

Northern Region-Grid Event Report for May 2020

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	Energy Unreserved (in MU)
					Date	Time	Date	Time						
1	NR	1) 400 KV Bareilly-Unnao (UP) Ckt-1 2) 400 KV Bareilly-Unnao (UP) Ckt-2	UTTAR PRADESH	UPPTCL	2-May-20	14:00	2-May-20	16:38	2:38	400 KV Bareilly-Unnao (UP) Ckt-1 tripped due to R-B fault, FC-IR-2.29KA. At the same time, 400 KV Bareilly-Unnao (UP) Ckt-2 also tripped. As per PMU, multiple R-B faults are observed in the system. In antecedent conditions, 400 KV Bareilly-Unnao (UP) Ckt-1 & 2 carrying 128MW & 77MW respectively.	0	0	GI-2	0
2	NR	1) 400/220 kv 500 MVA ICT 1 at Patran(PATR) 2) 400KV Bus 1 at Patran(PATR) 3) 400 KV Patran(PATR)-Kalthal(PG) (PATRAN) Ckt-2	HARYANA	POWERGRID, PSTCL	2-May-20	19:55	2-May-20	23:06	3:11	400 KV Patran(PATR)-Kalthal(PG) (PATRAN) Ckt-2 tripped on R-N fault, 26 km from Kalthal(PG) end. At the same time, 400KV Bus 1 at Patran(PATR) & 400/220 kv 500 MVA ICT 1 at Patran(PATR) also tripped due to Breaker failure protection operated in 408 Tc Circuit Breaker. As per PMU, R-N fault with delayed clearance is observed in the system. In antecedent conditions, 400 KV Patran(PATR)-Kalthal(PG) (PATRAN) Ckt-2 & 400/220 kv 500 MVA ICT 1 at Patran(PATR) carrying 159MW & 66MW respectively.	0	0	GI-2	0
3	NR	1) 765 KV Anta-Phagi (RS) Ckt-2 2) 660 MW Kawai TPS - UNIT 2 3) 765 KV Anta-Phagi (RS) Ckt-1 4) 660 MW Chhabra SCTPS - UNIT 5	RAJASTHAN	RRVNL	4-May-20	17:15	5-May-20	17:00	23:45	765 KV Anta-Phagi (RS) Ckt-2 tripped on Y-B fault, 74km from Phagi end. At 17:16hrs, 765 KV Anta-Phagi (RS) Ckt-1 tripped on Y-N fault, 71km from Phagi end. 660 MW Kawai TPS - UNIT 5 & 660 MW Kawai TPS - UNIT 2 also tripped due to operation of SPS. After patrolling, tower damage was found on both 765 KV Anta-Phagi (RS) Ckt-1 & 2. As per PMU, three phase fault is observed in the system. In antecedent conditions, 765 KV Anta-Phagi (RS) Ckt-1 & 2 carrying 588MW & 598MW respectively.	850	580	GD-1	0
4	NR	1) 400 KV Meja TPS(MUN)-Rewa Road(UP) (UP) Ckt-1 2) 400 KV Obra_B-Rewa Road (UP) Ckt-1 3) 400 KV Meja TPS(MUN)-Masoli(UP) (UP) Ckt-1 4) 400 KV Banda-Rewa Road (UP) Ckt-2 5) 400 KV Banda-Oral (UP) Ckt-2 6) 400/132 kv 200 MVA ICT 2 at Meja TPS(MUN) 7) 400/132 kv 200 MVA ICT 1 at Masoli(UP) 8) 400/132 kv 200 MVA ICT 2 at Masoli(UP)	UTTAR PRADESH	UPPTCL	5-May-20	2:07	5-May-20	4:44	2:37	At 02:07hrs 400 KV Meja TPS(MUN)-Rewa Road(UP) (UP) Ckt-1 tripped on B-N fault. At 02:20hrs, 400 KV Meja TPS(MUN)-Masoli(UP) (UP) tripped on Y-N fault. At the same time, 400 KV Obra_B-Rewa Road (UP) Ckt-1 & 400 KV Banda-Rewa Road (UP) Ckt-2 also tripped on overvoltage. Then at 02:43hrs, 400/132 kv 200 MVA ICT 1 & ICT 2 at Masoli(UP) also tripped due to ingress of water in junction box of control cable. As per PMU, B-N fault, Y-N fault and no fault observed at 02:07hrs, 02:20hrs & 02:43hrs respectively. In antecedent conditions, 400 KV Meja TPS(MUN)-Rewa Road(UP) (UP) ckt-1 carrying 402MW. 400 KV Obra_B-Rewa Road (UP) Ckt-1 & 400 KV Banda-Rewa Road (UP) Ckt-2 carrying 156MW & 121MW respectively.	0	0	GI-2	0
5	NR	1) 220 KV Kishenpur(PG)-Sala(NH) (PG) Ckt-1 2) 220 KV Kishenpur(PG)-Sala(NH) (PG) Ckt-2	J & K	POWERGRID	6-May-20	17:08	6-May-20	17:19	0:11	220 KV Kishenpur(PG)-Sala(NH) (PG) Ckt-1 & 2 tripped on Y-B fault. As per PMU, Y-B fault is observed in the system. In antecedent conditions, 220 KV Kishenpur(PG)-Sala(NH) (PG) Ckt-1 & 2 carrying 49MW & 50MW respectively.	90	0	GD-1	0
6	NR	1) 400 KV Ataur-Muradnagar_1 (UP) Ckt-1 2) 400/220 kv 500 MVA ICT 2 at Muradnagar_1(UP) 3) 400/220 kv 515 MVA ICT 3 at Muradnagar_1(UP) 4) 400 KV Aligarh-Muradnagar_1 (UP) Ckt-1	UTTAR PRADESH	UPPTCL	10-May-20	11:32	10-May-20	13:19	1:47	400 KV Aligarh-Muradnagar_1 (UP) Ckt-1, 400 KV Ataur-Muradnagar_1 (UP) Ckt-1, 400/220 kv 500 MVA ICT 2 at Muradnagar_1(UP) & 400/220 kv 315 MVA ICT 3 at Muradnagar_1(UP) tripped due to bad weather. As per PMU, multiple Y-N faults are observed in the system. No load loss is reported by UP.	0	0	GI-2	0
7	NR	1) 400 KV Deepalpur(JHKT)-Bawana(DV) (PG) Ckt-1 2) 400 KV Deepalpur(JHKT)-Kabulpur(HV) (HVPNL) Ckt-2	HARYANA	HVPNL, POWERGRID	10-May-20	12:00	10-May-20	13:57	1:57	400 KV Deepalpur(JHKT)-Bawana(DV) (PG) Ckt-1 & 400 KV Deepalpur(JHKT)-Kabulpur(HV) (HVPNL) Ckt-2 tripped due to over voltage at Deepalpur end. As per PMU, B-N fault is observed in the system. In antecedent conditions, 400 KV Deepalpur(JHKT)-Bawana(DV) (PG) Ckt-1 & 400 KV Deepalpur(JHKT)-Kabulpur(HV) (HVPNL) Ckt-2 carrying 124MW & 87MW respectively.	0	0	GI-2	0
8	NR	1) 400/132 kv 200 MVA ICT 1 at Masoli(UP) 2) 400 KV Meja TPS(MUN)-Masoli(UP) (UP) Ckt-1 3) 400/132 kv 200 MVA ICT 3 at Masoli(UP)	UTTAR PRADESH	UPPTCL	10-May-20	20:04	10-May-20	22:20	2:16	400 KV Meja TPS(MUN)-Masoli(UP) (UP) Ckt-1 tripped on B-N fault. At the same time, 400/132 kv 200 MVA ICT 1 & ICT 3 at Masoli(UP) also tripped due to bad weather. As per PMU, Y-N fault with unsuccessful autoreclosing is observed in the system. In antecedent conditions, 400 KV Meja TPS(MUN)-Masoli(UP) (UP) Ckt-1 carrying 77MW.	0	0	GI-2	0
9	NR	1) 220 KV Mandola(PG)-South Wazirabad(DV) (DTL) Ckt-4 2) 400 KV Mandola(PG)-Bawana(DV) (DV) Ckt-2 3) 400 KV Mandola(PG)-Bawana(DV) (DV) Ckt-1	NEW DELHI	DTL	14-May-20	17:49	14-May-20	22:28	4:39	400KV Mandola-Bawana ckt-1 tripped due to Phase to phase fault(Y-B fault), F/D-0.16km, F/C-17.44KA (LA Blast of B-phase at Mandola end) and 400KV Mandola-Bawana ckt-1 tripped on phase to phase fault (R-B phase) Zone 1, Fault Distance: 706.5m, Fault current: 9.6KA. At the same time, 220 KV Mandola(PG)-South Wazirabad(DV) (DTL) Ckt-4 tripped on R-N fault. As per PMU, R-B fault is observed in the system. In antecedent conditions, 400KV Mandola-Bawana ckt-1 & 2 carrying 89MW & 94MW respectively.	0	0	GI-2	0
10	NR	1) 400/220 kv 315 MVA ICT 1 at Rewa Road(UP) 2) 125 MVAR Bus Reactor No 1 at 400KV Rewa Road(UP) 3) 400 KV Rewa Road-Panki (UP) Ckt-1 4) 400 KV Meja TPS(MUN)-Rewa Road(UP) (UP) Ckt-1 5) 400 KV Banda-Rewa Road (UP) Ckt-1	UTTAR PRADESH	UPPTCL	15-May-20	18:31	15-May-20	21:06	2:35	Due to Earth fault in 400 KV Banda-Rewa Road (UP) Ckt-1, the line breaker of same not operated in time so LBB operated on BUS-1. Then all connected line breakers and Bus coupler with BUS-1 at 400/220KV Rewa Road(UP) got tripped. As per PMU, Y-N fault with delayed clearance is observed in the system. In antecedent conditions, 315 MVA ICT 1 at Rewa Road(UP) carrying 109MW. 400 KV Rewa Road-Panki (UP) Ckt-1, 400 KV Meja TPS(MUN)-Rewa Road(UP) (UP) Ckt-1 & 400 KV Banda-Rewa Road (UP) Ckt-1 carrying 182MW, 296MW & 77MW respectively.	0	0	GI-2	0
11	NR	1) 400 KV Obra_B-Rewa Road (UP) Ckt-1 2) 400/220 kv 315 MVA ICT 2 at Obra_B(UP) 3) 200 MW Obra TPS - UNIT 12 4) 400KV Bus 2 at Obra_B(UP)	UTTAR PRADESH	UPPTCL	16-May-20	21:34	17-May-20	0:23	2:49	400 KV Obra_B-Rewa Road (UP) Ckt-1 & 400/220 kv 315 MVA ICT 2 at Obra_B(UP) along with Bus-1 tripped at 21:34hrs due to fire of C.T. of unit no. 12 with reverse zone protection. As per PMU, R-N fault is observed in the system. In antecedent conditions, 400 KV Obra_B-Rewa Road (UP) Ckt-1 & 400/220 kv 315 MVA ICT 2 at Obra_B(UP) carrying 59MW & 132MW respectively.	100	0	GD-1	0
12	NR	1) 400 KV Bilaner-Bhadla (RS) Ckt-1 2) 220 KV Bhadla(PG)-Saurya Urja(SU) (UNDEF) Ckt-1 3) 220 KV Bhadla(PG)-Saurya Urja(SU) (UNDEF) Ckt-2	RAJASTHAN	RRVNL	17-May-20	12:20	17-May-20	13:25	1:05	400 KV Bhadla(PG) - Bilaner(RS) tripped R-B fault, Zone 1, 31.6 km from Bilaner end & 10.5 kA, I _c = 10.03 kA. At the same time, 220KV Bhadla - Saurya Urja ckt-1 & 2 also tripped due to low voltages (reported by Saurya Urja). As per PMU, R-Y fault is observed in the system. As per SCADA data, 300 MW (approx.) generation loss in Rajasthan Solar system and 600 MW (approx.) in Bhadla PG associated solar generation is observed.	900	0	GD-1	0
13	NR	1) 63 MVAR Bus Reactor No 1 at 400KV Banda(UP) 2) 400 KV Banda-Rewa Road (UP) Ckt-1 3) 400KV Bus 1 at Banda(UP)	UTTAR PRADESH	UPPTCL	18-May-20	18:02	18-May-20	20:01	1:59	B phase CT of Bus Reactor Main bay at 400/220KV Banda(UP) damaged resulting in tripping of 400KV Bus-1 and 400 KV Banda-Rewa Road (UP) Ckt-1. As per PMU, B-N fault is observed in the system. In antecedent conditions, 400 KV Banda-Rewa Road (UP) Ckt-1 carrying 157MW.	0	0	GI-2	0
14	NR	1) 400 KV Azamgarh-Mau (UP) Ckt-1 2) 400 KV Mau(UP)-Ballia(PG) (PG) Ckt-1	UTTAR PRADESH	POWERGRID, UPPTCL	20-May-20	15:53	20-May-20	17:49	1:56	400 KV Azamgarh-Mau (UP) Ckt-1 tripped on B-N fault. At the same time, 400 KV Mau(UP)-Ballia(PG) (PG) Ckt-1 tripped on DT received from Mau end and 22. As per PMU, B-N fault with delayed clearance is observed in the system. In antecedent conditions, 400 KV Azamgarh-Mau (UP) Ckt-1 & 400 KV Mau(UP)-Ballia(PG) (PG) Ckt-1 carrying 302MW & 78MW respectively.	0	0	GI-2	0
15	NR	1) 500 MW Anpara TPS - UNIT 5 2) 400/132 kv 100 MVA ICT 3 at Anpara(UP) 3) 400/132 kv 100 MVA ICT 1 at Anpara(UP) 4) 210 MW Anpara TPS - UNIT 1 5) 210 MW Anpara TPS - UNIT 2 6) 210 MW Anpara TPS - UNIT 3 7) 500 MW Anpara TPS - UNIT 4 8) 400/132 kv 100 MVA ICT 2 at Anpara(UP)	UTTAR PRADESH	UPPTCL	22-May-20	8:12	22-May-20	9:38	1:26	B phase CT of 10MVA, 132/13kV ICT II at 400/132KV Anpara(UP) blasted due to which Bus Bar protection operated at 132kV side but bus coupler did not open which resulted into tripping of all elements associated with 132kV buses along with station transformers which are the source of auxiliary supply for generating units resulting into tripping of all units at Anpara TPS. As per PMU, Voltage dip in B phase is observed in the system. Generation loss was about 1600MW.	1600	0	GD-1	0
16	NR	1) 400 KV Alaknanda GV(LPC)-Srinagar(LJK) (LJK) Ckt-2 2) 400 KV Alaknanda GV(LPC)-Srinagar(LJK) (LJK) Ckt-1	UTTRAKHAND	PTCL	22-May-20	13:24	22-May-20	15:46	2:22	400 KV Alaknanda GV(LPC)-Srinagar(LJK) (LJK) Ckt-1 & 2 tripped during charging of 220 KV Agatsumit to PTCL. As per PMU, Y-B fault is observed in the system. In antecedent conditions, 400 KV Alaknanda GV(LPC)-Srinagar(LJK) (LJK) Ckt-1 & 2 carrying 35MW each.	0	20	GD-1	0.05
17	NR	1) 220 KV Gurgaon(PG)-GurgaonSec2(HV) (HVPNL) Ckt-4 2) 220 KV Gurgaon(PG)-GurgaonSec2(HV) (HVPNL) Ckt-3 3) 220 KV Gurgaon(PG)-GurgaonSec2(HV) (HVPNL) Ckt-2 4) 220 KV Gurgaon(PG)-GurgaonSec2(HV) (HVPNL) Ckt-1	HARYANA	HVPNL	24-May-20	13:46	24-May-20	14:36	0:50	As reported by HVPNL, R-Phase CT of Ranga Ckt-1 blast at 220KV Gurgaon Sec2(HVPNL), due to this Bus bar protection operated at Gurgaon Sec2(HVPNL) resulting in tripping of 220 KV Gurgaon(PG)-GurgaonSec2(HV) (HVPNL) Ckt-1, 2, 3 & 4. As per PMU, R-N fault followed by B-N fault is observed in the system. In antecedent conditions, 220 KV Gurgaon(PG)-GurgaonSec2(HV) (HVPNL) Ckt-1, 2, 3 & 4 carrying 67MW, 81MW, 72MW & 55MW respectively.	0	400	GD-1	0.33
18	NR	1) 400/220 kv 500 MVA ICT 2 at Moga(PG) 2) 400/220 kv 500 MVA ICT 1 at Moga(PG)	PUNJAB	POWERGRID	26-May-20	16:36	26-May-20	18:20	1:44	400/220 kv 500 MVA ICT 1 & 400/220 kv 250 MVA ICT 2 at Moga(PG) tripped due to relay maloperation. As per PMU, No fault is observed in the system. In antecedent conditions, 500 MVA ICT 1 & 250 MVA ICT 2 carrying 272MW & 146MW respectively.	0	0	GI-2	0
19	NR	1) 400/220 kv 315 MVA ICT 3 at Mundka(DV) 2) 400/220 kv 315 MVA ICT 4 at Mundka(DV)	NEW DELHI	DTL	27-May-20	14:12	27-May-20	15:35	1:23	400/220 kv 315 MVA ICT 3 & 315 MVA ICT 4 at Mundka(DV) tripped on over current. As per PMU, R-N fault with delayed clearance is observed in the system. In antecedent conditions, 15 MVA ICT 3 & 315 MVA ICT 4 at Mundka(DV) carrying 98MW & 96MW respectively.	0	0	GI-2	0
20	NR	1) 220 KV Chamera_3(NH)-Chamba(PG) (PG) Ckt-1	HIMACHAL PRADESH	POWERGRID	27-May-20	15:28	27-May-20	16:21	0:53	220 KV Chamera_3(NH)-Chamba(PG) (PG) Ckt-1 tripped on R-N fault leading to Generation loss of around 280MW (230MW from Chamera 3 & 50MW from Budhi) due to loss of evacuation path. As per PMU, B-N fault is observed in the system. In antecedent conditions, 220KV Chamera 3(NHPC) & 220KV Budhi(HI) generating 230MW & 50MW respectively.	280	0	GD-1	0

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					Date	Time	Date	Time						
21	NR	1) 400 KV Banda-Rewa Road (UP) Ckt-1 2) 400 KV Meja TPS(MUN)-Rewa Road(UP) (UP) Ckt-1 3) 400 KV Banda-Rewa Road (UP) Ckt-2 4) 400 KV Obra_B-Rewa Road (UP) Ckt-1	UTTAR PRADESH	UPPTCL	27-May-20	16:35	27-May-20	17:34	0:59	400 KV Meja TPS(MUN)-Rewa Road(UP) (UP) Ckt-1 tripped on B-N fault. At the same time, 400 KV Obra_B-Rewa Road (UP) Ckt-1 & 400 KV Banda-Rewa Road (UP) Ckt-2 tripped on overvoltage. Also 400 KV Banda-Rewa Road (UP) Ckt-1 tripped on overvoltage from Banda end. As per PMU, B-N fault is observed in the system. In antecedent conditions, 400 KV Meja TPS(MUN)-Rewa Road(UP), 400 KV Obra_B-Rewa Road (UP) Ckt-1 & 400 KV Banda-Rewa Road (UP) Ckt-2 is 259MW, 238MW & 126MW respectively.	0	0	GI-2	0
22	NR	1) 400 KV Chamba-Jalandhar (PG) Ckt-2 2) 400 KV Chamba-Jalandhar (PG) Ckt-1	PUNJAB	POWERGRID	28-May-20	10:37	28-May-20	10:52	0:15	400 KV Chamba-Jalandhar (PG) Ckt-1 tripped on B-N fault,142.7km from Jalandhar end. At the same time, 400 KV Chamba-Jalandhar (PG) Ckt-2 tripped on BR-N fault,142.7km from Jalandhar end. As per PMU, R-B fault is observed in the system. In antecedent conditions, 400 KV Chamba-Jalandhar (PG) Ckt-1 & 2 carrying 175MW & 181MW respectively.	0	0	GI-2	0
23	NR	1) 800 KV HVDC Kurukshetra(PG) Pole-1 2) 800 KV HVDC Kurukshetra(PG) Pole-2	HARYANA	POWERGRID	28-May-20	14:58	28-May-20	16:22	1:24	800 KV HVDC Champa(PG)-Kurukshetra(PG) pole-1, 2, 3 & 4 tripped due to DC line fault. As per PMU, No fault is observed in the system. In antecedent conditions, 800 KV HVDC Champa(PG)-Kurukshetra(PG) pole-1, 2, 3 & 4 carrying total 1600MW.	0	0	GI-2	0
24	NR	1) 765 KV Agra-Fatehpur (PG) Ckt-1 2) 765 KV Agra-Aligarh (PG) Ckt-1	UTTAR PRADESH	POWERGRID	28-May-20	18:02	28-May-20	19:43	1:41	765 KV Agra-Fatehpur (PG) Ckt-1 tripped on overvoltage. At the same time, 765 KV Agra-Aligarh (PG) also tripped on overvoltage. As per PMU, No fault is observed in the system. In antecedent conditions, 765 KV Agra-Fatehpur (PG) Ckt-1 & 765 KV Agra-Aligarh (PG) carrying 157MW & 336MW respectively.	0	0	GI-2	0
25	NR	1) 500 KV HVDC Balia-Bhiwadi (PG) Ckt-2 2) 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1	RAJASTHAN	POWERGRID	29-May-20	17:45	29-May-20	19:11	1:26	500 KV HVDC Balia-Bhiwadi (PG) Ckt-1 & 2 tripped on DC line fault. As per PMU, Fluctuations observed in the phase voltages. In antecedent conditions, 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1 & 2 carrying 500MW total.	0	0	GI-2	0
26	NR	1) 765 KV Agra-Gwalior (PG) Ckt-1 2) 765 KV Agra-Gwalior (PG) Ckt-2	UTTAR PRADESH	POWERGRID	29-May-20	19:10	29-May-20	22:12	3:02	765 KV Agra-Gwalior (PG) Ckt-1 tripped on B-N fault, 92.3km from Agra end. At the same time, 765 KV Agra-Gwalior (PG) Ckt-2 also tripped on B-N fault,86.4km from Agra end. As per PMU, B-N fault with unsuccessful autoreclosing is observed in the system. In antecedent conditions, 765 KV Agra-Gwalior (PG) Ckt-1 & 2 carrying 508MW & 507MW respectively.	0	0	GI-2	0
27	NR	1) 765 KV Gr.Noida_2(UPC)-Meerut(PG) (PG) Ckt-1 2) 765 KV Moga-Meerut (PG) Ckt-1	UTTAR PRADESH	POWERGRID	29-May-20	21:23	29-May-20	22:09	0:46	765 KV Moga-Meerut (PG) Ckt tripped on B-N fault, 20.7km from Meerut S/S end. At the same time, 765 KV Gr.Noida_2(UPC)-Meerut(PG) (PG) Ckt tripped due to B-N fault, 75.7km from Gr. Noida end. As per PMU, B-N fault with unsuccessful autoreclosing is observed in the system. In antecedent conditions, 765 KV Moga-Meerut (PG) & 765 KV Gr.Noida_2(UPC)-Meerut(PG) (PG) carrying 56MW & 64MW respectively.	0	0	GI-2	0
28	NR	1) 400 KV Aligarh-Muradnagar_1 (UP) Ckt-1 2) 400/220 kv 500 MVA ICT 2 at Muradnagar_1(UP)	UTTAR PRADESH	UPPTCL	31-May-20	7:07	31-May-20	16:34	9:27	400 KV Aligarh-Muradnagar_1 (UP) Ckt-1 & 400/220 kv 500 MVA ICT 2 at Muradnagar_1(UP) tripped on operation of Bus Bar protection. As per PMU, B-N fault with delayed clearance is observed in the system.	0	120	GD-1	1.08
29	NR	1) 400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-1 2) 400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-2	HARYANA	HVNL	31-May-20	15:30	31-May-20	18:27	2:57	400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-2 tripped on B-N fault. At the same time, 400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-1 also tripped on B-N fault. As per PMU, multiple B-N faults are observed in the system. In antecedent conditions, 400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-1 & 2 carrying 16MW each.	0	0	GI-2	0
30	NR	1) 400 KV Bhimmal(PG)-Barmer(RS) (RS) Ckt-2 2) 400KV Bus 1 at Bhimmal(PG) 3) 400 KV Bhimmal(PG)-Barmer(RS) (RS) Ckt-1 4) 400KV Bus 2 at Bhimmal(PG)	RAJASTHAN	RRVNL	31-May-20	18:52	31-May-20	21:39	2:47	400 KV Bhimmal(PG)-Barmer(RS) (RS) Ckt-1 tripped due to Y-Phase insulator broken at loc. no. 87. At the same time, 400KV Bus 1, Bus-2 & 400 KV Bhimmal(PG)-Barmer(RS) (RS) Ckt-2 also tripped on operation of Bus Bar protection. As per PMU, multiple Y-N fault is observed in the system.	0	0	GI-2	0

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				Date	Time	Date	Time	Time					
1	WR	Tripping of 1.765 KV Gwalior Bus 1 2.765 KV Gwalior-Jaipur 1	PGCIL	3-May-20	17:29	3-May-20	18:25	0:56	765 KV Gwalior-Jaipur 1 tripped on Y-E fault at Jaipur end. Main bay at Gwalior did not open which resulted in LBB operation and 765 KV Gwalior Bus 1 and its associated main bays tripped.	Nil	Nil	GI-2	Nil
2	WR	Tripping of 1.400 kv MB Power-Jabalpur 1&2 2.600 MW MB Power Units 1&2	MB Power	4-May-20	20:36	4-May-20	20:59	0:23	400 kv MB Power-Jabalpur 2 tripped on Y-E fault from both ends and 400 kv MB Power-Jabalpur 1 tripped on B-E fault only at MB Power end. Due to loss of evacuation path, 660 MW MB Power Units 1&2 tripped.	791	Nil	GD-1	Nil
3	WR	Tripping of 1.400 kv Nagothane-Padghe 1 2.400 kv Nagothane-RGPP 2 3.400/220 kv 315 MVA Nagothane ICT 1 4.400 kv 80 MVAR Nagothane BR	MSETCL	5-May-20	12:14	5-May-20	12:41	0:27	At 400/220kv Nagothane S/S, 400/220 kv 500 MVA ICT 3 was under outage for testing activity. During testing , LBB trip signal got extended and resulted in tripping of 400 kv Bus 1 and all connected elements.	Nil	Nil	GI-2	Nil
4	WR	Tripping of 1. 400 kv REL - Durg 1 2.400 kv REL - Durg 2 3.685 MW REL Units 1&2	REL	17-May-20	0:02	17-May-20	0:52	0:50	At 00:02 Hrs, 400 kv REL- Durg 1 tripped on R-E fault and 400 kv REL-Durg 2 tripped on directional over current protection operation. Due to the loss of evacuation path, 685MW REL Units 1&2 tripped.	1120	Nil	GD-1	Nil
5	WR	Tripping of 1.220 kv Chhuri- Korba(E) 1&2 2.220 kv Chhuri-Korba-(W) 1&2 3.220 kv Chhuri-Mopka 1&2 4.220 kv Chhuri-Bishrampur 1&2 5.220 kv Chhuri-Kotmikala 1&2	CSPTCL	23-May-20	12:08	23-May-20	12:16	0:08	During test charging of 220 kv Chhuri-Kotmikala 2, R phase CB pole got stuck at Churri end and resulted in tripping of all the 220 kv and 132 kv lines at Chhuri S/S. Loads connected to 220/132 kv Chhuri, Bishrampur and 132/33kv Ambikapur, Baikunthpur, Manendragarh, Wandrafanagar, Pratapur, Rajpur, Balrampur & Pathalgaon, Kansabel, Lodhma, Jashpur, Batoli & Darri substations were affected due to the event.	Nil	365	GD-1	0.4086
6	WR	Tripping of 1.132 kv Jabalpur-Madhotal 2.220/132 kv Jabalpur ICTs 1,2&3 3.132kv Jabalpur-Bargi 1&2 4.132 kv Jabalpur-Teighat 5.132 kv Jabalpur-Srinagar 6.132 kv Jabalpur-Panagar 7.132 kv Jabalpur-VF1 1&2 8.132 kv Jabalpur-Maneri	MPPTCL	24-May-20	2:40	24-May-20	3:30	0:50	At 220/132 kv Jabalpur substation, 132 kv Jabalpur bus along with all connected feeders tripped due to blasting of Y phase CT of 132 kv Jabalpur-Madhotal feeder.	Nil	200	GI-1	0.1667
7	WR	Tripping of 1. +800kv HVDC Champa-Kurukshetra Poles 2&4	PGCIL	26-May-20	14:37	26-May-20	16:10	1:33	800kv HVDC Champa-Kurukshetra Poles 2&4 blocked due to DC line fault. Fault distance from Champa end was 804.17km. Prior to the event, each pole was carrying 400 MW.	Nil	Nil	GI-2	Nil
8	WR	Tripping of 1.400 kv Seoni-Kirnapur 2.132 kv Kirnapur- Dongargarh 3.132kv Lalbarra-Balaghat	MPPTCL	26-May-20	15:32	26-May-20	16:54	1:22	400 kv Seoni-Kirnapur tripped from Seoni end on R-E fault and the line was holding from Kirnapur end. At the same time, sparking occurred in R phase isolator of 132 kv Balaghat-Wara seoni line at Balaghat end. 132kv Lalbarra-Balaghat tripped on Zone 3 protection operation from Lalbarra end and 132kv Kirnapur-Dongargarh tripped without any relay indication. With these trippings, 400 kv Kirnapur & 132 kv Balaghat station went blackout. 400 kv Bhilai-Kirnapur was under outage on Voltage regulation prior to the event.	Nil	80	GD-1	0.1093
9	WR	Tripping of 1.220 kv Kasor-Gavasad 1 2.220 kv Kasor- Heranj 1 3.220 kv Kasor- Karamsad 1 4.400/220 kv Kasor ICT 1	GETCO	27-May-20	9:22	27-May-20	10:37	1:15	At 400/220 kv Kasor S/S, Y-E fault occurred on 220 kv Bus 1 and resulted in tripping of all the elements connected to 220 kv Bus 1 on Busbar protection operation. As reported from site, burnt aluminium wires were found in 220/66 kv ICT 1 bay which were suspected to be carried and dropped inside the substation by some bird.	Nil	Nil	GI-1	Nil
10	WR	Tripping of 1.765 kv Satna- Sasan 1&2 2.765 kv Satna-Vindhyachal PS 1&2 3.765 kv Satna-Orai 4.765 kv Satna-Gwalior 5.765 kv Satna-Bina 2 6.765 kv Satna BR 1&2 7.765/400 kv Satna ICT 2 8.765 kv Sasan-Vindhyachal PS 1&2 9.765kv Vindhyachal PS-Jabalpur 1&2 10.400 kv Satna-JP Nigirle 2 11.400 kv Vindhyachal PS-Sasan 1&2 12.400 kv VSTPS 4- Vindhyachal PS 1,2,3&4 13.400 kv VSTPS 4- VSTPS 5 1&2 14.660MW Sasan Units 2,3,4,5&6 15.500 MW VSTPS Units 11,12&13 16.500 MW Rihand Stage 3 Units 1&2 17.400 kv Sasan-Rewa 18.400/38.5 kv Satna STATCOM coupling transformer 19.765 kv Satna Bus 1&2	PGCIL/SASAN/N TPC	28-May-20	16:58	28-May-20	19:08	2:10	Due to Extreme weather conditions, multiple trippings occurred at Satna, Sasan and Vindhyachal Pooling station. 765 kv Satna Bus 1 & Bus 2 tripped on R-E fault. This resulted in islanding of Sasan, Vindhyachal Pooling, VSTPS stage 4&5 and Rihand. After isolation from the grid all the generators/lines connected tripped on Over speed/Over Voltage respectively	5246	950	GD-1	Multiple trippings occurred at MP due to heavy storm. Energy unreserved in MUs not submitted by MP SLDG
11	WR	Tripping of 1.+800kv HVDC Champa-Kurukshetra Poles 1,2,3&4	PGCIL	28-May-20	14:58	28-May-20	16:21	1:23	800 kv HVDC Champa-Kurukshetra Pole 1 blocked due to Valve Based Electronics (VBE) Control Maloperation at Kurukshetra end. Poles 2&4 blocked on Cable Longitudinal Differential (CLD) protection operation. Pole 3 blocked on Common Neutral Area Protection (CNAP) maloperation at Champa end. Prior to the event each pole was carrying 400 MW each.	Nil	Nil	GI-2	Nil
12	WR	Tripping of 1.800kv HVDC Champa-Kurukshetra Poles 1&2	PGCIL	28-May-20	19:53	28-May-20	21:25	1:32	800 kv HVDC Champa-Kurukshetra Poles 1&2 blocked on DC line fault. Fault Location was at tower No-2270 at 846.7 km from Champa end. Prior to the event, each pole was carrying 375 MW.	Nil	Nil	GI-2	Nil
13	WR	Tripping of 1.220 kv Malanpur-Gwalior 1&2 2.220 kv Malanpur-Morena 1&2 3.220 kv Malanpur-Morena(Adani) 4.220/132 kv Malanpur ICTs 1,2&3	MPPTCL	29-May-20	19:08	29-May-20	20:02	0:54	Due to Extreme weather conditions, 220 kv Malanpur -Gwalior 1&2 and 220 kv Malanpur-Morena(Adani) tripped on B-E fault. 220 kv Malanpur-Morena 1&2 tripped on B-Y fault and Y-E fault respectively. 132 kv Banmore 1 and 132 kv Mehgaon feeders tripped on R-E fault. Since 28.05.2020, 220kv Malanpur-Auraiya, 132 kv Malanpur-Banmore 2 and 132 kv Malanpur-Badagaon were under forced outage. Malanpur substation went blackout	Nil	38	GD-1	0.0342
14	WR	Tripping of 1.400 kv Korba(W) Extension-Bhilai 2.400 kv Korba(W) Extension-Marwa. 3.400/220 kv 500 MVA Korba(W) ICT 4.210 MW Korba(W) Units 3&4 5.500 MW Korba(W) Extension Unit 5	CSPTCL/ CSPGCL	31-May-20	18:15	31-May-20	19:28	1:13	While charging 400 kv Korba(W) Extension-Marwa, line tripped on SOTF and at the same time 400 kv Korba(W) Extension-Bhilai, 210 MW Korba(W) Units 3&4 and 500 MW Korba(W) Unit 5 tripped. The reason for the tripping is under investigation.	750	Nil	GD-1	Nil

Southern Region-Grid Event Report for May 2020

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 Unreserved (MU)
				Date	Time (Hrs)	Date	Time (Hrs)	Time					
1	SR	i. 220kV Kolar PG - Kolar KA Line-1 ii. 220kV Kolar PG - Kolar KA Line-2	KPTCL	9-May-20	22:41	9-May-20	23:10	29 mins	Complete outage of 220kV Kolar, 220kV Malur, 220kV Sarjapur and 220kV VTP SS of KPTCL: During antecedent conditions, 220kV Kolar Kar, 220kV Malur, 220kV Sarjapur and 220kV Vikas Tech Park (VTP) SS are radially fed from 220kV Kolar PG SS. Triggering incident was B phase jumper cut in 220kV Kolar PG- Kolar KA line-1. Subsequently Line tripped on operation of Z1 distance protection at both the ends. At the same time, YB fault was observed in 220kV Kolar PG-Kolar KA line-2 and line-2 tripped on operation of non-directional OC protection at Kolar Kar end and Zone-2 operation at Kolar PG end. Due to tripping of 220kV Kolar PG Kolar line-1 and 2, there was complete loss of supply at 220kV Kolar KA, 220kV Malur, 220kV Sarjapur and 220kV Vikas Tech Park.	----	360 MW	GD-1	0.1740
2	SR	i. 220kV Nelamangala - Peenya-1 ii. 220kV Nelamangala - Peenya-2 iii. 220kV Nelamangala - Peenya-3 iv. 220kV Nelamangala - Peenya-4	KPTCL	9-May-20	6:29	9-May-20	6:54	25 mins	Complete outage of 220kV Peenya SS of KPTCL : Triggering incident was snapping of earth conductor at second tower from 400 kv receiving station Nelamangala. All other connected lines at 220kV Peenya tripped resulting in complete outage of 220kV Peenya station. Details awaited from KPTCL.	----	150 MW	GD-1	0.06
3	SR	i. 220kV Alipur - BTPS line ii. 220kV Alipur - Regulapadu line	KPTCL	16-May-20	18:52	16-May-20	19:50	58 mins	Complete outage of 220kV Alipura SS of KPTCL: Triggering incident was R-ph fault in 220kV Alipur - BTPS line. Line tripped on operation of Zone-2 distance protection at BTPS end and Zone-1 distance protection at Alipur end. But from DR of at Alipur end, fault current was observed to be persistent for more than 400ms. Due to non-clearance of fault, 220kV Alipur - Regulapadu line tripped only at Alipur end on operation of reverse Zone-4 distance protection. Tripping of both connected 220kV lines resulted in complete loss of supply at 220kV Alipur SS. Details are still awaited.	----	70 MW	GD-1	0.07
4	SR	i. 220kV Tumkur PG - Madhugiri KA line-1 ii. 220kV Tumkur PG - Madhugiri KA Line-2 iii. 400/220kV Tumkur ICTs 1, 2 & 3	KPTCL	18-May-20	10:14	18-May-20	10:45	31 mins	Multiple Tripping in 400kV/220kV Tumkur SS and Complete outage of 220kV Anthrasanahalli SS of KPTCL: During antecedent conditions, due to outage of 220kV Shimoga - A'halli line and 220kV A'halli -Neelamangala line, 220kV A'halli SS was radially fed from 220kV Tumkur_PG SS. At 10:10hrs, 220kV Tumkur_PG A'halli line was taken under shutdown for AMP works . At 10:14hrs, bus fault occurred at 220kV Tumkur_PG SS due to inadvertent closure of Bus-1 Earth Switch of A'halli line-2 while Bus-2 isolator of A'halli line-2 was in closed condition. Due to non-operation of BBP at 220kV Tumkur_PG SS, fault was cleared by tripping of remote end feeders on Zone-2 operation and 400kV/220kV Tumkur ICT-1, 2 and 3 got tripped on operation of HV side directional OC protection. This resulted in de-energization of 220kV Tumkur_PG bus. Since 220kV A'halli SS was radially fed from 220kV Tumkur_PG SS, this resulted in complete loss of supply at 220kV A'halli SS of KPTCL .	----	120 MW	GD-1	0.062
5	SR	i. 220kV Manyata - Yelahanka line	KPTCL	24-May-20	14:55	24-May-20	17:58	3 hrs 3 mins	Complete loss of supply at 220kV Manyata and 220kV Hebbal SS of KPTCL: In the antecedent 220kV Peenya - Hebbal, 220kV Manyata - Hoody and 220kV Manyata - ITI were in idle charged condition. There was also heavy rain and wind. 220kV Manyata - Yelahanka line tripped on Zone-1, distance protection due to R-Y fault. As reported at tower location 67, tarpauline sheet fell on the line. Since the only incoming source to 220kV Hebbal was from Manyata, tripping of 220kV Manyata - Yalahanka line resulted in complete loss of supply at 220kV Manyata and 220kV Hebbal stations of KPTCL.	----	100 MW	GD-1	--
6	SR	i. 220kV Somanahally - Khodays line	KPTCL	24-May-20	15:15	24-May-20	16:55	1 hr 40 mins	Complete loss of supply at 220kV Khodays and 220kV Subramanyapura SS of KPTCL: In the antecedent conditions, 220kV Subramanyapura - Peenya line was in idle charged condition. There was also heavy rain and wind. Triggering incident was Y-B phase fault in 220kV Somanahally - Khodays line and the line tripped on Zone-1 distance protection. This resulted in complete loss of supply at 220kV Khodays and 220kV Subramanyapura stations since these stations were radially fed from Somanahalli station.	----	110 MW	GD-1	--
7	SR	All elements connected to 220kV Bus-1 and Bus-2 at Talapalli.	Andhra Pradesh	28-May-20	19:41	28-May-20	22:35	2 hr 54 mins	Complete outage of 220kV Talapalli SS of APTRANSCO: Triggering incident was R-phase CT blast connected to 220kV side of 400/220kV ICT-2 at Talapalli. Bus bar protection of both 220kV Bus-1 and Bus-2 operated and all connected elements tripped resulting in complete outage of 220kV Talapalli station. Details are awaited.	----	550 MW	GD-1	--
8	SR	i. 220kV KSPDCL - Pavagada line-4 ii. 220kV/33kV 80 MVA transformer no. 1 & 2. iii. 220kV Pavagada - KSPDCL line-3	KSPDCL	9-May-20	19:08	9-May-20	20:58	1 hr 50 mins	Multiple Tripping in 220kV/33kV KSPDCL SS 4; Triggering incident was B ph Bus-2 PT failure at 220kV KSPDCL SS no.4. Bus-2 BBP operated resulting in the tripping of all the elements connected to Bus-2 at 220kV KSPDCL SS no.4. At the same time, RYBG fault occurred at 33kV cable feeder no.6 of KSPDCL 220/33kV SS-3. Cable got tripped on operation of Overcurrent protection. At the same time, 220kV Pavagada KSPDCL line-3 got tripped only at Pavagada end on operation of DEF protection . There was no delayed fault clearance during the event.	----	----	GI-1	----
9	SR	i. 220kV Vemagiri - Peddapuram line-2 ii. 220kV Vemagiri - Bommaru Line-2 iii. 220kV Vemagiri - Duvva line iv. 400/220kV ICT-2 at Vemagiri	APTRANSCO	14-May-20	11:54	14-May-20	12:25	31 mins	Tripping of 220kV Bus-2 at 400/220kV Vemagiri station of APTRANSCO: As reported during relay testing of 220kV feeders at Vemagiri station, LBB relay of 220kV Vemagiri - Peddapuram line-2 maloperated. This resulted in tripping of 220kV Bus-2 and all elements connected to Bus-2 tripped.	----	----	GI-1	----
10	SR	i. All elements connected to Bus-1 and Bus-2 at 220kV Vemagiri	APTRANSCO	14-May-20	0:40	14-May-20	4:17	3 Hrs 37 mins	Complete outage of 220kV side of 400/220kV Vemagiri station of APTRANSCO: As reported control cables caught fire at 220kV Vemagiri switchyard. Bus bar protection of 220kV Bus-1 and Bus-2 operated resulting in tripping of all connected elements. 400/220kV ICT-1,2 and 3 also tripped.	----	----	GI-1	----
11	SR	i. 400/220kV ICT-1 ii. 400/220kV ICT-3 iii. 220kV Vemagiri - Bommaru line 2 iv. 220kV Vemagiri - Bheemavaram	APTRANSCO	15-May-20	18:07	15-May-20	18:38	31 mins	Tripping of 220kV Bus-1 at 400/220kV Vemagiri station of APTRANSCO: Triggering incident was B-phase insulator disc flashover of 220kV Vemagiri - Bommaru line 2. Bus bar protection of 220kV Bus-1 operated resulting in tripping of all elements connected to Bus-1.	----	----	GI-1	----
12	SR	i. 220kV Nunna - Bhimadolu line ii. 220kV Nunna - Gunadala line iii. 220kV Nunna - KTPS line iv. 220kV Nunna - Gudivada line-2 v. 400/220kV ICT-3 at Nunna	APTRANSCO	23-May-20	9:45	23-May-20	11:00	1 hr 15 mins	Tripping of Bus-2 at 220kV Nunna SS of APTRANSCO: Triggering incident was failure of HV side CT connected to 220/132kV ICT-1 at Nunna. Bus bar protection of Bus-2 operated and all Bus-2 connected elements tripped. There was no load / generation loss during the event.	----	----	GI-1	----
13	SR	i. 220kV Nagarjunsagar - Tallapalli Line-1 ii. 220kV Nagarjunsagar - Srisaillam RB iii. Unit#5 at Nagarjunsagar	TSGENCO	29-May-20	0:08	29-May-20	2:51	2 Hrs 43 mins	Tripping of Bus A at 220kV Nagarjunsagar station of TSGENCO: Triggering incident was failure of HV side CT connected to 220/132kV ICT-1 at Nagarjunsagar. Bus bar protection of Bus-A operated and all Bus A connected elements tripped.	----	----	GI-1	----

Eastern Region-Grid Event Report for May 2020

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 Standards	Loss of Energy(in MU)
				Date	Time	Date	Time						
1	ER	220 kV Darbhanga (DMTCL)-Darbhanga (Bihar) D/C 220 kV Dharbanga-Mushahari-1	BSPTCL	5-May-20	19:09	5-May-20	19:48	0:39	On 5th May 2020, at 19:09 Hrs, 220 kV Darbhanga (DMTCL)-Darbhanga (BSPTCL) D/C tripped on Y phase to earth fault. At the same time 220 kV Dharbanga-Mushahari-1 also tripped resulting in load loss at Darbhanga, Madhubani and Pandaul. Later on it was informed by BSPTCL that there was a Y-phase jumper snapping of 220 kV Darbhanga (DMTCL)-Darbhanga (BSPTCL) - 2 which was the root cause of the event.	0	180	GD-1	0.1170
2	ER	220 kV Chaibasa (JUSNL) – Chaibasa (PG) D/C 220 kV Chaibasa (JUSNL) – Ramchandrapur D/C 400/220 kV ICT 1 & 2 at Chaibasa (PG) 132 kV Rajkharwan – Goelkhera S/C	JUSNL	6-May-20	1:19	6-May-20	1:40	0:21	At 01:13 hrs 400/220 kV ICT 1 & 2 at Chaibasa (PG) tripped from 220 kV side due to mal-operation of back up impedance relay. At 01:19 hrs, 220 kV Chaibasa (JUSNL) – Chaibasa (PG) D/C and 220 kV Chaibasa (JUSNL) – Ramchandrapur D/C tripped due to R phase to earth fault resulting in total power failure at 220/132 kV Chaibasa (JUSNL) S/S. 132 kV Rajkharwan – Goelkhera S/C also tripped at same time.	0	20	GD-1	0.0070
3	ER	400 kV Barh – Motihari – 2	ISTS	7-May-20	12:51	7-May-20	13:26	0:35	Tripping of 400 kV Barh - Motihari - 2 due to Y phase to earth fault, had led to loss of supply to Betiah/Raxaul/Motihari as being the single source of supply.	0	85	GD-1	0.0496
4	ER	400 KV Alipuduar - Jigmelling D/C	ISTS	7-May-20	18:47	7-May-20	19:58	1:11	At 18:47 Hrs, 400 KV Alipuduar - Jigmelling D/C tripped on R-Y-N fault caused tripping of Mangdechu units #1 and #2 (At Bhutan) on no evacuation path. No generation and load loss at Indian grid. At Bhutan grid around 238 MW generation loss occurred at Mangdechu.	0	0	GI-2	0.0000
5	ER	220 kV Gaya Sonenagar – D/C	BSPTCL	10-May-20	22:51	10-May-20	23:02	0:11	220 kV Gaya Sonenagar – D/C tripped at 22:51 hrs due to R phase to earth fault resulting total power failure at Sonenagar S/S. Around 130 MW load loss was reported at Aurangabad, Sonenagar, Rafi Ganj, Japla. Around 15 MW traction load loss was reported at Japla, Garwah and Rafi Ganj.	0	130	GD-1	0.0238
6	ER	400 kV Barh – Motihari – 2	ISTS	10-May-20	23:56	11-May-20	0:48	0:52	Tripping of 400 kV Barh - Motihari - 2 due to Y phase to earth fault, had led to loss of supply to Betiah/Raxaul/Motihari as being the single source of supply.	0	120	GD-1	0.1040
7	ER	400 kV Barh – Motihari – 2	ISTS	11-May-20	2:48	11-May-20	12:05	9:17	Tripping of 400 kV Barh - Motihari - 2 due to Y phase to earth fault, had led to loss of supply to Betiah/Raxaul/Motihari as being the single source of supply.	0	120	GD-1	(Detail report from Bihar SLDC is yet to be received)
8	ER	220 kV Ranchi Hatia T/C 220 kV Patratu-Hatia D/C 220/132KV 150MVA ICT-1, 2 and 3 at Hatia	JUSNL	14-May-20	15:33	14-May-20	16:08	0:35	220 kV Ranchi Hatia T/C, 220 kV Patratu-Hatia D/C and 220/132KV 150MVA ICT-1, 2 and 3 at Hatia tripped at same time resulting in total power failure at 220/132 kV Hatia S/S. In Jamshedpur PMU data, one R phase to earth fault has been captured. Fault was cleared at around 400 ms.	0	161	GD-1	0.0939
9	ER	400 kV Meramundali JSPL D/C	OPTCL	16-May-20	19:28	16-May-20	20:21	0:53	At 19:26 hrs. 400 kV Meramundali – JSPL – 1 tripped due to receipt of DT signal at Meramundali end. After around 1 min, 400 kV Meramundali – JSPL – 2 tripped due to same reason resulting total power failure at JSPL. Inclement weather condition was reported at the time of the event.	230	160	GD-1	0.1413
10	ER	220 kV TTPS – PTPS S/C Unit 1 and 2 at TTPS	JUSNL	18-May-20	0:53	18-May-20	2:35	1:42	220 kV TTPS – PTPS S/C tripped from PTPS end only on B phase to earth fault. 220 kV TTPS – PTPS S/C, unit 2 at TTPS and station transformer 2 at TTPS were connected to 220 kV bus 2 at TTPS. So, both the running units at TTPS and 220 kV bus coupler at TTPS (tripping of bus coupler was verbally informed by TTPS) tripped to clear the fault. 220 kV TTPS – Bihar Sharif S/C and 220 kV bus 1 at TTPS did not trip during this event.	302	0	GI-1	0.0000
11	ER	220 kV Ranchi Hatia 1 and 3 220/132KV 150MVA ICT-1, 2 and 3 at Hatia	JUSNL	19-May-20	2:56	19-May-20	3:22	0:26	132 kV side B phase CT of 220/132 kV ICT – 3 at 220/132 kV Hatia S/s got burst. At same time, 220 kV Ranchi Hatia 1 and 3, 220/132KV 150MVA ICT-1, 2 and 3 at Hatia tripped resulting total loss of supply at 132 kV voltage level of Hatia S/S. 220 kV bus at Hatia remained in service along with 220 kV PTPS – Hatia D/C and 220 kV Ranchi – Hatia – 2.	0	200	GI-1	0.0867
12	ER	400 kV Teesta III – Dikchu S/C 400 kV Rangpo – Dikchu S/C	ISTS	19-May-20	20:57	19-May-20	21:35	0:38	At 20:57 hrs both circuits tripped resulting in total power failure at Dikchu HEP. 400 kV Teesta III – Dikchu S/C tripped due to B phase to earth fault. 400 kV Rangpo – Dikchu S/C tripped due to direct trip signal received at Rangpo.	55	0	GD-1	0.0000
13	ER	400 kV Barh – Motihari – 2	ISTS	20-May-20	13:23	20-May-20	14:39	1:16	Tripping of 400 kV Barh - Motihari - 2 due to R phase to earth fault, had led to loss of supply to Betiah/Raxaul/Motihari as being the single source of supply.	0	110	GD-1	0.1393
14	ER	220 kV TTPS – PTPS S/C 220 kV TTPS - Bihar Sharif S/C Unit 1 and 2 at TTPS	JUSNL	24-May-20	12:38	24-May-20	13:01	0:23	At 12:28 hrs 220 kV TTPS – Bihar Sharif S/C tripped due to R phase to earth fault. The whole power generated by TTPS was being evacuated through 220 kV TTPS – PTPS S/C. At 12:38 hrs, 220 kV TTPS – PTPS S/C tripped due to B phase to earth fault resulting in tripping of both running units at TTPS.	292	0	GD-1	0.0000
15	ER	220 kV Muzaffarpur Dhalkebar D/C	ISTS	24-May-20	19:51	24-May-20	20:21	0:30	220 kV Muzaffarpur Dhalkebar D/C tripped due to B phase directional O/C resulting in loss of power supply to Dhalkebar. Prior to the tripping export schedule to Nepal was 90 MW. Around 60-70 MW power was flowing through 220 kV Muzaffarpur Dhalkebar D/C. At 19:49 hrs power through these two circuits increased to more than 145 MW. No load loss reported in Indian grid.	0	0	GI-I	0.0000
16	ER	220 kV NJP- TLDP III S/C 220 kV NJP- TLDP IV D/C 220 kV NJP- Binaguri D/C	WBSETCL	27-May-20	0:56	27-May-20	2:02	1:06	At 00:56 Hrs. all 220 kV lines from 220 kV NJP tripped due to tripping of both 220 kV Buses, causing generation loss at TLDP III and TLDP IV on no evacuation path	280	0	GD-1	0.0000
17	ER	220 kV New Mellii - Jorethang D/C 220 kV Tashiding - New Mellii S/C 220 kV Tashiding - Rangpo S/C	ISTS	27-May-20	4:28	27-May-20	4:50	0:22	220 kV New Mellii - Jorethang - 1 tripped on Y phase to earth fault from Jorethang end. 220 kV New Mellii - Jorethang - 2 tripped on overcurrent protection from Jorethang end only. At same time 220 kV Tashiding - New Mellii S/C and 220 kV Tashiding - Rangpo S/C tripped from Tashiding end only on Y phase to earth fault.	110	0	GD-1	0.0000
18	ER	400 kV Barh – Motihari – 2	ISTS	30-May-20	19:22	30-May-20	21:59	2:37	At 19:22 hrs 400 kV Barh - Motihari - 2 tripped due to Y phase to earth fault. The tripping has led to loss of supply to Betiya and Motihari as being the single source of supply causing Grid Disturbance 1 (GD-1) category event.	0	126	GD-1	0.3297
19	ER	400 kV Barh – Motihari – 2	ISTS	30-May-20	22:05	31-May-20	18:47	20:42	At 22:05 hrs 400 kV Barh - Motihari - 2 tripped due to Y phase to earth fault. The tripping has led to loss of supply to Motihari as being the single source of supply causing Grid Disturbance 1 (GD-1) category event.	0	0	GD-1	0.0000

North Eastern Region-Grid Disturbances Report for May 2020														
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)	Generati on Loss in MU	Load Loss in MU	Category as per CEA Grid Standards		
1	NER	132 kV Imphal (MA) - Karong line 132 kV Kohima - Karong line	MSPCL & DoP, Nagaland	02-May-20 09:25	02-May-20 09:28	0:03:00	Karong area of Manipur Power System was connected with rest of NER Grid through 132 kV Imphal (MA) - Karong line and 132 kV Kohima - Karong line. At 09:25 Hrs on 02.05.2020, 132 kV Imphal (MA) - Karong line and 132 kV Kohima - Karong line tripped. Due to tripping of these elements, Karong area of Manipur Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	10	0	0.001	GD 1		
2	NER	132 kV Pare - Lekhi line	POWERGRID & DoP, Arunachal Pradesh	02-May-20 10:11	02-May-20 10:28	0:17:00	Lekhi and Nirjuli areas of Arunachal Pradesh Power System & Gohpur(Assam) load of Assam Power System were connected with rest of NER Grid through 132 kV Pare - Lekhi line. 132 kV Lekhi - Itanagar line was kept open due to CT ratio restriction at Lekhi & Bus Coupler at Gohpur was kept open for system requirement. At 10:11 Hrs on 02.05.2020, 132 kV Pare - Lekhi line tripped. Due to tripping of this element, Lekhi & Nirjuli Area of Arunachal Pradesh Power Sytem and Gohpur Load of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.	0	21	0	0.006	GD 1		
3	NER	132 kV Pare - Lekhi line	POWERGRID & DoP, Arunachal Pradesh	02-May-20 11:11	02-May-20 11:30	0:19:00	Lekhi and Nirjuli areas of Arunachal Pradesh Power System & Gohpur(Assam) load of Assam Power System were connected with rest of NER Grid through 132 kV Pare - Lekhi line. 132 kV Lekhi - Itanagar line was kept open due to CT ratio restriction at Lekhi & Bus Coupler at Gohpur was kept open for system requirement. At 11:11 Hrs on 02.05.2020, 132 kV Pare - Lekhi line tripped. Due to tripping of this element, Lekhi & Nirjuli Area of Arunachal Pradesh Power Sytem and Gohpur Load of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.	0	29	0	0.0090	GD 1		
4	NER	132 kV Pare - Lekhi line 132 kV Lekhi - Nirjuli line	POWERGRID & DoP, Arunachal Pradesh	02-May-20 12:03	02-May-20 12:27	0:24:00	Lekhi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Pare - Lekhi line and 132 kV Lekhi - Nirjuli line. 132 kV Lekhi - Itanagar line was kept open due to CT ratio restriction at Lekhi. At 12:03 Hrs on 02.05.2020, 132 kV Pare - Lekhi line and 132 kV Lekhi - Nirjuli line tripped. Due to tripping of these elements, Lekhi area of Arunachal Pradesh Power Sytem was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	14	0	0.0060	GD 1		
5	NER	132 kV Palatana - Surajmaninagar line 132 kV Agartala - AGTCCPP D/C 132 kV Jirania - Budjungnagar line 132 kV Agartala Dhalabil line 132 kV Agartala - Rokhia D/C	POWERGRID, TSECL and PGCB	06-May-20 21:46	06-May-20 23:40	1:54:00	Part of Tripura Power System and Comilla load of Bangladesh Power System were connected with the rest of NER Grid through 132 kV Palatana - Surajmaninagar line, 132 kV Jirania - Budjungnagar line, 132 kV Agartala Dhalabil line, 132 kV Agartala - Rokhia D/C and 132 kV Agartala - AGTCCPP D/C. At 21:46 Hrs on 06.05.20, 132 kV Palatana - Surajmaninagar line, 132 kV Jirania - Budjungnagar line, 132 kV Agartala Dhalabil line, 132 kV Agartala - Rokhia D/C and 132 kV Agartala - AGTCCPP D/C tripped. Due to tripping of these elements, Part of Tripura Power System and Comilla load of Bangladesh Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas.	98	211	0.26	0.4010	GD 2		
6	NER	132 kV Jiribam-Pailapool line 132 kV Pailapool-Srikona Line	AEGCL and POWERGRID	08-May-20 07:12	08-May-20 07:30	0:18:00	Pailapool area of Assam Power System was connected with the rest of NER Grid through 132 kV Jiribam-Pailapool line & 132 kV Pailapool-Srikona Line. At 07:12 Hrs on 08.05.2020, 132 kV Jiribam-Pailapool line & Pailapool-Srikona Line tripped. Due to tripping of these elements, Pailapool area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	12	0	0.0040	GD 1		
7	NER	132 kV Along-Pasighat line	DoP, Arunachal Pradesh	08-May-20 15:47	08-May-20 16:06	0:19:00	Pasighat area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Along-Pasighat line (Owner- DoP, Arunachal Pradesh). At 15:47 Hrs on 08.05.20, 132 kV Along-Pasighat line tripped. Due to tripping of this element, Along area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area.	0	10	0	0.0030	GD 1		
8	NER	132 kV Hailakandi-Panchgram line 132 kV Dullavchera-Hailakandi line 132 kV Hailakandi-Silchar D/C	AEGCL	13-May-20 11:20	13-May-20 11:42	0:22:00	Hailakandi area of Assam Power System was connected with the rest of NER Grid through 132 kV Hailakandi-Panchgram line, 132 kV Dullavchera-Hailakandi line & 132 kV Hailakandi-Silchar D/C. At 11:20 Hrs on 13.05.2020, 132 kV Hailakandi-Panchgram line, 132 kV Dullavchera-Hailakandi line & 132 kV Hailakandi-Silchar D/C 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	14	0	0.0044	GD 1		
9	NER	132 kV Ziro-Daporijo line	POWERGRID	17-May-20 22:46	17-May-20 23:01	0:15:00	Daporijo area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Ziro-Daporijo line. At 22:46 Hrs on 17.05.2020, 132 kV Ziro-Daporijo 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	19	0	0.0050	GD 1		
10	NER	132 kV Balipara-Tenga line	NEEPCO & DoP, Arunachal Pradesh	21-May-20 07:00	21-May-20 07:16	0:16:00	Khupi area of Arunachal Pradesh Power System and Dikshi HEP were connected with the rest of NER Grid through 132 kV Balipara-Tenga line. At 07:00 Hrs on 21.05.2020, 132 kV Balipara-Tenga line tripped. Due to tripping of this element, Khupi area of Arunachal Pradesh Power System and Dikshi HEP were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	11	11	0.003	0.0030	GD 1		
11	NER	132 kV Daporijo-Along	DoP, Arunachal Pradesh	26-May-20 07:36	26-May-20 07:54	0:18:00	Along area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Daporijo-Along line. At 07:36 Hrs on 26.05.2020, 132 kV Daporijo-Along line tripped. Due to tripping of this element, Along area of Arunachal Pradesh Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	14	0	0.0040	GD 1		
12	NER	132 kV Lumshnong-Panchgram line	AEGCL & MePTCL	26-May-20 22:13	26-May-20 22:24	0:11:00	Lumshnong area of Meghalaya Power System was connected with rest of NER Grid through 132 kV Lumshnong-Panchgram line. 132 kV Khleihriat- Lumshnong line was under forced outage since 21:56 Hrs on 26.05.20. At 22:13 Hrs on 26.05.2020, 132 kV Lumshnong-Panchgram line tripped. Due to tripping of this element, Lumshnong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	14	0	0.0026	GD 1		
13	NER	132 kV Dimapur-Kohima line	POWERGRID, MSPCL & DoP, Nagaland	27-May-20 11:38	27-May-20 12:06	0:28:00	Kohima area of Nagaland Power System & Karong Area of Manipur Power System were connected with the rest of NER Grid through 132 kV Dimapur - Kohima line. 132 kV Kohima - Wokha line was declared faulty at 05:10 Hrs of 27.05.2020 and 132 kV Imphal(Yurembam)-Karong Line was under planned S/D w.e.f 09:05 Hrs of 10.05.2020. At 11:38 Hrs on 27.05.2020, 132 kV Dimapur-Kohima line tripped. Due to tripping of this element, Kohima & Karong areas were separated from the rest of NER Grid and subsequently collapsed due to no source in these areas.	0	11	0	0.0050	GD 1		
14	NER	132 kV Dimapur-Kohima line	POWERGRID, MSPCL & DoP, Nagaland	27-May-20 15:58	27-May-20 16:16	0:18:00	Kohima area of Nagaland Power System & Karong Area of Manipur Power System were connected with the rest of NER Grid through 132 kV Dimapur - Kohima line. 132 kV Kohima - Wokha line was declared faulty at 05:10 Hrs of 27.05.2020 and 132 kV Imphal(Yurembam)-Karong Line was under planned S/D w.e.f 09:05 Hrs of 10.05.2020. At 15:58 Hrs on 27.05.2020, 132 kV Dimapur-Kohima line tripped. Due to tripping of this element, Kohima & Karong areas were separated from the rest of NER Grid and subsequently collapsed due to no source in these areas.	0	26	0	0.0080	GD 1		
15	NER	132 kV Doyang-Sanis line	DoP Nagaland	31-May-20 14:35	31-May-20 15:05	0:30:00	Kohima area of Nagaland Power System & Karong Area of Manipur Power System were connected with the rest of NER Grid through 132 kV Doyang-Sanis line. 132 kV Dimapur(PG)-Kohima line was declared faulty at 10:35 Hrs of 31.05.2020 and 132 kV Imphal(Yurembam)-Karong Line was under planned S/D w.e.f 09:05 Hrs of 10.05.2020. At 14:35 Hrs on 31.05.2020, 132 kV Doyang-Sanis line tripped. Due to tripping of this element, Kohima & Karong areas were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas.	8	32	0.004	0.0160	GD 1		

North Eastern Region-Grid Incidences Report for May 2020

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	AGBPP Unit-2	NEEPCO	03-May-20 07:52	03-May-20 09:00	1:08:00	AGBPP Unit-2 tripped at 07:52 Hrs on 03-05-20 due to tripping of gas booster compressor#3. Revision done from Block No.37 on 03-05-20	30	0	0.030	0	GI 2
2	NER	AGBPP Unit-2	NEEPCO	07-May-20 05:55	07-May-20 06:30	0:35:00	AGBPP Unit-2 tripped at 05:55 Hrs on 07-05-20 due to tripping of Gas Booster compressor#1. Revision done from Block No.27 on 07-05-20	27.8	0	0.020	0	GI 2
3	NER	AGBPP Unit-1,2,3,4,5,6,7,8 & 9	NEEPCO	10-May-20 11:47	10-May-20 12:30	0:43:00	AGBPP Unit-1,2,3,4,5,6,7,8,9 tripped at 11:47 Hrs on 10-05-20 due to tripping of Gas booster compressor. Revision done from Block No. 51 on 10-05-20	190	0	0.140	0	GI 2
4	NER	AGBPP Unit-2,4,5 &7	NEEPCO	16-May-20 06:38	16-May-20 07:15	0:37:00	AGBPP Unit-2,4,5 &7 tripped at 06:38 Hrs on 16-05-20 due to tripping of gas booster. Revision done from Block No. 30 on 16-05-20	60	0	0.040	0	GI 2
5	NER	AGTCCPP Unit- 5	NEEPCO	18-May-20 12:26	18-May-20 13:15	0:49:00	AGTCCPP Unit- 5 tripped at 12:26 Hrs on 18-05-20 due to Console Trip (Vacuum Pressure Low). Revision done from Block No. 54 on 18-05-20	20.6	0	0.020	0	GI 1
6	NER	AGBPP Unit- 1	NEEPCO	43976.89792	25-05-20 22:15	0:42:00	AGBPP Unit-1 tripped at 21:33 Hrs on 25-05-20 due to Auxiliary power supply failure. Revision done from Block No. 90 on 25-05-20	31	0	0.022	0	GI 2
7	NER	BGTTP unit 2	NTPC	26-May-20 07:13	26-06-20 8:00	0:47:00	BgTTP Unit-2 tripped at 07:13 Hrs on 26-05-20 on generator electrical protection. Revision done from Block No. 33 on 26-05-20	125	0	1.200	0	GI 2
8	NER	Pare Unit-1	NEEPCO	28-May-20 08:19	28-May-20 09:45	1:26:00	Pare Unit-1 tripped at 08:19 Hrs on 28-05-20 due to shaft seal pressure problem. Revision done from Block No. 40 on 28-05-20	59	0	0.080	0	GI 1
9	NER	AGBPP Unit-3	NEEPCO	29-May-20 14:37	29-May-20 15:30	0:53:00	AGBPP Unit-3 tripped at 14:37 Hrs on 29-05-20 due to low SF6 Gas pressure in GT CB. Revision done from Block No. 63 on 29-05-20	27.6	0	0.020	0	GI 2