

**Details of Grid Events during the Month of July 2021 in Northern 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)	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	GI-2	HARYANA	02-Jul-2021 14:48	02-Jul-2021 17:14	2:26	0	0	0.000	0.000	53329	69760	800 KV HVDC Kurukshetra(PG) Pole 1 & Pole 3 blocked due to DC line fault, Category D protection operated. As per PMU, no fault is observed and fluctuation in voltage is observed. In antecedent condition, 800 KV HVDC Kurukshetra(PG) Pole 1 & Pole 3 carrying total 1500MW.	1) 800 KV HVDC Kurukshetra(PG)-Champa(PG) (PG) Ckt-1 2) 800KV Kurukshetra(PG)-Champa(PG) ckt-3
2	GD-1	UTTARAKHAND	02-Jul-2021 20:21	02-Jul-2021 22:53	2:32	98	0	0.203	0.000	48378	63925	220 KV Tanakpur(NH)-Sitarganj(PG) (PG) Ckt-1 tripped on R-N phase to earth fault, 220 KV Sitarganj(PG)-CBGanj(UP) (PG) Ckt-1 tripped on Y-N phase to earth fault, 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt-1 tripped on R-Y phase to phase fault, Zone-2, distance was 118.5km from CBGanj(UP) and 132 KV Mahendra Nagar(PG)-Tanakpur(NH) (PG) Ckt-1 also tripped. All the lines tripped from remote-end only. At the same time, 31.4 MW Tanakpur HPS - UNIT 1, UNIT 2 & UNIT 3 all tripped on over frequency protection operation. As per PMU, R-N phase to earth fault followed by Y-N phase to earth fault with delayed clearance in 760ms is observed. As per SCADA, generation loss of approx. 98MW is observed at Tanakpur(NH). In antecedent condition, 220 KV Tanakpur(NH)-Sitarganj(PG) (PG) Ckt-1, 220 KV Sitarganj(PG)-CBGanj(UP) (PG) Ckt-1, 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt-1 & 132 KV Mahendra Nagar(PG)-Tanakpur(NH) (PG) Ckt-1 carrying 39MW, 29MW, 12MW & 70MW respectively.	1) 220 KV Tanakpur(NH)-Sitarganj(PG) (PG) Ckt-1 2) 220 KV Sitarganj(PG)-CBGanj(UP) (PG) Ckt-1 3) 220 KV Tanakpur(NH)-CBGanj(UP) (PG) Ckt-1 4) 31.42 MW Tanakpur HPS - UNIT 1 5) 31.4 MW Tanakpur HPS - UNIT 3 6) 31.4 MW Tanakpur HPS - UNIT 2 7) 132 KV Mahendra Nagar(PG)-Tanakpur(NH) (PG) Ckt-1
3	GD-1	HIMACHAL PRADESH	06-Jul-2021 11:44	06-Jul-2021 13:25	1:41	0	400	0.000	0.570	53609	70153	220 KV Nallagarh(PG)-HPSEB(HP) (HPSEB) Ckt-2 tripped on R-N phase to earth fault. Fault occurred due to flashover in R-phase of 220 KV Nallagarh(PG)-HPSEB(HP) (HPSEB) Ckt-2 at Nallagarh(PG) end. Fault distance was 35 meter & fault current was 22kA from Nallagarh(PG) end. At the same time, 220 KV Nallagarh(PG)-HPSEB(HP) (HPSEB) Ckt-1 also tripped on DT received at Nallagarh end. As per PMU, R-N phase to earth fault is observed. As per SCADA, load loss of approx. 400MW is observed in HP control area. In antecedent condition, 220 KV Nallagarh(PG)-HPSEB(HP) (HPSEB) Ckt-1 & Ckt-2 were carrying 212MW & 215MW respectively.	1) 220 KV Nallagarh(PG)-HPSEB(HP) (HPSEB) Ckt-1 2) 220 KV Nallagarh(PG)-HPSEB(HP) (HPSEB) Ckt-2
4	GD-1	NEW DELHI	06-Jul-2021 14:22	06-Jul-2021 16:34	2:12	0	280	0.000	0.398	53885	70337	220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-2 tripped on B-ph differential. Fault current was 3.4kA & fault distance was 11.72km from Narela end. At the same time, 220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-1 also tripped from Mandola end only in 2-2 on R-N fault. As per PMU, R-B phase to phase fault is observed at 14:22:50.440 followed by R-N phase to earth fault at 14:23:53.480. As per SCADA SOE & PMU it seems that, 1st 220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-2 tripped on R-B fault then after approx. 1min 220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-1 tripped on R-N fault. As per SCADA, load loss of approx. 280MW is observed. In antecedent condition, 220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-1 & Ckt-2 were carrying approx. 178MW each.	1) 220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-1 2) 220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-2
5	GD-1	UTTARAKHAND	08-Jul-2021 15:36	08-Jul-2021 16:24	0:48	100	0	0.199	0.000	50183	67553	220 KV Singoli Bhatwari (Singoli (LTUHP))-Srinagar(UK) (PTCU) Ckt-1 & Ckt-2 both tripped on under voltage (Y and B phase) stage 2 protection operated. Y and B ph voltages were in the range of 95kV & 93kV respectively. As per PMU, no fault is observed. As per SCADA, in antecedent condition bus voltages of Singoli Bhatwari were in the range of 220-222kV and generation loss of approx. 100MW is observed on tripping of 33MW three units of Singoli Bhatwari due to tripping of both evacuating lines. In antecedent condition, 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCU) Ckt-1 & Ckt-2 were carrying 52MW each.	1) 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCU) Ckt-1 2) 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCU) Ckt-2
6	GD-1	UTTAR PRADESH	08-Jul-2021 20:49	08-Jul-2021 22:00	1:11	0	150	0.000	0.216	51460	69544	At 20:49 Hrs 765 KV Meerut-Bhiwani (PG) Ckt-1 tripped on R-N fault, fault current was 10.192kA & distance was 45.69km from Meerut end and fault current 5.3kA & distance was 128.24km from Bhiwani end. At 20:50 hrs, 400 KV Meerut-Baghatpat (PG) Ckt-2 tripped on R-B fault, fault currents were 14.2kA, 1b 20kA & distance was 12km from Baghatpat end and fault currents were 9.61kA, 1b 9.68kA & distance was 44.1km from Meerut end. At 20:51 Hrs, 00 KV Baghatpat-Kathal (PG) Ckt-1 & Ckt-2 tripped on R-N & Y-N fault respectively during bad weather condition which also led to tower collapsed. As per PMU, at 20:49 Hrs R-N phase to earth fault with unsuccessful autorecloser is observed, at 20:50 Hrs R-B phase to phase fault is observed with fault current in the range of 5kA and at 20:51hrs R-N & Y-N faults are observed. As per SCADA, load loss of approx. 150MW is observed in UP control area. In antecedent condition, 765 KV Meerut-Bhiwani (PG) Ckt-1, 400 KV Meerut-Baghatpat (PG) Ckt-2, 400 KV Baghatpat-Kathal (PG) Ckt-1 & Ckt-2 were carrying 205MW, 121MW, 52MW & 51MW respectively.	1) 765 KV Meerut-Bhiwani (PG) Ckt-1 2) 400 KV Meerut-Baghatpat (PG) Ckt-2 3) 400 KV Baghatpat-Kathal (PG) Ckt-1 4) 400 KV Baghatpat-Kathal (PG) Ckt-2
7	GD-1	NEW DELHI	09-Jul-2021 10:24	09-Jul-2021 10:45	0:21	0	950	0.000	1.377	54093	68985	While change over of load from Bus D to Bus B while availing shutdown of 220kV Pappankalan-II Ckt-1, 220kV side Y Phase Bushing clamp along with bushing oil monitoring glass of 400/220kV 315MVA ICT-1 got blank, which resulted into tripping of 400/220kV 315MVA ICT-1, 400/220kV 500MVA ICT-2, 400/220kV 500MVA ICT-3 & 400/220kV 315MVA ICT-4 at Bannoli(DV) and all 220kV lines. As per PMU, R/Y/B three phase fault is observed with delayed clearance in 2600ms. As per SCADA, load loss of approx. 950MW is observed. As per SOE, 220kV Bannoli-DIAL-1 & 2 tripped before tripping of ICTs. In antecedent condition, 400/220kV 315MVA ICT-1, 400/220kV 500MVA ICT-2, 400/220kV 500MVA ICT-3 & 400/220kV 315MVA ICT-4 at Bannoli(DV) were carrying 150MW, 221MW, 220MW & 154MW respectively.	1) 400/220 kv 315 MVA ICT 4 at Bannoli(DV) 2) 400/220 kv 500 MVA ICT 2 at Bannoli(DV) 3) 400/220 kv 315 MVA ICT 1 at Bannoli(DV) 4) 400/220 kv 500 MVA ICT 3 at Bannoli(DV)
8	GD-1	NEW DELHI	09-Jul-2021 21:56	09-Jul-2021 22:30	0:34	0	600	0.000	0.836	50977	71783	400/220 kv 315 MVA ICT 1 at Mundka(DV) tripped at 21:56hrs on mal-operation of buchholz relay operation probably due to starting of both side oil pumps. At 21:59 Hrs, 400/220 kv 315 MVA ICT 3 & ICT 4 both tripped on back up over current protection operation at 220kV side. Due to tripping of ICTs, load of Peeragarhi, Wairipur and part load of Najafgarh affected. As per PMU, no fault is observed. As per SCADA, load loss of approx. 600MW is observed in Delhi control area. In antecedent condition, MW loading of 315 MVA ICT 1, ICT 2 & ICT 3 221MW, 336MW & 326MW respectively.	1) 400/220 kv 315 MVA ICT 1 at Mundka(DV) 2) 400/220 kv 315 MVA ICT 3 at Mundka(DV) 3) 400/220 kv 315 MVA ICT 4 at Mundka(DV)
9	GI-2	RAJASTHAN	10-Jul-2021 23:59	11-Jul-2021 01:15	1:16	0	0	0.000	0.000	48680	72139	400 KV Jodhpur-Kankani (RS) Ckt-2 tripped from Jodhpur end only. At the same time, 400 KV Jodhpur-Kankani (RS) Ckt-2 also tripped on R-N fault 1.2s from Jodhpur end and fault current of 4.8km & fault current of 11.05kA. As per PMU, Y-N phase to earth fault is observed with delayed clearance in 440ms. In antecedent condition, 400 KV Jodhpur-Kankani (RS) Ckt-2 & 400 KV Jodhpur-Kankani (RS) Ckt-2 were carrying 34MW & 4MW respectively.	1) 400 KV Bhadla-Jodhpur (RS) Ckt-1 2) 400 KV Jodhpur-Kankani (RS) Ckt-2
10	GI-2	UTTAR PRADESH	11-Jul-2021 07:00	11-Jul-2021 08:24	1:24	0	0	0.000	0.000	44146	59517	800 KV HVDC Agra(PG) Pole-1 & Pole-3 blocked on DC line differential protection operation. As per PMU, no fault is observed & fluctuation in voltage is observed. In antecedent condition, 800 KV HVDC Agra(PG) Pole-1 & Pole-3 were carrying total 1600MW.	1) 800 KV HVDC Agra(PG) Pole-1 2) 800 KV HVDC Agra(PG) Pole-3

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
11	GD-1	UTTRAKHAND	11-Jul-2021 13:32	11-Jul-2021 14:38	1:06	0	80	0.000	0.125	48263	64222	220 KV Khodri(UK)-Majri(HP) (UK) Ckt-1 tripped on R-N phase to earth fault. Fault was in 2-1 from both end, fault distance was 10.79km & fault current was 2.28kA from Majri(HP) end. At the same time, 220 KV Khodri(UK)-Majri(HP) (UK) Ckt-2 also tripped from Khodri(UK) end only. As per PMU, B-N phase to earth fault with delayed clearance in 320ms is observed. As per SCADA, load loss of approx. 80MW is observed. In antecedent condition, 220 KV Khodri(UK)-Majri(HP) (UK) Ckt-1 & Ckt-2 were carrying 42MW & 40MW respectively.	1) 220 KV Khodri(UK)-Majri(HP) (UK) Ckt-1 2) 220 KV Khodri(UK)-Majri(HP) (UK) Ckt-2
12	GD-1	HARYANA	13-Jul-2021 04:58	13-Jul-2021 07:38	2:40	0	650	0.000	1.099	45116	59122	There was a heavy spark between male & female fingers of Bus-1 220KV Samaypur red phase isolator of 400/220KV 500MVA ICT-2 at Badshahpur(PG), 400/220KV 500MVA ICT-2 at Badshahpur(PG) tripped on backup impedance protection operation as bus bar protection of Samaypur S/5 was out of service since 10/06/21 for the recommissioning of the new central unit. At the same time, 400/220KV 500MVA ICT-1, ICT-3 & ICT-4 at Badshahpur(PG) also tripped on backup impedance protection operation, 220KV lines to Faridabad, Badapur & Ballabhgarh also tripped in 2-4. As per PMU, B-N phase to earth fault with delayed clearance in 560ms is observed. As per SCADA, load loss of approx. 650MW is observed in Haryana control area. In antecedent condition, 400/220KV 500MVA ICT-1, ICT-2, ICT-3 & ICT-4 at Badshahpur(PG) were carrying approx. 185MW.	1) 220KV Bus 2 at Samaypur(BB) 2) 220KV Bus 1 at Samaypur(BB) 3) 220 KV Ballabhgarh(BB)-Badapur(NT) (BB) Ckt-1 4) 220 KV Ballabhgarh-Samaypur (BB) Ckt-2 5) 220 KV Faridabad(NT)-Samaypur(BB) (PG) Ckt-2 6) 220 KV Faridabad(NT)-Samaypur(BB) (PG) Ckt-1 7) 220 KV Ballabhgarh-Samaypur (BB) (PG) Ckt-3 8) 220 KV Ballabhgarh-Samaypur (BB) Ckt-1 9) 400/220 kv 500 MVA ICT 2 at Ballabhgarh(PG) 10) 400/220 kv 500 MVA ICT 1 at Ballabhgarh(PG) 11) 400/220 kv 500 MVA ICT 3 at Ballabhgarh(PG) 12) 400/220 kv 500 MVA ICT 4 at Ballabhgarh(PG)
13	GD-1	J & K	14-Jul-2021 07:06	14-Jul-2021 09:04	1:58	0	220	0.000	0.409	42590	53741	R-N phase to earth fault occurred in 13KV Gladni switchyard of JPTCL. Fault current was 1.9kA from Jammu end. Fault occurred due to monkeys climbing on 200/132KV Transformer in Gladni switchyard. During this fault 220 KV Salai(NH)-Jammu(PDD) (PG) Ckt-1, Ckt-2 and 220 KV Samba(PG)-Jammu(PDD) (PG) Ckt-1 tripped on directional earth fault protection operation at Salai & Samba end. As per PMU, R-N phase to earth fault with delayed clearance in 1980ms is observed. Fault was in 132KV switchyard of Gladni and as fault didn't clear from Gladni end, firstly 220 KV Salai(NH)-Jammu(PDD) (PG) Ckt-1 & Ckt-2 tripped but still fault was fed by Samba line. Finally fault cleared after tripping of 220KV Samba-Jammu line from Samba end. As per SCADA, load loss of approx. 220MW is observed in J&K (UT) control area. In antecedent condition, 220 KV Salai(NH)-Jammu(PDD) (PG) Ckt-1, Ckt-2 and 220 KV Samba(PG)-Jammu(PDD) (PG) Ckt-1 were carrying 132MW, 118MW & 42MW respectively.	1) 220 KV Samba(PG)-Jammu(PDD) (PG) Ckt-1 2) 220 KV Salai(NH)-Jammu(PDD) (PG) Ckt-2 3) 220 KV Salai(NH)-Jammu(PDD) (PG) Ckt-1
14	GI-2	UTTAR PRADESH	17-Jul-2021 04:08	17-Jul-2021 06:28	2:20	0	0	0.000	0.000	47942	64872	400KV Bus 1 at Muradnagar_2(UP), 400 KV Muradnagar_2-Mathura (UP) Ckt-1 & 400KV Dadri(NT)-Muradnagar_2(UP) (PG) Ckt-1 all tripped during Y-N fault. Fault current was 3.6kA & fault distance was 67.2km from Mathura(UP) end. As per PMU, Y-N phase to earth fault with delayed clearance in 320ms is observed. In antecedent condition, 400 KV Muradnagar_2-Mathura (UP) Ckt-1 & 400KV Dadri(NT)-Muradnagar_2(UP) (PG) Ckt-1 carrying 39MW & 250MW respectively.	1) 400 KV Muradnagar_2-Mathura (UP) Ckt-1 2) 400KV Bus 1 at Muradnagar_2(UP) 3) 400KV Dadri(NT)-Muradnagar_2(UP) (PG) Ckt-1
15	GD-1	NEW DELHI	17-Jul-2021 11:31	17-Jul-2021 11:38	0:07	0	450	0.000	0.657	53364	68541	At 11:31Hrs 400/220KV 315MVA ICT-1 tripped on Buchholz Relay operation. At the same time, 400/220KV 315MVA ICT-2 tripped on overloading. As per PMU, no fault is observed. As per SCADA, load loss of approx. 450MW is observed in Delhi control area. In antecedent condition, 400/220KV 315MVA ICT-1 & ICT-3 at Munda(DV) were carrying 218MW & 233MW respectively.	1) 400/220 kv 315 MVA ICT 1 at Munda(DV) 2) 400/220 kv 315 MVA ICT 3 at Munda(DV)
16	GD-1	HARYANA	19-Jul-2021 04:15	19-Jul-2021 08:43	4:28	0	360	0.000	0.706	39414	50974	R-B phase to phase fault occurred due to heavy spark in R-ph bus-1 isolator of 220 KV Fatehabad(PG)-Fatehabad(HV) (HVPNL) Ckt-1 and in bus phase bus connecting jumper of bus-1 is observed. Fault was in 2-2 of Fatehabad(PG) end. During this event, 220 KV Hissar(PG)-Fatehabad(HV) (HVPNL) Ckt-1 & Ckt-2 tripped in 2-4 from Fatehabad(HV) end. At the same time, 220 KV Fatehabad(PG)-Fatehabad(HV) (HVPNL) Ckt-1 & Ckt-2 tripped from Fatehabad(PG) end only in 2-2 (7km). As per PMU, R-B phase to phase fault is observed with delayed clearance in 400ms. From PMU & SOE it seems that 220 KV Fatehabad(PG)-Fatehabad(HV) (HVPNL) Ckt-1 & Ckt-2 didn't trip from Fatehabad(HV) end in 2-4 which led to delayed clearance of fault in 2-2 from Fatehabad(PG) end. As per SCADA, load loss of approx. 360MW is observed in Haryana control area.	1) 220 KV Fatehabad(PG)-Fatehabad(HV) (HVPNL) Ckt-1 2) 220 KV Fatehabad(PG)-Fatehabad(HV) (HVPNL) Ckt-2 3) 220 KV Hissar(PG)-Fatehabad(HV) (HVPNL) Ckt-2 4) 220 KV Hissar(PG)-Fatehabad(HV) (HVPNL) Ckt-1
17	GI-2	HARYANA	19-Jul-2021 14:14	19-Jul-2021 15:58	1:44	0	0	0.000	0.000	42725	51807	220 KV Bhiwani-Hissar (BB) Ckt-1, 220 KV Bhiwani-Charkhi Dadri (BB) Ckt-1 & Ckt-3, 220 KV Bhiwani(HV)-Bhiwani(BB) (HVPNL) Ckt-1 & 400/220 kv 500 MVA ICT 1 at Bhiwani(BB) all tripped on Bus bar protection operation of Bus-1. Bus bar operated due to damage of bus bar 1 isolator status selector cable. As per PMU, no fault is observed. In antecedent condition, 400/220 kv 500 MVA ICT 1 at Bhiwani(BB) carrying 230MW.	1) 220 KV Bhiwani-Hissar (BB) Ckt-1 2) 220 KV Bhiwani-Charkhi Dadri (BB) Ckt-3 3) 220 KV Bhiwani(HV)-Bhiwani(BB) (HVPNL) Ckt-1 4) 220KV Bus 1 at Bhiwani(BB) 5) 400/220 kv 500 MVA ICT 1 at Bhiwani(BB) 6) 220 KV Bhiwani-Charkhi Dadri (BB) Ckt-1
18	GD-1	RAJASTHAN	20-Jul-2021 10:25	20-Jul-2021 12:05	1:40	1550	0	3.506	0.000	44210	54168	220 KV Akal-Dangri Ckt-1 & Ckt-2 tripped from Akal end on R-Y phase to phase fault. Fault distance was 174.8meter and fault currents were 17.59kA & 11511.6kA from Akal end. At the same time, 220KV Akal-Bhu Ckt-1 & Ckt-2 and 220KV Akal-Jajja ckt also tripped from remote end only. As per PMU, R-Y phase to phase fault is observed which cleared within 100ms. As per SCADA, wind generation loss of approximately 1550MW is observed. In antecedent condition, 220 KV Akal-Dangri Ckt-1 & Ckt-2, 220KV Akal-Bhu Ckt-1 & Ckt-2 and 220KV Akal-Jajja ckt carrying 165MW, 48MW, 155MW, 168MW & 176MW respectively.	1) 220KV Akal-Dangri (RS) ckt-1 2) 220KV Akal-Dangri (RS) ckt-2 3) 220KV Akal-Bhu (RS) ckt-1 4) 220KV Akal-Bhu (RS) ckt-2 5) 220KV Akal-Jajja (RS) Ckt
19	GD-1	UTTAR PRADESH ; UTTRAKHAND	20-Jul-2021 14:39	20-Jul-2021 16:35	1:56	890	70	2.296	0.143	38768	49040	400KV Alaknanda-Muzaffarnagar Ckt tripped on Y-N phase to earth fault. Fault was in 2-1 from both end, fault current was 2.3kA and distance was 81.89km from Alaknanda end & 111.45km from Muzaffarnagar end. Due to tripping of above line, Alaknanda generation was evacuating from Vishnuprayag - Muzaffarnagar line which resulted into tripping of 400KV Muzaffarnagar(UP)-Vishnuprayag(UP) (UP) Ckt on over current protection operation at Vishnuprayag end. At the same time, 400 KV Alaknanda GVK(UPC)-Vishnuprayag(UP) (UP) Ckt-1, 400KV Alaknanda-Srinagar ckt-1 & Ckt-2 also tripped. Due to tripping of all evacuating lines at the units of Alaknanda HEP, Vishnuprayag HEP & Singoli Bhatwari HEP tripped on over speed protection operation. As per PMU, Y-N phase to earth fault is observed followed by oscillations for about 10 secs. As per SCADA, load loss of approx. 70MW is observed in Uttarakhand control area and hydro generation loss of approx. 345MW, 440MW & 107MW of Alaknanda HEP, Vishnuprayag HEP & Singoli Bhatwari HEP due to tripping of all units. In antecedent condition, 400KV Alaknanda-Muzaffarnagar Ckt, 400KV Alaknanda-Vishnuprayag Ckt & 400KV Vishnuprayag-Muzaffarnagar Ckt were carrying 452MW, 86MW & 349MW respectively.	1) 82.5 MW Alaknanda HEP - UNIT 1 2) 110 MW Vishnuprayag HPS - UNIT 4 3) 110 MW Vishnuprayag HPS - UNIT 1 4) 400 KV Alaknanda GVK(UPC)-Vishnuprayag(UP) (UP) Ckt-1 5) 400 KV Alaknanda GVK(UPC)-Muzaffarnagar (UP) Ckt-1 6) 82.5 MW Alaknanda HEP - UNIT 4 7) 220 KV Singoli Bhatwari(Singoli,TLUHP)-Srinagar(UK) (PTCUL) Ckt-2 8) 110 MW Vishnuprayag HPS - UNIT 3 9) 110 MW Vishnuprayag HPS - UNIT 2 10) 82.5 MW Alaknanda HEP - UNIT 3, 82.5 MW Alaknanda HEP - UNIT 2 11) 220 KV Singoli Bhatwari(Singoli,TLUHP)-Srinagar(UK) (PTCUL) Ckt-1 12) 400KV Muzaffarnagar(UP)-Vishnuprayag(UP) (UP) Ckt-1 13) 33MW Singoli Bhatwari UNIT 1 14) 33MW Singoli Bhatwari UNIT 2 15) 33MW Singoli Bhatwari UNIT 3



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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
20	GD-1	J & K	22-Jul-2021 16:20	22-Jul-2021 17:48	1:28	0	500	0.000	0.944	38445	52993	220 KV Wagoora(PG)-Pampore(PDD) (PG) Ckt-1 & Ckt-2 tripped from Pampore end only on overcurrent protection operation at Pampore end on B-N phase to earth fault. At the same time, 220KV Pampore-Mirbazar (PDD JK) Ckt-1 & Ckt-2 also tripped along with multiple element tripping at 132KV Mirbazar. As per PMU, R-N phase to earth fault with delayed clearance in 480ms is observed. As per SCADA, load loss of approx. 500MW is observed in J&K control area. In antecedent condition, 220 KV Wagoora(PG)-Pampore(PDD) (PG) Ckt-1 & Ckt-2 carrying 207MW & 217MW respectively.	1) 220 KV Wagoora(PG)-Pampore(PDD) (PG) Ckt-1 2) 220 KV Wagoora(PG)-Pampore(PDD) (PG) Ckt-2 3) 220KV Pampore-Mirbazar (PDD JK) Ckt-1 4) 220KV Pampore-Mirbazar (PDD JK) Ckt-2
21	GI-2	RAJASTHAN	22-Jul-2021 17:08	22-Jul-2021 18:12	1:04	0	0	0.000	0.000	38247	52549	400/220 kv 315 MVA ICT 1 & ICT 2 at Bikaner(RS) both tripped on Y-ph over current earth fault protection operation. As per PMU, no fault is observed.	1) 400/220 kv 315 MVA ICT 1 at Bikaner(RS) 2) 400/220 kv 315 MVA ICT 2 at Bikaner(RS)
22	GD-1	UTTAR PRADESH	23-Jul-2021 16:36	23-Jul-2021 17:36	1:00	280	300	0.708	0.555	39545	54075	Flash over was observed in 400/220 kv 315 MVA ICT 3 at Bareilly(UP) which tripped on directional earth fault protection operation. As fault didn't clear, 400/220 kv 315 MVA ICT 1 & ICT-2 at Bareilly(UP) both tripped on over current protection operation. At the same time, 220kv lines to CB Ganj, Dohna, Pilibhit, Dhauliganga & Pithoragarh also tripped. Due to tripping of evacuation lines all units of Dhauliganga also tripped. As per PMU, R-B phase to phase fault is observed with delayed clearance in 280ms. As per SCADA, load loss of approx. 350MW is observed in UP control area & generation loss of 280MW is observed at Dhauliganga HEP. In antecedent condition, 400/220 kv 315 MVA ICT 1, ICT-2 & ICT 3 at Bareilly(UP) were carrying approx. 99MW each.	1) 400/220 kv 315 MVA ICT 1 at Bareilly(UP) 2) 220 KV Pithoragarh(PG)-Bareilly(UP) (PG) Ckt-1 3) 220 KV Dhauliganga(NH)-Pithoragarh(PG) (PG) Ckt-1 4) 220 KV Dhauliganga(NH)-Bareilly(UP) (PG) Ckt-1 5) 400/220 kv 315 MVA ICT 3 at Bareilly(UP) 6) 400/220 kv 315 MVA ICT 2 at Bareilly(UP) 7) 220 KV Paritnagar(UK)-Bareilly(UP) (UP) Ckt-1
23	GD-1	UTTAR PRADESH	23-Jul-2021 16:38	23-Jul-2021 19:33	2:55	0	350	0.000	0.646	39645	54175	OPGW of 220KV Gr.Noida-Noida sec 20 ckt-2 snapped and fell on Y-ph which created Y-N fault. Y-ph got open on distance protection operation. Simultaneously, B-ph also came in contact with snapped OPGW but line didn't trip. Due to this, B-ph isolator of 220KV Gr.Noida-Noida sec 20 ckt-2 damaged and created bus fault which resulted into bus bar protection operation and all 220kv lines connected to Bus-1, 400/220 kv 315 MVA ICT 1 and 400/220 kv 500 MVA ICT 5 at Gr.Noida(UPC) tripped. As per PMU, Y-N phase to earth fault followed by B-N which later converted into R-B fault with delayed clearance in 1200ms. As per SCADA, load loss of approx. 350MW is observed in UP control area. In antecedent condition, 400/220 kv 315 MVA ICT 1 and 400/220 kv 500 MVA ICT 5 were carrying 134MW & 221MW respectively.	1) 400/220 kv 315 MVA ICT 1 at Gr.Noida(UPC) 2) 400/220 kv 500 MVA ICT 5 at Gr.Noida(UPC) 3) 220KV Gr.Noida-Noida sec 20 ckt-1 4) 220KV Gr.Noida-Noida sec 20 ckt-2 5) 220KV Gr.Noida-RC Green ckt-1 6) 220KV Gr.Noida-RC Green ckt-2 7) 220KV Gr.Noida-RC Green ckt-3
24	GD-1	UTTRAKHAND	28-Jul-2021 05:03	28-Jul-2021 05:30	0:27	230	0	0.654	0.000	35160	44336	220 KV AD hydro(AD)-Nallagarh(PG) (ADHPL) Ckt-1 tripped on Y-B phase to phase fault. Fault distance was 133km from Nallagarh and 44.9km (Z-1) from AD Hydro end. At the same time, 220 KV AD hydro(AD)-Phozal(HP) (ADHPL) Ckt-1 & 220 KV Phozal(HP)-Nallagarh(PG) (ADHPL) Ckt-1 tripped on over voltage followed by tripping of 96MW AD Hydro Unit 1 & Unit 2 as no evacuation path was available. As per PMU, Y-B phase to phase fault is observed. As per SCADA, generation loss of approx. 230MW is observed at AD Hydro HEP. In antecedent condition, 220KV AD Hydro - Nallagarh Ckt, 220KV AD Hydro - Phozal ckt and 220KV AD Hydro - Nallagarh Ckt were carrying 139MW, 89MW & 135MW respectively.	1) 220 KV AD hydro(AD)-Nallagarh(PG) (ADHPL) Ckt-1 2) 220 KV Phozal(HP)-Nallagarh(PG) (ADHPL) Ckt-1 3) 220 KV AD hydro(AD)-Phozal(HP) (ADHPL) Ckt-1 4) 96 MW AD hydro - UNIT 1, 96 MW AD hydro - UNIT 2
25	GD-1	UTTRAKHAND	28-Jul-2021 14:38	28-Jul-2021 15:42	1:04	98	90	0.284	0.198	34552	45356	220 KV Singoli Bhatwari-Srinagar Ckt-1 tripped on Y-N phase to phase fault. At the same time, 220 KV Singoli Bhatwari-Srinagar Ckt-2 also tripped on DT received from Srinagar(UK) end. As per PMU, Y-B phase to phase fault is observed. As per SCADA, load loss of approx. 90MW & generation loss of approx. 98MW at Singoli Bhatwari HEP observed. In antecedent condition, 220KV Singoli Bhatwari-Srinagar Ckt-1 & Ckt-2 were carrying 49MW each.	1) 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCLU) Ckt-1 2) 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCLU) Ckt-2 3) 33MW Singoli Bhatwari UNIT 1 4) 33MW Singoli Bhatwari UNIT 2 5) 33MW Singoli Bhatwari UNIT 3
26	GD-1	UTTRAKHAND	29-Jul-2021 16:31	29-Jul-2021 17:31	1:00	197	0	0.550	0.000	35840	46457	Tie CB of unit 1 and 400 kv Alaknanda-Srinagar ckt 1 at Alaknanda end blasted following which 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-1 tripped and DT received at Srinagar end. At the same time, 220 KV Singoli Bhatwari-Srinagar Ckt-2 also tripped on under voltage protection operation followed by tripping of 220KV Singoli Bhatwari-Srinagar Ckt-1. With tripping of both lines at Singoli Bhatwari, all three units tripped on loss of evacuation path. As per PMU, no fault is observed. As per SCADA, generation loss of approx. 107MW at Singoli Bhatwari & 90MW at Alaknanda HEP observed. In antecedent condition, 220KV Singoli Bhatwari - Srinagar Ckt-1 & Ckt-2, 220KV Alaknanda-Srinagar Ckt-1 were carrying 54MW, 54MW & 49MW respectively.	1) 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCLU) Ckt-1 2) 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCLU) Ckt-2 3) 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-1 4) 33MW Singoli Bhatwari UNIT 1 5) 33MW Singoli Bhatwari UNIT 2 6) 33MW Singoli Bhatwari UNIT 3

**Details of Grid Events during the Month of July 2021 in Western 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)	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	GI-2	WR	02-Jul-21 00:28	02-Jul-21 02:31	2:03	-	-	-	-	58813	47695	At 00:28:08.520 Hrs/02-07-2021, 765 kV Dharamjygarh Bus 2 and all the main bays connected & Bus sectionalizer tripped on Bus bar protection operation due to B-phase CT failure of 765 kV Champa 2 main bay. The fault was fed from Champa end and was cleared by Zone 2 DPR operation at Champa end at 00:28:08.880 Hrs. After 1.6 second from the inception of fault, 765 kV Dharamjygarh BR1 & 2 and 765 kV SLR of Jabalpur 2 tripped on Backup impedance protection operation. With these tripping, main and tie bays of 765 kV Jabalpur 1 & Bilaspur 1 tripped at Dharamjygarh end. 765 kV Dharamjygarh-Bilaspur remained in charged condition from Bilaspur end. 765 kV Jabalpur 1 tripped on DT receipt due to Over Voltage stage 1 protection operation at Dharamjygarh end. The reason for the tripping of reactors after bus 2 tripping on Backup impedance protection operation was not known. The Backup impedance protection operation of reactors may be due to non-switching of CVT Voltage from 765 kV Bus 2 to Bus 1 after Bus 2 tripping. As seen from the Bus 2 BB relay DR, differential current of 87.4 kA was observed during the event.	Tripping of 1.765 kV Dharamjygarh Bus 2 2.765 kV Dharamjygarh-Jabalpur 1 3.765 kV Dharamjygarh- Champa 2 4.765 kV Dharamjygarh- Bilaspur 1 5. 765 kV Dharamjygarh BR 1&2 6.765 kV Dharamjygarh-Jabalpur 2 LR at Dharamjygarh
2	GD-1	WR	03-Jul-21 06:09	03-Jul-21 06:30	0:21	9	192	0.02%	0.39%	57193	48892	At 05:19 Hrs/03-07-2021, 220 kV Osmanabad-Barshi line tripped on R-E fault. At the same time, 220 kV Osmanabad- Parli(PG) tripped on Zone 2 distance protection operation from Parli(PG). Due to tripping of 220 kV Parli(PG) – Osmanabad, total power requirement at Osmanabad and downstream was fed through 220 kV Osmanabad-Bale line. There is a 220 kV connection between Osmanabad to Paranda and Paranda is further connected to Barshi. At 06:03 hrs, 132 kV Kajj- Kalamb line tripped on LTS due to high loading in 220 kV Girwali-Yedeswari (536 A). This resulted in high loading on 220 kV Bale Osmanabad (around 200 MW). At 06:09 Hrs, 220 kV Osmanabad- Bale line tripped (line was carrying around 200 MW) on Y-B phase fault resulted in load loss of around 192 MW and wind generation loss of around 9 MW (Wind generation connected at 33 kV side).	Tripping of 1.220 kV Osmanabad- Bale 2.220 kV Osmanabad- Parli(PG) 3.220 kV Osmanabad- Barshi
3	GD-1	WR	03-Jul-21 10:57	03-Jul-21 11:16	0:19	-	370	-	0.71%	61130	51813	At 10:57 Hrs/03-07-2021, At 10:57 hrs, 220 kV Chakan- Chinchwad line tripped due to distance protection operation (Y-B phase fault). At 10:58 hrs 220 kV Urse- Chinchwad line tripped due to distance protection operation (B-E fault) which led to overloading of 220 kV Hinjewadi- Chinchwad and the line tripped due to over current protection operation at 10:58 hrs. With these tripping, total supply to 220 kV Chinchwad S/S was lost.	Tripping of 1.220 kV Chinchwad- Chakan 2.220kV Chinchwad- Urse 3.220 kV Chinchwad- Hinjewadi
4	GD-1	WR	03-Jul-21 22:20	04-Jul-21 07:28	9:08	295.8	-	0.48%	-	62041	49740	At 22:20 Hrs/03-07-2021, R phase CT of 400kV Bhadravati line at Dhariwal end failed and caught fire due to which 400 kV Dhariwal-Parli(PG) line, 400 kV Dhariwal-Bhadravati line along with Dhariwal Unit 2 (connected to ISTS) tripped. Dhariwal Station became dark due to the event.	Tripping of 1.400 kV Dhariwal- Bhadravathi 2.400 kV Dhariwal- Parli(PG) 3.300 MW Dhariwal Unit 2
5	GI-2	WR	04-Jul-21 17:01	04-Jul-21 19:52	2:51	-	-	-	-	57959	50076	At 17:01 Hrs/04-07-21, Y phase CB of 400kV Champa-KSK 3 main bay at Champa s/s blasted and resulted in tripping of 400kV Champa Bus 3 and all elements connected to it. At 17:05 Hrs, 800 kV HVDC Champa- Kurukshetra Pole 3 tripped on valve cooling protection trip on auxiliary supply failure due to faulty output card of change over auxiliary BCU.	Tripping of 1.400 kV Champa Bus 3 2.400 kV Champa- KSK 3 3.800 kV HVDC Champa- Kurukshetra Pole 3
6	GI-1	WR	10-Jul-21 10:15	10-Jul-21 10:20	0:05	-	230	-	0.44%	59415	51875	At 10:15 Hrs/10-07-2021, 220/66 kV Sartanpar ICT 1&2 tripped from LV side during testing of 66 kV Hybrid module at Sartanpur S/S. Due to tripping of these ICTs supply of 12 No. of 66 kV feeders failed which resulted in 230 MW load loss.	Tripping of 1.220/66 kV Sartanpar ICT 1 2.220/66 kV Sartanpar ICT 2
7	GD-1	WR	12-Jul-21 02:58	12-Jul-21 08:49	5:51	33	-	0.05%	-	68227	42797	At 02:58 Hrs/12-07-2021, 220 kV Bhuj-Gadhsisa line tripped on R to B phase fault. Due to the tripping of the only evacuation line for the wind power project, there was a generation loss of 33 MW at Renew Gadhsisa wind power plant connected to Bhuj.	Tripping of 1. 220 kV Bhuj- Gadhsisa
8	GI-1	WR	13-Jul-21 17:59	13-Jul-21 19:59	2:00	54	-	0.10%	-	52933	46442	At 17:59 Hrs/ 13-07-2021, 220/33 kV Vadva ICT 1 tripped on PRV protection operation. There was a generation loss of 54 MW at GIWEL-II wind power plant connected to Bhuj due to the event.	Tripping of 1.220/33 kV Vadva ICT 1

**Details of Grid Events during the Month of July 2021 in Western 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)	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)		
9	GI-1	WR	13-Jul-21 18:00	13-Jul-21 19:52	1:52	36	-	0.07%	-	52810	46325	At 18:00 Hrs/ 13-07-21, 220/33 kV Ostro ICT 2 tripped on B phase Over current protection operation. As reported by site, there was heavy rain and lightning. There was a generation loss of 36 MW at Renew Ostro kutch wind power plant connected to Bhachau due to the event.	Tripping of 1.220/33 kV Ostro ICT 2
10	GD-1	WR	21-Jul-21 16:22	21-Jul-21 16:32	0:10	-	130	-	0.30%	53991	43900	At 16:22 Hrs/ 21-07-2021, 110kV Tivim Ponda-1 line (which was connected to 110kV Bus-II) guarding fell (due to heavy wind and rain) on 33kV Bus-II at Ponda S/s. The Bus-bar differential Protection of 220kV Ponda Bus 1 acted and resulted in tripping of 220kV Mapusa-Ponda, 100MVA 220/110 kV Ponda ICTs 1&2 and 50MVA 220/33 kV Ponda ICT. 220 kV amona-Ponda 2 also tripped at the same time. 220/110 kV 100 MVA ICT 3 tripped on LV side E/F protection operation.	Tripping of 1. 220 kV Ponda Bus 1 2.220 kV Mapusa- Ponda 3.220 kV Amona- Ponda 2 4.220/110 kV 100 MVA Ponda ICTs 1,2&3
11	GI-2	WR	22-Jul-21 02:17	22-Jul-21 13:54	11:37	-	-	-	-	51440	40850	At 02:17 Hrs/22-07-2021, 765/400kV Akola(2) ICT and 765kV Line Reactor of 765 Akola –Ektuni 1 tripped on PRD protection operation due to Water ingress in CCP (Common Control Panel).  400 kV Akola(2)-Akola(MH) 2 tripped on Over Voltage protection operation at Akola(2) at 02:17 Hrs followed by the 765/400 kV ICT tripping.  400 kV Akola(2)- Akola(MH) 1 & 400 kV Akola(2)-RPL 2 tripped on Over Voltage protection operation at Akola(2) s/s at 02:20 Hrs.  400 kV Akola(2)-RPL 1 tripped on Over Voltage protection operation at Akola(2) s/s at 02:22 Hrs.	Tripping of 1.400 kV Akola(2)- Akola(MH) 1&2 2.400 kV Akola(2)- RPL 1&2 3.765/400 kV Akola(2) ICT 4.L/R of 765 Akola –Ektuni 1 at Akola
12	GD-1	WR	29-Jul-21 03:27	29-Jul-21 04:29	1:02	-	46	-	0.12%	50371	39032	At 02:31 Hrs/ 29-07-2021, 400 kV Raita – Jagdalpur tripped on over voltage protection operation at Jagdalpur end. In order to control over voltage at Jagdalpur, the L/R of 400 kV Raita –Jagdalpur at Jagdalpur couldn't be charged as bus reactor due to backup impedance protection operation as intimated by SLDC Chhatisgarh. 220 kV Barsoor – Jagdalpur -1&2 also tripped at 03:22 hrs due to over voltage at Jagdalpur. At 03:27 hrs, 400 kV Kurud – Jagdalpur line tripped due to over voltage at Jagdalpur leading to total supply failure at the substation.	Tripping of 1.400 kV Raita- Jagdalpur 2.220 kV Barsoor- Jagdalpur 1&2 3.400 kV Kurud- Jagdalpur

**Details of Grid Events during the Month of July 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	Ronginchi	14-07-2021 11:27	14-07-2021 13:31	02:04	73	0	0.28%	0.00%	25789	19898	220 kV Rangpo-Ronginchi-2 was under shutdown since 08:15 hrs on 14-07-2021. Power generated at Ronginchi HEP was being evacuated through 220 kV Rangpo-Ronginchi-1 which was the only available connection between Ronginchi HEP and rest of grid. At 11:27 hrs, 220 kV Rangpo-Ronginchi-1 tripped from Ronginchi end only leading to loss of evacuation path for Ronginchi HEP. 220 kV Rangpo-Ronginchi-1 was charged by 13:31 hrs.	220 kV Rangpo- Ronginchi-1
2	GD-1	New Town AA-III	14-07-2021 11:54	14-07-2021 12:37	00:43	0	185	0.00%	0.93%	25412	19984	On 14-07-2021 at 11:54 hrs both buses at 220 kV New Town AA-III S/S tripped due to operation of bus bar protection leading to load loss in New town region and corresponding tripping of associated transmission lines. All lines were restored by 12:37 hrs.	220 kV Bus I & Bus II at Newtown AA III 220 kV New Town AA III-Rajarhat D/C 220 kV New Town AA III-Subhashgram 220 kV New Town AA III-KLC Bantala 2*160 MVA 220/132 kV ICTs at New Town AA III 3*50 MVA 220/33 kV ICTs at New Town AA III
3	GD-1	Ronginchi	15-07-2021 01:38	15-07-2021 02:10	00:32	80	0	0.30%	0.00%	26230	22161	At 01:38 hrs 15-07-2021, 220 kV Rangpo-Ronginchi-1 tripped from Ronginchi end due to overcurrent relay operated. Both running units at Ronginchi HEP tripped due to loss of evacuation path as circuit II was already under shutdown from 08:15 hrs on 14.07.21. 220 kV Rangpo-Ronginchi-1 charged by 02:10 hrs	220 kV Rangpo- Ronginchi-1
4	GD-1	Sonenagar	16-07-2021 19:04	16-07-2021 19:15	00:11	0	157	0.00%	0.71%	28218	22239	At 19:04 hrs 220 kV Chandauti-Sonenagar D/C tripped due to operation of LBB during testing of 220/132 kV ICT-3 at Sonenagar and 220/132 kV Sonenagar S/S became dead. It resulted interruption of power supply to Sonenagar, Aurangabad, Jajla and Nagaruntari (Jharkhand) which was being fed from Sonenagar. All loads were restored by 19:15 hrs.	220 kV Chandauti-Sonenagar D/C 132 kV Sonenagar – Sonenagar (old) D/C
5	GD-1	Bokaro B	18-07-2021 19:37	18-07-2021 20:09	00:32	0	254	0.00%	1.12%	24073	22613	On 18-07-2021 at 19:37 hrs, Bus differential protection of 220 kV Bus 1&2 at Bokaro TPS- B operated. Consequently, 220 kV Bus I & Bus II at Bokaro TPS -B tripped, leading to total power failure at 220/132 kV Bokaro S/S, 220/132 kV Ramgarh, 132 kV Patratu, 132 kV North Karpura. Total 254 MW load loss occurred	220 kV Bus I & Bus II at Bokaro 220 kV Bus coupler at Bokaro 220 kV Bokaro – Chandrapura D/C 220 kV Bokaro – Ramgarh D/C 220 kV Bokaro – Jamshedpur D/C 2*315 MVA 400/220 kV ICTs at Bokaro 150 MVA 220/132 kV ICT I at Bokaro 132 kV Gola-Ramgarh D/C
6	GD-1	Khizisarai	25-07-2021 19:05	25-07-2021 19:20	00:15	0	300	0.00%	1.30%	28030	23091	At 19:05 hrs 220kV Gaya-Khizisarai-1 tripped in Y-Earth fault from Khizisarai end and at the same time 220kV Biharsharif-Khizisarai-D/C tripped in R-Y-Earth fault leading to Khizisarai bus becoming dead. All load restored by 19:20 hrs.	220 kV Gaya-Khizisarai-1 220 kV Khizisarai-Biharsharif D/C
7	GD-1	Rengali HEP	27-07-2021 08:57	27-07-2021 13:35	04:38	178	0	0.70%	0.00%	25288	20478	At 08:57 hrs all feeder connected to Rengali PH tripped along with Units 1, 2, 4 and 5 due to earth fault and overcurrent in the downstream of 33kV system at Rengali PH leading to complete power failure at Rengali PH. All feeder and Unit restored by 13:35Hrs.	Rengali PH unit 1,2,4,5 220kV Rengali PH-TSTPP S/C 220kV Rengali PH-Rengali (OPTCL) D/C 220kV Rengali PH-TTSP S/C
8	GD-1	Parulia	28-07-2021 02:26	28-07-2021 03:08	00:42	0	140	0.00%	0.66%	22808	21097	At 02:20hrs 220 kV Parulia DVC–Durgapur STPS (Andal)-1 tripped in R-Y-Earth fault followed by tripping of 220 kV Parulia DVC-Parulia PG D/C and Parulia DVC –Durgapur STPS (Andal)-2 in Y-Earth fault at 02:26 hrs.220 kV Parulia DVC –Muchi para D/C were already in open condition leading to complete blackout of 220 kV Parulia DVC S/S along with interruption of power supply at DSP (Tamil) affecting power failure at oxygen plant as well. All load restored by 03:08 hrs by charging of 220kV Parulia DVC-Parulia PG D/C.	220 kV Parulia DVC-Parulia PG D/C 220 kV Parulia DVC- Durgapur STPS(Andal) D/C
9	GD-1	Darbhanga	28-07-2021 07:32	28-07-2021 09:37	02:05	0	211	0.00%	1.06%	22974	19841	At 07:32 hrs fire hazard occurred in R-phase bushing of 160MVA ICT-2 at 220kV Darbhanga(BSEB)/S, leading to tripping of 220kV Darbhanga(DMTCL)-Darbhanga(BSEB) D/C leading to load loss of around 220MW in adjoining areas of Madhubani, Pandor and Jaynagar.	220kV Darbhanga(DMTCL)-Darbhanga(BSEB) D/C 220kV Darbhanga(DMTCL)-Mushari D/C
10	GD-1	Sonenagar	31-07-2021 12:13	31-07-2021 12:24	00:11	0	12	0.00%	0.07%	20790	16171	On 31-07-2021 at 12:13 hrs 220 kV Chandauti Sonenagar D/C tripped due to bus bar operation of bus bar 1 at Sonenagar. Both the circuits were connected to bus bar 1 at Sonenagar.	220 kV Chandauti-Sonenagar D/C

**Details of Grid Events during the Month of July 2021 in Southern 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	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	03-Jul-21 14:40	03-Jul-21 17:27	2hr 7mins	0	332	0.00	0.01	44802	45773	Complete outage of 220kV/66kV Kolar SS and Multiple trippings at 220kV/66kV Malur SS and 400/220kV Kolar(IG) of KPTCL. As per the report submitted, triggering incident was flashover of LV side B-phase bushing of 220/66kV Transformer-1 at 220kV/66kV Kolar SS. Immediately, the transformer caught fire , and all the lines connected to Kolar SS were handtripped.	1.220kV-Kolar_KAR - Kolar_AC-1 2. 220kV-Kolar_KAR - Kolar_AC-2 3.220kV Malur Kolar Line-1 4.220kV Malur Kolar Line-3 5. 220kV/66kV Transformer-1 6. 220/66kV Transformer-2
2	GD-1	Tamil Nadu	14-Jul-21 15:32	14-Jul-21 16:22	50mins	735	0	0.02	0.00	38127	35812	Multiple trippings in 400/230kV TTGS and Complete Outage of 230kV/33kV Betam, 230kV/33kV Mytrah, 230kV/33kV Orange and 230kV/33kV/11kV Green Infra Wind Stations : As per the report submitted, triggering incident was tripping of 400kV/230kV ICT#1 at TTGS due to suspected maloperation of Buchholz protection. After the tripping of ICT#1, entire power got shifted to ICT#2 and it got tripped on operation of Over current protection. Due to tripping of both ICTs, there was loss of wind evacuation of 735MW since wind generation is getting evacuated at 400kV/220kV TTGS through 2*500MVA 400kV/230kV ICT#1 and 2 from 4 numbers of Wind Stations namely 230kV/33kV Betam, 230kV/33kV Mytrah, 230kV/33kV Orange and 230kV/33kV/11kV Green Infra (Chandragiri).	1.400/230kV TTGS ICT-1 2.400/230kV TTGS ICT-2
3	GD-1	Andhra Pradesh	18-Jul-21 06:07	18-07-2021 09:11hrs	3hrs 4mins	0	0	0.00	0.00	33532	319485	Complete outage of 220kV/33kV Galiveedu PSS-3 of APSPCL: As per the report submitted, triggering incident was B-N fault in 220kV Galiveedu PSS-2 to Galiveedu PSS-3 Lines 1&2 and both lines got tripped. Since these are the only lines connected to 220kV/33kV Galiveedu PSS-3, this resulted in complete outage of 220kV/33kV Galiveedu PSS-3.	1. 220kV Galiveedu PSS2-Galiveedu PSS-3 Line-1 2. 220kV Galiveedu PSS2-Galiveedu PSS-3 Line-2
4	GD-1	Karnataka	22-Jul-21 15:08	22-Jul-21 15:16	8mins	1400	0	0.04	0.00	39083	34029	Complete outage of 400kV/220kV UPCL and Multiple Trippings in 220kV/11kV Varahi Generating station of KPCL: During antecedent conditions, 220kV UPCL Kemar Line-2 was under maintenance. As per the report submitted, triggering incident was R-N fault in 400kV UPCL Hassan Line-2 and Y-N fault in 400kV UPCL Hassan Line-1. For both lines, at both the ends fault was sensed in zone-1. A/R operated and lines tripped on persistent fault. Tripping of both these lines initiated SPS protection for Unit #2 trip at UPCL. Due to non-availability of 400kV lines, complete generation of UPCL Unit#1 was diverted to 220kV UPCL Kemar line-1 and it got tripped on over current protection. Subsequently, UPCL Unit #1 got tripped on zero power due to outage of all lines. At 220kV Varahi station, tripping of 220kV UPCL Kemar line-1 led to sudden over loading of 220kV Varahi Kemar lines leading to triggering of SPS at Varahi end. Hence all 4 running units of Varahi PH got tripped.	1.400kV UPCL Hassan Line-1 2.400kV UPCL Hassan Line-2 3.UPCL Unit 1,2 4. 220kV UPCL Kemar line-1 5.Varahi Unit 1,2,3&4
5	GD-1	karnataka	26-Jul-21 14:06	26-Jul-21 14:27	21mins	967	157	0.02	0.00	43539	40663	Complete Outage of 220kV/110kV Bagewadi SS, 220kV/110kV Vajramatti SS, 220kV Almatti PH, 220kV/110kV Bagalkot SS, 220kV Baluti SS, 220kV Fortune Five(Greenco) Wind Station, 220kV Atria Wind Station and 220kV/110kV Gadag SS in Karnataka KPTCL: Triggering incident was BN fault in 220kV Vajramatti- Kudagi line -2 due to jumper cut at a distance of 0.88km from Kudgi end. At Vajramatti end, fault was sensed in zone-2 and carrier was received. At Kudgi end, line tripped on operation of Zone-1 distance protection. A/r didn't operate at both the ends. Fault current was 12kA from Kudgi end and 2kA from Vajramatti end. After the tripping of 220kV Vajramatti- Kudagi line -2, 220kV Vajramatti- Kudagi line -1 got overloaded and got tripped only at Kudagi end on operation of over current protection. With these line tripping, there was no evacuating path for RE generation in the complex and Almatti hydro generation through 400kV/220kV Kudgi. Hence RE and Almatti generation got shifted towards Dhoni (through Bagalkot, Gadag), causing further overloading of 220kV Bagalkot Gadag line-1 &2 and 220kV Dhoni Gadag line-1 &2. Subsequently, 220kV Bagalkot Gadag line-1 &2 got tripped only at Bagalkot end on operation of over current protection, 220kV Dhoni Gadag line-1 got tripped only at Gadag end, and 220kV Dhoni Gadag line-2 got tripped only at Dhoni end. These 220kV line trippings resulted in the complete outage 220kV/110kV Bagewadi SS, 220kV/110kV Vajramatti SS, 220kV Almatti PH, 220kV/110kV Bagalkot SS, 220kV Baluti SS, 220kV Fortune Five(Greenco) Wind Station and 220kV/110kV Gadag SS in Karnataka.	1. 220kV Bagalkot Gadag Line-1 2. 220kV Bagalkot Gadag Line-2 3. 220kV Vajramatti Kudgi Line-1 4. 220kV Vajramatti Kudgi Line-2
6	GD-1	karnataka	26-Jul-21 16:25	26-Jul-21 16:39	14mins	320	79	0.01	0.00	41514	40853	Complete Outage of 220kV/110kV Bagewadi SS, 220kV/110kV Vajramatti SS, 220kV Almatti PH, 220kV/110kV Bagalkot SS, 220kV Baluti SS, 220kV Fortune Five(Greenco) Wind Station, 220kV Atria Wind Station and 220kV Gadag SS in Karnataka: Due to outage of 220kV Bagewadi Lingasurur lines and 220kV Vajramatti Kudgi lines during antecedent conditions, RE generation in Bagalkot complex and Almatti hydro generation were getting evacuated only at 400kV/220kV Dhoni SS(through Bagalkot, Gadag). Antecedent flow in 220kV Dhoni Gadag line-1 and 2 were around 210MW each. Triggering incident was tripping of 220kV Dhoni Gadag line-1 and 2 only at Dhoni end on operation of overcurrent protection. Due to loss of evacuating path, this resulted in the complete outage 220kV/110kV Bagewadi SS, 220kV/110kV Vajramatti SS, 220kV Almatti PH, 220kV/110kV Bagalkot SS, 220kV Baluti SS, 220kV Fortune Five(Greenco) Wind Station, 220kV Atria Wind Station and 220kV Gadag SS in Karnataka.	1. 220kV Bagalkot Gadag Line-1 2. 220kV Bagalkot Gadag Line-2
7	GD-1	karnataka	29-Jul-21 13:46	29-Jul-21 13:50	4mins	1028	225	0.02	0.01	46672	44720	Multiple Tripping in 400kV/220kV RTPS, 220kV/110kV Kushtagi SS & 220kV/110kV Sindhanur SS and Complete Outage of 220kV/110kV Lingasurur SS, 220kV/110kV Mallat SS, 220kV/110kV Bagewadi SS, 220kV/110kV Vajramatti SS, 220kV Almatti PH, 220kV/110kV Bagalkot SS, 220kV Baluti SS, 220kV Fortune Five(Greenco) Wind Station, 220kV Atria Wind Station and 220kV/110kV Gadag SS in Karnataka: Triggering incident was YN fault in 220kV RTPS Mallat line at a distance of 0.28km from RTPS end. At both the ends line tripped on operation of Zone-1 distance protection and A/r didn't operate. Fault current was 18kA from RTPS end. At the same time, 220kV Lingasurur RTPS line-1 and line-2 got tripped only at Lingasurur end on operation of Zone-3 distance protection without any time delay and the same needs review. There was no delayed fault clearance from PMU data also. Around 380MW was getting evacuated through Mallat and Lingasurur lines to 400kV/220kV RTPS. Hence, after the tripping of 220kV Lingasurur RTPS line-1 and line 2, 220kV Lingasurur Shapur line got overloaded and tripped only at 220kV Lingasurur end on operation of Overcurrent protection. This further increased loading of 220kV Lingasurur Sindhanur line and the line got tripped on operation of distance protection at Lingasurur end only (1.85ka,1.64ka, 1.51ka). With these line tripping, there was no evacuating path for RE generation in the complex and Almatti PH. Hence RE and Almatti got shifted towards Dhoni (through Bagalkot, Gadag) and Kudgi (through Bagalkot, Vajramatti). Since 220kV Vajramatti Kudgi line-1 and 220kV Dhoni Gadag lines got heavily overloaded due to loss of lingasurur path, this event resulted in complete outage of 220kV/110kV Lingasurur SS, 220kV/110kV Mallat SS, 220kV/110kV Bagewadi SS, 220kV/110kV Vajramatti SS, 220kV Almatti PH, 220kV/110kV Bagalkot SS, 220kV Baluti SS, 220kV Fortune Five(Greenco) Wind Station, 220kV Atria Wind Station and 220kV/110kV Gadag SS in Karnataka. Details are still awaited.	1. 220 kV RTPS - Lingasurur-1 2. 220 kV RTPS - Lingasurur-2 3. 220kV Sindhanur Lingapur Line 4.V Bagalkot Gadag Line-1 5. 220kV Bagalkot Gadag Line-2 6. 220kV Mallat-RTPS Line-1 7. 220kV Lingasurur Shapur 8. 220kV Vajramatti Kudgi Line-1

**Details of Grid Events during the Month of July 2021 in Southern 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	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)		
8	GI-2	Andhra Pradesh	04-Jul-21 18:46	05-Jul-21 01:29	6 hrs 43 mins	0	0	0.00	0.00	33106	35692	Tripping of 400kV Bus-1 of 400kV/V Nellore_PG SS of PGCIL SR-1: As per the report submitted, triggering incident was failure of Y-phase LA of 400 kV Vijayawada Nellore line 1 at Nellore end. At Nellore end, fault was sensed in Zone-1 and at Vijayawada end, fault was sensed in Zone-2 and carrier was received. A/ operated at both the ends and line got tripped due to persistent fault. However, at the same time BBP of Bus-1 at Nellore got operated resulting in the tripping of all the main breakers of Bus-1 due to suspected CT saturation.	1.400 kV Vijayawada Nellore line 1
9	GI-2	Andhra Pradesh	03-Jul-21 16:20	03-Jul-21 17:41	1hr 21mins	0	0	0.00	0.00	41656	43878	Tripping of 400kV Bus-1 of 400kV/220kV Vijayawada SS of PGCIL SR-1:As per the report submitted, triggering incident was maloperation of 400kV bus-1 BBP at 400kV/220kV Vijayawada SS.	1.400kV Vijayawada-Sattenapalli 2.400kV Vijayawada Vemagiri -1
10	GI-2	Karnataka	05-Jul-21 12:07	05-Jul-21 18:32	6hrs 25mins	0	0	0.00	0.00	45691	44238	Tripping of HVDC Talcher Kolar Bipole: HVDC Talcher-Kolar Pole-1 & 2 Blocked simultaneously due to trip initiated by the DC station control due to Non availability of Minimum AC filter.	1.HVDC Talcher-Kolar Pole-1 2.HVDC Talcher-Kolar Pole-2
11	GI-1	Andhra Pradesh	05-Jul-21 23:03	07-Jul-21 02:42	27hrs 39mins	300	0	0.01	0.00	39967	39885	Multiple Trippings in 220kV Lower Sileru PH of APGENCO: As per the information received, all running units at Lower Sileru got tripped due to fire in Battery bank.Immediately 220kV Asupaka - Lower Sileru-1, 220kV KTPS-V Lower Sileru-2, and 220kV Lower Sileru Bommuru lines were hand tripped.	1.220kV-Asupaka - Lower Sileru-1 2.220kV KTPS-V Lower Sileru-2 3.220kV Lower Sileru Bommuru
12	GI-1	Telangana	06-Jul-21 19:09	07-Jul-21 01:25	6hrs 16mins	0	0	0.00	0.00	37857	41999	Tripping of 220kV Bus-1 and Bus-2 of 400kV/220kV Nirmal SS of TSTRANSCO:During antecedent conditions, 220kV Nirmal-Renjal-1(Mupkal) & 220kV Nirmal-Renjal-2(Renjal) feeders were under Line Clearance with its line isolators open and earth switches in closed condition at both ends. Triggering incident was BN fault on 132kV Nirmal-Pochampad feeder. At the same time, LBB of 220kV Nirmal-Renjal-1(Mupkal) & 220kV Nirmal Renjal-2(Renjal) feeders at 400/220kV Nirmal SS maloperated resulting in the tripping of 220kV Bus-1 & 2 at 400kV/220kV Nirmal SS.	1.220kV Nirmal Renjal 2.400kV/220kV Nirmal ICT-1,2&3
13	GI-1	Telangana	16-Jul-21 02:27	16-Jul-21 05:22	2hrs 55mins	160	0	0.00	0.00	34798	31291	Tripping of 220kV Bus-2 of 220kV Lower Sileru PH of APGENCO: During antecedent conditions, there was bus split operation at 220kV Lower Sileru PH. As per the report submitted, triggering incident was B-N fault in 220kV Asupaka Lower Sileru-1 and line got tripped. At the same time BBP operated and all the elements connected to Bus-2 got tripped at 220kV Lower Sileru PH.	1.220kV Asupaka Lower Sileru-1 2.220kV KTPS V Lower Sileru-2
14	GI-2	Andhra Pradesh	16-Jul-21 12:42	16-Jul-21 12:49	7mins	0	0	0.00	0.00	42444	40788	Tripping of 400kV/220kV Bus-4 of 400kV/220kV Kalpakka SS of APTRANSCO: As per the report submitted, at 400kV Kalpakka SS, Bus-4 BBP maloperated and all the elements connected to bus-4 got tripped. At the same time, 400V Gajuwaka Simhadri stage-2 tripped due to DT received at Simhadri end. No fault was observed during the time of tripping from PMU data. Details are awaited	1.400kV Simhadri Kalpakka-2 2.400kV Kalpakka Vemagiri AP-1 3.400kV Kalpakka Asupaka-1 4.400kV Gajuwaka Kalpakka-2 5.400kV Gajuwaka Simhadri stage-2
15	GI-1	Karnataka	26-Jul-21 14:09	26-Jul-21 16:32	2hrs 23mins	72	0	0.00	0.00	43536	41106	Tripping of 220kV Bus-1 and Bus-3 of 220kV Sharavathy Generating Station of KPCL: As per the report submitted, triggering incident was continuous arc in 220kV Sharavathy Sirsi Y-phase isolator. Immediately, it was decided to open the line on emergency basis. While opening the breaker at Sharavathy end, heavy arcing occurred at R-phase jump-clamp connecting to Bus-1 and got broken.Due to heavy differential current in bus, bus bar zone-1 protection operated and all the lines connected to bus-1 and bus-3 got tripped. At the same time, unit#7 tripped on operation of over frequency stage-1 protection.	1.220kV Sharavathy Shimoga -3,4 2.220kV Shimoga Talaguppa-2 3.220kV Shimoga Sirsi-1 4.Unit#6, 7 & 8 at Sharavathi
16	GI-2	Karnataka	28-Jul-21 16:21	28-Jul-21 18:01	1hr 40mins	0	0	0.00	0.00	38408	39958	Tripping of 400kV Bus-2 of 400kV/220kV Bidadi SS of PGCIL SR-2: As per the report submitted, triggering incident was operation of 400kV side ICT#2 Bay Gas density monitor . Immediately BBP operated and all the elements connected to 400kV Bus-2 got tripped at 400kV/220kV Bidadi SS.	1.400kV Bidadi-Somanahalli -2 2.400kV Bidadi - Nelamangala -2 3.400kV Bidadi - Tumkur -2 4.400/220kV ICT-2



**Details of Grid Events during the Month of July 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)		
1	GD-1	Khupi area of Arunachal Pradesh Power System & Dikshi HEP	03-Jul-21 11:11	03/Jul/21 11:26	0:15:00	9	18	0.0	0.0	2521	2065	Khupi area of Arunachal Pradesh Power System & Dikshi HEP of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Balipara - Tenga line. At 11:11 Hrs on 03.07.2021, 132 kV Balipara - Tenga line tripped. Due to tripping of this element, Khupi area of Arunachal Pradesh Power System & Dikshi HEP of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. Power extended to Tenga S/S by charging 132 kV Balipara-Tenga line at 11:26 Hrs and Khupi S/S by charging 132 kV Tenga-Khupi line at 11:38 hrs on 03.07.2021.	132 kV Balipara - Tenga line, 132 kV Tenga- Khupi Line Dikshi HEP Unit 1
2	GD-1	Khupi area of Arunachal Pradesh Power System & Dikshi HEP	03/Jul/21 14:26	03/Jul/21 19:45	5:19:00	9	17	0.0	0.0	2434	1988	Khupi area of Arunachal Pradesh Power System & Dikshi HEP of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Balipara - Tenga line. At 14:26 Hrs on 03.07.2021, 132 kV Balipara - Tenga line tripped. Due to tripping of this element, Khupi area of Arunachal Pradesh Power System & Dikshi HEP of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. Power extended to Tenga S/S by charging 132 kV Balipara-Tenga line at 19:45 Hrs and Khupi S/S by charging 132 kV Tenga-Khupi line at 20:00 hrs on 03.07.2021.	132 kV Balipara - Tenga line, 132 kV Tenga- Khupi Line & Dikshi HEP Unit 1
3	GD-1	North Lakhimpur, Dhemaji and Majuli areas of Assam Power System	10/Jul/21 04:46	10/Jul/21 04:51	0:05:00	0	16	0.0	0.0	2491	2076	North Lakhimpur, Dhemaji and Majuli areas of Assam Power System were connected with the rest of NER Grid through 132 kV Gohpur- North-Lakhimpur D/C lines. At 04:46 Hrs on 10.07.2021, 132 kV Gohpur- North-Lakhimpur D/C lines tripped. Due to tripping of these elements, North Lakhimpur, Dhemaji and Majuli areas of Assam Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. Power extended to 132 kV North-Lakhimpur S/S by charging 132 kV Gohpur- North-Lakhimpur 1 at 04:51 Hrs on 10.07.2021.	132 kV Gohpur- North Lakhimpur D/C, 132 kV North Lakhimpur- Dhemaji S/C 132 kV North Lakhimpur- Majuli S/C lines.
4	GD-1	North Lakhimpur, Dhemaji and Majuli areas of Assam Power System	10/Jul/21 14:16	10/Jul/21 14:33	0:17:00	0	52	0.0	0.0	2623	2334	North Lakhimpur, Dhemaji and Majuli areas of Assam Power System were connected with the rest of NER Grid through 132 kV Gohpur- North-Lakhimpur D/C lines. At 14:16 Hrs on 10.07.2021, 132 kV Gohpur- North-Lakhimpur D/C lines tripped. Due to tripping of these elements, North Lakhimpur, Dhemaji and Majuli areas of Assam Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. Power extended to 132 kV North-Lakhimpur S/S by charging 132 kV Gohpur- North-Lakhimpur 1 at 14:33 Hrs on 10.07.2021.	132 kV Gohpur- North Lakhimpur D/C 132 kV North Lakhimpur- Dhemaji S/C 132 kV North Lakhimpur- Majuli S/C lines.
5	GD-1	Khupi area of Arunachal Pradesh Power System & Dikshi HEP	12/Jul/21 11:27	12/Jul/21 19:05	7:38:00	12	3	0.0	0.0	1855	2370	Khupi area of Arunachal Pradesh Power System & Dikshi HEP of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Balipara - Tenga line. At 11:27 Hrs on 12.07.2021, 132 kV Balipara - Tenga line tripped. Due to tripping of this element, Khupi area of Arunachal Pradesh Power System & Dikshi HEP of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. Power extended to Tenga S/S and subsequently to radially connected Khupi S/S by charging 132 kV Balipara-Tenga line at 19:05 Hrs on 12.07.2021.	132 kV Balipara - Tenga line, 132 kV Tenga- Khupi Line & Dikshi HEP Unit 1 & 2
6	GD-1	Rabindranagar and Udaipur areas of Tripura Power System & Monarchak Power Station	14/Jul/21 11:04	14/Jul/21 14:04	3:00:00	67	25	0.0	0.0	2437	2139	Rabindranagar and Udaipur areas of Tripura Power System & Monarchak Power Station were connected with the rest of NER Grid through 132 kV Palatana-Udaipur line. (132kV Monarchak - Rokhia line & Monarchak STG were under shutdown since 10:22 Hrs) At 11:04 Hrs on 14.07.2021, 132 kV Palatana-Udaipur line tripped. Due to tripping of this element, Rabindranagar and Udaipur areas of Tripura Power System & Monarchak Power Station were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power extended to Monarchak S/S by charging 132 kV Monarchak-Rokhia line at 14:04 Hrs on 14.07.2021 subsequently to 132 kV Udaipur S/S by charging 132 kV Palatana-Udaipur line at 14:07 Hrs	132 kV Palatana - Udaipur line & Monarchak GTG
7	GD-1	Dhaligaon, Gossaigaon and part load of Boranagar areas of Assam Power System	16/Jul/21 09:15	16/Jul/21 09:19	0:04:00	0	52	0.0	0.0	2556	2209	Dhaligaon, Gossaigaon and part load of Boranagar areas of Assam Power System were connected with the rest of NER Grid through 132 kV BTPS-Dhaligaon 1 and 2 lines. 132 kV Gossaigaon-Gauripur line was ideally charged from Gauripur end to avoid O/L of 132 kV BTPS-Kokrajhar line and 132 kV Dhaligaon-Nalbari line was kept open by Assam SLDC due to low loading capability of the line At 09:15 Hrs on 16.07.2021, 132 kV BTPS-Dhaligaon 1 & 2 lines tripped. Due to tripping of these elements, Dhaligaon, Gossaigaon and part load of Boranagar areas of Assam Power System were separated from the rest of NER Grid and subsequently collapsed due to no source in these areas. Power was extended to Dhaligaon area of Assam Power System by charging 132 kV BTPS-Dhaligaon 1 line at 09:19 Hrs on 16.07.2021, subsequently power was extended to Gossaigaon and Boranagar areas of Assam Power System.	132 kV BTPS-Dhaligaon 1 and 2 Lines.
8	GD-1	Pasighat area of Arunachal Pradesh Power System	17/Jul/21 15:24	17/Jul/21 15:40	0:16:00	0	16	0.0	0.0	1974	2268	Pasighat area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Along - Pasighat line. At 15:24 Hrs on 17.07.2021, 132 kV Along - Pasighat line tripped. Due to tripping of this element, Pasighat area of Arunachal Pradesh Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area. Power was extended to 132 kV Pasighat S/S and radially connected S/Ss by charging 132 kV Along - Pasighat line at 15:40 Hrs of 17.07.2021.	132 kV Along - Pasighat line

**Details of Grid Events during the Month of July 2021 in North Eastern 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 (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)		
9	GD-1	Myndu Lesbka HEP of Meghalaya Power System	18/Jul/21 18:03	18/Jul/21 18:53	0:50:00	123	0	0.0	0.0	2846	2401	Myndu Lesbka HEP of Meghalaya Power System was connected to the rest of NER Grid through 132 kV Lesbka - Khliehriat D/C lines. At 18:03 Hrs on 18.07.2021,132 kV Lesbka - Khliehriat D/C lines tripped. Due to tripping of these elements, Myndu Lesbka HEP of Meghalaya Power System consisting of 3 units of Lesbka Generation were separated from the rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power extended to Myndu Lesbka HEP of Meghalaya Power System by charging 132 kV Lesbka - Khliehriat I line at 18:53 Hrs on 18.07.2021	132 kV Lesbka - Khliehriat D/C lines Myndu Lesbka - UNIT 1 Myndu Lesbka - UNIT 2 Myndu Lesbka - UNIT 3
10	GD-1	Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations	20/Jul/21 09:42	20/Jul/21 09:53	0:11:00	0	17	0.0	0.0	2707	2172	Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations were connected to the rest of NER Grid through 132 kV Balipara - Tenga Line. At 09:42 Hrs on 20.07.2021, 132 kV Balipara - Tenga Line tripped. Due to tripping of this element, Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power extended to Tenga S/S and subsequently to radially connected Khupi S/S by charging 132 kV Balipara-Tenga line at 09:53 Hrs on 20.07.2021.	132 kV Balipara - Tenga line
11	GD-1	132 kV Mokokchung (DoP, Nagaland) Area of Nagaland Power System	20/Jul/21 11:45	20/Jul/21 12:16	0:31:00	0	16	0.0	0.0	2129	2406	132 kV Mokokchung (DoP, Nagaland) area of Nagaland Power System was connected to the rest of NER Grid through 132 kV Mokokchung(PG)-Mokokchung(DoP, Nagaland) D/C Lines and 132 kV Doyang-Mokokchung (DoP, Nagaland) Line. At 11:45 Hrs on 20.07.2021, 132 kV Doyang-Mokokchung (DoP, Nagaland) Line and 132 kV Mokokchung(PG)-Mokokchung(DoP, Nagaland) D/C Lines tripped. Due to tripping of these elements, 132 kV Mokokchung (DoP, Nagaland) Area of Nagaland Power System were separated from the rest of NER Grid and subsequently collapsed due to no source in the area.	132 kV Doyang-Mokokchung (DoP, Nagaland), 132 kV Mokokchung(PG)-Mokokchung(DoP, Nagaland)-1, 132 kV Mokokchung(PG)-Mokokchung(DoP, Nagaland)-2
12	GD-1	Pasighat, Roing, Tezu and Namsai Area of Arunachal Pradesh Power System	21/Jul/21 12:46	21/Jul/21 12:57	0:11:00	0	16	0.0	0.0	1986	2445	Pasighat, Roing, Tezu and Namsai Area of Arunachal Pradesh Power System was connected to the rest of NER Grid through 132 kV Along - Pasighat Line. At 12:46 Hrs on 21.07.2021, 132 kV Along - Pasighat Line tripped. Due to tripping of these elements, Pasighat, Roing, Tezu and Namsai Area of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to no source in the area.	132 kV Along - Pasighat Line
13	GD-1	Myndu Lesbka HEP of Meghalaya Power System	22-Jul-21 13:35	22/Jul/21 13:57	0:22:00	48	0	0.0	0.0	2105	2535	Myndu Lesbka HEP of Meghalaya Power System was connected to the rest of NER Grid through 132 kV Lesbka - Khliehriat D/C. At 13:35 Hrs on 22.07.2021,132 kV Lesbka - Khliehriat D/C tripped. Due to tripping of these elements, Myndu Lesbka HEP of Meghalaya Power System consisting of 3 units of Lesbka Generation were separated from the rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power was extended to Myndu Lesbka HEP of Meghalaya Power System by charging 132 kV Lesbka - Khliehriat I at 13:57 Hrs on 22.07.2021	132 kV Lesbka - Khliehriat D/C
14	GD-1	Myndu Lesbka HEP of Meghalaya Power System	22/Jul/21 14:35	22/Jul/21 14:57	0:22:00	42	0	0.0	0.0	2179	2558	Myndu Lesbka HEP of Meghalaya Power System was connected to the rest of NER Grid through 132 kV Lesbka - Khliehriat D/C. At 14:35 Hrs on 22.07.2021,132 kV Lesbka - Khliehriat D/C tripped. Due to tripping of these elements, Myndu Lesbka HEP of Meghalaya Power System consisting of 3 units of Lesbka Generation were separated from the rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power was extended to Myndu Lesbka HEP of Meghalaya Power System by charging 132 kV Lesbka - Khliehriat I at 14:57 Hrs on 22.07.2021	132 kV Lesbka - Khliehriat D/C
15	GD 1	Zuangtui Area of Mizoram Power System	22/Jul/21 16:54	22/Jul/21 17:32	0:38:00	0	35	0.0	0.0	2216	2523	Zuangtui area of Mizoram Power System was connected with the rest of NER Grid through 132 kV Melriat - Zuangtui line.At 16:54 Hrs on 22.07.2021, 132 kV Melriat - Zuangtui line tripped. Due to tripping of this element, Zuangtui area of Mizoram Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area. Power was extended to Zuangtui Area of Mizoram Power System by charging 132 kV Melriat - Zuangtui line at 17:32 Hrs on 22.07.2021	132kV Melriat-Zuangtui line
16	GD 1	Zuangtui Area of Mizoram Power System	22/Jul/21 18:07	22/Jul/21 18:40	0:33:00	0	30	0.0	0.0	2465	2429	Zuangtui area of Mizoram Power System was connected with the rest of NER Grid through 132 kV Melriat - Zuangtui line.At 18:07 Hrs on 22.07.2021, 132 kV Melriat - Zuangtui line tripped. Due to tripping of this element, Zuangtui area of Mizoram Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area. Power was extended to Zuangtui Area of Mizoram Power System by charging 132 kV Melriat - Zuangtui line at 18:40 Hrs on 22.07.2021	132kV Melriat-Zuangtui line
17	GD-1	Umrangshu & Haflong area of Assam Power System	23/Jul/21 12:50	23/Jul/21 15:32	2:42:00	0	14	0.0	0.0	2107	2338	Umrangshu & Haflong area of Assam power system were connected to the rest of NER Grid through 132 kV Khandong - Umrangshu Line. 132 kV Haflong(PG)-Jiribam line was under shutdown since 08:46 Hrs of 22.07.2021. At 12:50 Hrs on 23.07.2021, 132 kV Khandong - Umrangshu Line tripped. Due to tripping of this element, Umrangshu & Haflong area of Assam power system were separated from the rest of NER Grid and subsequently collapsed due to no source in the area. Power was extended by charging 132 kV Khandong - Umrangshu Line at 15:32 Hrs on 23.07.2021.	132 kV Khandong - Umrangshu Line

**Details of Grid Events during the Month of July 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)		
18	GD-1	Tenga, Dikshi & Khupi area of Arunachal Pradesh Power System	23/Jul/21 03:12	23/Jul/21 03:35	0:23:00	0	19	0.0	0.0	2147	2214	Tenga & Khupi area of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Balipara - Tenga line. At 03:12 Hrs on 23.07.2021, 132 kV Balipara - Tenga line tripped. Due to tripping of this element, Tenga & Khupi area of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. Power extended to Tenga S/S and subsequently to radially connected Khupi S/S by charging 132 kV Balipara-Tenga line at 03:35 Hrs on 23.07.2021.	132 kV Balipara - Tenga line
19	GD-1	132 kV Mokokchung (DoP, Nagaland) Area of Nagaland Power System	26/Jul/21 11:12	26/Jul/21 11:46	0:34:00	21	18	0.0	0.0	2067	2337	132 kV Mokokchung (DoP, Nagaland) area of Nagaland Power System was connected to the rest of NER Grid through 132 kV Mokokchung(PG)-Mokokchung(DoP, Nagaland) D/C Lines and 132 kV Doyang-Mokokchung (DoP, Nagaland) Line. At 11:12 Hrs on 26.07.2021, 132 kV Doyang-Mokokchung (DoP, Nagaland) Line and 132 kV Mokokchung(PG)-Mokokchung(DoP, Nagaland) D/C Lines tripped. Due to tripping of these elements, 132 kV Mokokchung (DoP, Nagaland) Area of Nagaland Power System were separated from the rest of NER Grid and subsequently collapsed due to no source in the area. Power was extended to Mokokchung area by charging 132 kV Mokokchung(PG) - Mokokchung(NL) D/C at 11:46 Hrs. of 26.07.2021.	132 kV Doyang-Mokokchung (DoP, Nagaland) line, 132 kV Mokokchung(PG)-Mokokchung(DoP, Nagaland) D/C lines, 66kV Mokokchung - Tuensang Line
20	GD-1	Kohima (Capital) area of Nagaland Power System	27/Jul/21 09:30	27/Jul/21 09:51	0:21:00	0	13	0.0	0.0	2395	2762	Kohima (Capital) area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG)- Kohima line, 132 Kohima -Wokha line & 132 kV Karong -Kohima line (132 kV Kohima-Meluri line was under outage/handripped due to tower on verge of collapse since 13/07/21). At 09:30 Hrs on 27.07.21,132 kV Dimapur(PG)- Kohima line, 132 Kohima -Wokha line & 132 kV Karong -Kohima lines tripped. Due to tripping of these elements, Kohima (Capital) area of Nagaland Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area. Power supply was extended to Kohima area by charging 132 kV Dimapur- Kohima line at 09:51 Hrs of 28/07/21	132 kV Dimapur(PG)- Kohima line, 132 Kohima -Wokha line & 132 kV Karong -Kohima line
21	GD-1	Pasighat, Roing, Tezu and Namsai Area of Arunachal Pradesh Power System	28/Jul/21 11:52	28/Jul/21 11:58	0:06:00	0	17	0.0	0.0	2114	2449	Pasighat, Roing, Tezu and Namsai Area of Arunachal Pradesh Power System were connected to the rest of NER Grid through 132 kV Along - Pasighat Line. At 11:52 Hrs on 28.07.2021, 132 kV Along - Pasighat Line tripped. Due to tripping of these elements, Pasighat, Roing, Tezu and Namsai Area of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to no source in the area. Power was extended to Pasighat, Roing, Tezu and Namsai Area of Arunachal Pradesh Power System by charging 132 kV Along - Pasighat Line at 11:58 Hrs on 28.07.2021.	132 kV Along - Pasighat Line
22	GD-1	Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations	29-Jul-21 03:39	29/Jul/21 03:54	0:15:00	0	15	0.0	0.0	2607	2072	Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations were connected to the rest of NER Grid through 132 kV Balipara - Tenga Line. At 03:39 Hrs on 29.07.2021, 132 kV Balipara - Tenga Line tripped. Due to tripping of this element, Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power extended to Tenga S/S and subsequently to radially connected Khupi S/S by charging 132 kV Balipara-Tenga line at 03:54 Hrs on 29.07.2021.	132 kV Balipara - Tenga line
23	GD-1	Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations	29/Jul/21 10:18	29/Jul/21 15:37	5:19:00	0	18	0.0	0.0	2560	2305	Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations were connected to the rest of NER Grid through 132 kV Balipara - Tenga Line. At 10:18 Hrs on 29.07.2021, 132 kV Balipara - Tenga Line tripped. Due to tripping of this element, Tenga and Khupi areas of Arunachal Pradesh Power System and Dikshi Generating Stations were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. 132 kV Balipara-Tenga line was declared faulty at 11:50 Hrs on 29.07.2021 Power extended to Tenga S/S and subsequently to radially connected Khupi S/S by charging 132 kV Balipara-Tenga line at 15:37 Hrs on 29.07.2021.	132 kV Balipara - Tenga line
24	GD-1	Along Area of Arunachal Pradesh Power System	30/Jul/21 02:05	30/Jul/21 12:23	10:18:00	0	22	0.0	0.0	2500	2290	Along,Pasighat,Roing,Tezu & Namsai Areas of Arunachal Power System was connected with the rest of NER Grid through 132 kV Daporijo-Along line. At 02:05 Hrs on 30.07.2021, 132 kV Daporijo-Along line tripped. Due to tripping of this element, Along and the radially connected Pasighat, Roing, Tezu & Namsai areas of Arunachal Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas. Power was extended to Along,Pasighat,Roing, Tezu & Namsai Areas of Arunachal Power System by charging 132 kV Daporijo-Along line at 12:23 Hrs on 30.07.2021	132 kV Daporijo - Along line
25	GD-1	Leshka Area of Meghalaya Power System	30/Jul/21 16:28	30/Jul/21 16:42	0:14:00	105	0	0.0	0.0	2609	2298	Leshka Power Station of Meghalaya Power System was connected with rest of NER Grid through 132 kV Khleihriat - Leshka D/C lines. At 16:28 hrs of 30.07.2021, 132 kV Khleihriat - Leshka D/C tripped. Due to tripping of these lines, Leshka Power Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch. Power was extended to Leshka HEP by charging 132 kV Khleihriat - Leshka II line at 16:42 Hrs on 30.07.2021	132 kV Khleihriat - Leshka D/C

**Details of Grid Events during the Month of July 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)		
26	GD-1	Zaungtui area of Mizoram Power System	30Jul/21 10:18	30Jul/21 10:28	0:10:00	0	26	0.0	0.0	2644	2175	Zaungtui area of Mizoram Power System was connected with the rest of NER Grid through 132 kV Melriat - Zaungtui line. 132 kV Serchip - Lunglei (Khawiva) line is kept in opened condition to avoid overloading of 132 kV Aizawl - Luangmaal line. At 10:18 Hrs dtd 30.07.2021, 132 kV Melriat - Zaungtui line tripped. Due to tripping of this element, Zaungtui area of Mizoram Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area. Power Supply to Zaungtui area of Mizoram was restored by charging 132 kV Melriat - Zaungtui line at 10:28 Hrs on 30.07.2021	132 kV Melriat - Zaungtui line
27	GD-1	Zaungtui area of Mizoram Power System	30Jul/21 10:46	30Jul/21 11:10	0:24:00	0	27	0.0	0.0	2604	2188	Zaungtui area of Mizoram Power System was connected with the rest of NER Grid through 132 kV Melriat - Zaungtui line. 132 kV Serchip - Lunglei (Khawiva) line is kept in opened condition to avoid overloading of 132 kV Aizawl - Luangmaal line. At 10:46 Hrs dtd 30.07.2021, 132 kV Melriat - Zaungtui line tripped. Due to tripping of this element, Zaungtui area of Mizoram Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area. Power Supply to Zaungtui area of Mizoram was restored by charging 132 kV Melriat - Zaungtui line at 11:10 Hrs on 30.07.2021	132 kV Melriat - Zaungtui line
28	GI-II	Arunachal Pradesh	05Jul/21 17:36	05Jul/21 20:00	2:24:00	115	0	0.0	0.0	2346	2354	Kameng Unit 2 tripped at 17:36 hours on 05-07-21 due to Excitation Control Relay Malfunction. Revision done from Block No. 81 on 05-07-21.	Kameng Unit 2
29	GI-II	Assam	12Jul/21 13:05	12Jul/21 15:00	1:55:00	25	0	0.0	0.0	2125	2707	Khandong Unit 2 tripped at 13:05 hours on 12-07-21 due to rotor earth fault. Revision done from Block No. 61 on 12-07-21.	Khandong Unit 2
30	GI-II	Tripura	21Jul/21 00:38	21Jul/21 02:00	1:22:00	338	0	0.2	0.0	2163	2590	Palatana ST-II & Palatana GT-II tripped at 00:38 hours on 21-07-21 due to operation of over current protection in auxiliary transformer. Revision done from Block No. 9 on 21-07-21.	Palatana ST-II & Palatana GT-II
31	GI-II	Arunachal Pradesh	21Jul/21 14:56	21Jul/21 16:30	1:34:00	128	0	0.1	0.0	2126	2604	Kameng Unit 3 tripped at 14:56 hours on 21-07-21 due to operation of GT PRV. Revision done from Block No. 67 on 21-07-21.	Kameng Unit 3
32	GI-II	Arunachal Pradesh	29Jul/21 16:14	29Jul/21 18:00	1:46:00	152	0	0.1	0.0	2465	2085	Kameng unit 4 tripped at 16:14 hours on 29-07-21 due to Rotor E/F. Revision done from Block No. 73 on 29-07-21.	Kameng unit 4