

Details of Grid Events during the Month of March 2021 in Northern Region



Sl No.	Category of Grid Event (GI 1 or 2 GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event		Antecedent Generation/Load in the Regional Grid*		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	UTTRAKHAND	02-Mar-2021 16:27	02-Mar-2021 18:04	01:37	95	0	0.276	0.000	34457	40455	100 KV Koteswar HPS - UNIT 2 tripped due to bursting of String Insulator of B-Phase of Unit-2. At the same time, 400 KV Koteswar(TH)-Koteswar(PG) Ckt-1 also tripped and Bus 1 at Koteswar(TH) become dead. As per PMU, B-N phase to earth fault is observed. As per SCADA, generation loss of approx. 95MW is observed. In antecedent condition, 100 MW Koteswar HPS - UNIT 2 and 400 KV Koteswar(TH)-Koteswar(PG) Ckt-1 carrying 96MW & 93MW respectively.	1) 400 KV Koteswar(TH)-Koteswar(PG) Ckt-1 2) 100 MW Koteswar HPS - UNIT 2 3) 400KV Bus 1 at Koteswar(TH)
2	GD-1	HARYANA	05-Mar-2021 13:50	05-Mar-2021 15:29	01:39	0	120	0.000	0.272	37603	44046	While taking emergency shutdown of 400KV Bus2, 400/220 kv 500 MVA ICT 1 at Kadarpur (GPTL) tripped due to secondary fuse failure of Bus-1 R-ph. At the same time, 400 KV Kadarpur -Sohna Road (GPTL) Ckt-1 and 125 MVAR Bus Reactor No 1 at 400 KV Kadarpur (GPTL) also tripped. As per PMU, R-N phase to earth fault with delayed clearance of 1040ms is observed. In antecedent condition, 400 KV Kadarpur -Sohna Road (GPTL) Ckt-1 carrying 259MW.	1) 125 MVAR Bus Reactor No 1 at 400 KV Kadarpur (GPTL) 2) 400 KV Kadarpur -Sohna Road (GPTL) Ckt-1 3) 400 KV Kadarpur (GPTL) - Bus 2 4) 400/220 kv 500 MVA ICT 1 at Kadarpur (GPTL)
3	GD-1	J & K	07-Mar-2021 15:40	07-Mar-2021 17:10	01:30	0	140	0.000	0.380	32078	36847	220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-1 & Ckt-2 both tripped due to CT failure at 132KV Kalakote sub station. As per PMU, B-N phase to earth fault is observed. In antecedent condition, 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-1 & Ckt-2 carrying 72MW each.	1) 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-1 2) 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-2
4	GI-2	HARYANA	08-Mar-2021 11:17	08-Mar-2021 11:57	00:40	0	0	0.000	0.000	36446	47071	800 KV HVDC Kurukshetra(PG) Pole-01 & Pole-03 tripped due to mal-operation of differential protection while charging converter transformer of 800 KV HVDC Kurukshetra(PG) Pole-2. As per PMU, no fault is observed. In antecedent condition, 800 KV HVDC Kurukshetra(PG) Pole-01 & Pole-03 carrying approx. 370MW each.	1) 800 KV HVDC Kurukshetra(PG) Pole-03 2) 800 KV HVDC Kurukshetra(PG) Pole-1
5	GD-1	UTTAR PRADESH	10-Mar-2021 20:27	10-Mar-2021 22:09	01:42	76	0	0.200	0.000	38045	49139	Y-N phase to earth fault occurred on 400 KV Alaknanda GVK(UPC)-Vishnuprayag(IP) (UP) Ckt-1. Line tripped from Alaknanda end but didn't trip from Vishnuprayag end. After 400ms, 400 KV Muzaffarnagar (UP)-Vishnuprayag(IP) (UP) Ckt-1 tripped from Muzaffarnagar end in Z-2. Fault distance was 332km from Muzaffarnagar end. At the same time, 82.5 MW Alaknanda HEP - UNIT 4 also tripped on low voltage. As per PMU, Y-N phase to earth fault is observed. As per SCADA, generation loss of approx. 76MW is observed at Alaknanda HEP. In antecedent condition, 400 KV Alaknanda GVK(UPC)-Vishnuprayag(IP) (UP) Ckt-1 carrying 25MW.	1) 400 KV Alaknanda GVK(UPC)-Vishnuprayag(IP) (UP) Ckt-1 2) 400 KV Muzaffarnagar(UP)-Vishnuprayag(IP) (UP) Ckt-1 3) 82.5 MW Alaknanda HEP - UNIT 4
6	GD-1	PUNJAB	11-Mar-2021 18:51	12-Mar-2021 22:42	03:51	320	0	0.776	0.000	41231	48905	165 MW Dehar HPS - UNIT 5 & UNIT 6, 400 KV Dehar(BB)-Rajpura(PS) (PG) Ckt-1, 400 KV Dehar(BB)-Panchkula(PG) (PG) Ckt-1 and 400/220 kv 315 MVA ICT 1 at Dehar(BB) all tripped on R-N phase to earth fault. Fault occurred due to damage/burst of R-ph CT (400 KV bus-1 side) of 400 KV Dehar-Rajpura line. As per PMU, R-N phase to earth fault followed by Y-N phase to earth fault is observed. As per SCADA, generation loss of approx. 320MW is observed. In antecedent condition, 400 KV Dehar(BB)-Rajpura(PS) (PG) Ckt-1, 400 KV Dehar(BB)-Panchkula(PG) (PG) Ckt-1 and 400/220 kv 315 MVA ICT - carrying 76MW, 146MW & 90MW respectively.	1) 400KV Bus 1 at Dehar(BB) 2) 400KV Bus 2 at Dehar(BB) 3) 400/220 kv 315 MVA ICT 1 at Dehar(BB) 4) 400 KV Dehar(BB)-Rajpura(PS) (PG) Ckt-1 5) 400 KV Dehar(BB)-Panchkula(PG) (PG) Ckt-1 6) 165 MW Dehar HPS - UNIT 5 7) 165 MW Dehar HPS - UNIT 6
7	GD-1	UTTAR PRADESH	13-Mar-2021 06:25	13-Mar-2021 09:36	03:11	0	100	0.000	0.258	33814	38705	400 KV Kanpur(PG)-Auraiya(NT) (PG) Ckt-1 & Ckt-2 tripped on high voltage. As per PMU, Y-N phase to earth fault is observed. As per SOE, line tripped from Kanpur(PG) end only. As per PMU, Bus voltage at Kanpur(PG) end was approx. 415kV. In antecedent condition, 400 KV Kanpur(PG)-Auraiya(NT) (PG) Ckt-1 & Ckt-2 carrying 339MW & 334MW respectively.	1) 400 KV Kanpur(PG)-Auraiya(NT) (PG) Ckt-1 2) 400 KV Kanpur(PG)-Auraiya(NT) (PG) Ckt-2
8	GI-2	UTTAR PRADESH	15-Mar-2021 11:23	15-Mar-2021 13:55	02:32	0	0	0.000	0.000	38286	48520	400/220 kv 315 MVA ICT 1 at Obra_B(UP) tripped on Directional IDMT O/C operated. At the same time, 400/220 kv 315 MVA ICT 3 also tripped. As per PMU, B-R phase to phase fault is observed. In antecedent condition, 400/220 kv 315 MVA ICT 1 at Obra_B(UP) carrying 77MW.	1) 400/220 kv 315 MVA ICT 1 at Obra_B(UP) 2) 400/220 kv 240 MVA ICT 3 at Obra_B(UP)
9	GD-1	UTTAR PRADESH	17-Mar-2021 22:08	18-Mar-2021 00:15	02:07	0	130	0.000	0.296	33326	43976	400/220 kv 315 MVA ICT 1, ICT 2, ICT 3 & ICT 4 at Muzaffarnagar(UP), 400 KV Meerut(PG)-Muzaffarnagar(UP) (PG) Ckt-1, 400 KV Roorkee(PG)-Muzaffarnagar(UP) (PG) Ckt-1, 400 KV Muzaffarnagar (UP)-Vishnuprayag(IP) (UP) Ckt-1 and 400 KV Muzaffarnagar-Ataur (UP) Ckt-1 all tripped due to fire flame in R ph CT of ICT 2 (ICT 2 in bus 2), Bus bar protection operated which leads to the tripping of above elements. As per PMU, R-N phase to earth fault is observed. As per SCADA, load loss of approx. 130MW is observed. In antecedent condition, 400/220 kv 315 MVA ICT 1, ICT 2, ICT 3 & ICT 4 at Muzaffarnagar(UP) carrying 56MW, 63MW, 60MW & 92MW respectively.	1) 400 KV Meerut(PG)-Muzaffarnagar(UP) (PG) Ckt-1 2) 400/220 kv 315 MVA ICT 1 at Muzaffarnagar(UP) 3) 400 KV Roorkee(PG)-Muzaffarnagar(UP) (PG) Ckt-1 4) 400/220 kv 315 MVA ICT 4 at Muzaffarnagar(UP) 5) 400 KV Muzaffarnagar(UP)-Vishnuprayag(IP) (UP) Ckt-1 6) 400 KV Muzaffarnagar-Ataur (UP) Ckt-1 7) 400/220 kv 315 MVA ICT 3 at Muzaffarnagar(UP)
10	GI-2	RAJASTHAN	19-Mar-2021 17:05	19-Mar-2021 20:02	02:57	0	0	0.000	0.000	34764	41971	400 KV Kankani-Jaisalmer (RS) Ckt-2 tripped on Y-N phase to earth fault. Auto recloser operated at Jaisalmer end and not operated at Kankani end. At the same time, 400/220 kv 500 MVA ICT 3 at Jaisalmer(RS) also tripped on E/F stage 2 operation. As per PMU, Y-N phase to earth fault is observed. In antecedent condition, 400 KV Kankani-Jaisalmer (RS) Ckt-2 & 400/220 kv 500 MVA ICT 3 at Jaisalmer(RS) carrying 56MW & 28MW respectively.	1) 400/220 kv 500 MVA ICT 3 at Jaisalmer(RS) 2) 400 KV Kankani-Jaisalmer (RS) Ckt-2
11	GD-1	HARYANA	22-Mar-2021 15:17	22-Mar-2021 17:16	01:59	0	60	0.000	0.157	33691	38322	400/220 kv 500 MVA ICT 1 at Bhiwani(BB), 220 KV Bhiwani-Charkhi Dadri (BB) Ckt-1, 220 KV Bhiwani-Hissar (BB) Ckt-1 and 220 KV Bhiwani(HV)-Bhiwani(BB) (HVPNL) Ckt-1 all tripped due to mal-operation of newly commissioned 220KV bus bar protection at Bhiwani(BBMB) (Bus 1). As per PMU, no fault was observed. In antecedent condition, 400/220 kv 500 MVA ICT 1 at Bhiwani(BB) carrying 184MW.	1) 220 KV Bhiwani-Charkhi Dadri (BB) Ckt-1 2) 400/220 kv 500 MVA ICT 1 at Bhiwani(BB) 3) 220 KV Bhiwani-Hissar (BB) Ckt-1 4) 220 KV Bhiwani(HV)-Bhiwani(BB) (HVPNL) Ckt-1

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
12	GI-2	UTTAR PRADESH	22-Mar-2021 15:51	22-Mar-2021 18:14	02:23	0	0	0.000	0.000	33625	38024	400/220 kv 315 MVA ICT 1 & ICT 2 at Orail(UP), 400 KV Orail-Paricha (UP) Ckt-1, 400 KV Banda-Orail (UP) Ckt-1 and 400 KV Banda-Orail (UP) Ckt-2 all tripped due to bus bar protection operation at Bus 2 of Orail(UP). R-ph bushing of HV side of 400/220 kv 315 MVA ICT 2 got damaged which leads to bus bar operation. As per PMU, R-N phase to earth fault is observed. In antecedent condition, 400/220 kv 315 MVA ICT 1 & ICT 2 carrying 29MW each.	1) 400 KV Banda-Orail (UP) Ckt-1 2) 400 KV Orail-Paricha (UP) Ckt-1 3) 400/220 kv 315 MVA ICT 1 at Orail(UP) 4) 400/220 kv 315 MVA ICT 2 at Orail(UP) 5) 400KV Bus 2 at Orail(UP), 400 KV Banda-Orail (UP) Ckt-2
13	GI-2	HARYANA	22-Mar-2021 21:35	22-Mar-2021 23:31	01:56	0	0	0.000	0.000	32590	42151	400/220 kv 500 MVA ICT 1 at Bhiwani(BB), 220 KV Bhiwani-Charkhi Dadri (BB) Ckt-1 & Ckt-2, 220 KV Bhiwani-Hissar (BB) Ckt-1 and 220 KV Bhiwani(HV)- Bhiwani(BB) (HVPNL) Ckt-1 all tripped due to mal-operation of newly commissioned 220KV bus bar protection at Bhiwani(BB) (Bus 1). As per PMU, no fault was observed. In antecedent condition, 400/220 kv 500 MVA ICT 1 at Bhiwani(BB) carrying 159MW.	1) 220 KV Bhiwani(HV)-Bhiwani(BB) (HVPNL) Ckt-2 2) 220KV Bus 2 at Bhiwani(BB), 220KV Bus 1 at Bhiwani(BB) 3) 220 KV Bhiwani(HV)-Bhiwani(BB) (HVPNL) Ckt-1 4) 220 KV Bhiwani-Charkhi Dadri (BB) Ckt-2 5) 220 KV Bhiwani-Charkhi Dadri (BB) Ckt-1 6) 400/220 kv 500 MVA ICT 1 at Bhiwani(BB)
14	GI-2	RAJASTHAN	23-Mar-2021 01:08	23-Mar-2021 03:41	02:33	0	0	0.000	0.000	30328	35954	400 KV Kankani-Jaisalmer (RS) Ckt-2 tripped on Y-N fault phase to earth fault. Fault distance was 95.49km and fault current was 3.042KA from Kankani end. At the same time, 400/220 kv 500 MVA ICT 3 at Jaisalmer(RS) tripped on O/C E/F protection operated. As per PMU, Y-N phase to earth fault is observed. In antecedent condition, 400 KV Kankani-Jaisalmer (RS) Ckt-2 carrying 128MW.	1) 400/220 kv 500 MVA ICT 3 at Jaisalmer(RS) 2) 400 KV Kankani-Jaisalmer (RS) Ckt-2
15	GI-2	RAJASTHAN	23-Mar-2021 01:25	23-Mar-2021 05:28	04:03	0	0	0.000	0.000	29869	35729	400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 and 400 KV Bikaner(PG)-Bikaner RENEW Solar(RENEW) (Renew Power) Ckt-1 both tripped on Y-N phase to earth fault. Fault distance was 34km from Bikaner(RS) end. At the same time, 125 MVAR Bus Reactor No 2 at 400KV Bikaner(RS) also tripped on E/F protection operated. As per PMU, Y-N phase to earth fault is observed. In antecedent condition, 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 carrying 98MW.	1) 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 2) 400 KV Bikaner(PG)-Bikaner RENEW Solar(RENEW) (Renew Power) Ckt-1 3) 125 MVAR Bus Reactor No 2 at 400KV Bikaner(RS)
16	GD-1	RAJASTHAN	24-Mar-2021 12:16	24-Mar-2021 12:20	00:04	2000	450	5.259	1.036	38032	43446	400 KV Bikaner-Bhadla (RS) Ckt-1, 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1, 400 KV Suratgarh SCTPS(RVUN)-Bikaner(RS) Ckt-1, 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1, 400 KV Bikaner-Merta (RS) Ckt-1 & 400 KV Bikaner(RS)-Sikar(PG) (RS) Ckt-2 all tripped on bus bar protection operation due to heavy spark at bus isolator of 50 MVAR Bus reactor. At the same time, 220 KV Bhadla(PG)-Saurya Urja Solar(SU) (Saurya Urja) Ckt-1 tripped due to over voltage on DT received at at Bhadla end and 220 KV Bhadla(PG)-Saurya Urja Solar(SU) (Saurya Urja) Ckt-2 tripped due to under voltage on DT received at at Bhadla end. As per PMU, R-Y phase to phase fault is observed. As per SCADA, load loss of approx. 450MW is observed and solar generation loss of approx. 2000MW is observed. In antecedent condition, Azure Power 34, Mahoba Solar, ACME, TATA Power, Saurya Urja 1 & II carrying 129MW, 317MW, 244MW, 152MW, 228MW & 305MW respectively.	1) 220 KV Bhadla(PG)-Saurya Urja Solar(SU) (Saurya Urja) Ckt-2 2) 400 KV Bikaner-Bhadla (RS) Ckt-1 3) 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 4) 400 KV Suratgarh SCTPS(RVUN)-Bikaner(RS) (RS) Ckt-1 5) 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1 6) 400 KV Bikaner-Merta (RS) Ckt-1 7) 220 KV Bhadla(PG)-Saurya Urja Solar(SU) (Saurya Urja) Ckt-1 8) 400 KV Suratgarh(RVUN)-Bikaner(RS) (RS) Ckt-1 9) 400 KV Bikaner(RS)-Sikar(PG) (RS) Ckt-2
17	GI-2	HARYANA	24-Mar-2021 14:59	24-Mar-2021 16:31	01:32	0	0	0.000	0.000	35614	38858	800 KV HVDC Kurukshetra(PG) Pole-2 blocked due to UBM (Unaccepted breaker movement) protection operated at Kurukshetra end. At the same time, 800 KV HVDC Kurukshetra(PG) Pole-1 also blocked due to minimum filter power limit blocking during blocking of Pole-2. As per PMU, no fault was observed. In antecedent condition, 800 KV HVDC Kurukshetra(PG) Pole-1 & Pole-2 carrying approx. 625MW each.	1) 800 KV HVDC Kurukshetra(PG) Pole-1 2) 800 KV HVDC Kurukshetra(PG) Pole-2
18	GI-2	HARYANA	28-Mar-2021 19:32	29-Mar-2021 20:35	01:03	0	0	0.000	0.000	38419	44259	400/220 kv 450 MVA ICT 1 at Panipat(BB), 220 KV Panipat_TH(HV)-Panipat(BB) (HVPNL) Ckt-1, Ckt-3 & Ckt-4, 220 KV Panipat(BB)-Chajpur(HV) (HVPNL) Ckt-1 and 220 KV Panipat(BB)-Narela(DV) (BBMB) Ckt-1 all tripped on bus bar protection operation at 220kv Bus-1. Bus bar of Bus 1 operated due to CT Burst of 220kv PTPS(HV) - Panipat (BB) Ckt-3. As per PMU, R-N phase to earth fault is observed. In antecedent condition, 400/220 kv 450 MVA ICT 1 at Panipat(BB) carrying approx. 160MW.	1) 400/220 kv 450 MVA ICT 1 at Panipat(BB) 2) 220KV Bus 1 at Panipat(BB) 3) 220 KV PanipatTH(HV)-Panipat(BB) (HVPNL) Ckt-4 4) 220 KV PanipatTH(HV)-Panipat(BB) (HVPNL) Ckt-3 5) 220 KV Panipat(BB)-Narela(DV) (BBMB) Ckt-1 6) 220 KV Panipat(BB)-Chajpur(HV) (HVPNL) Ckt-1 7) 220 KV PanipatTH(HV)-Panipat(BB) (HVPNL) Ckt-1
19	GD-1	UTTAR PRADESH	29-Mar-2021 17:53	29-Mar-2021 18:27		0	160	0.000	0.489	27764	32713	Y-Ph LA of 220KV G.Noida – Noida Sec 20 got blast which lead to bus bar protection operation of 220kv Bus1 at Gr.Noida which further lead to tripping of 220kv Gr.Noida-Sec 20 Ckt-2, 220kv Gr.Noida-Sec 129 Ckt, 400/220 kv 315 MVA ICT 1 & ICT 2 at Gr.Noida_2(UPC) and 400/220 kv 500 MVA ICT 5 & ICT 6 at Gr.Noida(UPC). As per PMU, Y-N phase to earth fault is observed. As per SCADA, load loss of approx. 160MW is observed. In antecedent condition, 400/220 kv 315 MVA ICT 1 & ICT 2 at Gr.Noida_2(UPC) and 400/220 kv 500 MVA ICT 5 & ICT 6 at Gr.Noida(UPC) carrying 54MW, 58MW, 88MW & 90MW respectively.	1) 400/220 kv 315 MVA ICT 1 at Gr.Noida_2(UPC) 2) 400/220 kv 500 MVA ICT 5 at Gr.Noida(UPC) 3) 400/220 kv 315 MVA ICT 2 at Gr.Noida_2(UPC) 4) 400/220 kv 500 MVA ICT 6 at Gr.Noida(UPC)
20	GI-2	HARYANA	30-Mar-2021 11:02	30-Mar-2021 15:11		0	0	0.000	0.000	33294	39181	CT of 220 kv Samaypur(BBMB)-Palli ckt-2 got damaged which lead to LBB protection operation of 220kv Samaypu - palli Ckt-2 at Samaypur(BB) which further lead to tripping of 220 kv Samaypur(BBMB)-Palli ckt-2, 400/220 kv 500 MVA ICT 1 at Ballabgarh(PG), 220 KV Palwal(HV)-Samaypur(BB) (HVPNL) Ckt-2 and 220 KV Samaypur(BB)-Badshahpur(HV) (HVPNL) Ckt-1. As per PMU, multiple phase to earth fault was observed. In antecedent condition, 400/220 kv 500 MVA ICT 1 carrying 119MW.	1) 400/220 kv 500 MVA ICT 1 at Ballabgarh(PG) 2) 220KV Bus 2 at Samaypur(BB) 3) 220 KV Palwal(HV)-Samaypur(BB) (HVPNL) Ckt-2 4) 220 KV Samaypur(BB)-Badshahpur(HV) (HVPNL) Ckt-1 5) 220 kv Samaypur(BBMB)-Palli ckt-2

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	(GI for 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	WR	03-Mar-21 20:51	03-Mar-21 21:54	01:03	63	-	0.10%	-	61571	51711	At 20:51 Hrs/03-03-2021, while First time charging of 33kV Feeder No. 322 connected with ICT-03 at Ratadiya (Wind Plant)substation, 220kV Bus-2 Bus Bar Differential Protection maloperated for the external fault due to CT connection error of ICT-3 in bus bar protection scheme as informed by Adani Ratadiya. This resulted in tripping of both 220kV Ratadiya- Bhuj -1 & 2 as both the lines were on Bus-2. 220kV Ratadiya - Bhuj -1 was shifted on Bus-2 due to hotspot on bus isolator of line with Bus-1.	Tripping of 1. 220kV Ratadiya - Bhuj 1 2. 220kV Ratadiya - Bhuj 2 3. 220/33 kV Ratadiya ICT 1 4. 220/33 kV Ratadiya ICT 2 5. 220/33 kV Ratadiya ICT 3 6. 220/33 kV Ratadiya ICT 4
2	GI-2	WR	07-Mar-21 16:43	07-Mar-21 17:00	00:17	194	-	0.30%	-	63661	55059	At 16:43 Hrs/07-03-2021, 400kV SSP - Asoj line tripped on B ph - E fault with unsuccessful autoreclose. At the same time, 4 no. of CHPH units(50 MW each) also tripped on Directional Overcurrent & E/F protection (67 N) at 220kV CHPH (SSP) substation.	Tripping of 1. 400 kV SSP - Asoj 2. SSP CHPH unit-1 (50 MW) 3. SSP CHPH unit-2 (50 MW) 4. SSP CHPH unit-4 (50 MW) 5. SSP CHPH unit-5 (50 MW)
3	GD-1	WR	10-Mar-21 16:57	10-Mar-21 17:16	00:19	692	100	1.03%	0.17%	67240	57540	At 16:57 Hrs/10-03-2021, while restoration of 400kV bus coupler at Marwa substation (which was under planned shutdown) due to maloperation of LBB initiation from bus coupler both 400kV Bus-1 & 2 tripped. It was informed by CSPCTL that false LBB initiation occurred while putting LBB link of bus coupler in service due to external cable found short in the relay panel of bus coupler bay. Thus, all the elements associated with both 400kV buses tripped during the event.	Tripping of 1. 400kV-Marwa-Bhillai-1 2. 400kV-Marwa-Raita-1 3. 400kV-Marwa-Raita-2 4. 400kV-Marwa-Korba W Ext -1 5. 400/220 kV-Marwa ICT-1 6. Marwa unit-1 (500 MW) 7. Marwa unit-2 (500 MW)
4	GD-1	WR	12-Mar-21 06:40	12-Mar-21 06:50	00:10	-	235	-	0.43%	63816	54525	At 06:40 Hrs/12-03-2021 , both 220/132 kV ICT-1 &2 (160 MVA each) at Paraswani substation tripped due to maloperation of over-current protection . This led to a load loss of 235 MW in Chhatisgarh region.	Tripping of 1. 220/132 kV Paraswani ICT -1 2. 220/132 kV Paraswani ICT-2
5	GI-2	WR	12-Mar-21 15:35	12-Mar-21 21:05	05:30	-	-	-	-	64856	55964	At 15:34:56Hrs/12-03-2021, 400 kV Julwania - Chegaon line tripped on B-E fault with unsuccessful autoreclose. After around 40 seconds at 15:34:39 hrs, 400 kV Julwania - Singhaji line tripped on R - E fault only from Singhaji end in Zone-1 with unsuccessful A/R .The fault was seen in Zone-3 from Julwania end. At the same time , 315 MVA ICT-1 also tripped on over-current protection as informed by MPPTCL.	Tripping of 1. 400kV Julwania-Singhaji line 2. 400kV Julwania-Chhegaon line 3. 400/220kV ICT-1
6	GI-1	WR	13-Mar-21 04:37	13-Mar-21 05:20	00:43	-	-	-	-	58643	45131	At 04:37 Hrs/13-03-2021, at 220 kV Satna (MP) Y - Ph Bus -1 CVT failed and bus bar protection operated of Bus-1 & 2 . This resulted in tripping of all the connected 220kV feeders and 220/132 kV ICTs and station became dead. At 05:24 hrs , 132 kV Rampur Baghelan to Kotar feeder tripped from Rapur Baghelan end on over current protection causing total interruption to 132kV Nagod ,Panna,Pawai,Majhgawan,Prism Cement ,Satna .	Tripping of 1. 220 kV Satna (MP)-Satna (PG)-1 2. 220 kV Satna (MP)-Satna (PG)-2 3. 220 kV Satna (MP)-Satna (PG)-3 4. 220/132 kV(160MVA) Satna (MP) ICT-1 5. 220/132 kV(160MVA) Satna (MP) ICT-1 6. 220/132 kV(160MVA) Satna (MP) ICT-3 7. 220kV Satna(MP)-Kotar 8. 220 kV Satna(MP)-Chhatarpur
7	GI-2	WR	18-Mar-21 15:49	18-Mar-21 16:27	00:38	146	-	0.22%	-	67711	58641	On 26-02-2021 at 15:49 hrs, 400 kV Bus-1 at Koradi -1 substation tripped along with associated bays on bus bar protection. Later after inspection, Bus-1 was charged again through bus coupler and subsequently 400 kV Bhusawal, 400 kV Khaparkheda-1, 400/220 kV ICT-1 were charged successfully. However at 17:00 hrs, during charging of 400 kV Koradi- Bhilai ct, Bus- 1 tripped again due to false LBB initiation from Bhilai C&R Panel due to faulty 86 Y Phase Main -1 trip relay. The faulty relay maintained by M/S PGCIL was replaced by spare relay available at Koradi-1 substation.	Tripping of 1. 400 kV Koradi- Bhusawal 2. 400 kV Koradi- Khaparkheda -1 3. 400/220 kV 300MVA ICT-1 4. 400 kV Koradi- Bhilai line 5. 400 kV Koradi - Sarni line 6. Koradi Unit-6 (210 MW)

8	GI-2	WR	20-Mar-21 16:59	20-Mar-21 17:37	00:38	-	240	-	0.44%	64719	54775	On 20-03-2021 at 16:59hrs, at 400/220 kV Dhule (MH) substation 500 MVA ICT-2 and ICT-3 tripped on Neutral Displacement Relay(NDR) protection and also ICT-1 HV B/U overload resulted in operation of LTS Stage -1 & 2 . This led to tripping of 132kV Dhule-1 , 132kV Dhule-2, 132kV Dhule- Shrivajinagar 132kV Almaner - Nardana and 220/132kV bus at Dondaicha substation as per LTS scheme. Heavy hailstorm and winds were prevailing prior to the event as informed by MSETCL. As informed by MSTECL , NDR settings were increased from 30 V to 50 V as remedial action.	Tripping of 1. 315 MVA, 400/220 kV ICT-1 2. 500 MVA, 400/220 kV ICT-2 3. 500 MVA, 400/220 kV ICT-3 4. 132kV Dhule - Dhule-1 5. 132kV Dhule - Dhule-2 6. 132kV Dhule- Shrivajinagar line 7. 132kV Almaner - Nardana 8. 220/132kV lines at Dondaicha as per LTS
9	GD-1	WR	22-Mar-21 15:16	22-Mar-21 16:07	00:51	569	-	0.85%	-	66995	55054	On 22.03.2021, planned shutdown of 400kV Lanco-Bilaspur-2 was taken for annual maintenance work. At 15:16 Hrs during this maintenance work at tower location no. 86 (AP 25), 63 km away from LANCO a manual earthing cable fell down on live conductor of R-phase of 400kV Lanco-Bilaspur-1 due to high windy condition and resulted in tripping of the line. .Due to tripping of 400kV Lanco-Bilaspur-1, Lanco substation became dead. LANCO Unit-1 (300MW) tripped due to the loss of evacuation path. At the same time MCCPL unit-1 (300 MW) also tripped on GT differential protection.	Tripping of 1. 400kV Lanco-Bilaspur-1 2. LANCO Unit-1 (300MW) 3. MCCPL unit-1 (300 MW)
10	GI-1	WR	26-Mar-21 19:00	26-Mar-21 19:31	00:31	48	-	0.07%	-	66087	55276	At 19:00 Hrs/26-03-2021, while withdrawing CHPH unit-5 (50 MW) at 220kV CHPH substation (SSP) as per schedule, Y phase pole of CB got stuck and bus bar protection operated which resulted in tripping of 220 kV Bus-2, CHPH Unit-2 (50 MW) and 220 kV RBPH - CHPH line -2.	Tripping of 1. 220kV CHPH Unit-2 (50 MW) 2. 220kV CHPH- RBPH line-2
11	GD-1	WR	27-Mar-21 15:01	27-Mar-21 21:59	06:58	20	-	0.03%	-	65011	53141	On 27-03-2021 at 15:01 hrs, 220kV Nanavalka (Alfanar wind)- Bhuj line tripped on B-E fault due to tree fault (due to gusty wind at near Nirona village) between tower loc no. 20 -21 without A/R attempt. Due to loss of evacuation path, 20 MW wind generation of Alfanar was lost.	Tripping of 1. 220kV Nanavalka- Bhuj
12	GI-1	WR	30-Mar-21 11:54	30-Mar-21 12:21	00:27	-	-	-	-	68081	55613	At 11:54 hrs on 30-03-2021, fault occurred at 220kV Pithampur S/s Bus-1 due to bursting of R phase CT of 220 kV Pithampur – Pithampur Section 1 line. As the bus bar protection did not operate, all the connected 220 kV lines along with the 400/220 kV ICTs tripped on backup protection to clear the fault.	Tripping of 1. 220 KV Interconnector 1 (Sec 3) 2. 220 KV Interconnector 1 (Sec 3) 3. 220 KV Pithampur – Badnagar 4. 220 KV Pithampur – PithampurSec 1 5. 220 KV Pithampur – Deplapur 6. 315 MVA 400/220 kV ICT-1 7. 315 MVA 400/220 kV ICT-2 8. 315 MVA 400/220 kV ICT-3

Details of Grid Events during the Month of March 2021 in Eastern Region



Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
	(GI I or 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	JSPL	09-03-2021 08:02	09-03-2021 13:08	05:06	373	333	1.42%	1.82%	26293	18323	At 07:50:45:808 hrs, 400 kV JSPL – Meramundali - 2 got tripped after unsuccessful auto-reclose attempt due to persistent Y phase to earth fault. At 08:02:27:939 hrs, 400 kV JSPL – Meramundali – 1 got tripped after unsuccessful auto-reclose attempt due to persistent Y phase to earth fault resulting in total power failure at JSPL plant. During line patrolling, it was observed that “Y” Phase Insulators of both the circuits were damaged and conductors were lying on top of Blue Phase cross arms at tower location at 111.	400 kV JSPL - Meramundali D/C
2	GD-1	Rangpo, Dikchu HEP, Teesta III HEP, Teesta V HEP, Jorethang HEP, New Melli, Tashiding HEP, Chujachen HEP, Gangtok	10-03-2021 19:35	10-03-2021 19:56	00:21	1560	54	5.72%	0.26%	27290	20868	At 10th March 2021 at 19:35 Hrs both the 400 kV circuits tripped due to R and B phase to earth fault resulted in islanding operation of 1560 MW generation at Sikkim hydro complex with 54 MW load at Gangtok. Consequently all the generators tripped and total power failure occurred.	400 kV Rangpo – Kishangunj S/c 400 kV Teesta III – Kishangunj S/C
3	GD-1	Lalmatia, Godda	22-03-2021 11:05	22-03-2021 12:37	01:32	0	45	0.00%	0.24%	23770	18449	220 kV Godda Dumka D/C were not in service. On 22-03-2021 at 11:05 hrs 220 kV Farakka Lalmatia S/C and 132 kV KhSTPP - Lalmatia S/C tripped resulting in total power failure at Lalmatia and Godda S/S.	220 kV Farakka Lalmatia S/C 132 kV KhSTPP - Lalmatia S/C
4	GD-1	Motihari	23-03-2021 16:18	23-03-2021 16:58	00:40	0	300	0.00%	1.54%	22924	19535	400 kV Barh - Motihari - 2 was under shutdown. 400/132 kV Motihari S/S is connected to rest of the grid via 400 kV Gorakhpur - Motihari - 2. On 23-03-2021 at 16:18 hrs 400 kV Gorakhpur - Motihari - 2 tripped from Motihari end due to Overvoltage at Motihari end. Due to outage of radial infeed source, load of 132 kV Motihari , Betiah, Raxaul got interrupted.. Power supply to Nepal (Surajpura & Ramnagar) also got interrupted. Total load loss was around 300MW out of which Nepal load was around 120MW.	400 kV Gorakhpur - Motihari - 2

Details of Grid Events during the Month of March 2021 in Southern Region



Sl No.	Category of Grid Event (GI 1or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Name of Elements (Tripped/Manually opened)
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	KARNATAKA	06-Mar-21 14:45	06-Mar-21 15:29	44min	460	90	0.99	0.17	46315	53729	Complete outage of 220kV Nagjhari GS and 110kV Supa GS of KPCL and 220kV Hubli SS, 220kV Bidnal SS, 220kV Haveri SS and 220kV Ambewadi SS of KPTCL : During antecedent conditions, many connected 220kV lines were under outage. 220kV Nagjhari generation was mainly evacuated through 220kV Bidnal line and 220kV Hubli line-1, 2, and 3 due to outage of 220kV Ambewadi Narendra lines-1 & 2 and 220kV Nagjhari Kodalalli lines-1 & 2. Triggering incident was subsequent tripping of 220kV Bidnal and 220kV Hubli connected lines on fault. After the tripping of evacuating lines, running units#1, 2, 5 and 6 at Nagjhari got tripped on operation of over frequency 4th Stage protection due to loss of evacuating lines. This resulted in complete loss of supply at 220kV Nagjhari GS and 110kV Supa GS of KPCL and 220kV Hubli SS, 220kV Bidnal SS, 220kV Haveri SS and 220kV Ambewadi SS of KPTCL.	i. 220kV Hubli-Narendra 2 ii. 220kV Hubli-Narendra 1 iii. 220kV Bidnal-Narendra iv. 220kV Hubli-Bidnal v.220kV Nagjhari-Hubli 1 vi.220kV Nagjhari-Hubli 2 vii.220kV Nagjhari-Hubli 3 viii.220kV Nagjhari-Ambewadi 1 ix.220kV Nagjhari-Ambewadi 2 x.220kV Guttur-Haveri 1
2	GD-1	KARNATAKA	16-Mar-21 11:50	16-Mar-21 12:10	20min	203	450	0.42	0.80	48429	55924	Complete outage of 220kV Begur SS, 220kV Chamrajnagar SS, 220kV Madhuvanahalli SS, and 220kV Hebbani SS of KPTCL: During antecedent conditions, 220kV Hebbani - TK Halli lines-1 and 2 were under outage. Triggering incident was tripping of 220kV Kadakola Begur line-1 and 2 on operation of OC protection. This resulted in complete loss of supply at 220kV Begur SS, 220kV Chamrajnagar SS, 220kV Madhuvanahalli SS, and 220kV Hebbani SS.	i. 220kV Kadakola Begur line-1 ii. 220kV Kadakola Begur line-2
3	GD-1	KERALA	20-Mar-21 08:59	20-Mar-21 09:41	42mins	100	305	0.24	0.59	42524	51752	Complete outage of 220kV/110kV Kalamassery SS of KSEB: Triggering incident was tripping of 110kV kalamaserry Edayar line-1 and 2 at Kalamassery end due to conductor snapping. At the same time, 220kV Kochi- Kalamaserry - 1 & 2 tripped only at Kochi end. This resulted in complete outage of 220kV/110kV Kalamassery SS.	i. 220kV Kochi Kalamassery-1 ii. 220kV Kochi Kalamassery-2 iii.200MVA 220/110kV Transformer -1, 2 and 3 iv.120MVA 220/110kV Transformer -4
4	GD-1	KARNATAKA	30-Mar-21 14:57	30-Mar-21 16:41	1hr 44mins	135	0	0.29	0.00	46779	56734	Complete outage of 220kV Rayacherlu Station-1 of KSPDCL: As per the report submitted, triggering incident was DEF operation in 220kV Pavagada Rayacherlu line-1. Due to tripping of only connected line there was complete loss of supply at 220kV Rayacherlu Station-1.	i. 220kV-Pavagada-Rayachelu 1
5	GD-1	TAMILNADU	30-Mar-21 05:55	30-Mar-21 06:57	1hr 2mins	0	0	0.00	0.00	36279	46654	Complete outage of 230kV Veeranam SS of TANTRANSKO: As per the report submitted, triggering incident was maloperation of LBB protection in 230kV Kodikuruchi-Veeranam line-1 at 230kV Veeranam end due to suspected DC leakage. This resulted in tripping of all connected elements at 230kV Veeranam SS since there was single bus configuration at 230kV Veeranam SS.	i.230kV Kayathar Feeder ii. 230/33kV Power Transformer - 1, 2, 3 and 4 iii. 230kV Kodikuruchi -1 and 2 iv. 230kV Abisegapatty-1 and 2
6	GI-2	ANDHRA PRADESH	03-Mar-21 20:12	03-Mar-21 21:06	54 min	0	0	0.00	0.00	36045	43378	Multiple tripping at 400kV Kalpakka SS of APTRANSKO: Triggering incident was failure of B-Phase CT pertaining to 400kV Bus sectionalizer 1. At 400kV Kalpakka SS, the 400kV Bus Sectionalizer-1 bay sectionalizes the 400kV Bus-1 and 3. The bay has CTs on either side of the breaker. CTs of the 400kV Sectionalizer-1 bay forms overlapping of protection zones Bus-1 & 3 to cover blind zone. Hence, 400kV Bus 1&3 BPP operated and all the feeders/ICTs connected to 400kV Bus-1&3 got tripped during this event. No load loss was reported during this event.	i. 400kV Kalpakka – Gazuwaka line-1 ii. 400kV Kalpakka – Simhadri line-2 and 3 iii. Kalpakka 315MVA ICT-1 and 3 iv. 400kV Kalpakka - Maradam line v. 400kV Kalpakka HNPCL line-1 vi. 400kV Kalpakka Khammam line-1
7	GI-1	KARNATAKA	04-Mar-21 10:55	04-Mar-21 11:41	46min	0	0	0.00	0.00	47914	53878	Multiple Tripping at 400kV/220kV Guttur SS of KPTCL: As per the reports submitted, the triggering incident is the mal operation of LBB of Bus coupler at 220kV Guttur station. The mal operation is due to the non-disabling of function key to LBB connected during offline testing and operational unwanted enabling of the function key. It is already mentioned that the LBB initiation wiring was not done to Bus-2. This led to tripping of Bus-1 and all the elements connected to it.	i.220kV Guttur-Neelagunda ii.220kV Guttur-Davanagere-1 iii.400/220kV Guttur-ICT-1 iv.220kV Guttur-Chitradurga v.220kV Guttur-Davanagere-2 vi.220kV Guttur-Davanagere-3 vii.220kV Guttur-Ranebennur viii.400/220kV Guttur-ICT-2 ix.220kV Guttur-Haveri-2 x.220kV Guttur-Haveri-1
8	GI-1	KARNATAKA	04-Mar-21 11:41	04-Mar-21 12:22	41min	0	0	0.00	0.00	48604	53062	Multiple Tripping at 400kV/220kV Guttur SS of KPTCL: After incident 1 at 10:56 Hrs, there was operational lapse of non-checking of Bus Coupler Relay records and all the elements connected to Bus-1 were taken into service, the triggering incident was closing of the Bus Coupler which was responsible for the first incident. The Bus Coupler again initiated the LBB operation leading to tripping of all elements connected to Bus-1 at 220kV Guttur SS.	i.220kV Guttur-Neelagunda ii.220kV Guttur-Davanagere-1 iii.400/220kV Guttur-ICT-1 iv.220kV Guttur-Chitradurga v.220kV Guttur-Davanagere-2 vi.220kV Guttur-Davanagere-3 vii.220kV Guttur-Ranebennur viii.400/220kV Guttur-ICT-2 ix.220kV Guttur-Haveri-2 x.220kV Guttur-Haveri-1

Details of Grid Events during the Month of March 2021 in Southern Region



Sl.No.	Category of Grid Event (GI 1or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Name of Elements (Tripped/Manually opened)
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
9	GI-1	KARNATAKA	04-Mar-21 12:22	04-Mar-21 13:49	1hr 17min	0	0	0.00	0.00	47976	52592	Multiple Tripping at 400kV/220kV Guttur SS of KPTCL: The incident was an operational decision of taking out all the elements connected to 220kV Guttur SS after heavy arc & fire was observed while closing the Haveri-2 Bus-2 89B Isolator in order to shift the load from Bus-1 to Bus-2(89A in closed condition) resulting in complete loss of supply at 220kV side of 400kV/220kV Guttur SS.	i.220kV Guttur-Neelagunda ii.220kV Guttur-Davanagere-1 iii.400/220kV Guttur-ICT-1 iv.220kV Guttur-Chitradurga v.220kV Guttur-Davanagere-2 vi.220kV Guttur-Davanagere-3 vii.220kV Guttur-Ranebennur viii.400/220kV Guttur-ICT-2 ix.220kV Guttur-Haveri-2 x.220kV Guttur-Haveri-1
10	GI-1	ANDHRA PRADESH	11-Mar-21 18:28	11-Mar-21 20:18	1hr 50min	0	0	0.00	0.00	36589	45385	Multiple Trippings at 220kV Srisailem RB of APGENCO:As per the report submitted, due to LBB operation of U#3, all elements connected to bus-1 got tripped at 220kV Srisailem RB.	i.220kV Srisailem RB Dindi-1 ii. U#3
11	GI-1	KARNATAKA	28-Mar-21 13:14	28-Mar-21 13:45	31min	0	0	0.00	0.00	44060	54086	Multiple Tripping at 400kV/220kV Guttur SS of KPTCL: Triggering incident was tripping of ICT-1&2 at Guttur on operation of Over current protection. This resulted in complete loss of supply at 220kV side of 400kV/220kV Guttur SS. Further details are awaited.	i.400/220kV ICT-1 at Guttur ii.400/220kV ICT-2 at Guttur

Details of Grid Events during the Month of March 2021 in North Eastern Region



Sl No.	Category of Grid Event (GI 1 or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM:SS)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-I	Churachandpur, Elangangkopki, Kakching & New Moreh areas of Manipur Power System	02-Mar-21 05:12	02-Mar-21 05:28	00:16:00	0	18	0.0	0.0	1609	1617	Churachandpur, Elangangkopki, Kakching & New Moreh areas of Manipur Power System were connected with the rest of NER Grid through 132 kV Ningthoukhong-Churachandpur D/C, 132 KV Kakching - Thoubal line was under shutdown to avoid overloading of 132 KV Loktak - Ningthoukhong line. At around 05:12 hrs on 02.03.2021, 132 kV Ningthoukhong - Churachandpur D/C tripped. Due to tripping of these elements, Churachandpur, Elangangkopki, Kakching & New Moreh areas of Manipur Power System were separated from rest of NER Grid and subsequently collapsed due to no source in this area. Power was extended to Churachandpur, Elangangkopki, Kakching & New Moreh areas of Manipur Power System by charging 132 kV Ningthoukhong-Churachandpur line 1 at 05:28 hours on 02.03.2021	132 kV Ningthoukhong-Churachandpur D/C lines
2	GD-I	Karong area of Manipur Power System	02-Mar-21 08:55	02-Mar-21 09:32	00:37:00	0	11	0.0	0.0	1878	2013	Karong area of Manipur Power System was connected with the rest of NER Grid through 132 kV Imphal(MA) - Karong line and 132 kV Karong-Kohima line. At 08:55 Hrs on 02.03.2021, 132 kV Imphal(MA) - Karong line and 132 kV Karong-Kohima line tripped. Due to tripping of these elements, Karong area of Manipur Power System was separated from the rest of NER Grid and subsequently collapsed due to no source in this area. Power was extended to Karong area of Manipur Power System by charging 132 kV Imphal(MA) - Karong line at 09:32 hours on 02.03.2021	132 kV Karong- Imphal(Yurembam) & 132 kV Karong-Kohima
3	GD-I	Monarchak Power Station & Rabindranagar area of Tripura Power System	02-Mar-21 12:20	02-Mar-21 12:45	00:25:00	68	6	0.0	0.0	1596	1877	Rabindranagar area of Tripura Power System & Monarchak Power Station were connected with the rest of NER Grid through 132 kV Monarchak - Udaipur line, 132 kV Monarchak - Rokhia Line was under planned shutdown. At 12:20 Hrs on 02.03.2021, 132 kV Monarchak - Udaipur line tripped. Due to tripping of this element, Rabindranagar area of Tripura Power System & Monarchak Power Station were separated from rest of NER Grid and subsequently collapsed due to load-generation mismatch. Power was extended to Monarchak Power Station & Rabindranagar area of Tripura Power System by charging 132 kV Monarchak - Udaipur line at 12:45 Hrs on 02.03.2021	132 kV Monarchak - Udaipur line
4	GD-I	BTSPS (AS) area of Assam Power system	06-Mar-21 09:33	06-Mar-21 09:58	00:25:00	0	90	0.0	0.1	1542	1672	BTSPS area of Assam Power System comprises of downstream load of 132 kV buses of Dhaligon, Kokrajhar, Gossaigaon, Gauripur, Bilaspura and Bomagar S/S was connected with the rest of NER Grid through 220/132 kV, 100 MVA ICT I & 160 MVA ICT II at BTSPS(AS). 132 kV Bomagar-Rangia line and 132 kV Dhaligon-Nalbari line were kept opened for system requirements. At 09:33 Hrs on 06.03.2021, 220/132 kV, ICT I & II at BTSPS along with 220 kV Salakati-BTSPS D/C tripped. Due to tripping of these elements, BTSPS area was separated from rest of NER grid and collapsed due to no source in this area. Power was extended to BTSPS (AS) area of Assam Power system by charging 220KV Salakati -BTSPS-1 at 10:50 Hrs on 06.03.2021	220/132 kV 160 MVA ICT I at BTSPS (AS), 220/132 kV 100 MVA ICT II at BTSPS (AS) along with 220KV-Salakati-BTSPS D/C
5	GD-I	Tenga & Khupi areas of Arunachal Pradesh Power system & Dikshi Power Station	07-Mar-21 12:05	07-Mar-21 14:07	02:02:00	3.8	17	0.0	0.0	1418	1703	Tenga & Khupi areas of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Balipara - Tenga line. At 12:05 Hrs on 07.03.2021, 132 kV Balipara - Tenga line tripped. Due to tripping of this element, Tenga & Khupi areas of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power supply extended to Tenga & Khupi S/S & Dikshi Power Station by charging of 132 kV Balipara - Tenga Line at 14:07 Hrs on 07.03.2021.	132 kV Balipara - Tenga Line
6	GD-I	Yiangangpokpi, Kongba, Hundung and Thoubal Area of Manipur Power system.	10-Mar-21 16:14	10-Mar-21 16:46	00:32:00	0	25	0.0	0.0	1516	1590	Yiangangpokpi, Kongba, Hundung and Thoubal Area of Manipur Power system was connected with the rest of NER Grid through 132 kV Imphal-Yiangangpokpi D/C lines, 132 KV Kakching - Thoubal line was under shutdown to avoid overloading of 132 KV Loktak - Ningthoukhong line. At 16:14 Hrs on 10.03.2021, 132 kV Imphal-Yiangangpokpi D/C line tripped. Due to tripping of these elements, Yiangangpokpi, Kongba, Hundung and Thoubal Areas of Manipur Power System were separated from the rest of NER Grid and subsequently collapsed due to no source in these areas. Power supply extended to Yiangangpokpi, Kongba, Hundung and Thoubal Area of Manipur Power system by charging 132 kV Imphal-Yiangangpokpi D/C lines at 16:46 Hrs on 10.03.2021	132 kV Imphal-Yiangangpokpi D/C Line

Details of Grid Events during the Month of March 2021 in North Eastern Region



Sl.No.	Category of Grid Event (GI for 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM:SS)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
7	GD-I	Kongba and Thoubal Area of Manipur Power system.	12-Mar-21 12:30	12-Mar-21 12:41	00:11:00	0	13	0.0	0.0	1688	1891	Kongba and Thoubal Area of Manipur Power system were connected with the rest of NER Grid through 132 kV Yiangangpokpi - Kongba line. 132 KV Kakching - Thoubal line was under shutdown to avoid overloading of 132 KV Loktak - Ningthoukong line. At 12:30 Hrs on 12.03.2021, 132 kV Yiangangpokpi - Kongba line tripped. Due to tripping of this element, Kongba and Thoubal Areas of Manipur Power System were separated from the rest of NER Grid and subsequently collapsed due to no source in these areas. Power supply extended to Kongba and Thoubal Area of Manipur Power system by charging 132 kV Yiangangpokpi - Kongba line at 12:41 Hrs on 12.03.2021. 132 kV Kongba - Thoubal line charged at 12:43 Hrs on 12.03.2021	132 kV Yiangangpokpi - Kongba line
8	GD-I	Mokokchung, Sanis and Wokha Areas of Nagaland Power system.	13-Mar-21 11:48	13-Mar-21 12:07	00:19:00	30	22	0.0	0.0	2276	2323	Mokokchung, Sanis and Wokha Areas of Nagaland Power system were connected with the rest of NER Grid through 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1&2 lines, 132 kV Doyang - Mokokchung (DoP, Nagaland) line, 132 kV Kohima-Wokha line & 132kV Doyang-Sanis line. 132 kV Mariani (AS) - Mokokchung (DoP, Nagaland) line kept idle charged at Mokokchung (DoP, Nagaland) end. At 11:48 Hrs on 13.03.2021, 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1&2 lines, 132 kV Doyang - Mokokchung (DoP, Nagaland) line, 132 kV Kohima-Wokha line & 132kV Doyang-Sanis line tripped. Due to tripping of these elements, Mokokchung, Sanis and Wokha areas of Nagaland Power system were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power was extended to Mokokchung(NL) S/S by charging 132 kV Mokokchung(PG)-Mokokchung(NL) D/C lines at 12:07 Hrs on 13.03.2021 , to Wokha by charging 132 kV Kohima-Wokha line at 11:59 Hrs on 13.03.2021 and to Sanis by charging 132 kV Sanis-Wokha line at 12:21 Hrs on 13.03.2021	132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1&2 lines, 132 kV Doyang - Mokokchung (DoP, Nagaland) line, 132 kV Kohima-Wokha line, 132 kV Kohima-Wokha line & 132kV Doyang-Sanis line
9	GD-I	Daporijo area of Arunachal Pradesh Power System	18-Mar-21 05:49	18-Mar-21 06:30	00:41:00	0	17	0.0	0.0	1673	1723	Daporijo Area of Arunachal Pradesh Power system was connected with the rest of NER Grid through 132 kV Ziro- Daporijo Line. At 05:49 Hrs on 18.03.2021, 132 kV Ziro- Daporijo Line tripped. Due to tripping of this element, Daporijo area of Arunachal Pradesh was separated from the rest of NER Grid and subsequently collapsed due to no source in this area. Power was extended to Daporijo area of Arunachal Pradesh Power System by charging 132 kV Ziro- Daporijo Line at 06:30 Hrs on 18.03.2021.	132 kV Ziro- Daporijo Line.
10	GD I	Rabindranagar area of Tripura Power System & Monarchak Power Station	20-Mar-21 11:00	20-Mar-21 11:30	00:30:00	98	6	0.1	0.0	1776	2014	Rabindranagar area of Tripura Power System & Monarchak Power Station were connected with rest of NER Grid through 132 kV Monarchak- Udaipur line and 132 kV Monarchak - Rokhia line. At 11:00 Hrs on 20.03.2021, 132 kV Monarchak- Udaipur line and 132 kV Monarchak - Rokhia line tripped. Due to tripping of these elements, Rabindranagar area of Tripura Power System & Monarchak Power Station were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. Power supply was extended to Monarchak area by charging 132 kV Rokhia - Monarchak T/L and 132 kV Monarchak -Rabindranagar T/L at 11:30 hrs on 20.03.2021	132 kV Monarchak- Udaipur line and 132 kV Monarchak - Rokhia line
11	GD-I	Ningthoukong, Churachandpur, Elangkangpokpi, Kakching & New Moreh areas of Manipur Power System	26-Mar-21 14:05	26-Mar-21 14:16	00:10:26	0	23	0.0	0.0	1439	2113	Ningthoukong, Churachandpur, Elangkangpokpi, Kakching & New Moreh areas of Manipur Power System is connected with rest of NER grid through 132 kV Imphal-Ningthoukong & Loktak-Ningthoukong line. 132 KV Kakching - Thoubal line was under shutdown to avoid overloading of 132 KV Loktak - Ningthoukong line. At 14:05 Hrs on 26.03.21, 132 kV Imphal-Ningthoukong & Loktak-Ningthoukong line tripped. Due to tripping of these elements, Ningthoukong, Churachandpur, Elangkangpokpi, Kakching & New Moreh areas of Manipur Power System were separated from rest of NER Grid and subsequently collapsed due to no source in these areas. Power was extended to Ningthoukong, Churachandpur, Elangkangpokpi, Kakching & New Moreh areas of Manipur Power System by charging 132 kV Imphal-Ningthoukong Line at 14:16 Hrs on 26.03.2021	132 kV Imphal- Ningthoukong Line & 132 kV Loktak- Ningthoukong Line
12	GD-I	Jawaharnagar area of Assam Power System	27-Mar-21 07:43	27-Mar-21 08:05	00:22:00	0	25	0.0	0.0	1046	2168	Jawaharnagar area of Assam Power System is connected with rest of NER grid through 220 kV Jawaharnagar - Sarusajai Line & 220 kV Jawaharnagar - Samaguri Line. At 07:43 Hrs on 27.03.21, 220 kV Jawaharnagar - Sarusajai Line & 220 kV Jawaharnagar - Samaguri Line tripped. Due to tripping of these elements, Jawaharnagar area of Assam Power System was separated from rest of NER Grid and subsequently collapsed due to no source in the area. Power was extended to Jawaharnagar area of Assam Power System by charging 220 kV Jawaharnagar - Sarusajai Line at 08:05 Hrs on 27.03.2021.	220 kV Jawaharnagar - Sarusajai Line & 220 kV Jawaharnagar - Samaguri Line

Details of Grid Events during the Month of March 2021 in North Eastern Region



Sl No.	Category of Grid Event (GI I or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM:SS)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
13	GD-I	Churachandpur, Elangkangpokpi, Kakching & New Moreh areas of Manipur Power System	30-Mar-21 22:37	30-Mar-21 22:41	00:04:00	0	20	0.0	0.0	1617	1530	Churachandpur, Elangkangpokpi, Kakching & New Moreh areas of Manipur Power System is connected with rest of NER grid through 132 kV Ningthoukong - Churachandpur 1 & 2 lines. 132 KV Kakching - Thoubal line was under shutdown to avoid overloading of 132 KV Loktak - Ningthoukong line. At 22:37 Hrs on 30.03.2021, 132 kV Ningthoukong - Churachandpur D/C lines tripped. Due to tripping of these elements, Churachandpur, Elangkangpokpi, Kakching & New Moreh areas of Manipur Power System were separated from rest of NER Grid and subsequently collapsed due to no source in these areas. Power supply was extended to Churachandpur, Elangkangpokpi, Kakching & New Moreh areas of Manipur Power System by charging 132 kV Ningthoukong - Churachandpur 1 & 2 Lines at 22:40 & 22:41 hrs respectively on 30.03.2021.	132 kV Ningthoukong - Churachandpur 1 & 2 Lines
14	GD-I	Khupi & Tenga areas of Arunachal Power System	31-Mar-21 02:10	31-Mar-21 02:35	00:25:00	4	13	0.0	0.0	1476	1276	Khupi & Tenga areas of Arunachal Power System is connected with rest of NER grid through 132 kV Balipara - Tenga line. At 02:10 Hrs on 31.03.2021, 132 kV Balipara - Tenga tripped. Due to tripping of this element, Khupi & Tenga areas of Arunachal Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power was extended to Tenga & Khupi S/S by charging 132 kV Balipara - Tenga Line at 02:35 Hrs on 31.03.2021.	132 KV Balipara - Tenga Line
15	GI-II	AGBPP Unit 6	05-Mar-21 00:30	05-Mar-21 02:30	02:00:00	38	0	0.0	0.0	1415	1590	AGBPP Unit 6 tripped at 00:30 hours on 05-03-21. Revision done from Block No. 11 on 05-03-21	AGBPP Unit 6
16	GI-I	Doyang Unit 3	06-Mar-21 17:56	06-Mar-21 19:30	01:34:00	21	0	0.0	0.0	2340	2465	Doyang Unit 3 tripped at 17:56 hours on 06-03-21. Revision done from Block No. 79 on 06-03-21	Doyang Unit 3
17	GI-II	BgTPP Unit 3	07-Mar-21 14:03	07-Mar-21 15:30	01:27:00	127	0	0.1	0.0	1407	1680	BgTPP Unit 3 tripped at 14:03 hours on 07-03-21. Revision done from Block No. 63 on 07-03-21	BgTPP Unit 3
18	GI-II	AGBPP unit 2	30-Mar-21 14:58	30-Mar-21 15:29	00:31:00	29.9	0	0.0	0.0	1376	1709	AGBPP Unit 2 tripped at 14:58 hours on 30-03-21. Revision done from Block No. 67 on 30-03-21	AGBPP Unit 2
19	GI-I	AGTCCPP unit 4 & 6	30-Mar-21 15:21	30-Mar-21 18:58	03:37:00	34.4	0	0.0	0.0	1368	1786	AGTCCPP Unit 4 & 6 tripped at 15:21 hours on 30-03-21. Revision done from Block No. 69 on 30-03-21	AGTCCPP Unit 4 & 6