & 2 lines tripped . Due to tripping of these elements, Tripura Power System (Udaipur, Kailashahar, Dharmanagar, P K Bari, Kamalpur, Ambasa, Jirana, Baramura, Gamaitila, Monarchak, Rabindranagar) was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	175	75	0.072	0.031	GD 1
23	NER	132 kV Ziro - Daporijo Line	POWEGRID	23-Jun-19 12:00	23-Jun-19 12:56	56 mins	Daporijo area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Ziro - Daporijo Line. At 12:00 Hrs on 23.06.2019, 132 kV Ziro - Daporijo Line tripped. Due to tripping of this element, Daporijo area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	11	0	0.010	GD 1
24	NER	132 kV Dimapur - Kohima line and 132 kV Wokha - Kohima line	POWERGRID & DoP, Nagaland	23-Jun-19 12:56	23-Jun-19 14:42	1 hrs 46 mins	Capital area of Nagaland Power System and Karong substation of Manipur Power System were connected with rest of NER Grid through 132 kV Dimapur - Kohima line and 132 kV Wokha - Kohima line. 132 kV Imphal (MA) - Karong Line was under planned shutdown for maintenance work. At 12:56 Hrs on 23.06.2019, 132 kV Dimapur -Kohima line and 132 kV Wokha - Kohima line tripped. Due to tripping of these elements, 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	25	0	0.044	GD 1

Sl. No.	Region	Name of Element	Owner / Agency	Date and Time of Tripping	Date and Time of Restoration	Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
25	NER	132 kV Doyang-Sanis line and 132 kV Kohima- Wokha line	POWERGRID & DoP, Nagaland	23-Jun-19 19:22	23-Jun-19 19:56	34 mins	Capital area of Nagaland Power System and Karong area of Manipur Power System were connected with rest of NER Grid through 132 kV Doyang-Sanis-Wokha-Kohima line.132 kV Dimapur -Kohima line was under outage since 12:56 Hrs of 23.06.2019. 132 kV Imphal (MA) - Karong Line was under planned shutdown for maintenance work. At 19:22 Hrs on 23.06.2019, 132 kV Doyang-Sanis line and 132 kV Kohima-Wokha line tripped. Due to tripping of these elements,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	38	0	0.021	GD 1
26	NER	132 kV Doyang-Sanis line, 132 kV Kohima-Wokha line and 132 kV Karong - Kohima line	DoP, Nagaland, MSPCL	23-Jun-19 20:22	23-Jun-19 20:55	33 mins	Capital area of Nagaland Power System and Karong area of Manipur Power System were connected with rest of NER Grid through 132 kV Doyang-Sanis line, 132 kV Kohima- Wokha line and 132 kV Karong - Kohima line.132 kV Dimapur - Kohima line was under outage since 12:56 Hrs of 23.06.2019. 132 kV Imphal (MA) - Karong Line was under planned shutdown for maintenance work. At 20:22 Hrs on 23.06.2019, 132 kV Doyang-Sanis line, 132 kV Kohima- Wokha line and 132 kV Karong - Kohima line tripped. Due to tripping of these elements,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	28	0	0.015	GD 1
27	NER	132 kV Dimapur - Kohima line	POWERGRID,DoP, Nagaland	24-Jun-19 10:09	24-Jun-19 10:48	39 mins	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	0	0.014	GD 1
28	NER	132 kV Loktak-Ningthoukhong line & 132 kV Loktak-Rengpang line.	MSPDCL	26-Jun-19 17:13	26-Jun-19 18:10	57 mins	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	0	0.042	GD 1

Sl. No.	Region	Name of Element	Owner / Agency	Date and Time of Tripping	Date and Time of Restoration	Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
29	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	15 mins	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	0.045	0.047	GD 1
30	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	26 mins	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	0.024	0.013	GD 1
31	NER	132 kV Badarpur - Kolasib line and 132 kV Aizawl - Kolasib line	POWERGRID	30-Jun-19 07:06	30-Jun-19 07:21	15 mins	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	0.009	0.001	GD 1
32	NER	132 kV Monarchak - Udaipur line	TSECL	30-Jun-19 10:58	30-Jun-19 11:02	4 mins	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	0.004	0.0004	GD 1

North Eastern Region-Grid Incidences Report for June 2019

Sl. No.	Region	Name of Element	Owner / Agency	Date and Time of Tripping	Date and Time of Revival	Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
1	NER	AGTCCPP Unit 6	NEEPCO	01-Jun-19 08:30	01-Jun-19 09:30	1 hrs 0 mins	AGTCCPP Unit 6 tripped at 08:30 Hrs on 01.06.19 due to voltage jerk. (Revision of schedule from Block No.39 on 01.06.19).	6	0	0.006	0	GI 1
2	NER	AGBPP Unit 5	NEEPCO	08-Jun-19 05:40	08-Jun-19 06:30	50 mins	AGBPP Unit 5 tripped at 05:40 Hrs of 08.06.2019 due to low Gas fuel inter-valve pressure. (Revision done from block number 27 on 08.06.2019)	29	0	0.024	0	GI 2
3	NER	AGBPP Unit 2	NEEPCO	10-Jun-19 13:25	10-Jun-19 14:30	1 hrs 5 mins	AGBPP Unit 2 tripped at 13:25 Hrs of 10.06.2019 due to tripping of Gas Compressor. (Revision done from block number 59 on 10.06.2019)	28	0	0.030	0	GI 2
4	NER	AGBPP Unit 4, 7 & 8	NEEPCO	10-Jun-19 15:21	10-Jun-19 16:00	39 mins	AGBPP Unit 4, 7 & 8 tripped at 15:21 Hrs of 10.06.2019 due to tripping of Gas Compressor 3 & 4. (Revision done from block number 65 on 10.06.2019)	72	0	0.047	0	GI 2
5	NER	AGBPP Unit 4	NEEPCO	11-Jun-19 20:25	11-Jun-19 21:30	1 hrs 5 mins	AGBPP Unit 4 tripped at 20:25 Hrs of 11.06.2019 due to tripping of Gas Compressor. (Revision done from block number 87 on 11.06.2019)	31	0	0.034	0	GI 2
6	NER	Ranganadi Unit 1	NEEPCO	11-Jun-19 20:31	11-Jun-19 21:15	44 mins	Ranganadi Unit 1 tripped at 20:31 Hrs of 11.06.2019 due to Rotor Earth Fault. (Revision done from block number 86 on 11.06.2019)	112	0	0.082	0	GI 2
7	NER	AGBPP Unit 6	NEEPCO	13-Jun-19 13:20	13-Jun-19 14:00	40 mins	AGBPP Unit 6 tripped at 13:20 Hrs of 13.06.2019 due to high vibration in turbine bearing. (Revision done from block number 57 on 13.06.2019)	26	0	0.017	0	GI 2
8	NER	Khandong Unit 2	NEEPCO	14-Jun-19 07:09	14-Jun-19 08:00	51 mins	Khandong Unit 2 tripped at 07:09 Hrs of 14.06.2019 due to Governor Problem. (Revision done from block number 33 on 14.06.2019)	23	0	0.020	0	GI 1
9	NER	AGTCCPP Unit 1,2,3 and STG-1 & 2	NEEPCO	18-Jun-19 11:32	18-06-2019 12:45:00	73 mins	AGTCCPP Unit 1,2,3 and STG-1 & 2 tripped at 11:32 Hrs on 18/06/19 due to Under voltage stage-1 operation. Revision done at Block No 52.	82	0	0.100	0	GI 1
10	NER	Palatana Module-1	OTPC	18-Jun-19 11:32	18-06-2019 12:30:00	58 mins	OTPC Module-1(GT and ST) tripped at 11:32 Hrs on 18/06/19 due to tripping of gas booster compressor.Revision done from Block No.51 on 18/06/19.	323	0	0.312	0	GI 2
11	NER	KHANDONG UNIT-1	NEEPCO	21-Jun-19 16:55	21-06-2019 17:30:00	35 mins	Loktak Unit-1 tripped at 16:55 Hrs on 21/06/19 due to thrust bearing temperature high. (Revision carried out at 71 block)	21	0	0.012	0	GI 1
12	NER	AGTCCPP Unit 4, AGTCCPP STG-1 and AGTCCPP STG-2	NEEPCO	26-Jun-19 08:38	26-06-2019 09:15:00	37 mins	AGTCCPP Unit 4, AGTCCPP STG-1, AGTCCPP STG-2 tripped at 08:38 Hrs on 26/06/19 due to Voltage jerk.Revision done from Block No.38 on 26/06/19.	90	0	0.056	0	GI 1
13	NER	AGTCCPP STG-1	NEEPCO	26-Jun-19 17:30	26-06-2019 18:00:00	30 mins	AGTCCPP STG-1 tripped at 17:30 Hrs on 26/06/19 due to high exhaust steam pressure.Revision done from Block No.73 on 26/06/19.	4	0	0.002	0	GI 1
14	NER	AGBPP Unit 6	NEEPCO	27-Jun-19 12:01	27-06-2019 12:45:00	44 mins	AGBPP Unit 6 tripped at 11:32 Hrs on 27/06/19 due to high vibration.Revision done from Block No.52 on 27/06/19.	26	0	0.019	0	GI 2