

Northern Region-Event Report for February 2019

S.No.	Region	Name of Elements (Tripped/Manually opened)	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) 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 2) 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-2	POWERGRID	1-Feb-19	10:00	1-Feb-19	10:06	00:06	400kV Kishenpur(PG)-New Wanpoh(PG) ckt-2 tripped on B-N fault, 88.1km from Kishenpur(PG) end. At the same time, 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 also tripped on R-N fault, 91.3km from Kishenpur(PG) end. As per PMU, B-N fault followed by R-N fault with unsuccessful auto-reclosing is observed. In antecedent conditions, 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 & 2 carrying 36 MW & 40 MW respectively.	Nil	Nil	GI-2
2	NR	1) 400kV Banda(UP)-Orai(UP) ckt-1 2) 400kV Banda(UP)-Orai(UP) ckt-2	UP	3-Feb-19	7:07	3-Feb-19	10:28	03:21	400kV Banda(UP)-Orai(UP) ckt-2 tripped on B-N fault, 47.2km from Banda(UP) end. At the same time, 400kV Banda(UP)-Orai(UP) ckt-1 tripped on R-N fault, 47.6km from Banda(UP) end. As per PMU, R-N fault followed by B-N fault with unsuccessful auto-reclosing is observed. In antecedent conditions, 400kV Banda(UP)-Orai(UP) ckt-1 & 2 carrying 116 MW & 115 MW respectively.	Nil	Nil	GI-2
3	NR	1) 220kV Sarita Vihar(DTL)-Pragati(DTL) 2) 220kV Sarita Vihar(DTL)-Maharani Bagh(DTL) 3) 220kV Sarita Vihar(DTL)-BTPS(NTPC) ckt-1 4) 220kV Sarita Vihar(DTL)-BTPS(NTPC) ckt-2	Delhi & NTPC	5-Feb-19	11:57	5-Feb-19	12:12	00:15	Multiple element tripping at 220kV Sarita Vihar(DTL) occurred due to Birdage resulting in tripping of 220kV Sarita Vihar(DTL)-Pragati(DTL), 220kV Sarita Vihar(DTL)-Maharani Bagh(DTL), 220kV Sarita Vihar(DTL)-BTPS(NTPC) ckt-1 & 2. As per PMU, three phase fault with delayed clearance of 360ms is observed. In antecedent conditions, 220kV Sarita Vihar(DTL)-Pragati(DTL) & 220kV Sarita Vihar(DTL)-Maharani Bagh(DTL) carrying 43 MW & 72 MW respectively.	Nil	230	GD-1
4	NR	1) 220 kV Bus 2 at 400/220kV Hamirpur(PG) 2) 315 MVA ICT 1 at 400/220kV Hamirpur(PG) 3) 315 MVA ICT 2 at 400/220kV Hamirpur(PG) 4) 220kV Hamirpur(HPSEB)-Hamirpur(PG) ckt-1 5) 220kV Hamirpur(HPSEB)-Hamirpur(PG) ckt-2	POWERGRID & HP	6-Feb-19	11:13	6-Feb-19	11:51	00:38	220 kV Bus 2 at 400/220kV Hamirpur(PG) tripped due to operation of Bus Bar protection during SF6 refilling in GIS bus/bay resulting in tripping of 315 MVA ICT 1 & 2, 220kV Hamirpur(HPSEB)-Hamirpur(PG) ckt-1 & 2. As per PMU, No fault is observed in the system. In antecedent conditions, 315 MVA ICT 1 & 315 MVA ICT 2 carrying 104 MW each.	Nil	25	GD-1
5	NR	1) 500 MVA ICT 3 at 400/220kV Dadri(NTPC) 2) 500 MVA ICT 4 at 400/220kV Dadri(NTPC)	NTPC	7-Feb-19	17:44	7-Feb-19	18:32	00:48	500 MVA ICT 3 & 500 MVA ICT 4 at 400/220kV Dadri(NTPC) tripped due to operation of overhead differential protection. As per PMU, R-N fault and no auto-reclosing is observed in the system.	Nil	Nil	GI-2
6	NR	1) 220kV Rosa(UP)-Dohna(UP) 2) 220kV Rosa(UP)-Sahajahanpur(UP) ckt 1 & 2 3) 220kV Rosa(UP)-Badaura(UP) ckt 1 & 2 4) 200 MVA ICT1 at 400/220kV Rosa(UP) 5) 200 MVA ICT2 at 400/220kV Rosa(UP)	UP	7-Feb-19	21:45	8-Feb-19	23:49	02:04	Phase to earth fault occurred in 220kV Rosa(UP)-Dohna(UP) Line. Breaker at 400/220kV Rosa(UP) did not trip, resulting in tripping of all 220kV elements and 200 MVA ICT1 & ICT2 at 400/220kV Rosa(UP). As per PMU, R-B fault is observed.	Nil	125	GD-1
7	NR	1) 400kV Dulhasti(NHPC)-Kishenpur(PG) ckt-1 2) 130 MW Unit#1, #2, #3 at 400kV Dulhasti(NHPC).	POWERGRID & NHPC	7-Feb-19	17:07	8-Feb-19	15:38	22:31	400kV Dulhasti(NHPC)-Kishenpur(PG) ckt-1 tripped on R-N fault. 400kV Dulhasti(NHPC)-Kishenpur(PG) ckt-2 already tripped at 1647hrs due to R-N fault. Consequently, Unit#1, #2, #3 at 400kV Dulhasti(NHPC) tripped due to loss of evacuation path. As per PMU, R-N fault with unsuccessful autoreclosing is observed. In antecedent conditions, 400kV Dulhasti(NHPC)-Kishenpur(PG) ckt-1 carrying 259 MW.	250	Nil	GD-1
8	NR	1) 220kV Kishenpur(PG)-Mirbazar(JK) 2) 220kV Kishenpur(PG)-Ramban(JK)	POWERGRID & J&K	7-Feb-19	16:14	7-Feb-19	20:45	04:31	220kV Kishenpur(PG)-Mirbazar(JK) & 220kV Kishenpur(PG)-Ramban(JK) tripped on R-Y fault. As per PMU, multiple R-Y fault with delayed clearance of 360ms is observed. In antecedent conditions, 220kV Kishenpur(PG)-Mirbazar(JK) carrying 16 MW.	Nil	Nil	GI-2
9	NR	1) 400kV Hapur 765(UP)-Muradnagar(UP) 2) 400kV Aligarh(UP)-Muradnagar(UP) 3) 400kV Ataur(UP)-Muradnagar(UP) 4) 500 MVA ICT 2 at 400/220kV Muradnagar(UP) 5) 315 MVA ICT 1 at 400/220kV Muradnagar(UP) 6) 315 MVA ICT 3 at 400/220kV Muradnagar(UP) 7) 220kV Muradnagar(UP)-Muradnagar II(UP) ckt 1 & 2 8) 220kV Muradnagar(UP)-Sahibabad(UP) ckt 1 & 2 9) 220kV Muradnagar(UP)-Loni(UP) 10) 220kV Muradnagar(UP)-Faridnagar(UP)	UP	7-Feb-19	12:49	7-Feb-19	14:04	01:15	while working on 400kV Bus coupler at 400/220kV Muradnagar(UP), 400kV Bus bar protection operated leading to complete outage of 400/220kV Muradnagar(UP). As per PMU, R-N fault is observed. In antecedent conditions, 315 MVA ICT 1, 500 MVA ICT 2 & 315 MVA ICT 3 carrying 130 MW, 205 MW & 115 MW respectively.	Nil	375	GD-1
10	NR	1) 500kV HVDC Rihand-Dadri Pole 1 2) 400kV Dadri(NTPC)-Harsh Vihar(DTL) ckt-1 3) 220kV Palwal(HVPLN)-Samaypur(BBMB) ckt-1 & 2 4) 220kV Gopalpur(DTL)-Mandola(PG) ckt-1 & 2 5) 220kV Mandola(PG)-Narela(DTL) ckt-1 & 2	POWERGRID, NTPC, Haryana & Delhi	14-Feb-19	9:03	14-Feb-19	09:34	00:31	500kV HVDC Rihand-Dadri Pole 1 tripped due to operation of transformer differential protection leading to operation of SPS and tripping of 220kV feeders. At the same time, 400kV Dadri(NTPC)-Harsh Vihar(DTL) ckt-1 also tripped. As per PMU, B-N fault is observed in the system. In antecedent conditions, 500kV HVDC Rihand-Dadri Pole 1 carrying 700 MW.	Nil	570	GD-1
11	NR	1) 400kV Dadri(NTPC)-Maharanibagh(PG) 2) 400kV Ballabgarh(PG)-Maharanibagh(PG) 3) 220kV Maharanibagh(PG)-HCM(L)DTL ckt-1 4) 220kV Maharanibagh(PG)-Trauma Centre(DTL) ckt-1 5) 220kV Maharanibagh(PG)-Trauma Centre(DTL) ckt-2 6) 220kV Maharanibagh(PG)-Masjid Moth(DTL) ckt-1 7) 220kV Maharanibagh(PG)-Lodhi Road(DTL) ckt-1	POWERGRID & Delhi	15-Feb-19	4:22	15-Feb-19	06:08	01:46	400kV Ballabgarh(PG)-Maharanibagh(PG) tripped on overvoltage. At the same time, 400kV Dadri(NTPC)-Maharanibagh(PG) tripped due to DT received from Maharanibagh(PG) end. As per PMU, No fault is observed in the system. In antecedent conditions, 400kV Dadri(NTPC)-Maharanibagh(PG) & 400kV Ballabgarh(PG)-Maharanibagh(PG) carrying 232 MW & 7 MW respectively.	54	291	GD-1

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner/ Agency	Outage		Revival		Duration	Event (As reported)	Generation Loss(MW)	Load Loss(MW)	Category as per CEA Grid Standards
				Date	Time	Date	Time					
12	NR	1) 220kV Akal(Raj)-Barmar(Raj) 2) 220kV Akal(Raj)-Akal(Raj) ckt-2 3) 220kV Akal(Raj)-Rajgarh(Raj) 4) 220kV Akal(Raj)-Jajla(Raj) 5) 220kV Akal(Raj)-Bhu(Raj) ckt-2 6) 220kV Akal(Raj)-Mulana(Raj) 7) 220kV Akal(Raj)-Amarsagar(Raj) 8) 220kV Amarsagar(Raj)-Tejva(Raj) ckt-1 & 2	Rajasthan	17-Feb-19	17:15	17-Feb-19	17:44	00:29	Fault was observed in 220kV Akal- Barmar line which was connected with 220kV Bus-1 at 400/220kV Akal(Raj). Delay in opening of breaker at Akal end resulted in LBB operation causing opening of feeders and Bus coupler connected with Bus-1. Wind generation loss also occurred at 2127Hrs and 2233Hrs due to tripping of Bus coupler on overcurrent at 220kV Amarsagar(Raj). As reported by Rajasthan SLDC, similar incident occurred at 0551 Hrs of 18th Feb,2019. As per PMU, at 1715Hrs, three phase fault is observed in the system.	700	Nil	GD-1
13	NR	1) 400kV Bus 1 at 400/220kV Panipat(BBMB) 2) 400kV Dadri(NTPC)-Panipat(BBMB) ckt-1 3) 400kV Dadri(NTPC)-Panipat(BBMB) ckt-2	BBMB, NTPC & POWERGRID	18-Feb-19	12:30	18-Feb-19	13:30	01:00	400kV Bus 1 at 400/220kV Panipat(BBMB) tripped due to bus bar protection operated due to CT blast in Tie-bay of 400kV Dadri-Panipat ckt 2 at Panipat(BBMB) end. At the same time, 400kV Dadri(NTPC)-Panipat(BBMB) ckt-1 & 2 also tripped. As per PMU, B-N fault is observed in the system. In antecedent conditions, 400kV Dadri(NTPC)-Panipat(BBMB) ckt-1 & 2 carrying 257 MW & 249 MW respectively.	Nil	Nil	GI-2
14	NR	1) 400kV Kala Amb(PKATL)-Karchamwangtoo(JSW) ckt-2 2) 400kV Jhakra(SJVNL)-Karchamwangtoo(JSW) ckt-1	JSW, HP and SJVNL	19-Feb-19	1:59	19-Feb-19	05:49	03:50	400kV Kala Amb(PKATL)-Karchamwangtoo(JSW) ckt-2 tripped on B-N fault, 183km From Kala Amb(PKATL) end. At the same time, 400kV Jhakra(SJVNL)-Karchamwangtoo(JSW) ckt-1 tripped on Over voltage at Karcham end and DT received at Jhakra(SJVNL) end. As per PMU, B-N fault with unsuccessful autoreclosing is observed. In antecedent conditions, 400kV Jhakra(SJVNL)-Karchamwangtoo(JSW) ckt-1 carrying 94 MW.	30	Nil	GD-1
15	NR	1) 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 2) 80 MVAR B/R at 400/220kV Kishenpur(PG) 3) 63 MVAR B/R at 400/220kV Kishenpur(PG)	POWERGRID	21-Feb-19	13:27	21-Feb-19	13:53	00:26	400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 tripped on B-N fault, 95.9km from Kishenpur(PG) end. At the same time, 80 MVAR B/R & 63 MVAR B/R at 400/220kV Kishenpur(PG) also tripped due to Problem in CB. As per PMU, B-N fault with unsuccessful auto-reclosure is observed in the system. In antecedent conditions, 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 carrying 67 MW.	Nil	Nil	GI-2
16	NR	1) 220kV Delina(J&K)-Kishanganga(NHPC) ckt-1 2) 220kV Delina(J&K)-Kishanganga(NHPC) ckt-2	NHPC/JK/PPD/NRSS29/POWER GRID	24-Feb-19	16:47	24-Feb-19	18:07	01:20	220kV Delina-Kishanganga-2 tripped on R-Y phase to phase fault. 220kV Delina-Kishanganga-1 tripped from Delina end only. From SCADA data, it seems 220kV Delina-Amargarh also tripped. As per PMU data, R-Y fault occurred.	Nil	Nil	GI-1
17	NR	1) 400kV Khedar-Kirori ckt-1 2) 400kV Khedar-Kirori ckt-2	Haryana	24-Feb-19	20:51	24-Feb-19	22:11	01:20	400kV Khedar-Kirori D/C tripped simultaneously. As per PMU data, Y-N fault occurred.	Nil	Nil	GI-2
18	NR	1) 400kV Ballabgarh(PG)-Kanpur(PG)-1 2) 400kV Ballabgarh(PG)-Kanpur(PG)-2 3) 400kV Ballabgarh(PG)-Kanpur(PG)-3 4) 400kV Ballabgarh(PG)-Mainpur(PG)-2 5) 400kV Bus-3 at Ballabgarh(PG)	POWERGRID	25-Feb-19	10:03	25-Feb-19	11:12	01:09	400kV Bus-4 was to be taken under shutdown. Inadvertently, earth switch of Bus-3 was applied in place of Bus-4 resulted in tripping of all elements connected to Bus-3. As per PMU data, R-N fault occurred.	Nil	Nil	GI-2
19	NR	1) 400kV Dadri(NTPC)-Panipat(BBMB) Ckt-1 2) 400kV Dadri(NTPC)-Muradnagar(UP)	NTPC/BBMB/UP	25-Feb-19	23:46	26-Feb-19	06:02	06:16	400kV Dadri(NTPC)-Panipat(BBMB)-1 and 400kV Dadri(NTPC)-Muradnagar(UP) tripped on over voltage. As per PMU data, Voltage dip observed. (Dadri PMU data didn't report).	Nil	Nil	GI-2
20	NR	1) 315 MVA ICT 1 at 400/220kV Suratgarh(Raj) 2) 315 MVA ICT 2 at 400/220kV Suratgarh(Raj)	Rajasthan	27-Feb-19	3:32	27-Feb-19	07:05	03:33	315 MVA ICT 1 & 2 at 400/220kV Suratgarh(Raj) tripped due to overfluxing. 400kV Bikaner(Raj)-Suratgarh(Raj) and 400kV Bikaner(Raj)-Suratgarh(Raj) SC 1 also tripped at 0344 Hrs and 0345Hrs on overvoltage. As per PMU, No fault is observed in the system. In antecedent conditions, 315 MVA ICT 1 & 2 carrying 89 MW each.	Nil	Nil	GI-2

Western Region-Event Report for February 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 Unserved (MU)
				Date	Time	Date	Time	Time					
1	WR	Tripping of 1. 400 KV Korba (W)-Marwa Ckt. 2. 400 KV Korba (W)-Raita Ckt. 3. 400 KV Korba (W)-Bhilai Ckt. 4. 210 MW Korba(W) Unit 3&4	CSPTCL	06-02-2019	22:00	06-02-2019	22:51	00:51	At 400/220 kv Korba(W) substation,While charging 400 kv Korba(W)-Marwa all the other 400 kv lines at Korba(W) tripped on Over Voltage. 210 MW Korba(W) Units 3&4 also tripped during the event.	337	Nil	GD-1	Nil
2	WR	Tripping of 1.800 kv HVDC Champa-Kurukshetra Pole 1 2.800 kv HVDC Champa-Kurukshetra Pole 2	PGCIL	07-02-2019	21:40	07-02-2019	22:06	00:26	800 kv HVDC Champa-Kurukshetra BI-Pole tripped due to TOVC operation at Kurukshetra end.	Nil	Nil	GI-2	Nil
3	WR	Tripping of 1.765 kv Bhopal-Indore 2.765 kv Bhopal-Jabalpur 3.765 kv Bhopal Bus reactor	BDTCL	14-02-2019	01:58	14-02-2019	05:39	03:41	At 765/400 kv Bhopal substation,765 kv Bhopal-Indore tripped at Indore end on B phase to earth fault but from the Bhopal end line was not tripped on distance protection due to the problem in B phase CVT. Since the DEF setting was 1.5 second, 765 kv Bhopal-Jabalpur tripped from Jabalpur end on Zone 3 distance protection operation and the line tripped at Bhopal end due to the DT receipt from Jabalpur on OverVoltage. 765 kv Bus reactor tripped on differential protection operation.	Nil	Nil	GI-2	Nil
4	WR	Tripping of 1. 400 kv ACBIL-BILASPUR 1 2. 400 kv MCCPL-Bilaspur1 3. 300 MW MCCPL Unit 1 4. 30 MW Chakabura Unit 1 5. 30 MW Chakabura Unit 2 6. 135 MW ACBIL Unit 2 7. 50 MW SCPL Unit 2	ACBIL/MCCPL /SCPL	24-02-2019	22:14	24-02-2019	22:53	00:39	Due to the tripping of 400 kv Bilaspur-ACBIL and 400 kv Bilaspur-MCCPL on B-E fault, ACBIL and MCCPL generators tripped due to the loss of evacuation path and got blacked out.	483	Nil	GD-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.

Eastern region_ Grid Events for Feb-2019

Sl. No.	Region	Name of major elements	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	Time					
1	ERLDC	220 kV Sagardighi - New Sagardighi D/C 400/220 kV ICT - I at Sagardighi unit I at Sagardighi	WBPDC	3-Feb-19	18:43	3-Feb-19	19:20	00:37	Due to B phase CT failure of Bus coupler Bay and actuation of Bus bar protection, 220 kV Sagardighi - New Sagardighi D/C tripped along with 400/220 kV ICT - I at Sagardighi and unit I at Sagardighi.	300	0	GI-I	0.0000
2	ERLDC	400 kV Arambag - Bakreswar S/C 400/220 kV ICT - II at Bakreswar GT-II at Bakreswar	WBPDC	11-Feb-19	14:54	11-Feb-19	17:04	02:10	400 kV bus II at Bakreswar tripped at 14:54 hrs due to Y-N fault at 400 kV Arambag - Bakreswar S/C resulting tripping of 400/220 kV ICT - II at Bakreswar along with unit II GT. As per PMU data analysis fault was cleared within 100 ms after tripping of line from both ends. Unit II was on house load after tripping of GT-II. So it was transferred later to bus I.	0	0	GI-II	0.0000
3	ERLDC	400 kV Koderma - Bokaro - I 400 kV Koderma - Biharshariff - I 400 kV bus - I at Koderma Unit I & II at Koderma	DVC	25-Feb-19	21:32	26-Feb-19	00:16	02:44	At 21:32 hrs 400 kV Biharshariff Koderma I & 400 kV Bokaro Koderma I tripped from both ends along with bus I and two running units LBB protection operated for tie bay between ST-I & GT-I. It is reported that insulation failure occurred in CT associated with GT I which was about to be synchronised.	900	0	GI-II	0.0000
4	ERLDC	400 kV Meramundali - New Duburi - D/C 400 kV Meramundali - Mendasal S/C 400/220 kV ICT - I at Meramundali 400 kV bus - I at Meramundali	OPTCL	26-Feb-19	17:50	26-Feb-19	18:50	01:00	At 17:50 hrs, 400 kV bus I at Meramundali tripped due to LBB operation of tie breaker between 400 kV Meramundali - New Duburi - I and 400 kV Meramundali - Mendasal S/C resulting tripping of all elements from bus I at Meramundali. No effect in 220 kV bus as other ICT was in service.	0	0	GI-II	0.0000

Southern Region _Grid events_February_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	All connected elements viz. 1. 220kV Hootagalli - Vajamangala 2. 220kV Hootagalli - Mysore ckt-1&2 3. 220kV Hootagalli - Kadakola	KPTCL	3-Feb-19	20:26	3-Feb-19	21:21	55 mins	Complete Outage of 220kV Hootagalli SS of KPTCL : Triggering incident was B-ph fault due to failure of B-ph CT of Bus Coupler at 220kV Hootagalli Station. Since bus bar protection is not available at 220kV Hootagalli, fault was cleared by tripping of all connected lines at remote end on Zone 2 Distance Protection operation. This resulted in the complete outage at 220kV Hootagalli Station.	-----	101 MW	GD-1	0.11
2	SR	All connected elements at Kadra viz. 1. 220kV Kadra - Kodalalli 2. 220kV Kadra - Kaiga 3. 220kV Kadra - Karwar ckt-1 & 2	KPTCL	4-Feb-19	20:19	4-Feb-19	20:35	16 mins	Complete Outage of 220kV Kadra Power House of KPCL & 220kV Karwar SS of KPTCL : During de-synchronising of Kadra unit#2, R-pole didn't open due to struck breaker condition. Pole Discrepancy operated. All the connected 220kV lines at Kadra end were hand tripped. This resulted in complete outage at 220kV Kadra Power House. Since 220kV Karwar was radially fed from 220kV Kadra power house, there was complete loss of supply at 220kV Karwar station.	-----	64 MW	GD-1	0.021
3	SR	All connected elements tripped viz.: i. 220kV Ambewadi-Nagjheri line-2 ii. 220kV Ambewadi-Nagjheri line-1 iii. 220kV Ambewadi – Narendra Line-2	KPTCL	6-Feb-19	14:51	6-Feb-19	15:34	43 mins	Complete Outage of 220kV Ambewadi Station of KPTCL : 220kV Ambewadi-Nagjheri line-2 had tripped in the antecedent at 14:21 hrs due to B- phase to ground fault. While test charging 220kV Ambewadi – Nagjheri Line -2 from Ambewadi end at 14:51 Hrs, the other connected lines 220kV Ambewadi – Nagjheri line-1 and 220kV Ambewadi – Narendra Line-2 tripped due to suspected stuck breaker condition at Ambewadi end. Fault was cleared by remote end breaker in Zone-2 as LBB protection was not active at 220kV Ambewadi station. This resulted in complete outage of 220kV Ambewadi station. During the incident Generation Loss of 90MW occurred at Supa Generating station	90 MW	6 MW	GD-1	
4	SR	All connected elements tripped viz.: i. 220kV LowerPeriyar - Brahmapuram- 1 &2 ii. 220kV Ambalamugal - Brahmapuram 1&2 iii. 220kV Cochin - Brahmapuram 1&2	KSEB	8-Feb-19	10:28	8-Feb-19	11:15	47 mins	Complete Outage of 220kV Brahmapuram SS of KSEB : Complete outage of 220kV Brahmapuram SS occurred due to suspected mal operation of Bus Bar protection.	7 MW	200 MW	GD-1	

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				Date	Time (Hrs)	Date	Time (Hrs)	Time					
5	SR	All elements connected to Bus-1 and Bus-2 tripped.	TSGENCO	17-Feb-19	23:22	18-Feb-19	15:00	15 Hrs 38 mins	Complete Outage of 220kV N'Sagar Main Power House of TSGENCO: During change over to Pump Condenser mode, bus fault occurred at 220kV N'Sagar Main Power House. Due to non-operation of BBP (Bus Bar Protection), fault was cleared by tripping of 220kV connected feeders on Zone 2 Distance Protection operation. This resulted in the complete loss of supply at 220kV N'Sagar Main Power House. Antecedent generation at N'Sagar was Nil during this event	----	----	GD-1	
6	SR	All connected elements tripped viz. i. 400/220kV, 315 MVA ICT-1 &2 at Gooty ii. 400/220kV, 500MVA ICT-3 at Gooty iii. 220kV Gooty - Dhone 1&2 iv. 220kV Gooty SWS - Gooty v. 220kV Gooty SWS - Ananthpur vi. 220kV Gooty SWS- Ultratech vii. 220kV Gooty SWS - Boyrelli	APTRANSCO	19-Feb-19	04:15	19-Feb-19	05:12	57 mins	Complete Outage of 220kV Gooty Switching Station (SWS) of APTRANSCO : Triggering incident was failure of B-ph CT of 220kV Gooty PG to Gooty SWS line-1. Bus-1 and Bus-2 Bus Bar Protection (BBP) operated resulting in the tripping of all the connected elements at 220kV Gooty SWS. 400kV/220kV ICT#1, 2 and 3 at Gooty also got tripped during this event.	----	----	GD-1	
7	SR	All connected elements tripped viz.: i. 220kV Hoody - HSR line-1 ii. 220kV HSR - EPIP iii. 220kV HSR - NIMHANS	KPTCL	22-Feb-19	11:35	22-Feb-19	12:00	25 mins	Complete Outage of 220kV NIMHANS and 220kV East DV Compound (EDC) SS of KPTCL: Triggering incident was R-ph to Y-ph fault in 220kV Hoody to HSR line-1. Line tripped due to DPR (Distance Protection) operation. After the tripping of 220kV Hoody to HSR line-1, 220kV HSR EPIP line got overloaded and tripped at HSR end only on Overcurrent protection. At the same time, 220kV HSR NIMHANS line was hand tripped at HSR end. 220kV EDC and 220kV NIMHANS were fed from HSR and Hoody SS. Tripping of 220kV Hoody to HSR line-1 and 220kV HSR NIMHANS line resulted in complete loss of supply at 220kV NIMHANS and 220kV EDC.	---	240 MW	GD-1	0.12
8	SR	i. 400kV Kaiga - Guttur Ckt-2 ii. 400/220kV ICT-2 at Kaiga	KPTCL	11-Feb-19	11:46	16-Feb-19	17:39	-	Multiple trippings at Kaiga: Bus-2 at 400kV Kaiga got deenergised due to LBB operation.	-	-	GI-2	-
9	SR	i. 400/220kV, 315 MVA, ICT-1,2&3 ii. 230kV Karamadi - Ingur iii. 230kV Karamadai - Arasur iv. 230kV Karamadai - Pushp v. 230kV Karamadai - Karuvalur vi. 230kV Karamadai - Kundah vii. 230kV Karamadai - Tudiyalur viii. 230/110kV, 100MVA, ICT-1&2	TANTRANSCO	19-Feb-19	14:15	19-Feb-19	15:51	1 hr 36 mins	Complete outage of 230kV side of 400/220kV Karamadai station: Triggering incident was failure of B-ph CT of 230kV Karamadai Ingur line at Karamadai end. Bus-1 Bus Bar Protection (BBP) operated. After 500ms, Bus-2 Bus Bar Protection (BBP) also operated resulting in the tripping of all the connected elements at 230kV Karamadai SS. A reported operation of Bus-2 BBP was due to fire in the failed CT.	-	-	GI-1	-

NER Grid Disturbances during February 2019

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
1	NER	Dhalabil area of Tripura Power System	TSECL	05-Feb-19 16:45	05-Feb-19 21:27	04:42	Dhalabil area of Tripura Power System was connected with rest of NER Grid through 132 kV Agartala-Dhalabil & 132 kV Dhalabil-Kamalpur lines. At 16:45 Hrs on 05.02.2019, 132 kV Agartala-Dhalabil & 132 kV Dhalabil-Kamalpur lines tripped. Due to tripping of these elements, Dhalabil area of Tripura Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	25	0.000	0.117	GD-I
2	NER	Imphal area (capital area) of Manipur Power System	MSPCL & POWERGRID	08-Feb-19 18:25	08-Feb-19 18:58	00:33	Imphal area (capital area) of Manipur Power System was connected with rest of NER Grid through 132 kV Imphal (PG) - Imphal I & II lines (132 kV Kakching - Kongba line kept open for overloading of 132 kV Loktak - Ningthoukhong line and 132 kV Karong - Kohima (NG) line kept open due to system requirement At 18:25 Hrs on 08.02.2019, 132 kV Imphal-Imphal I & II lines tripped. Due to tripping of these elements, Imphal area (capital area) was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	93	0.000	0.116	GD-I
3	NER	132 kV Loktak-Ningthoukhong	MSPCL	17-Feb-19 10:08	17-Feb-19 10:33	00:25	Ningthoukhong area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak - Ningthoukhong line. 132 kV Imphal(PG) - Ningthoukhong line & 132 kV Kakching-Kongba line kept open (for overloading of 132 kV Loktak-Ningthoukhong line). At 10:08 Hrs on 17.02.2019, 132 kV Loktak-Ningthoukhong line tripped. Due to tripping of this element, Ningthoukhong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	40	0.000	0.017	GD-I
4	NER	132 kV Dimapur(PG) - Kohima (DoP, Nagaland)	DoP Nagaland & POWERGRID	17-Feb-19 13:12	17-Feb-19 13:33	00:21	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) line. 132 kV Karong - Kohima line kept idle charged from Kohima, 132 kV Wokha - Kohima line was kept open (Cause : PSDF work at Wokha substation) & 66 kV Tuensang - Likhimro line kept open (Cause : construction activities). At 13:12 Hrs on 17.02.2019, 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	30	0.000	0.007	GD-I
5	NER	220/132 kV, 100 MVA ICT I, II & III at Sarusajai and 132 kV Sarusajai-Sishugram 1 Line	AEGCL	17-Feb-19 11:13	17-Feb-19 11:24	00:11	Capital Area of Assam Power System and Motonga area of Bhutan Power System were connected with the rest of the NER grid through 220/132 kV, 100 MVA ICT I, II & III of Sarusajai substation. 132 kV Kahilipara- Narengi line and 132 kV Dispur - CTPS line were kept open to control overloading of 3x100 MVA ICTs at Sarusajai substation. 132 kV Rangia-Bornagar line and 132 kV Rangia-Nalbari line kept open due to voltage dip issue and over loading of 220/132 kV BTPS ICT 1 & 2. 132 kV Rangia - Sipajhar line, 132 kV Rangia- Rowta line and 132 kV Sisugram - Kamalpur lines were kept open due to voltage dip issue. At 11:13 Hrs on 17.02.2019, 220/132 kV, 100 MVA ICT I, II & III of Sarusajai substation tripped. Due to tripping of these elements, Capital Area of Assam Power System and Motonga area of Bhutan Power System were separated from the rest of the NER grid and subsequently collapsed due to no source in these areas.	0	165	0.000	0.030	GD-I
6	NER	Imphal area (capital area) of Manipur Power System	MSPCL & POWERGRID	19-Feb-19 13:45	19-Feb-19 13:51	00:06	Imphal area (capital area) of Manipur Power System was connected with the rest of the NER grid through 132 kV Imphal(PG)-Imphal(MA) I & II lines. 132 kV Karong(MA) - Kohima (NG) line kept open due to CT ratio restriction and 132 kV Kakching(MA)-Kongba(MA) line was kept open to avoid overloading of 132 kV Loktak-Ningthoukhong line. At 13:45 Hrs on 19.02.2019, 132 kV Imphal(PG)-Imphal(MA) I & II lines tripped. Due to tripping of these elements, Imphal area (capital area) of Manipur Power System was separated from the rest of the NER grid and subsequently collapsed due to no source in this area.	0	51	0.000	0.005	GD-I

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
7	NER	Imphal area (capital area) of Manipur Power System	MSPCL & POWERGRID	23-Feb-19 19:39	23-Feb-19 20:02	00:23	<p>Imphal area (capital area) of Manipur Power System was connected with the rest of the NER grid through 132 kV Imphal (PG)-Imphal (MA) I & II lines. 132 kV Karong (MA) - Kohima (DoP, Nagaland) line kept open due to CT ratio restriction and 132 kV Kakching (MA)-Kongba (MA) line was kept open to avoid overloading of 132 kV Loktak-Ningthoukong line.</p> <p>At 19:39 Hrs on 23.02.2019, 132 kV Imphal (PG)-Imphal (MA) I & II lines tripped. Due to tripping of these elements, Imphal area (capital area) of Manipur Power System was separated from the rest of the NER grid and subsequently collapsed due to no source in this area.</p>	0	80	0.000	0.031	GD-I
8	NER	132 kV Doyang - Sanis line	DoP Nagaland	27-Feb-19 06:00	27-Feb-19 06:17	00:17	<p>Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang - Sanis line. 132 kV Karong - Kohima line kept idle charged from Kohima, 132 kV Dimapur (PG) - Kohima (DoP, Nagaland) line was under shutdown since 13:59 Hrs on 26.02.2019 and 66 kV Tuensang - Likhimro line kept open (Cause : construction activities).</p> <p>At 06:00 Hrs on 27.02.2019, 132 kV Doyang - Sanis line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.</p>	8	23	0.002	0.007	GD-I

NER_Grid Incidents during February 2019

S.No.	Region	Plant Involved	Name of Elements	Owner / Agency	Outage Date & Time	Revival Date & Time	Outage Duration	Event (Brief Details)	Generation Loss (MW)	Load Loss MW	Energy Unreserved (MU)	Category as per CEA Grid Standards
1	NER	Kopili	Kopili Unit 1	NEEPCO	07-02-2019 07:13	07-02-2019 07:45	00:32:00	Kopili Unit 1 tripped at 07:13 Hrs on 07.02.19 due to Stator E/F. (Revision of schedule from Block No. 32 on 07.02.19).	27	0	0.014	GI-II
2	NER	AGBPP	AGBPP Unit 8	NEEPCO	11-02-2019 06:38	11-02-2019 07:30	00:52:00	AGBPP Unit 8 tripped at 06:38 Hrs on 11.02.19 due to APRDS problem. (Revision of schedule from Block No. 31 on 11.02.19).	6	0	0.005	GI-II
3	NER	AGBPP	AGBPP Unit 2, 5, 8	NEEPCO	24-02-2019 09:21	24-02-2019 10:15	00:54:00	AGBPP Unit 2, 5, 8 tripped at 09:21 Hrs on 24.02.19 due to tripping of Gas Compressor I and III. (Revision of schedule from Block No. 42 on 24.02.19).	63	0	0.057	GI-II
4	NER	AGTPP	AGTPP Unit 1,2,3,STG-I, STG-II	NEEPCO	25-02-2019 01:46	25-02-2019 02:30	00:44:00	AGTPP Unit 1,2,3,STG-I, STG-II tripped at 01:46 Hrs on 25.01.19 due to tripping of central UPS system (Revision of schedule from Block No. 11 on 25.02.19).	86	0	0.063	GI-I
5	NER	AGBPP	AGBPP Unit 2	NEEPCO	25-02-2019 03:44	25-02-2019 04:45	01:01:00	AGBPP Unit 2 tripped at 03:44 Hrs on 25.01.19 due to low gas pressure (Revision of schedule from Block No. 20 on 25.02.19).	30	0	0.030	GI-II
6	NER	AGBPP	AGBPP Unit 6	NEEPCO	26-02-2019 17:27	26-02-2019 19:00	01:33:00	AGBPP Unit 6 tripped at 17:27 Hrs on 26.02.19 due to low gas pressure (Revision of schedule from Block No. 81 on 26.02.19).	27	0	0.042	GI-II
7	NER	AGTPP	AGTPP STG-II	NEEPCO	27-02-2019 22:15	27-02-2019 23:00	00:45:00	AGTPP STG-II tripped at 22:15 Hrs on 27.02.19 due to problem in AVR circuit (Revision of schedule from Block No. 93 on 27.02.19).	6	0	0.005	GI-I