

Major Grid Events for April, 2018_ Northern Region

S. No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event (As reported)	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unservd (in MU)
				Date	Time	Date	Time	Time					
1	NR	1) Unit #3 at KTPS 2) Unit #4 at KTPS 3) Unit #5 at KTPS 4) Unit #6 at KTPS 5) Unit #7 at KTPS 6) 220kV KTPS-Kota(PG)-1 7) 220kV KTPS-Kota(PG)-2 8) 220kV KTPS-Heerpaura 9) 220kV KTPS-Bundi 10) 220kV KTPS-Beawar 11) 220kV KTPS-Sakatpura-3 12) 220kV KTPS-Vatika 13) 220kV KTPS-Morak 14) 220kV KTPS-Sakatpura-1 15) 220kV Sakatpura-Bhanupura 16) 220kV Sakatpura-RAPS-1 17) 220kV Sakatpura-RAPS-2 18) 220kV Sakatpura-Dahra 19) 220kV Sakatpura-Anta 20) 220kV Sakatpura-Mandalgarh 21) 220/132kV ICT-3 at Sakatpura	Rajasthan/ POWERGRID	1-Apr-18	1:42	1-Apr-18	02:30	00:48	Y-ph CT of Bus coupler of 220kV Bus-B & C blasted at 220kV Kota (Sakatpura). 220kV Bus Bar Protection was not in service. All the 220 kV connected lines from Sakatpura tripped from remote end in Z-2 or Z-3. At 220 kV Kota TPS all the 220 kV lines tripped in Z-3 or reverse zone. All the running units of Kota TPS also tripped.	700	520	GD-1	0.4
2	NR	1) 220kV Ratangarh(RRVPNL)-Sikar(PG)-1 2) 220kV Sikar(RRVPNL)-Sikar(PG)-1 3) 400/220kV, 315MVA ICT-1 at Sikar(PG) 4) 400/220kV, 315MVA ICT-3 at Sikar(PG)	POWERGRID/ Rajasthan	5-Apr-18	12:20	5-Apr-18	12:50	00:30	LBB (Local Breaker Back up) operated due to spurious trip signal input received to LBB of 220kV side of newly commissioned 400/220kV 500MVA ICT-3 at Sikar (PG) end. It further resulted into operation of bus bar protection for 220kV Bus-1 of 400/220kV Sikar (PG). All the 220kV connected elements to 220kV Bus-1 of Sikar (PG) tripped. As per PMU data no fault observed.	0	0	GI-2	Nil
3	NR	1) 400kV Bareilly(UP)-Bareilly(PG)-1 2) 400kV Bareilly(UP)-Bareilly(PG)-2 3) 400kV Bareilly(UP)-Unnao(UP)-1 4) 400kV Bareilly(UP)-Unnao(UP)-2 6) 400/220kV, 315MVA ICT-1 7) 400/220kV, 315MVA ICT-2 8) 400/220kV, 315MVA ICT-3	UP/ POWERGID	5-Apr-18	22:39	5-Apr-18	23:30	00:51	LBB (Local Breaker Back up) operated during charging of 400 kV Bareilly(UP)-Unnao(UP)-1 at Bareilly (UP) through transfer bus. All the 400kV connected elements from 400kV Bareilly (UP) tripped due to bus tied operation of Bus Reactor earlier connected to transfer bus. As per PMU data, no fault observed. However, fluctuation in phase voltages observed at 22:39hrs.	0	55	GD-1	0.05
4	NR	1) 400kV Jodhpur(RRVPNL)-Merta(RRVPNL)-1 2) 400kV Jodhpur(RRVPNL)-Merta(RRVPNL)-2 3) 400kV Jodhpur(RRVPNL)-Akal(RRVPNL) 4) 400kV Jodhpur(RRVPNL)-Kankroli(PG)	Rajasthan	5-Apr-18	21:42	5-Apr-18	23:08	01:26	Main CB of 400kV Jodhpur (end)-Kankroli line stucked during R-phase to earth fault in the line. LBB (Local Breaker Back up) operated and bus bar protection operated for 400kV Main Bus-A of 400kV Jodhpur. 400 kV Jodhpur(Raj)-Merta(Raj) 2 tripped due to tripping of tie CB along with main CB and 400 kV Akal(Raj)-Jodhpur(Raj) also tripped due to DT send signal from Jodhpur(Raj).	0	0	GI-2	Nil

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				Date	Time	Date	Time	Time					
5	NR	1) 765kV Aligarh(PG)-Orai(PG)-2 2) 765kV Aligarh(PG)-Jhatikara(PG)	POWERGRID	6-Apr-18	16:54	6-Apr-18	17:06	00:12	765 kV Aligarh(PG)-Jhatikara(PG) ckt & 765 kV Aligarh(PG)-Orai(PG) ckt-2 tripped during Blue phase to earth fault in the system.	0	0	GI-2	Nil
6	NR	1) 400kV Dhuri(PSTCL)-Rajpura(PSTCL)-1 2) 400kV Dhuri(PSTCL)-Rajpura(PSTCL)-2	Punjab	6-Apr-18	20:06	6-Apr-18	22:36	02:30	400kV Dhuri-Rajpura ckt-1 & 2 tripped during damage of R-phase CT at Rajpura end of 400kV Dhuri-Rajpura ckt-2	0	0	GI-2	Nil
7	NR	1) 400kV Gorakhpur(PG)-Motihari(PG)-1 2) 400kV Gorakhpur(PG)-Motihari(PG)-2	POWERGRID	7-Apr-18	9:48	7-Apr-18	21:39	11:51	400 kV Gorakhpur(PG)-Motihari(PG) D/C tripped along with complete station outage of Motihari(PG). As per PMU data, Y-N fault observed immediately followed by B-N fault at two instances	0	0	GI-2	Nil
8	NR	1) 400kV Khedar-Nuhiyawali 2) 400kV Khedar-Kirori-1 3) 400kV Khedar-Kirori-2 4) Unit #1 at Khedar	Haryana	7-Apr-18	13:01	7-Apr-18	14:18	01:17	Khedar unit #1 tripped due to turbine vibration, at the same time 400 kV Khedar-Nuhiyawali ckt-2, Fatehabad-Nuhiyawali ckt-2 also tripped. 400 kV Khedar-Kirori ckt-1 & 2 and Kirori 315 MVA 400/220kV ICT 1,2 & 3 also tripped after some time. As per PMU data, no fault observed	550	0	GD-1	Nil
9	NR	complete outage of 220kV Mohali	Punjab	8-Apr-18	8:28	8-Apr-18	08:56	00:28	Y-Phase CT of 100 MVA ICT 2 bursted at 220 kV Mohali(PSTCL) lead to tripping of 220 kV Bus 1 & 2 Mohali(PSTCL) resulted in complete outage of 220 kV Mohali(PSTCL). 210MW unit-3 of Ropar TPS also tripped at the time of incident. As per PMU data, Y-N fault followed by 3-phase fault observed. Delayed clearance of fault during 3-phase fault.	160	300	GD-1	0.15
10	NR	1) 400kV Rewa Road-Meja TPS-1 2) 400kV Rewa Road-Meja TPS-2 3) 400kV Rewa Road-Banda-2 4) 400 kV Bara-Meja TPS At 01:49hrs: 5) 400kV Rewa Road-Panki 6) 400kV Rewa Road-Obra 7) 400kV Rewa Road-Banda-1	UP/ POWERGRID/ NTPC	8-Apr-18	1:10	8-Apr-18	02:44	01:34	Yellow phase to earth fault occurred resulting in tripping of 400kV Meja TPS(UP) 1 & 2 and 400 kV Banda(UP) 2 from Rewa Road(UP) along with 400 kV Bara-Meja TPS(UP). Further at 0149hrs 400kV Rewa Road-Panki, 400kV Rewa Road-Obra and 400kV Rewa Road-Banda ckt-1 also tripped lead to complete outage of 400/220 kV Rewa Road(UP) station.	0	0	GI-2	Nil
11	NR	1) 400kV Bareilly(UP)-Bareilly(PG)-1 2) 400kV Bareilly(UP)-Bareilly(PG)-2 3) 400kV Bareilly(UP)-Unnao(UP)-1 4) 400kV Bareilly(UP)-Unnao(UP)-2 6) 400/220kV, 315MVA ICT-1 7) 400/220kV, 315MVA ICT-2 8) 400/220kV, 315MVA ICT-3	UP/ POWERGRID	8-Apr-18	10:51	8-Apr-18	12:33	01:42	Bus bar protection operated at 400 kV Bareilly(UP) due to flash over in CT change over relay RXPSU-14 of 400 kV Bareilly (end)-Unnao ckt-2. Due to flashing/shorting of RXPSU-14 relay, DC got extended to trip relays causing mal-operation of Bus Bar Protection and leading to tripping of all the 400kV connected elements from 400kV Bareilly (UP). As per PMU data, R-N Fault observed and Autorecloser didn't operate	0	20	GD-1	0.03
12	NR	1) 220kV Tanakpur(NHPC)-Sitarganj(PG) 2) 220kV Tanakpur(NHPC)-CBganj(PG) 3) 132kV Tanakpur(NHPC)-Mahendranagar(Nepal) 4) Unit #3 at Tanakpur	NHPC/ POWERGRID/ UP	9-Apr-18	11:51	9-Apr-18	12:47	00:56	Generator fault occurred on Unit 3 of 220 kV Tanakpur HEP lead to tripping of 220 kV Tanakpur-CB Ganj(UP), 220kV Tanakpur-Sitarganj(PG)& 132 kV Tanakpur-Mahendranagar(Nepal) resulted in complete outage of 220 kV Tanakpur HEP. As per PMU data, Blue phase to earth fault observed with delayed fault clearance of 560 ms.	25	0	GD-1	Nil
13	NR	1) 220kV Himmatpura(PSEB) - Moga(PG) 2) 400/220kV, 250MVA ICT-2 at Moga(PG)	POWERGRID/ Punjab	10-Apr-18	15:04	10-Apr-18	15:51	00:47	220 kV Himmatpura (PSEB) - Moga (PG) ckt-1 tripped on three phase fault and 400/220 kV 250MVA ICT-2 of Moga (PG) also tripped due to operation of Backup Earth fault protection. As per PMU data, voltage dip observed in all three phase, delayed clearance of fault.	0	0	GI-2	Nil

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14	NR	1) 765 kV Agra(PG)-Jhatikara(PG) 2) 400 kV Agra(PG)-Sikar(PG) 2 3) 765 kV Lalitpur TPS 330 MVAR Bus Reactor 1 4) 765 kV Agra(PG)-Aligarh 765(PG) 5) 400 kV Agra(PG)-Agra(UP) 6) 400 kV Agra(PG)-Fatehabad 765 (UP) 7) 400 kV Agra(UP)-Fatehabad 765 (UP) 2 8) 400 kV Manesar-Neemrana 1 9) 400 kV Manesar(PG)-Neemrana(PG) 2 10) 400 kV Fatehabad 765(UP)-Mathura 400(UP) 1 11) 800 kV HVDC Champa(WR) - Kurukshetra(NR) line -1 12) 400 kV Agra South (UP)-Fatehabad 765 (UP) 1 13) 400 kV Agra South (UP)-Fatehabad 765 (UP) 2 14) 400 kV Fatehabad 765(UP)-Mathura 400(UP) 2 15) 800 kV HVDC Champa(WR) - Kurukshetra(NR) line -2 16) 220 kV Auraiya(NTPC)-Malanpur(PG) 17) 800 kV HVDC Champa(WR) - Kurukshetra(NR) line -1 18) 765 kV Jabalpur 765(PG)-Orai 765(PG) 2	POWERGRID/UP /NTPC	11-Apr-18	18:29	11-Apr-18	22:31	04:02	Multiple elements tripped especially around Agra area during thunderstorm. 765kV and 400kV lines emanating from Agra(PG) station tripped. All the 400kV lines emanating from 765/400kV Fatehabad(UP) tripped except 400kV Fatehabad-Agra(UP)-1 and 800kV HVDC Champa-Kurukshetra bipole, important inter-regional link, also tripped multiple times during the event.	0	0	GI-2	Nil
15	NR	1) 400kV Dadri(NTPC)-Panipat(BBMB)-1 2) 400kV Dadri(NTPC)-Panipat(BBMB)-2	NTPC/ BBMB	15-Apr-18	13:32	15-Apr-18	14:15	00:43	At 1332 Hrs, 400kV Dadri(NTPC)-Panipat(BBMB) D/C (double circuit) tripped simultaneously during Y-N fault. At 16:06hrs, again 400kV Dadri(NTPC)-Panipat(BBMB) D/C tripped simultaneously during Y-N fault	0	0	GI-2	Nil
16	NR	1) 400kV Mainpuri(PG)-Mainpuri 765(UP)-1 2) 400kV Aligarh(UP)-Mainpuri 765(UP)-1	UP/ POWERGRID	15-Apr-18	21:11	15-Apr-18	22:39	01:28	400 kV Mainpuri(PG)-Mainpuri 765(UP) ckt-1 tripped on Y-N fault. 400 kV Aligarh(UP)-Mainpuri 765(UP) ckt-1 also tripped during fault in adjacent line. As per PMU Y-N fault observed and autorecloser not operated	0	0	GI-2	Nil
17	NR	1) 400kV Rewa Road-Banda-1 2) 400kV Rewa Road-Banda-2 3) 400kV Bara TPS-Meja TPS-1 4) 400kV Bara TPS-Meja TPS-2 5) 400kV Rewa Road-Meja TPS-1 6) 400kV Rewa Road-Meja TPS-2 7) 400kV Rewa Road-Panki 8) 400kV Rewa Road-Obra	UP/ POWERGRID	16-Apr-18	13:49	16-Apr-18	15:09	01:20	400 kV Rewa Road- Obra tripped on B-N fault & all other lines from 400 kV Rewa Road(UP) tripped on high voltage. 400kV Bara TPS(UP)-Meza TPS(UP) ckt-1&2 also tripped. As per PMU data, B-N fault observed and delayed clearance of fault. Fault duration: ~400ms.	0	0	GI-2	Nil
18	NR	1) 400kV Parbati pool(PG) - Parbati(2) HEP (NHPC) 2) 400kV Parbati(2) HEP(NHPC) - Sainj HEP(HPPCL)	NHPC/ POWERGRID/ HP	17-Apr-18	21:27	17-Apr-18	22:28	01:01	400 kV Parbati pool (PG) - Parbati(2) HEP (NHPC) ckt- 1 & 400kV Parbati(2) HEP(NHPC) - Sainj HEP(HPPCL) ckt-1 tripped during Y-N fault. As per PMU data, Y-N fault observed. Oscillations were also observed in frequency for 3 mins	50	0	GD-1	Nil
19	NR	1) 400kV Rewa Road-Banda-1 2) 400kV Rewa Road-Banda-2 3) 400kV Rewa Road-Panki 4) 400kV Rewa Road-Meja TPS-2 5) 400kV Rewa Road-Panki 6) 400kV Rewa Road-Obra	UP	19-Apr-18	12:58	19-Apr-18	15:24	02:26	All lines emanating from 400 kV Rewa Road(UP) (except 400 kV Rewa Road(UP)-Meza TPS(UP) 1 which was already out on high voltage) tripped on overvoltage. As per PMU data, No fault observed. 400 kV Bara TPS(UP)-Meza TPS(UP) 1 & 2 also under outage	0	0	GI-2	Nil
20	NR	1) 765kV Aligarh Kanpur 2) 765kV Aligarh G Noida 3) 765kV Aligarh Agra 4) 765kV Aligarh Orai-1 5) 765kV Aligarh Orai-2 6) 765kV Aligarh-Jhatikara	POWERGRID/ UP	20-Apr-18	0:39	20-Apr-18	04:48	04:09	Bus bar protection operated at 765 kV Aligarh(PG) leading to tripping of all emanating lines from 765 kV Aligarh(PG). As per PMU data, R-N fault and delayed clearance of fault observed.	0	0	GI-2	Nil
21	NR	1) 400kV Kurukshetra(PG)-Sonipat(PG)-1 2) 400kV Kurukshetra(PG)-Sonipat(PG)-2	POWERGRID	20-Apr-18	11:48	20-Apr-18	15:05	03:17	400 kV Kurukshetra(PG)-Sonipat 1 & 2 reportedly tripped on overvoltage. As per PMU data, B-N fault observed and no autoreclosing.	0	0	GI-2	Nil

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				Date	Time	Date	Time	Time					
22	NR	1) 400kV Jhakri(SJVNL)-Karchamwangtoo(JSW)-1 2) 400kV Baspa(HP)-Karchamwangtoo(JSW)-1 3) 40 kV Jalandhar(PG)-Moga(PG)-1 4) 400kV Chamera I(NHPC)-Jalandhar(PG)-1	POWERGRID/ JSW/ NHPC/ HP	20-Apr-18	12:54	20-Apr-18	13:12	00:18	400 kV Jhakri(SJVNL)-Karchamwangtoo(JP) ckt-1, 400 kV Baspa(HP)-Karchamwangtoo(JP) ckt-1, 400 kV Jalandhar-Moga ckt-1 & 400 kV Chamera I(NHPC)-Jalandhar(PG) ckt-1 reportedly tripped on overvoltage. As per PMU data, B-N fault and delayed clearance of fault observed.	0	0	GI-2	Nil
23	NR	1) 400 kV Rihand(PG)-Rihand(NTPC) interconnection 2) 400 kV Rihand(NTPC)-Singrauli(NTPC)-1 3) 400 kV Rihand(NTPC)-Singrauli(NTPC)-2 4) 500 kV HVDC Vindhyachal BtB Block 1	NTPC/ POWERGRID	21-Apr-18	8:25	21-Apr-18	09:23	00:58	Y-ph CT of 400 kV Rihand(PG)-Rihand(NTPC)-1 blasted at NTPC Rihand end, leading to tripping of 400 kV Rihand(PG)-Rihand(NTPC), 400 kV Rihand(NTPC)-Singrauli(NTPC) 1& 2 and 500 kV HVDC Vindhyachal BtB Block 1. As per PMU data, Y-N fault observed	0	0	GI-2	Nil
24	NR	1) 400kV Dadri-HarshVihar-1 2) Unit #6 at Dadri TPS 3) 400/220kV 500MVA ICT-5 at Dadri	NTPC/ DTL	21-Apr-18	15:01	21-Apr-18	17:31	02:30	Due to fault in Blue Phase CT of 400kV side of ICT-5 at 400 kV Dadri Thermal (NTPC), Bus bar protection operated and 400kV bus 1 tripped. 400kV Dadri-HarshVihar ckt 1, Dadri Thermal Unit 6 (490 MW) & 500 MVA ICT-5 also tripped during the fault. As per PMU data, B-N fault observed	450	0	GD-1	Nil
25	NR	1) 400kV Patiala-Patran-1 2) 400kV Patiala-Patran-2 3) 400kV Kaithal-Patran-1	PTCL/ POWERGRID	22-Apr-18	19:13	22-Apr-18	19:55	00:42	400kV Patiala-Patran ckt-1 & 2 and 400kV Kaithal-Patran ckt-1 & 2 tripped due to DT received from Patran end. As per PMU data R-N fault and delayed fault clearance observed. Fault duration was ~500ms.	0	0	GI-2	Nil
26	NR	1) 400kV Chamera I(NHPC)-Chamera II(NHPC) 2) 400 kV Chamera I(NHPC)-Jalandhar(PG)-1 3) 400 kV Chamera I(NHPC)-Jalandhar(PG)-2	NHPC/ POWERGRID	23-Apr-18	15:07	23-Apr-18	16:07	01:00	During charging of newly commissioned bus reactor, B-N bus fault occurred and 400kV Bus-1 differential protection operated at 400 kV Chamera I(NHPC). However at the same time elements charged through 400kV Bus-2 of Chamera I(NHPC) namely 400 kV Chamera I(NHPC)-Chamera II(NHPC), 400 kV Chamera I(NHPC)-Jalandhar(PG) 1 & 2 also tripped. Reason of tripping yet to be ascertained. As per PMU data, B-N fault observed	0	0	GI-2	Nil
27	NR	1) 765kV G.Noida(UP)-Mainpuri(UP) 2) 765 kV Bus-1 at Mainpuri(UP)	UP	25-Apr-18	14:17	25-Apr-18	15:17	01:00	765 kV G.Noida(UP)-Mainpuri(UP) tripped on Y-N Fault. At the same time, 765kV Bus 1 of Mainpuri (UP) also tripped due to LBB protection operated at 765/400 kV Mainpuri(UP). As per PMU data, Y-N fault observed with no autoreclosing	0	0	GI-2	Nil
28	NR	1) 765kV Bara TPS(UP)-Mainpuri(UP) 2) Unit #1 at Bara TPS(UP) 3) Unit #2 at Bara TPS(UP)	UP	26-Apr-18	10:33	26-Apr-18	16:55	06:22	765 kV Bara TPS(UP)-Mainpuri(UP) tripped on persistent B-N fault after autoreclosing of the line. Unit 1 & 2 of 765 kV Bara TPS(UP) also tripped due to evacuation problem. 765/400 kV 1500 MVA Single transformer at Bara (out since 1528hrs of 02.04.18 due to Bucholz Alarm in Y phase ICT).	859	0	GD-1	Nil
29	NR	1) 800kV HVDC Champa-Kurukshetra line-1 2) 800kV HVDC Champa-Kurukshetra line-2	POWERGRID	29-Apr-18	23:02	30-Apr-18	00:16	01:14	800kV Champa-Kurukshetra line-1 tripped on DC line fault whereas line-2 went under outage due to differential protection operated at Champa end	0	0	GI-2	Nil
30	NR	1) 400/132kV 200MVA ICT-1 2) 400/132kV 200MVA ICT-2	UP	30-Apr-18	3:22	30-Apr-18	04:34	01:12	200 MVA 400/220kV ICT 1 & 2 at 400 kV Mau(UP) tripped on back up protection during R-N fault in 132kV Mau-Rasra line. 200 MVA ICT 3 was already tripped at 0236hrs. As per PMU data, R-N fault and delayed clearance of fault observed. Fault duration was ~1500ms.	0	0	GD-1	to be confirmed by UP
31	NR	1) Unit #1 at Pong HEP 2) Unit #3 at Pong HEP 3) Unit #5 at Pong HEP 4) 220kV Pong-Dasuya-3 5) 220kV Pong-Jalandhar-1 6) 220 kV Pong-BairaSiul 7) 220kV Pong-Jasor	BBMB	30-Apr-18	21:05	30-Apr-18	22:54	01:49	Due to blast of B Phase CT of Pong unit-3, Bus bar protection operated and 220kV bus 1 got out along with unit-1, 3 and 5. 220 kV Pong-Dasuya ckt-3, 220 kV Pong-Jalandhar ckt-1, 220 kV Pong-BairaSiul and bus sectionalised between two part of Bus-1 also tripped. 220kV Pong-Jasor ckt which was connected to other section got open from Jasor end. As per PMU, B-N Fault observed.	150	0	GD-1	Nil

Major Grid Events for April, 2018_ Western Region

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 1.765 kV Durg-Champa 2 2.220kV Churi-kotmikala 1 3.132 kV Bango-Manendargarh 4.132 kV Simgha-Chakarbhata 5.500 MW Marwa Unit 2 6.Some of the 33 kV feeders at Chattisgarh system	CSPTCL	01-04-2018	16:09	01-04-2018	16:22	00:13	Due to inclement weather condition at chattisgarh state, multiple tripping occurred at chattisgarh system and the load crash happened is mainly due to the tripping of 33 kV feeders at chattisgarh. 500 MW Marwa unit 2 also tripped on generator protection operation	Data awaited from SLDC Chhattisgarh	Data awaited from SLDC Chhattisgarh	GI-2	
2	WR	Tripping of 1.800 kV HVDC Champa-Khurukshehra Pole 1 2.800 kV HVDC Champa-Khurukshehra Pole 2	PGCIL	02-04-2018	01:30	02-04-2018	03:50	02:20	DC pole differential protection operated at Lane 2 resulted in tripping of Pole 1 and followed by the tripping of Pole 2 on TOVC protection operation.	Nil	Nil	GI-2	Nil
3	WR	Tripping of 1.400/220 kV Aurangabad (PG) ICT 1 2.400/220 kV Aurangabad (PG) ICT 2	PGCIL	07-04-2018	19:32	07-04-2018	21:45	02:13	400/220 kV Aurangabad(PG) ICT 1 and 2 tripped on Backup earth fault protection operation.	Nil	Nil	GI-2	Nil
4	WR	Tripping of 1.400 kV Bhadrawathi-EMCO 1 2.400 kV Bhadrawathi-EMCO 2 3.GMR Warora 300 MW Unit 1 4.GMR Warora 300 MW Unit 2	EMCO	09-04-2018	21:46	09-04-2018	22:00	00:14	400 kV EMCO-Bhadrawati D/C tripped on R phase to Earth fault resulted in GMR warora units 1 and 2 tripping due to loss of evacuation path	507	Nil	GD-1	Nil
5	WR	Tripping of 1.210 MW VSTPS Unit 4 2.500 MW VSTPS Unit 13 3. 20 MVA Waidhan(MP) ICT	PC/MPP	10-04-2018	19:44	11-04-2018	06:07	10:23	Due to the Earth quake at Vindhyachal near Vindhayachal and Satna area, Vindhyachal Unit 4 and 13 tripped on Turbine protection operation.At the same time 20 MVA ICT at Waidhan also tripped.	688	Nil	GI-2	Nil
6	WR	Tripping of 1.400 kV Chorania-Amreli 2.400 kV Chorania-Hadala 3.400 kV Chorania-Kasor 4.400 kV Chorania-Asoj D/C 5.400 kV Chorania-Vadavi D/C 6.400 kV Chorania-Kosamba D/C 7.400 kV Chorania-Mansar 8.400 kV Chorania-Bachhau 9.400/220 kV 315 MVA Chorania ICT 1,2 and 3 10.400 kV Chorania B/R	GETCO	11-04-2018	15:10	11-04-2018	15:46	00:36	At 400kV Chorania while transferring 400KV Bachau-Chorania from TBC to 400KV Bus-2 at Chorania, B-phase isolator got stuck up resulting in sparking and operation of Busbar protection at Chorania S/S and tripping of all the 400 kV elements as Bus 1 was already under outage.	Nil	Nil	GI-2	Nil
7	WR	Tripping of 1. 220 kV TONS-Rewa 2 2.220 kV TONS-Kotar 2 3.220/33 kV 20 MVA Transformer	MPPGCL	12-04-2018	00:40	12-04-2018	00:55	00:15	220 kV Bus 2 Bus bar protection operated at 220 kV TONS and all the elements connected to the 220 kV Bus tripped along with Bus coupler	Nil	Nil	GI-1	Nil
8	WR	Tripping of	KWPCL	16-04-2018	13:23	16-04-2018	15:18	01:55	Due to the failure of Bus post insulator	200	Nil	GI-2	Nil

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					
9	WR	Tripping of 1.220 kV Bhableshtar-Ahmednagar 1 2.220 kV Bhableshtar-Ahmednagar 2 3.132 kV Bhenda-Shevgaon	MSETCL	17-04-2018	04:11	17-04-2018	04:31	00:20	220 kV Bhableshtar-Ahmednagar D/C tripped due to heavy rain near Bhableshtar area and after the tripping of these two lines 132 kV Bhenda-Shevgaon tripped due to the overloading as the 132 kV load on Ahmednagar shifted to this circuit.	Data awaited from SLDC Maharashtra	Data awaited from SLDC Maharashtra	GI-1	
10	WR	Tripping of 1.220 kV Pedambe-Adlabs 2.220 kV Pedambe-Nerule 3.Pedambe Units 9 and 12 4.400/220 kV 315 MVA NewKoyna ICT 1and 2 5.400/132 kV Bhusawal ICT 1&2 6.400 kV Parli-Solapur(MS) 7.220 kV Karad-Malharpath 8.220 kV Padghe-Nallasoppara 9.220 kV Talangade-Tilwani	MSETCL	17-04-2018	15:49	17-04-2018	16:12	00:23	Due to the heavy rain near New Koyna S/s multiple 220 kV lines tripped on distance protection operation along with ICTs due to NDR operation and fault at 132 kV side.	Data awaited from SLDC Maharashtra	Data awaited from SLDC Maharashtra	GI-2	
11	WR	Tripping of 1.400 kV Pune(GIS) -Pune(PG) Q/C 2.400 kV Pune(GIS) – Parli D/C 3.400 kV Pune(GIS) - Aurangabad D/C 4.765/400 kV 1500 MVA Pune(GIS) ICT 1&2	PGCIL	20-04-2018	11:09	20-04-2018	12:02	00:53	400 kV Bus Coupler SF6 locked out at Pune(GIS) resulted in Bus bar protection operation and tripping of all the elements connected in 400 kV Bus 1 and 2.	Nil	Nil	GI-2	Nil
12	WR	Tripping of 1.800 kV HVDC Champa-Khurukshehra Bi-Pole 2.765 kV Durg-Kotra D/C 3.765/400 kV 1500 MVA Kotra ICT 1,2, 3 and 4 4.765 kV Tamnar(PS)-Kotra 2 5.400 kV Kotra-Lara D/C 6.400 kV Champa-Lara D/C 7.400 kV NSPCL-Raipur 2 8.400 kV KWPCCL-Kotra D/C 9.400 kV SKS-Kotra D/C 10.400 kV Kotra-Raigarh D/C 11.400 kV Kotra-DB Power D/C 12.400/220 kV 315 MVA NSPCL ICT 1&2 13.400 kV 50 MVAR RKM B/R 2 14.400 kV 80 MVAR Kotra B/R 15.400 kV Kotra-RKM Power D/C 16.250 MW NSPCL Unit 2 17.360 MW RKM Power Unit 1 18.600 MW DB Power Unit 1 and 2 19.600 MW KSK Unit 2 and 4 & 300 MW SKS Unit 2 20.300 MW TRN Energy Unit 1 and 2	PGCIL	23-04-2018	10:42	23-04-2018	11:15	00:33	At 400kV Kotra, during DCRM testing at 400 kV Main bay of 765/400 kV 1500 MVA Kotra ICT 1,B phase 400 kV Tie Isolator 89 B was closed by mistake instead of earth switch.This led to tripping of all the elements in 765/400 kV Kotra S/S along with some of the generators and transmission elements at nearby substation.	3090	Nil	GD-1	Nil

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					
13	WR	Tripping of 1.220 kV old Kalwa-Airoli 2.220 kV old Kalwa Bus coupler 3.220/100 kV 200 MVA old Kalwa ICT 1,2 and 3 4.several 100 kV feeders at Old Kalwa	MSETCL	24-04-2018	18:49	24-04-2018	19:22	00:33	The bus inter connector with 400kV Kalwa S/S to 220kV Old Kalwa tripped due to fault by crow , leading to tripping of connected transformer.	Nil	120	GI-1	0.066
14	WR	Tripping of 1.400 kV Kasor-SSP 2.400 kV Kasor-Rajgarh D/C 3.400 kV Kasor-Chorania 4.400 kV Kasor-GPEC 5.400 kV Kasor Bus Reactor 1&2 6.400/220 kV 315 MVA Kasor ICT 1&2 7.400/220 kV 500 MVA Kasor ICT 3	GETCO	25-04-2018	15:21	25-04-2018	16:24	01:03	At 400kV Kasor, outage was in progress on 400 KV Transfer bus , Transfer bus coupler & 50 MVAR bus reactor I for replacement of old PG isolator of 50 MVAR bus reactor.the Y Phase isolator of 400 bus reactor I got connected to Bus II (reason not known whether manual error or automatic not known) resulting in Bus II fault as the isolator was earthed already to carry out the works.	Nil	Nil	GI-2	Nil
15	WR	Tripping of 1. 400/220KV ICT-2(315MVA) at Bableshwar. 2. 400/220KV ICT-4(500MVA) at Bableshwar 3. 220KV Bableshwar-Ahmednagar-1 4. 220KV Bableshwar-Ahmednagar-2 5. 220KV Bableshwar-Nasik-1 6. 220KV Bableshwar-Bableshwar-1 7. 220KV Bableshwar-Ultra tech sugar factory. 8. 220KV Bableshwar-Rajangaon. 9. 220KV Bus coupler at Bableshwar	MSETCL	28-04-2018	15:40	28-04-2018	16:19	00:39	At 400/220kV Bhableshwar, Bus bar protection of Bus-1 operatedcausing tripping of the mentioned ckts. The probable reason of Busbar operation indicates towards bird carrying conducting material falling on bus or coming in induction zone of bus, leading to bus fault.	Nil	575	GI-1	0.0002
16	WR	Tripping of 1.800 kV HVDC Champa-Khurukshehra Pole 1 2.800 kV HVDC Champa-Khurukshehra Pole 2	PGCIL	29-04-2018	23:02	30-04-2018	00:16	01:14	DC line fault protection operation resulted in tripping of Pole 1 and followed by the tripping of Pole 2 on metallic return line differential DMR1 operation.	Nil	Nil	GI-2	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 qunatum of load/generation loss is based on details given by SLDC and utility and may vary later with updated details.

Grid Disturbances in SR for April 2018

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration Time	Event (As reported)	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unserviced (MU)
				Date	Time	Date	Time						
1	SR	1. 220kV Sedam - Shahapur 220kV Sedam - RTPS ckt-1 220kV Sedam - RTPS ckt-2 220kV Sedam - Tandoor	2. 3. 4. Karnataka	1-Apr-18	19:56	1-Apr-18	20:34	38 mins	Complete outage of 220kV Sedam Station: In the antecedent conditions, all lines and transformers were on 220kV Bus-2 due to Bus-1 selector jumper cut in Bus Coupler Bay. 220kV Sedam Shahapur , 220kV Sedam-RTPS line-1&2 and 220kV Sedam-Tandoor line tripped on operation of distance protection. Tripping of incoming lines to Sedam caused Bus-2 shut down at Sedam Sub Station resulting in complete outage of the station.	---	9 MW	GD-1	0.01 MU
2	SR	1. 220kV Ambewadi - Nagjheri ckt-2 220kV Ambewadi - Ponda Ckt-1 3. 220kV Ambewadi - Ponda Ckt-2	2. Karnataka	2-Apr-18	13:46	2-Apr-18	13:57	11 mins	Complete outage of 220kV Ambewadi station: In the antecedent conditions 220kV Ambewadi - Nagjheri ckt-1 was out of service due to failure of R-phase CT and 220kV Ambewadi-Narendra Ckt-1 &2 were out of service. As reported, Bus dead occurred due to tripping of 220kV Nagzhari-Ambewadi line-2 (Source) at Nagzhari power house resulting in loss of supply to Ambewadi. After bus dead, Ambewadi-Ponda line I & II were handtripped.	----	150 MW	GD-1	0.0275 MU
3	SR	1. 220kV Idukki - Lower Periyar Ckt-1 2. 220kV Idukki - Lower Periyar Ckt-2 220kv Idukki - New Pallom 220kV Idukki - Udumalpet Generating Unit# 1,2,4,5 & 6	3. 4. 5. Kerala	7-Apr-18	16:36	7-Apr-18	18:31	1 hr 55 mins	Complete outage of 220kV Idukki station: Triggering incident was failure of wave trap connected to 220kV Idukki-Lower Periyar ckt-2. 220kV Idukki-Lower Periyar Ckt-1 &2 tripped. In the antecedent conditions 220kV Idukki-Kalamessary ckt-1&2 were under planned shutdown. 220kV Idukki-New pallom and Idukki-Udumalpet also tripped on fault due to failure of clamp. Running units at Idukki Power house tripped due to loss of evacuating lines.	565 MW	---	GD-1	----
4	SR	1. 220kV Kundara - Kayamkulam 220kv Kundara - Edamon 3. 220/110kv ICT-1 4. 220/110kv ICT-2	2. Kerala	16-Apr-18	20:01	16-Apr-18	22:00	1 hr 59 mins	Complete outage of 220kV Kundara station: Triggering incident was snapping of Earth conductor onto 110kV Kunadra Bus no 2 and along with that Y-Phase CT of 110kV Buscoupler flashed . 220/110kv ICT-1 &2 tripped on directional earth fault protection. Since there was heavy arcing in the switchyard, 220kV Kundara-Kayamkulam and 220kV Kundara - Edamon feeders were hand tripped.	-----	181 MW	GD-1	0.46 MU
5	SR	1. 400kV Kalikiri - RYTPP ckt-1 2. 400kV Kalikiri - Chittoor Ckt-1 400kV Kalikiri - Chittoor Ckt-2	3. Karnataka	25-Apr-18	16:55	25-Apr-18	17:35	40 mins	Complete outage of 400kV Kalikiri station: Triggering incident was Y-phase to ground fault in 400kV Kalikiri - RYTPP ckt. 400kV Kalikiri - Chittor ckt-1&2 tripped due to relay maloperation resulting in complete outage of 400kV Kalikiri station.	---	----	GD-1	----
6	SR	1. 220kV Dindi - Srisailam ckt-1 2. 400/220kV ICT-1 3. All other elements connected to Bus-1	TGTRANSCO	5-Apr-18	16:15	5-Apr-18	17:28	1 hr 13 mins	Tripping of Bus-1 at 220kV Dindi station: Triggering incident was fault in 220kV Dindi-Srisailam-1 feeder. During the fault, Y-phase breaker of the feeder opened with time delay which resulted in initiation of LBB and bus bar protection for 220kV Bus-1 acted. All elements connected to Bus-1 tripped.	---	---	GI-1	---
7	SR	1. 220kV Guttur - Devengare Ckt-1, 2,3 220kV Guttur - Chitradurga 3. 220kV Guttur - Ranibennur 4. 220kV Guttur - Haveri ckt-1&2 5. 220kV Guttur - Neelagunda 6. 400/220kV ICT-2	2. KPTCL	12-Apr-18	13:03	12-Apr-18	14:53	1 hr 50 mins	Multiple tripping at 400/220kV Guttur station: Triggering incident was operation of external LBB of 220kV Guttur - Devenagre ckt-2. This resulted in operation of bus bar protection resulting in tripping of all 220kV lines and 400/220kV ICT-2. 220kV Guttur was on single bus operation due to CVT problem in Bus-2.	---	210 MW	GI-1	0.385 MU

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event (As reported)	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unserved (MU)
				Date	Time	Date	Time	Time					
8	SR	1. 400/220kV ICT-1 2. 400/220kV ICT-2 3. All 220kV Lines at Guttur SS	KPTCL	19-Apr-18	12:53	19-Apr-18	14:00	1 hr 7 mins	Multiple tripping at 400/220kV Guttur station: Triggering incident was R-ph to ground fault in 220kV Jogihally feeder. 220kV Guttur Bus bar protection operated resulting in tripping of all the connected elements.220kV Guttur was on single bus operation due to CVT problem in Bus-2.	---	---	GI-1	---
9	SR	1. 400/220kV ICT-1 2. 400/220kV ICT-2 3. All 220kV Lines at Guttur SS	KPTCL	21-Apr-18	12:50	21-Apr-18	13:52	1 hr 2 mins	Multiple Tripping at 400/220kV Guttur station: There was fault in 220kV Guttur-Devenagare Ckt-1. Bus bar protection operated resulting in tripping of all the connected elements. 220kV Guttur was on single bus operation due to CVT problem in Bus-2.	----	---	GI-1	---

Major Grid Events for April, 2018_Eastern Region

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	Energy Unserved (MU)
				Date	Time	Date	Time	Time					
1	ERLDC	400 kV Barh - Motihari D/C 132 kV Motihari - Betiah - D/C 132 kV Motihari (DMTCL) - Motihari (BSPTCL)- D/C	DMTCL	7-Apr-18	09:56	7-Apr-18	11:35	01:39	At 09:48 hrs 400 KV Motihari – Gorakhpur I and II tripped on Y-N and B-N fault respectively. Thereafter tripping of 400 kV Motihari – Gorakhpur D/C at 09:56 hrs in R-Y-B fault resulted total power failure at 400/132 kV Motihari S/S and other radially connected areas (Birganj, Surajpura, Parwanipur in Nepal; Ramnagar, Betiah, Raxaul, Motihari, Dhaka in Bihar).	0	160	GD-I	0.2640
2	ERLDC	220 kV Maithon - Dhanbad D/C 220 kV Maithon - Kalyaneswari D/C 220 kV Maithon - Dumka - II 220 kV B/C bay at Maithon	ER-II	7-Apr-18	17:20	7-Apr-18	18:04	00:44	220 kV Maithon - Dhanbad D/C, 220 kV Maithon - Kalyaneswari D/C and 220 kV Maithon - Dumka - II tripped along with 220 kV B/C bay at Maithon tripped due to B/B protection operated at Maithon.	0	0	GI-I	0.0000
3	ERLDC	220 kV Maithon – Dhanbad – D/C 220 kV Kalyaneswari – CTPS - D/C 220 kV Jindal – Jamshedpur S/C	DVC	11-Apr-18	20:10	11-Apr-18	20:26	00:16	Unit 7 & 8 at CTPS – B, 220 kV Bokaro B – CTPS B D/C, 220kV Dhanbad – Giridih D/C and 132kV CTPS A – Putki – Patherdhi link were open prior to the disturbance. At 19:40 hrs 220 kV Maithon – Dhanbad - I tripped on B-N fault. While restoration of this circuit, 220 kV Maithon – Dhanbad – II also tripped at 20:10 hrs resulting Dhanbad radial with Kalyaneswari through 220 kV Kalyaneswari – CTPS A – CTPS B – Dhanbad section (220 kV Bokaro B – CTPS B D/C was kept open). At 20:15 hrs 220 kV Kalyaneswari – CTPS – I tripped due to jumper snapping (suspected) and at 20:18 hrs 220 kV Kalyaneswari – CTPS – II tripped on overload. At the same time 220	0	700	GD-I	0.1867
4	ERLDC	220 kV Tashiding Rangpo S/C 220 kV Tashiding New Melli S/C	ISTS	15-Apr-18	06:43	15-Apr-18	07:08	00:25	At 06:43 hrs, 220 kV Tashiding Rangpo S/C and 220 kV Tashiding New Melli S/C tripped in Y-N fault resulting tripping of running unit due to loss of evacuation path. At the same time 220 kV Jorethang New Melli - I tripped from Jorethang end (successful A/R operation at New Melli end) in earth fault protection.	50	0	GD-I	0.0000
5	ERLDC	220 kV Subhasgram - EMSS D/C 132 kV PCSS - PRS S/C	CESC	17-Apr-18	10:37	17-Apr-18	11:40	01:03	At 10:37 hrs, 220 kV Subhasgram - EMSS D/C tripped due to operation of line differential relay at EMSS end (R phase for Circuit II and B phase for Circuit I) resulting load loss at radially connected area i.e. New Cossipore, Kasba, Dum Dum and B/T road.	0	500	GD-I	0.5250
6	ERLDC	220 kV Purnea - Madhepura II	BSPTCL	30-Apr-18	05:48	30-Apr-18	06:16	00:28	220 kV Purnea - Madhepura II was in opened condition due to O/V. At 05:48 hrs 220 kV Purnea - Madhepura I tripped on B-N fault causing load loss at Madhepura, Supaul and Lahan (Nepal).	0	60	GD-I	0.0280

Grid Disturbances in NER Grid for April 2018

Sl. No.	Region	Name of Element	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unreserved (MU)
				Date	Time	Date	Time						
1	NER	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 Line	DoP, Nagaland	02-Apr-2018	23:04:00	03-Apr-2018	00:15:00	01:11	Dimapur area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I line. 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) II line is under long outage. At 23:04 Hrs on 02.04.2018, 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I lines tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	40	GD-I	0.047
2	NER	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 Line	DoP, Nagaland	03-Apr-2018	00:17:00	03-Apr-2018	02:57:00	02:40	Dimapur area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I line. 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) II line is under long outage. At 00:17 Hrs on 03.04.2018, 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I line tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	38	GD-I	0.107
3	NER	132 kV Loktak - Ningthoukhong Line	MSPCL	05-Apr-2018	04:45:00	05-Apr-2018	05:06:00	00:21	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 04:45 Hrs on 05.04.2018, 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	24	GD-I	0.013
4	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, AP	05-Apr-2018	13:42:00	05-Apr-2018	14:42:00	01:00	Khupi-Bhalukpong area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 13:42 Hrs on 05.04.2018, 132 kV Balipara- Bhalukpong line tripped. Due to tripping of this element, Khupi-Bhalukpong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	21	GD-I	0.034
5	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, AP	05-Apr-2018	16:39:00	05-Apr-2018	18:05:00	01:26	Khupi-Bhalukpong area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 16:39 Hrs on 05.04.2018, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi-Bhalukpong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	16	GD-I	0.027
6	NER	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 & 2 Lines	DoP, Nagaland	06-Apr-2018	14:24:00	06-Apr-2018	14:45:00	00:21	Dimapur area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur (PG) - Dimapur (NA) I & II lines. At 14:24 Hrs on 06.04.2018, 132 kV Dimapur (PG) - Dimapur (NA) I & II lines tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	40	GD-I	0.014
7	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, AP	13-Apr-2018	00:47:00	13-Apr-2018	01:08:00	00:21	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 00:47 Hrs on 13.04.2018, 132 kV Balipara - Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	21	GD-I	0.016

Sl. No.	Region	Name of Element	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unserviced (MU)
				Date	Time	Date	Time						
1	NER	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 Line	DoP, Nagaland	02-Apr-2018	23:04:00	03-Apr-2018	00:15:00	01:11	Dimapur area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I line. 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) II line is under long outage. At 23:04 Hrs on 02.04.2018, 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I lines tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	40	GD-I	0.047
8	NER	132 kV Ranganadi - Pare Line	POWERGRID & NEEPCO	14-Apr-2018	01:51:00	14-Apr-2018	02:24:00	00:33	Pare Power Station, Lekhi area & Capital area of Arunachal Pradesh Power System and Gohpur area of Assam Power System were connected with rest of NER Grid through 132 kV Ranganadi - Pare line. Bus Coupler CB of Gohpur kept open for overloading of 132 kV Ranganadi - Pare line. At 01:51 Hrs on 14.04.2018, 132 kV Ranganadi - Pare line tripped. Due to tripping of this element, Pare Power Station, Lekhi area, Capital area & Gohpur area were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.	0	40	GD-I	0.022
9	NER	132 kV Monarchak - Rokhia Line & 132 kV Monarchak - Udaipur Line	TSECL	14-Apr-2018	16:08:00	14-Apr-18	17:35:00	01:27	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia Line and 132 kV Monarchak - Udaipur Line. At 16:08 Hrs on 14.04.2018, 132 kV Monarchak - Rokhia Line and 132 kV Monarchak - Udaipur Line tripped. Due to tripping of these elements, Monarchak Power Station and Rabindranagar area were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas.	72	11	GD-I	0.016
10	NER	132 kV Melriat - Zungtui 1 Line	POWERGRID	16-Apr-2018	10:05:00	16-Apr-2018	10:30:00	00:25	Zuangtui area of Mizoram Power System was connected with rest of NER Grid through 132 kV Melriat - Zuangtui line. At 10:05 Hrs on 16.04.2018, 132 kV Melriat - Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	30	GD-I	0.013
11	NER	132 kV Agartala - Rokhia 1 & 2 Lines. 132 kV Monarchak - Udaipur	TSECL	16-Apr-2018	22:35:00	16-Apr-2018	23:41:00	01:06	Monarchak Power Station, Rokhia Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Agartala - Rokhia 1 & 2 Lines. 132 kV Monarchak - Udaipur Line was under outage since 16:08 Hrs on 14.04.2018, 66 kV Rokhia - Badarghat line and 66 kV Bagafa - Belonia line kept open (Phase sequence issue). At 22:35 Hrs on 16.04.2018, 132 kV Agartala - Rokhia 1 & 2 Lines tripped. Due to tripping of these elements, Monarchak Power Station, Rokhia Power Station and Rabindranagar area were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas.	60	11	GD-I	0.012
12	NER	132 kV Dimapur (PG) - Kohima (DoP, Nagaland) 1 Line	POWERGRID & DoP, Nagaland	22-Apr-2018	11:15:00	22-Apr-2018	12:10:00	00:55	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 : improper relay co-ordination of 132 kV Dimapur - Kohima - Wokha link) & 66 kV Tuensang - Likhimro line kept open (Cause : construction activities). At 11:15 Hrs on 22.04.2018, 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	23	GD-I	0.021

Sl. No.	Region	Name of Element	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unerved (MU)
				Date	Time	Date	Time						
1	NER	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 Line	DoP, Nagaland	02-Apr-2018	23:04:00	03-Apr-2018	00:15:00	01:11	Dimapur area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I line. 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) II line is under long outage. At 23:04 Hrs on 02.04.2018, 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I lines tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	40	GD-I	0.047
13	NER	132 kV Dimapur (PG) - Kohima (DoP, Nagaland) 1 Line	POWERGRID & DoP, Nagaland	22-Apr-2018	12:57:00	22-Apr-2018	13:09:00	00:12	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 : improper relay co-ordination of 132 kV Dimapur - Kohima - Wokha link) & 66 kV Tuensang - Likhimro line kept open (Cause : construction activities). At 12:57 Hrs on 22.04.2018, 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	23	GD-I	0.005
14	NER	132 kV Ranganadi - Pare 1 Line	POWERGRID & NEEPCO	25-Apr-2018	17:30:00	25-Apr-2018	17:42:00	00:12	Pare Power Station, Lekhi area & Capital area of Arunachal Pradesh Power System and Gohpur area of Assam Power System were connected with rest of NER Grid through 132 kV Ranganadi - Pare line. Bus Coupler CB of Gohpur kept open for overloading of 132 kV Ranganadi - Pare line. At 17:30 Hrs on 25.04.2018, 132 kV Ranganadi - Pare line tripped. Due to tripping of this element, Pare Power Station, Lekhi area, Capital area & Gohpur area were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.	0	30	GD-II	0.006
15	NER	132 kV Monarchak - Udaipur 1 Line	TSECL	25-Apr-18	18:45	25-Apr-18	18:50:00	00:05	Monarchak Power Station and Rabindranagar area of Tripura Power System was connected with rest of NER Grid through 132 kV Monarchak - Udaipur line. 132 kV Monarchak - Rokhia line was under outage since 18:05 Hrs on 25.04.2018. At 18:45 Hrs on 25.04.2018, 132 kV Monarchak - Udaipur line tripped. Due to tripping of this element, Monarchak Power Station and Rabindranagar area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas.	76	5	GD-I	0.001
16	NER	132 kV Kumarghat - P K Bari 1 Line and 132 kV Agartala - Dhalabil Line	TSECL	29-Apr-2018	10:13:00	29-Apr-2018	10:21:00	00:08	Baramura Power Station, Dhalabil-P K Bari-Dharmangar area of Tripura Power System and Dullavcherra area of Assam Power System were connected with rest of NER Grid through 132 kV Agartala - Dhalabil Line & 132 kV P K Bari - Kumarghat Line. 132 kV Jirania - Baramura Line was under shutdown since 10:02 Hrs, 132 kV Silchar - Hailakandi I & II lines kept open at 09:02 Hrs, 132 kV Silchar - P K Bari 1 & 2 lines kept open at 08:37 Hrs for facilitating shutdown of Bus I & Bus II at Silchar since 08:49 Hrs on 29.04.2018. At 10:13 Hrs on 29.04.2018, 132 kV Agartala - Dhalabil Line & 132 kV P K Bari - Kumarghat Line tripped. Due to tripping of these elements, Baramura Power Station, Dhalabil-P K Bari-Dharmangar area of Tripura Power System and Dullavcherra area of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.	0	21	GD-I	0.012

Sl. No.	Region	Name of Element	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unserved (MU)
				Date	Time	Date	Time						
1	NER	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 Line	DoP, Nagaland	02-Apr-2018	23:04:00	03-Apr-2018	00:15:00	01:11	Dimapur area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I line. 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) II line is under long outage. At 23:04 Hrs on 02.04.2018, 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) I lines tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	40	GD-I	0.047
17	NER	132 kV Agartala - AGTCCPP 1 & 2 Lines, 132 kV Palatana - Surajmaninagara line, 132 KV Rokhia - Monarchak line and 132 kV Baramura - Gamaitila 1 Line	TSECL	30-Apr-18	12:20	30-Apr-18	12:35:00	00:15	South Comilla (Bangladesh Power System), Rokhia Power Station, Baramura Power Station, Agartala, Surajmaninagar, Jirania and Bodhjangnagar areas of Tripura Power System were connected with rest of NER Grid through 132 kV Agartala - AGTCCPP 1 & 2 Lines, 132 kV Palatana - Surajmaninagara line, 132 KV Rokhia - Monarchak line and 132 kV Baramura - Gamaitila 1 Line. 132 kV Agartala - Dhalabil Line was under shutdown since 08:00 Hrs, 66 kV Rokhia - Rabindranagar Line was under outage since 08:45 Hrs on 30.04.2018, 66 kV Amarpur - Gumti line and 66 kV Udaipur - Gokulnagar line kept open (Phase sequence issue). At 12:20 Hrs on 30.04.2018, 132 kV Agartala - AGTCCPP 1 & 2 Lines, 132 kV Palatana - Surajmaninagara line, 132 KV Rokhia - Monarchak line and 132 kV Baramura - Gamaitila 1 Line tripped. Due to tripping of these elements, South Comilla (Bangladesh Power System), Rokhia Power Station, Baramura Power Station, Agartala, Surajmaninagar, Jirania and Bodhjangnagar areas of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas.	85	66	GD-I	0.022

NER List of Grid Incidents during April 2018

S.No.	Region	Name of Elements	Owner / Agency	Outage		Revival		Outage Duration	Event (Brief Details)	Generation Loss (MW)	Load Loss MW	Energy Unreserved (MU)	Category as per CEA Grid Standards
				Date	Time	Date	Time						
1	NER	AGBPP Unit 2 and Unit 4	NEEPCO	01-Apr-2018	03:57:00	01-Apr-2018	04:45:00	00:48	AGBPP Unit 2 and Unit 4 tripped at 03:57 Hrs on 01.04.18 due to tripping of GC-1 & 2. (Revision of schedule from Block No.20 on 01.04.18).	56	0	0.045	GI-II
2	NER	AGBPP Unit 1, Unit 3 and Unit 8	NEEPCO	01-Apr-2018	04:03:00	01-Apr-2018	04:45:00	00:42	AGBPP Unit 1, Unit 3 & Unit 8 tripped at 04:03 Hrs on 01.04.18 due to tripping of GC-1 & 2. (Revision of schedule from Block No.20 on 01.04.18).	93	0	0.065	GI-II
3	NER	AGBPP Unit 3 and Unit 8	NEEPCO	01-Apr-2018	10:55:00	01-Apr-2018	11:45:00	00:50	AGBPP Unit 3 & Unit 8 tripped at 10:55 Hrs on 01.04.18 due to under voltage. (Revision of schedule from Block No.48 on 01.04.18).	62	0	0.052	GI-II
4	NER	AGBPP Unit 2	NEEPCO	02-Apr-2018	03:50:00	02-Apr-2018	04:00:00	00:10	AGBPP Unit 2 tripped at 03:50 Hrs on 02.04.18 due to SF6 gas pressure lock out. (Revision of schedule from Block No.17 on 02.04.18).	30	0	0.050	GI-II
5	NER	AGTCCPP Unit 1 & STG 1	NEEPCO	03-Apr-2018	18:05:00	03-Apr-2018	18:45:00	00:40	AGTCCPP Unit 1 & STG 1 tripped at 18:05 Hrs on 03.04.2018 due to Control system problem. (Revision of schedule from Block No.76 on 03.04.2018).	29	0	0.019	GI-I
6	NER	Kopili Unit 3	NEEPCO	03-Apr-2018	19:32:00	03-Apr-2018	20:45:00	01:13	Kopili Unit 3 tripped at 11:32 Hrs on 03.04.2018 due to Excitation problem. (Revision of schedule from Block No.84 on 03.04.2018).	48	0	0.052	GI-II
7	NER	AGTCCPP Unit 1	NEEPCO	03-Apr-2018	23:27:00	04-Apr-18	00:00:00	00:33	AGTCCPP Unit 1 tripped at 23:27 Hrs on 03.04.2018 due to Control system problem. (Revision of schedule from Block No.1 on 04.04.2018).	20	0	0.011	GI-I
8	NER	AGTCCPP Unit 2	NEEPCO	05-Apr-2018	12:19:00	05-Apr-2018	13:00:00	00:41	AGTCCPP Unit 2 tripped at 12:19 Hrs on 05.04.2018 due to Control system problem. (Revision of schedule from Block No.53 on 05.04.2018).	20	0	0.014	GI-I

S.No.	Region	Name of Elements	Owner / Agency	Outage		Revival		Outage Duration	Event (Brief Details)	Generation Loss (MW)	Load Loss MW	Energy Unreserved (MU)	Category as per CEA Grid Standards
				Date	Time	Date	Time						
9	NER	AGTCCPP Unit 2	NEEPCO	05-Apr-2018	18:35:00	05-Apr-2018	21:45:00	03:10	AGTCCPP Unit 2 tripped at 18:35 Hrs on 05.04.2018 due to control system problem. (Revision of schedule from Block No.88 on 05.04.2018).	15	0	0.048	GI-I
10	NER	AGTCCPP Unit 2	NEEPCO	05-Apr-2018	21:05:00	09-Apr-2018	21:45:00	00:40	AGTCCPP Unit 1 tripped at 21:05 Hrs on 05.04.2018 due to Pull Button Turbine. (Revision of schedule from Block No.88 on 05.04.2018).	20	0	0.013	GI-I
11	NER	BgTPP Unit 2	NTPC	06-Apr-2018	16:05:00	06-Apr-2018	16:45:00	00:40	BgTPP Unit 2 tripped at 16:05 Hrs on 06.04.2018 due to PA fan header pressure loss. (Revision of schedule from Block No.68 on 06.04.2018).	210	0	0.140	GI-II
12	NER	AGTCCPP Unit 2 & STG 1	NEEPCO	07-Apr-2018	15:44:00	07-Apr-2018	16:30:00	00:46	AGTCCPP Unit 2 & STG 1 tripped at 15:44 Hrs on 07.04.2018 due to Lube oil temperature high. (Revision of schedule from Block No.67 on 07.04.2018).	30	0	0.023	GI-I
13	NER	BgTPP Unit 2	NTPC	09-Apr-2018	12:40:00	09-Apr-2018	13:15:00	00:35	BgTPP Unit 2 tripped at 12:40 Hrs on 09.04.2018 due to PA fan header pressure loss. (Revision of schedule from Block No.54 on 09.04.2018).	172	0	0.100	GI-II
14	NER	Kopili Stg 2 Unit 1	NEEPCO	10-Apr-2018	17:42:00	10-Apr-2018	18:30:00	00:48	Kopili STG-2 Unit I tripped at 17:42 Hrs on 10.04.2018 due to Excitation problem. (Revision of schedule from Block No.75 on 10.04.2018).	23	0	0.018	GI-I
15	NER	AGBPP Unit 1, 2, 4, 6 & 7	NEEPCO	11-Apr-2018	18:59:00	11-Apr-2018	19:45:00	00:46	AGBPP Unit 1, 2, 4, 6 & 7 tripped at 18:59 Hrs on 11.04.2018 due to tripping of Gas compressor 1 & 3. (Revision of schedule from Block No.80 on 11.04.2018).	115	0	0.088	GI-II
16	NER	AGBPP Unit 2, 5, 6 & 9	NEEPCO	13-Apr-2018	13:39:00	13-Apr-2018	14:15:00	00:36	AGBPP Unit 2, 5, 6 & 9 tripped at 13:39 Hrs on 13.04.2018 due to tripping of Gas compressor 1 & 2 (Revision of schedule from Block No.58 on 13.04.2018).	111	0	0.067	GI-II
17	NER	BgTPP Unit 2	NTPC	17-Apr-2018	13:27:00	17-Apr-2018	14:00:00	00:33	BgTPP Unit 2 tripped at 13:27 Hrs on 17.04.2018 due to PA fan header pressure loss. (Revision of schedule from Block No.57 on 17.04.2018).	195	0	0.107	GI-II
18	NER	BgTPP Unit 1	NTPC	19-Apr-2018	02:31:00	19-Apr-2018	03:15:00	00:44	BgTPP Unit 1 tripped at 02:31 Hrs on 19.04.2018 due to Turbine shaft vibration high. (Revision of schedule from Block No.14 on 19.04.2018).	231	0	0.169	GI-II

S.No.	Region	Name of Elements	Owner / Agency	Outage		Revival		Outage Duration	Event (Brief Details)	Generation Loss (MW)	Load Loss MW	Energy Unreserved (MU)	Category as per CEA Grid Standards
				Date	Time	Date	Time						
19	NER	Palatana GTG-1 and GTG-2	OTPC	21-Apr-18	17:37:00	21-Apr-18	17:45:00	00:08	Palatana GTG 1 & 2 tripped at 17:37 Hrs on 21.04.2018 due to spurious SPS-3 signal. (Revision of schedule from Block No.72 on 21.04.2018).	281	0	0.375	GI-II
20	NER	BgTPP Unit 2	NTPC	21-Apr-2018	20:33:00	21-Apr-2018	21:15:00	00:42	BgTPP Unit 2 tripped at 20:33 Hrs on 21.04.2018 due to boiler feed pump drum level high. (Revision of schedule from Block No.86 on 21.04.2018).	198	0	0.139	GI-II
21	NER	BgTPP Unit 2	NTPC	22-Apr-2018	01:52:00	22-Apr-2018	03:15:00	01:23	BgTPP Unit 2 tripped at 01:52 Hrs on 22.04.2018 due to condenser vacuum problem. (Revision of schedule from Block No.14 on 22.04.2018).	164	0	0.227	GI-II
22	NER	AGBPP Unit 1, 2, 3, 7 & 8	NEEPCO	24-Apr-2018	05:13:00	24-Apr-2018	06:15:00	01:02	AGBPP Unit 1, 2, 3, 7 & 8 tripped at 05:13 Hrs on 24.04.2018 due to tripping of GC-2 & GC-3. (Revision of schedule from Block No. 26 on 24.04.2018).	112	0	0.108	GI-II
23	NER	AGBPP Unit 8	NEEPCO	25-Apr-2018	11:10:00	25-Apr-2018	12:00:00	00:50	AGBPP Unit 8 tripped at 11:10 Hrs on 25.04.2018 due to Low Condenser vacuum. (Revision of schedule from Block No.49 on 25.04.2018).	10	0	0.008	GI-II
24	NER	AGBPP Unit 7	NEEPCO	25-Apr-2018	13:40:00	25-Apr-2018	14:15:00	00:35	AGBPP Unit 7 tripped at 13:40 Hrs on 25.04.2018 due to Low Condenser vacuum. (Revision of schedule from Block No.58 on 25.04.2018).	10	0	0.006	GI-II
25	NER	AGBPP Unit 7	NEEPCO	25-Apr-2018	15:10:00	25-Apr-2018	16:00:00	00:50	AGBPP Unit 7 tripped at 15:10 Hrs on 25.04.2018 due to Low Condenser vacuum. (Revision of schedule from Block No.65 on 25.04.2018).	24	0	0.020	GI-II
26	NER	Palatana GTG-1 and GTG-2	OTPCL	30-Apr-18	17:42:00	30-Apr-18	17:45:00	00:03	Palatana GTG 1 & GTG 2 Units tripped at 17:42 Hrs on 30.04.2018 due to spurious SPS-3 signal. (Revision of schedule from Block No.72 on 30.04.2018).	264	0	0.013	GI-II