



Details of Grid Events during the Month of June 2022 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	GD-1	HIMACHAL PRADESH	02-Jun-2022 19:45	02-Jun-2022 20:58	1:13	120	0	0.243	0.000	49439	62775	<p>1.) 220KV Pong(BBMB) substation have double main transfer bus scheme. During antecedent condition, 66MW Unit-385 and 220KV feeders to Baira, Jalandhar-I, Dasuya-II were connected to 220KV bus-1 and 66MW Unit-4 and 220KV feeders to Jasor, Jalandhar-II, Dasuya-IV were connected to 220KV bus-2.</p> <p>2.) At 19:45hrs, Y-Phase CT of UNIT 5 at Pong(BB) damaged, which led to bus bar protection of 220KV bus1 at Pong(BB).</p> <p>3.) Due to tripping of 220KV bus-1, 66MW Unit-385 and 220KV feeders to Baira, Jalandhar-I, Dasuya-II tripped as they were connected to 220KV bus-1 during antecedent condition.</p> <p>4.) At the same time, 220 KV Jalandhar-Pong (BB) Ckt-2 also tripped which was connected to 220KV bus-2.</p> <p>5.) Other elements connected at 220KV bus-2 were remained in service.</p> <p>6.) As per PMU, Y-N phase to earth fault which cleared within 80ms is observed. As per SCADA, change in generation of approx. 120MW is observed at Pong(BBMB).</p>	<p>1) 220 KV Jalandhar-Pong (BB) Ckt-1</p> <p>2) 220 KV Balarasi(NH)-Pong(BB) (PG) Ckt-1</p> <p>3) 220 KV Pong(BB)-Dasuya(PS) (BBMB) Ckt-1</p> <p>4) 220 KV Jalandhar-Pong (BB) Ckt-2</p> <p>5) 66MW Unit-3 at Pong(BBMB)</p> <p>6) 66MW Unit-5 at Pong(BBMB)</p>
2	GD-1	RAJASTHAN	05-Jun-2022 13:03	05-Jun-2022 15:25	2:22	670	500	1.222	0.796	54806	62843	<p>1.) In antecedent condition, 250 MW Suratgarh TPS - UNIT 2, UNIT 4 & UNIT 6, 400/220 kv 315 MVA ICT 1 & ICT 2 at Suratgarh(RVUN) were carrying 175MW, 265MW, 233MW, 197MW & 196MW respectively.</p> <p>2.) As reported, at 13:03 hrs, 250 MW Suratgarh TPS - UNIT 2 along with 400/220 kv 315 MVA ICT 1 & ICT 2 at Suratgarh(RVUN) tripped on over current protection operation.</p> <p>3.) As per the verbal communication with Suratgarh SCTPS, 400/220 kv 315 MVA ICT 2 loading went up to 252MW (602A) which led to tripping of ICT-2 on over current protection operation followed by tripping of ICT-1.</p> <p>4.) With the tripping of 250MW Unit-2 (connected at 220KV bus) and 400/220kv 315MVA ICT-1&2, 220kv side became dead and 6.6kV supply to 250MW Unit-4 & 5 also became dead which led to tripping of 250MW UNIT 4 & UNIT 5.</p> <p>5.) As per PMU, no fault is observed. As per SCADA, change in Suratgarh SCTPS generation of approx. 670MW is observed. As reported by SLDC-RS, load loss of approx. 500MW occurred in Rajasthan control area.</p>	<p>1) 400/220 kv 315 MVA ICT 1 at Suratgarh(RVUN)</p> <p>2) 250 MW Suratgarh TPS - UNIT 5</p> <p>3) 250 MW Suratgarh TPS - UNIT 4</p> <p>4)250 MW Suratgarh TPS - UNIT 2</p> <p>5) 400/220 kv 315 MVA ICT 2 at Suratgarh(RVUN)</p>
3	GD-1	J & K	06-Jun-2022 17:51	06-Jun-2022 19:06	1:15	0	80	0.000	0.129	50264	61990	<p>1.) In antecedent condition, 220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-1 & Ckt-2 and 220 KV Amargah(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-1 & Ckt-2 were carrying 27MW, 19MW, 102MW & 102MW respectively.</p> <p>2.) As reported, at 17:51hrs, 220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-1 tripped on B-N phase to earth fault, fault was in 2.1 km with distance 1.5km & 9.3km from Ziankote end.</p> <p>3.) At the same time, 220 KV Amargah(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-1 tripped from both ends and 220 KV Amargah(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-2 tripped from Ziankote end only.</p> <p>4.) During patrolling, disc string of 220KV Wagoora-Ziankote ckt-1 was found damaged.</p> <p>5.) As per PMU, B-N phase to earth fault which cleared within 120ms is observed. As per SCADA, change in load of approx. 80MW is observed in JK control area.</p>	<p>1) 220 KV Amargah(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-2</p> <p>2) 220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-1</p> <p>3) 220 KV Amargah(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-1</p>
4	GD-1	NEW DELHI	07-Jun-2022 15:59	08-Jun-2022 06:47	14:48	295	750	0.511	1.111	57723	67500	<p>1.) In antecedent condition, CCGT Bawana bus was importing 198 MW from Bahadurgarh and 309 MW from Bhiwani. GT-3 and STG-2 were generating at CCGT and total generation was 300 MW (110-130).</p> <p>2.) Whole of this 800 kW power being fed to 315 MVA ICT-1&4,5 & 6 situated at Bawana(DTL) and further to 220 kv Rohini-1&2, Shalimar Bagh-1&2 and DSID-1&2.</p> <p>3.) The interconnector between Bawana (DTL) and CCGT was open with ICT-2&3 on other section. The corresponding bus sectionalizer at 220 kv level was also open. The interconnector is being kept open to reduce fault level. 400 kv CCGT - Bhiwani and 400 kv CCGT - Bahadurgarh moves on common tower after existing from the CCGT gantry.</p> <p>4.) At 15:59 hrs R - Phase conductor of CCGT - Bhiwani snapped and fell on B-Phase conductor of CCGT - Bahadurgarh thereby causing R-Phase to Earth fault in former line followed by B-phase to earth fault in latter.</p> <p>5.) As per PMU, CCGT-Bhiwani line tripped after unsuccessful A/R operation on persisted fault and followed by tripping of CCGT - Bahadurgarh after 4 secs on B-N fault.</p> <p>6.) Due to tripping of both these lines Import of around 500 MW tripped thereby causing Generation load mismatch at CCGT due to which running GT-3 and STG-2 also tripped on Exhaust temperature high and under frequency operation respectively.</p> <p>7.) As confirmed by SLDC Delhi and DTL all the 220 kv feeders from Bawana (DTL) were running in radial mode therefore as CCGT units tripped the 400 kv bus got dead and load loss of around 750 MW occurred in and around DSIDC, Shalimarbagh and Rohini. DTL also confirmed that these feeders are being run in radial mode (in spite of parallel source being available) in order to reduce fault level.</p> <p>8.) It is also to be noted that no tripping has happened at Bawana (DTL) and all ICTs and 220 kv CBs remained intact and closed. Restoration was carried out by closing 400 kv CCGT - Bawana (DTL) interconnector and extending supply to CCGT bus.</p>	<p>1) 400 kv Bawana CCGT(DTL)-Bahadurgarh(PG) (PG) Ckt-1</p> <p>2) 400 kv Bawana CCGT(DTL)-Bhiwani(PG) (PG) Ckt-1</p> <p>3) 215MW GT-3 at CCGT Bawana</p> <p>4) 254MW STG-2 at CCGT Bawana</p>
5	GD-1	PUNJAB	11-Jun-2022 18:15	11-Jun-2022 19:44	1:29	165	0	0.336	0.000	49047	62691	<p>1. 400/220KV Dehar(BB) have double main single breaker scheme however 400 KV Dehar(BB)-Panchkula(PG) (PG) Ckt & 400 KV Dehar(BB)-Rajpura(PS) (PG) Ckt are connected with both the buses with separate breaker (which also act as bus coupler) just like as double main double breaker scheme.</p> <p>2. During antecedent condition, 165MW Unit-6 at Dehar(BB) was connected to 400KV Bus-1 and generating 165MW & 400/220KV 315MVA ICT at Dehar(BB) was connected to 400KV Bus-2 and carrying 53MW.</p> <p>3. At 18:15hrs, 400 KV Dehar(BB)-Rajpura(PS) (PG) Ckt (carrying 77MW) tripped on R-N phase to earth fault, fault was at distance 95km from Rajpura end. As reported, line successfully autoreclosed from Rajpura end but tripped from Dehar end. At the same time, 400 KV Dehar(BB)-Panchkula(PG) (PG) Ckt (carrying 53MW) also tripped from Dehar end only.</p> <p>4. With the tripping of both these lines, both the buses became decoupled and 165MW Unit-6 at Dehar(BB) tripped due to loss of evacuation path.</p> <p>5. As per PMU, R-N phase to earth fault is observed which cleared within 80ms. As per SCADA, change in generation of approx. 165MW is observed of Dehar(BB).</p>	<p>1) 400 KV Dehar(BB)-Panchkula(PG) (PG) Ckt-1</p> <p>2) 400 KV Dehar(BB)-Rajpura(PS) (PG) Ckt-1</p> <p>3) 165MW Unit-6 at Dehar(BB)</p>
6	GI-2	UTTAR PRADESH	11-Jun-2022 23:00	12-Jun-2022 00:03	1:03	0	0	0.000	0.000	51734	71057	<p>1. 400/220KV Muzaffarnagar(UP) substation have double main transfer bus scheme at both 400KV & 220KV level. During antecedent condition, 400/220 kv 315 MVA ICT 1 & 500 MVA ICT 4 at Muzaffarnagar(UP), 220/132kv 160MVA ICT-2 at Muzaffarnagar(UP), 220KV Muzaffarnagar-Badhakalan ckt & 220KV Muzaffarnagar-Charia ckt were connected to 220KV bus-2 and 400/220 kv 315 MVA ICT 2 & ICT 3 at Muzaffarnagar(UP), 220KV Muzaffarnagar-Shami ckt, 220KV Muzaffarnagar-Modipuram ckt, 220KV Muzaffarnagar-Jansath ckt & 220/132kv 160MVA ICT-1 were connected to 220KV bus-1.</p> <p>2. At 23:00hrs, Y-ph CT of 220KV Muzaffarnagar-Shami ckt damaged and created bus fault. On this fault, bus bar protection of 220KV Bus-1 operated and led to the tripping of elements connected to bus-1. As per PMU, Y-N phase to earth fault is observed which cleared within 80ms.</p> <p>3. At the same time, 400/220 kv 315 MVA ICT 1 & 220/132kv 160MVA ICT-2 at Muzaffarnagar(UP) was hand tripped.</p> <p>4. No load loss reported as sufficient connectivity is available there from other stations.</p>	<p>1) 400/220 kv 315 MVA ICT 3 at Muzaffarnagar(UP)</p> <p>2) 400/220 kv 315 MVA ICT 2 at Muzaffarnagar(UP)</p> <p>3) 400/220 kv 315 MVA ICT 1 at Muzaffarnagar(UP)</p>

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
7	GD-1	PUNJAB	13-Jun-2022 12:18	13-Jun-2022 14:50	2:32	530	0	0.927	0.000	57203	69435	1. 220kV Guru Gobind Singh TPS (Ropar) have double main single breaker bus scheme. Bus 1 is divided into three part (Bus1A, Bus1B, Bus1C) by two bus sectionalizers. 2. During antecedent condition, 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 3, UNIT 4 & UNIT 5 were generating approx. 187MW, 155MW & 151MW respectively. 3. As reported, at 12:18hrs, LBB protection of bus coupler breaker (connected to bus1A & bus2) maloperated which led to the tripping of Bus1A & Bus-2. Due to tripping of aforementioned buses, 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 3, UNIT 4 & UNIT 5 and 220kV lines connected to Bassi Pathana, Ghulal, Gongarh, Goray, Khara, Mohali & Gobio-II tripped. 4. Due to tripping of aforementioned UNITS, generation loss of approx. 530MW is observed (as per SCADA). 5. 220kV bus1B & bus1C were remained in service as Bus coupler and bus sectionaliser opened. 220kV lines to Gobio-I & Jmshr were remained in service via these buses. 6. As per PMU, no fault is observed.	1) 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 5 2) 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 3 3) 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 4
8	GD-1	UTTRAKHAND	15-Jun-2022 10:19	15-Jun-2022 11:59	1:40	140	0	0.239	0.000	58490	70383	1. In antecedent condition, 70MW Dhauliganga Unit-3 & 4, 220kV Dhauliganga-CB Ganj ckt (carrying 110MW) were connected to 220kV Bus-1 at Dhauliganga HEP and 70MW Dhauliganga Unit-1 & 2, 220kV Dhauliganga - Pithoragarh ckt (carrying 167MW) were connected to 220kV Bus-2 at Dhauliganga HEP. 220kV Pithoragarh- Almora ckt was carrying 67MW during antecedent condition. 2. At 10:18:52:990 (as per SOE), 220kV Pithoragarh-CB Ganj ckt was opened to avail shutdown. At the same time, oscillations also observed (as per PMU plot of frequency and voltage at Pithoragarh). 3. With the opening of 220kV Pithoragarh-CB Ganj ckt, MW loading of 220kV Dhauliganga-CB Ganj ckt & 220kV Pithoragarh- Almora ckt rose to 145MW & 137MW respectively (as per SCADA). 4. Further after approx. 15secs, at 10:19:09:1616 (as per SOE), 132kV Pithoragarh- Almora ckt tripped on over current protection (approx. loading during antecedent condition was 137MW (~600A) as per SCADA. As per PMU, no fault is observed. 5. With the tripping of 132kV Pithoragarh- Almora ckt, path of evacuation of Dhauliganga generation from Pithoragarh side lost. 6. Further after approx. 4secs at 10:19:13 (as per SOE), bus coupler breaker at Dhauliganga opened (on SP5 operation) and 70MW Dhauliganga Unit-1 & 2 tripped on loss of evacuation path.	1) 132 KV Pithoragarh(PG)-Almora(PTCLU) (PTCLU) Ckt-1, 2) 70 MW Dhauliganga HPS - UNIT 2 3) 70 MW Dhauliganga HPS - UNIT 1
9	GD-1	J & K	17-Jun-2022 18:27	17-Jun-2022 20:51	2:24	220	0	0.472	0.000	46572	57921	1. 220kV Kishenganga(NHPC) HEP have double main single breaker bus scheme. 2. During antecedent condition, 220 KV Kishenganga(NH)-Wagora(PG) (PG) Ckt-1 (carrying 69MW), 220 KV Kishenganga(NH)-Delina(PDD) (PG) Ckt-2 (carrying 97MW), 110 MW Kishenganga - UNIT 1 & UNIT 2 were connected at 220kV Bus-1 and 220kV Kishenganga(NH)-Wagora(PG) (PG) Ckt-2 (carrying 69MW), 220 KV Kishenganga(NH)-Delina(PDD) (PG) Ckt-1 (carrying 99MW), 110 MW Kishenganga - UNIT 3 were connected at 220kV Bus-2. 3. At 18:27 Hrs, Y-B phase to phase bus fault occurred due to snapping of jumper between isolator and bus-1 of 110 MW Kishenganga - UNIT 1. As per PMU at New Wanpoh, Y-B phase to phase fault is observed which cleared within 80ms. 4. On this bus fault, bus bar protection of 220kV Bus-1 at Kishenganga HEP operated and 220 KV Kishenganga(NH)-Wagora(PG) (PG) Ckt-1, 220 KV Kishenganga(NH)-Delina(PDD) (PG) Ckt-2, 110 MW Kishenganga - UNIT 1 & UNIT 2 all tripped. 5. At the same time, 220 KV Kishenganga(NH)-Wagora(PG) (PG) Ckt-2 which was connected to bus-2 tripped on SOTF protection operation from Main-1 relay (as per telephonic communication with Kishenganga HEP). 6. As per SCADA, generation loss of approx. 220MW is observed due to tripping of 110 MW Kishenganga - UNIT 1 & UNIT 2	1) 220 KV Kishenganga(NH)-Wagora(PG) (PG) Ckt-1 2) 220 KV Kishenganga(NH)-Wagora(PG) (PG) Ckt-2 3) 220 KV Kishenganga(NH)-Delina(PDD) (PG) Ckt-2 4) 110 MW Kishenganga - UNIT 1, 110 MW Kishenganga - UNIT 2
10	GD-1	J & K	18-Jun-2022 15:11	18-Jun-2022 16:01	0:50	0	90	0.000	0.156	50663	57573	1. During antecedent condition, 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-1 & Ckt-2 were carrying 19MW each. 2. At 15:27 hrs, 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-1 tripped on R-N phase to earth fault during inclement weather condition, fault distance was 4.1km & fault current was 4.7kA from Barn end. 3. At the same time, 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-2 also tripped from Barn end only. 4. As reported by SLDC-JK, load loss of approx. 90MW occurred, which was restored by charging 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-2 at 16:01hrs.	1) 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-1 2) 220 KV Kishenpur(PG)-Barn(JK) (PDD JK) Ckt-2
11	GI-2	RAJASTHAN	21-Jun-2022 15:24	21-Jun-2022 17:26	2:02	0	0	0.000	0.000	46244	56639	1. 400/220kV Bikaner(RS) have one and half breaker bus scheme. 2. During antecedent condition, 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1, 400/220 kv 315 MVA ICT 1 & ICT 2 at Bikaner(RS) and 125 MVAR Bus Reactor No 2 at 400KV Bikaner(RS) were connected to 400kV Bus-2 and 400kV lines to Merta, Sikar-ckt-182, Bhadli(PG), SCTPS ckt-1&2 and STPS were connected to 400kV Bus-1. 3. At 15:24 hrs, during wind storm/sand storm, Tower no 91 & 92 of 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1 collapsed followed by blast of R-ph pole of CB of 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1. As per PMU, Y-N phase to earth fault with delayed clearance in 1.000ms followed by R-N fault is observed. 4. As per details received from SDCRS, bus bar protection of bus-2 operated which resulted in tripping of 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1, 400/220 kv 315 MVA ICT 1 & ICT 2 at Bikaner(RS) and 125 MVAR Bus Reactor No 2 at 400KV Bikaner(RS). 5. At the same time, elements connected at 400kV Bus-1 of Bikaner(RS) also tripped on protection operation at remote end and DT received at Bikaner. 6. 400/33 kv 125 MVA ICT 1 at Bikaner RENEW Solar(RENEW) also tripped during same time on LV SEF (stand by earth fault) protection operation.	1) 400 KV Bikaner-Bhadli (RS) Ckt-1 2) 400 KV Bikaner(Sikar)(RS) Ckt-1 3) 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 4) 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1 5) 400 KV Suratgarh SCTPS(RVUN)-Suratgarh(RS) (RS) Ckt-1 6) 400 KV Suratgarh SCTPS(RVUN)-Suratgarh(RS) (RS) Ckt-2 7) 400 KV Suratgarh(RVUN)-Bikaner(RS) (RS) Ckt-1 8) 400 KV Bikaner-Merta (RS) Ckt-1 9) 400/33 kv 125 MVA ICT 1 at Bikaner RENEW Solar(RENEW) 10) 400/220 kv 315 MVA ICT 2 at Bikaner(RS) 11) 125 MVAR Bus Reactor No 2 at 400KV Bikaner(RS) 12) 400/220 kv 315 MVA ICT 1 at Bikaner(RS) 13) 400 KV Suratgarh SCTPS(RVUN)-Bikaner(RS) (RS) Ckt-1 14) 400 KV Suratgarh SCTPS(RVUN)-Bikaner(RS) (RS) Ckt-2 15) 400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-2
12	GD-1	HIMACHAL PRADESH	22-Jun-2022 16:15	22-Jun-2022 16:40	0:25	50	0	0.098	0.000	51064	61003	1. 220kV Ad Hydro -Nallagarh ckt & 220kV Ad Hydro-Phozal ckt are on same tower. 2. During antecedent condition, 96MW MW Unit-1 at Ad Hydro was not running and 96MW Unit-2 was generating around 45MW. 3. At 16:15 hrs, R-N phase to earth fault occurred on 220kV Ad Hydro -Nallagarh ckt at distance around 9.2km from Ad Hydro end. As per PMU, R-N phase to earth fault which cleared within 80ms is observed. 4. At the same time, 220kV Ad Hydro-Phozal ckt also tripped from Phozal end only. As per the information received, Phozal end distance protection relay sensed R-N fault in Z-2 with distance 35km. 5. With the tripping of both the lines, 96MW MW Unit-2 at Ad Hydro tripped due to loss of evacuation path. 6. As per SCADA, change in generation of approx. 50MW is observed at Ad Hydro HEP.	1) 220 KV Ad Hydro(AD)-Nallagarh(PG) (ADHPL) Ckt-1 2) 220 KV Ad Hydro(AD)-Phozal(HP) (ADHPL) Ckt-1

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13	GI-2	RAJASTHAN	22-Jun-2022 17:10	22-Jun-2022 18:32	1:22	0	0		0.000	47977	59061	1. At 17:10:26 hrs, 765 KV Bikaner-Moga (PG) Ckt-2 was manually opened due to high voltage on account of voltage regulation. 2. In antecedent condition, SCADA Bus voltage at 765KV Fatehgarh2, Bhadia, Bhadia2, Bikaner & Ajmer was 818kV, 824kV, 818kV, 829kV & 810kV respectively. 3. With the opening of 765 KV Bikaner-Moga (PG) Ckt-2, rise in voltage by 4-5kV is observed as per PMU which sustained for around 5-6secs. 4. At around 17:10:31hrs, 765 KV Fatehgarh_III(PG)-Bhadia(PG) (FBTL) Ckt-1, 765 KV Bhadia_2 (PG)-Fatehgarh_III(PG) (PFTL) Ckt-1, 765 KV Ajmer-Bhadia_2 (PG) Ckt-1, 765 KV Bhadia-Bikaner (PG) Ckt-1 and 765 KV Bikaner-Moga (PG) Ckt-1 all tripped on over voltage protection operation.	1) 765 KV Bikaner-Moga (PG) Ckt-1 2) 765 KV Bhadia_2 (PG)-Fatehgarh_III(PG) (PFTL) Ckt-1 3) 765 KV Fatehgarh_III(PG)-Bhadia(PG) (FBTL) Ckt-1 4) 65 KV Bhadia-Bikaner (PG) Ckt-1 5) 765 KV Ajmer-Bhadia_2 (PG) Ckt-1
14	GI-2	HARYANA	28-Jun-2022 14:50	28-Jun-2022 16:20	1:30	0	0	0.000	0.000	59609	76263	1. 400/220KV Bhiwani(BB) have double bus double breaker bus scheme. 2. At 14:50hrs, Y-ph CT of 400KV Bhiwani-Hissar ckt bursted at Bhiwani end and caused bus fault. As per PMU, Y-N phase to earth fault which cleared within 80ms. 3. On this bus fault, bus bar protection of Bus-1 operated and resulted into tripping of all the breakers connected to Bus-1 4. At the same time, 400KV Bhiwani(BB)-Bhiwani(PG) ckt tripped on maloperation of LBB protection and 400KV Bhiwani-Rajpura ckt from Rajpura end only on DT received from Bhiwani(BB) end.	1) 400 KV Bhiwani(BB)-Hissar(PG) (PG) Ckt-1 2) 400 KV Bhiwani(PG)-Bhiwani(BB) (PG) Ckt-1 3) 400KV Bus 1 at Bhiwani(BB) 4) 400 KV Bhiwani(BB)-Rajpura(PS) (PG) Ckt-1
15	GD-1	UTTRAKHAND	29-Jun-2022 11:38	29-Jun-2022 11:52	0:14	0	500	0.000	0.692	58677	72293	1. At 11:35 hrs, 220KV Pantnagar-Bareilly ckt-1 was taken under emergency shutdown to attend hotspot. 2. At 11:40 hrs, 400/220KV 315MVA ICT1 & ICT2 at Kashipur tripped on over current earth fault protection operation. As per PMU, no fault is observed. 3. As per SCADA, load loss of approx. 500 MW occurred in Uttarakhand control area. 4. In antecedent condition, 400/220KV 315MVA ICT1 & ICT2 at Kashipur and 220KV Kashipur-Pantnagar were carrying 280MW, 280MW & 43MW respectively	1) 400/220 kv 315 MVA ICT 1 at Kashipur(UK) 2) 400/220 kv 315 MVA ICT 2 at Kashipur(UK)
16	GD-1	RAJASTHAN	29-Jun-2022 15:09	29-Jun-2022 15:52	0:43	820	0	1.377	0.000	59551	73880	1. At 15:09hrs, 220KV Fatehgarh2-Renew Jharkhand3 ckt tripped on B-N fault. As reported, B phase jumper of line, found open at location no-80. As per PMU at Renew Sunwave, B-N phase to earth fault with delayed clearance in 600ms is observed. In antecedent condition, Renew Jharkhand3 was generating approx. 247MW. 2. Further after approx. 120ms (as per SCADA SOE), 220/33KV 150MVA ICT-1 & ICT-2 at Renew Sunwave and 220/33KV 150MVA ICT-2 at Renew Sunbight tripped from LV (33kV) side. In antecedent condition, Renew Sunwave and Renew Sunbight were generating approx. 241MW & 245MW respectively. 3. As per SCADA, solar generation drop of approx. 820MW is observed during the event. (247MW at Renew Jharkhand3, 241MW at Renew Sunwave, 122MW at Renew Sunbight and 245MW at Renew Solaruja. 4. Due to sudden drop in generation of ~820MW, over voltage occurred. On this over voltage, 765 KV Fatehgarh_III(PG)-Bhadia(PG) (FBTL) Ckt-1 tripped on over voltage protection stage-1 operation at Fatehgarh2 end. As per PMU plot of phase voltage at Fatehgarh2, rise in phase voltage of approx. 20kV is observed. Phase voltage rose from 453kV (~785kV line voltage) to 473kV (~820kV line voltage).	1) 765 KV Fatehgarh_III(PG)-Bhadia(PG) (FBTL) Ckt-1 2) 220 KV Fatehgarh_III(PG)-Renew_Jharkhand 3 SL_FGARH_PG (RSE 3PL) (RSE 3PL) Ckt-1

Details of Grid Events during the Month of June 2022 in Western 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)	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	WR	02-Jun-22 18:46	02-Jun-22 21:15	2:29	136	-	0.002	-	68468	58142	At 18:46 Hrs/02-06-2022, 220 kV Bhuj- Baranda tripped on B-E fault at Baranda end only. Generation loss of 136 MW occurred at Baranda (ASIPL) Wind Power station due to loss of evacuation path.	Tripping of 1.220 kV Bhuj- Baranda
2	GD-1	WR	04-Jun-22 02:57	04-Jun-22 05:50	2:53	224	-	0.003	-	68881	58367	At 02:57 Hrs/04-06-2022, 220 kV Bhuj- Gadhsisa tripped on Y-E fault. Generation loss of 224 MW occurred at Gadhsisa (Renew Power) Wind Power station due to loss of evacuation path.	Tripping of 1.220 kV Bhuj- Gadhsisa
3	GI-1	WR	05-Jun-22 04:35	05-Jun-22 07:57	3:22	210	-	0.003	-	67192	57572	At 04:35 Hrs/05-06-2022, 220 kV KAPS 1&2 Bus 2 and all the elements connected to it tripped on Bus bar protection operation due to damaged R phase Isolator of 220 kV Vav 2 line. There was a generation loss of 210 MW due to the event.	Tripping of 1. 220 kV KAPS 1&2 Bus 2 2. 220 kV KAPS 1&2- Vav 2 3. 220 kV KAPS 1&2- Haldarwa 2 4. 220 kV KAPS 1&2- Vapi 2 5. 220 MW KAPS 1&2 Unit 2
4	GD-1	WR	05-Jun-22 04:41	05-Jun-22 08:10	3:29	197	-	0.003	-	67008	57591	At 04:41 Hrs/05-06-2022, 220 kV KAPS 1&2 Bus 1 and all the elements connected to it tripped on Bus bar protection operation due to damage of 220 kV Bus 1 post insulator. With this tripping, 220 kV KAPS 1&2 station became dark. Prior to the event, 220 kV KAPS 1&2 Bus 2 tripped at 04:35 Hrs on BB protection operation. There was a generation loss of 197 MW due to the event.	Tripping of 1. 220 kV KAPS 1&2 Bus 1 2. 220 kV KAPS 1&2- Vav 1 3. 220 kV KAPS 1&2- Haldarwa 1 4. 220 kV KAPS 1&2- Vapi 1 5. 220 MW KAPS 1&2 Unit 1
5	GI-2	WR	05-Jun-22 04:43	05-Jun-22 07:29	2:46	-	-	-	-	66793	57461	At 04:43 Hrs/05-06-2022, 400 kV Veloda Bus 2 and all the elements connected to it tripped on Bus bar protection operation due to flashover of Y phase fly-over insulator string of 400/220 kV Veloda ICT 2. There was no load loss due to the event.	Tripping of 1. 400 kV Veloda Bus 2 2. 400/220 kV Veloda ICT 2 3. 400 kV Veloda- Banaskantha 2 4. 400 kV Veloda- Ranchohpura S/c 5. 400 kV Veloda- Charanka 1
6	GI-2	WR	05-Jun-22 06:18	05-Jun-22 07:29	1:11	-	-	-	-	66429	58697	At 06:18 Hrs/05-06-2022, 400 kV Veloda Bus 1 and all the elements connected to it tripped on Bus bar protection operation due to flashover of 400 kV Bus coupler Y phase fly-over insulator. There was no load loss due to the event.	Tripping of 1. 400 kV Veloda Bus 1 2. 400/220 kV Veloda ICT 1 3. 400 kV Veloda- Banaskantha 1 4. 400 kV Veloda- Kansari S/c 5. 400 kV Veloda- Charanka 2
7	GI-1	WR	09-Jun-22 10:02	09-Jun-22 10:20	0:18	-	250	-	0.004	64316	59418	At 10:02 Hrs/09-06-2022, 220 kV Mapusa- Ponda tripped on B-E fault (connected to 220 kV Ponda Bus 1 & 220 kV Ponda Bus coupler was in open condition). As 220 kV Mapusa- Ponda was the only source connected to 220 kV Bus 1 (220 kV Amona-Ponda 1 which was normally connected to Bus 1 was under planned outage since 08:43 Hrs), load connected to 220 kV Ponda Bus 1 was fed from 110 kV Tivim and resulted in tripping of 220/110 kV Tivim ICTs on Overload. As informed by SLDC Goa, there was a load loss of 250 MW.	Tripping of 1. 220 kV Mapusa- Ponda 2. 220/110 kV Tivim ICTs 1,2&3
8	GD-1	WR	09-Jun-22 20:21	10-Jun-22 18:31	22:10	184	-	0.003	-	69606	57476	At 20:21 Hrs/09-06-2022, 220 kV Bhuj- Naranpar tripped on B-E fault. With this tripping 220 kV Naranpar went dark. There was a generation loss of 184 MW at Naranpar(GIWEL) Wind power station.	Tripping of 1. 220 kV Bhuj – Naranpar
9	GD-1	WR	09-Jun-22 22:50	10-Jun-22 22:44	23:54	145	-	0.002	-	71078	58490	At 22:50 Hrs/09-06-2022, 220 kV Bhuj- Vadva tripped on 86B relay mal-operation at Bhuj end. With this tripping 220 kV Vadava went dark. There was a generation loss of 145 MW at Vadva(GIWEL) Wind power station. Line test charged at 02:51 Hrs/10-06-22 but line tripped again due to 86 B relay operation at Bhuj end.	Tripping of 1. 220 kV Bhuj-Vadva
10	GI-1	WR	11-Jun-22 22:47	11-Jun-22 23:09	0:22	-	239	-	0.004	67664	54921	At 22:47 Hrs/11-06-2022, Y phase PT of 220 kV Gurur Bus 1 blasted and resulted in tripping of all the elements connected to 220 kV Bus 1&2 at Gurur s/s. There was a load loss of 239 MW due to the event.	Tripping of 1. 220 kV Gurur- Bhalai 1&2 2. 220 kV Gurur- Kurud 1&2 3. 220 kV Gurur- Barsoor 4. 220/110 kV Gurur ICTs 1,2&3
11	GD-1	WR	13-Jun-22 13:55	13-Jun-22 15:16	1:21	535	-	0.008	-	67575	57478	At 13:55 Hrs/13-06-2022, while charging of 220kV Bhuj-Ratadiya Line-1 from Bhuj SS, 220 kV Bhuj Bus-1 Section A tripped which led to tripping of 220 kV Bhuj-Vadva, 220 kV Bhuj-Naranpar and 400/220 kV Bhuj ICT-4. At the same time 220 kV Bhuj-Gadhsisa and 220 kV Bhuj-Alfanar tripped, resulting wind generation loss of 535 MW. Prior to the event, 220kV Bhuj-Ratadiya 1 was under emergency outage for attending Hotspot at Ratadiya end.	Tripping of 1. 220 kV Bhuj Bus 1 Section A 2. 220 kV Bhuj- Vadava 3. 220 kV Bhuj- Naranpar 4. 400/220 kV Bhuj ICT 4 5. 220 kV Bhuj- Gadhsisa 6. 220 kV Bhuj- Alfanar

Details of Grid Events during the Month of June 2022 in Western 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)	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)		
12	GD-1	WR	14-Jun-22 19:28	15-Jun-22 17:53	22:25	21	-	0.000	-	69704	56883	At 19:28 Hrs/14-06-2022, 220 kV Bhuj- Naranpar tripped on B-E fault and resulted in generation loss of 21 MW at Naranpar(GIWEL) wind power station.	Tripping of 1. 220 kV Bhuj- Naranpar
13	GI-2	WR	15-Jun-22 23:23	16-Jun-22 00:40	1:17	-	-	-	-	70809	56255	At 23:23 Hrs/15-06-2022, 765 kV Dharamjaygarh Bus 2 and 765 kV Dharamjaygarh- Jharsuguda 1 tripped on BB protection operation due to failure of R phase CT of 733 Main Bay.	Tripping of 1. 765 kV Dharamjaygarh Bus 4 2. 765 kV Dharamjaygarh- Jharsuguda 1
14	GI-1	WR	18-Jun-22 00:38	18-Jun-22 01:57	1:19	167.7	-	0.003	-	64315	55067	At 00:38 Hrs/18-06-2022, 220/33 kV Alfanaar ICTs 1&2 tripped on Neutral Over current protection during the Y phase LA failure of 33 kV Feeder 4. There was a generation loss of 167.7 MW at Nanavalka(Alfanaar) wind power station.	Tripping of 1. 220/33 kV Nanavalka (Alfanaar) ICT 1&2
15	GI-1	WR	19-Jun-22 13:08	19-Jun-22 14:06	0:58	-	499	-	0.010	56882	52208	At 13:08 Hrs/19-06-2022, All Lines & ICTs connected to 220 kV Padghe Bus sections 1&3 along with Bus Coupler tripped due to decapping of Y phase stub bus suspension string above 50 MVA 220/22 kV BHEL T/F Bay. As reported by MSETCL, there was a load loss of 499 MW	Tripping of 1. 400/220 kV Padghe ICTs 1,2,3&5 2. 220/100 kV Padghe ICTs 1,2,3&4 3. 220 kV Padghe Bus sections 1&3 4. 220 kV Padghe- Jhambul 5. 220 kV Padghe- PAL
16	GD-1	WR	22-Jun-22 15:51	22-Jun-22 19:48	3:57	230	700	0.004	0.013	57597	53219	At 15:51 Hrs/22-06-2022, 400 kV Gandhar Bus 2 & 400 kV Gandhar- Hazira 2 tripped on Busbar protection operation due to flashover of R-ph 89A isolator at Gandhar end. Prior to the event, 400 kV Gandhar Hazira 1 tripped at 15:45 Hrs on R-E fault. With these tripping, 400 kV Hazira station went blackout. As informed by AMNSIL, Island failed to separate due to issue in DC system and collapsed due to load-generation imbalance. There was a load loss of 700 MW and captive generation loss of 230 MW at AMNSIL.	Tripping of 1. 400 kV Gandhar Bus 2 2. 400 kV Gandhar- Hazira 1&2
17	GI-2	WR	28-Jun-22 01:12	28-Jun-22 05:12	4:00	-	-	-	-	63943	51003	At 01:12 Hrs/28-06-2022, 400 kV Asoj Buses 1 & 2 on Bus bar protection operation due to snapping of Bph flyover jumper of 400 kV Bus coupler. There was no load loss due to the event.	Tripping of 1. 400 kV Asoj- Chorania 2 2. 400 kV Asoj- Kosamba 3. 400 kV Asoj- SSP 4. 400 kV Asoj- Indore 1&2 5. 400 kV Asoj- Vadodara 1&2 6. 400/220 kV Asoj ICTs 1,2,3&4

Details of Grid Events during the Month of June 2022 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 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)	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	05-Jun-22 19:16	05-Jun-22 20:04	48mins	13	86	0.03%	0.22%	38039	39164	Complete Outage of 220kV/110kV Mahalingapura SS and 220kV/110kV Soudatti SS of KPTEL: During antecedent conditions, 220kV/110kV Soudatti SS was radially fed from 220kV/110kV Mahalingapura SS. At 220kV/110kV Mahalingapura SS, all 220kV elements were connected to 220kV Bus-2. As per the reports submitted, the triggering incident was R-N fault in 220kV Narendra Mahalingapura Line-2. At Mahalingapura end, Y-pole of the breaker failed to open leading to LBB operation. All the elements connected to 220kV Bus-2 tripped. This led to complete outage of 220kV/110kV Mahalingapura SS and 220kV/110kV Soudatti SS.	1. 220kV Mahalingapura Vajramathi Line-1&2 2. 220kV Mahalingapura Athani 3. 220kV Mahalingapura Kuduchi 4. 220kV Mahalingapura Soudatti 5. 220kV Mahalingapura Narendra Line-1&2
2	GD-1	Karnataka	07-Jun-22 13:57	07-Jun-22 14:15	18 mins	0	0	0.00%	0.00%	44753	44607	Complete Outage at 220kV/110kV Haveri SS of KPTEL: In the antecedent condition, all the elements were connected to Bus-2 at 220kV Haveri SS and Bus coupler was in closed condition. As per the reports submitted, the triggering incident was the failure of B phase Bus-1 string insulators. However Bus Bar did not operate at Haveri end. Since Haveri Bus-1 did not clear the fault, this led to the tripping of all the lines connected to Haveri at remote ends and Bus coupler got tripped on EF. This led to the complete outage at 220kV/110kV Haveri SS.	1. 220kV Haveri - Bidal Line 2. 220kV Haveri - Narendra Line 3. 220kV Haveri - Guttur Line-1&2 4. 220kV/110kV 100MVA PT-1&2 at Haveri SS
3	GD-1	Tamil Nadu	08-Jun-22 08:34	08-Jun-22 10:18	1 hrs 44 mins	67	6	0.16%	0.01%	42098	43957	Complete Outage of 400kV/110kV Thappugundu SS of TANTRANSCO: During antecedent conditions, 400kV Anakadavu Thappugundu Line-2 was under outage. As per the reports submitted, triggering incident was R-N fault in 400kV Anakadavu Thappugundu Line-1 and the line got tripped. Tripping of the only connected line resulted in complete outage of 400kV/110kV Thappugundu SS.	1. 400kV Anakadavu Thappugundu Line-1
4	GD-1	Telangana	17-Jun-22 00:53	17-Jun-22 01:49	56 mins	0	0	0.00%	0.00%	35524	38249	Complete Outage of 400kV/11kV Tippapur SS and 400kV/11kV Medaram SS of TSTRANSCO: During antecedent conditions, 400kV Singareni Ramadugu line-2, 400kV Ramadugu-Gajwel line-1, 400kV Medaram Ramadugu line-2, 400kV Tippapur Ramadugu line-2, 400kV Tippapur Ramadugu line-2 and 400kV Tippapur Chandlapur line-1 were under outage. While charging 400kV Singareni Ramadugu line-1 at 00:53 hrs 400kV Ramadugu-Medaram-1, 400kV Ramadugu-Tippapur-1, 400kV Tippapur-Janganon-1 and 400kV Tippapur-Chandlapur-2 tripped on over voltage. Tripping of all connected lines resulted in complete outage of 400kV/11kV Tippapur SS and 400kV/11kV Medaram SS.	1. 400kV Ramadugu Tippapur-1 2. 400kV Medaram Ramadugu-1 3. 400kV Tippapur Chandlapur-2 4. 400kV Jaganon Tippapur-1
5	GD-1	Andhra Pradesh	18-Jun-22 12:38	18-Jun-22 13:01	23 mins	0	220	0.00%	0.50%	39671	43672	Complete Outage of 220kV/132kV Nellore AP SS of APTANSCO: As per the reports submitted, the triggering incident was Y-N fault in 220kV Manubolu Nellore Line-3. At both ends, A/R initiated and Y-pole opened. After 400ms, the relay could still sense the current in Y-phase and LBB operated. All the elements connected to 220kV Bus tripped. Since 220kV Nellore AP SS was under single bus operation, this led to complete outage of 220kV/132kV Nellore AP SS.	1. 220kV Nellore_AP-Manubolu-1,2 and 3 2. 220kV Nellore_AP-Atmakur-1 and 2 3. 220kV Nellore_AP-Rachalapadu 4. 220/132kV 160 MVA Nellore_AP ICT-1,2 and 3
6	GD-1	Tamil Nadu	21-Jun-22 14:53	21-Jun-22 15:16	23 mins	277	120	0.64%	0.29%	43492	40691	Complete Outage of 230kV/110kV Theni SS of TANTRANSCO: As per the reports submitted, the triggering incident was LV side insulator failure of 230kV/110kV Auto Transformer-2 at Theni SS. Immediately, LBB operated and all the elements connected to 230kV Bus tripped. Since 230kV Theni SS was under single bus operation. This resulted in complete outage of 230kV/110kV Theni SS.	1. 230 kV Theni-Sabarigiri 2. 230 kV Theni-Sembatty 3. 230kV Theni-Chikanoori 4. 230kV/110kV Auto Transformer-1,2&3
7	GD-1	Telangana	21-Jun-22 19:34	21-Jun-22 21:14	1 hrs 40 mins	0	150	0.00%	0.36%	40171	42121	Complete Outage of 220kV/132kV Medchal SS of TSTRANSCO: As per the reports submitted, the triggering incident was 220kV BBP operation at 220kV/132kV Medchal SS and all the elements connected to bus bar tripped. Since 220kV Medchal was under single bus operation, this resulted in complete outage of 220kV/132kV Medchal SS.	1. 220kV Medchal-Gjwel Line-1&2 2. 220kV Medchal-Malkaram Line-1&2 3. 220/132kV Auto Transformer-1,2&3
8	GD-1	Andhra Pradesh	24-Jun-22 02:41	24-Jun-22 15:46	13 hrs 5 mins	0	0	0.00%	0.00%	37673	36109	Complete Outage of 400kV RYTPP Generating Station of APGENCO: During antecedent conditions, 400kV Kalkiri RYTPP Line-2 was under outage. The triggering incident was tripping of 400kV Kalkiri RYTPP Line-1 on over voltage stage-1 protection at RYTPP end and DT was received at Kalkiri end. Since both lines connected to RYTPP got tripped, this resulted in complete outage of 400kV RYTPP generating station. There was no generation in RYTPP during this event.	1. 400kV Kalkiri RYTPP Line-1
9	GD-1	Kerala	25-Jun-22 05:46	25-Jun-22 07:34	1 hrs 48 mins	0	404	0.00%	1.09%	37954	37164	Complete Outage of 220kV/110kV/11kV Areacode SS, 220kV/110kV/11kV Kanhirode SS, 220kV/110kV/11kV Orkattery, 220kV/110kV/33kV Taliparamba SS, 220kV/110kV/11kV Mylatty SS and 220kV/110kV Ambalathara SS of KSEB: As per the reports submitted, the triggering incident was Earth wire snapping and falling on 220kV Bus-1 and Bus-2 at 220kV/110kV/11kV Areacode SS. 220kV Bus-1 and Bus-2 BBP operated and all the elements connected to the Buses tripped resulting in complete outage of 220kV/110kV/11kV Areacode SS. Because of radial connection, this also resulted in complete outage of 220kV/110kV/11kV Kanhirode SS, 220kV/110kV/11kV Orkattery, 220kV/110kV/33kV Taliparamba SS, 220kV/110kV/11kV Mylatty SS and 220kV/110kV Ambalathara SS.	1. 220kV Areakode-Kothikode line-1,2&3 2. 220kV Areakode-Nallam line-1&2 3. 220kV Areakode-Orakkeri 4. 220kV Areakode-Kanhirode 5. 220kV Areakode-Elinkur 6. 220kV Areakode-Shoranur 7. 220kV Areakode-Kumamangalam 8. 220/110kV ICT at Areacode
10	GI-2	Andhra Pradesh	02-Jun-22 03:49	02-Jun-22 12:27	8 hrs 38 mins	0	0	0.00%	0.00%	40799	39209	Tripping of 400kV Bus-3 of 400kV/220kV Kalpakka SS of APTRANSCO: As per the reports submitted, 400kV Bus-3 B-phase differential protection operated at Kalpakka SS due to B-phase isolator failure. Immediately, BBP operated and all the elements connected to 400kV Bus-3 got tripped at 400kV/220kV Kalpakka SS.	1. 400kV Simhadri Kalpakka-2 2. 220kV Mywadi Sembatty 3. 400kV Gajuwaka Kalpakka-1 4. 400kV Kalpakka Vemagiri-1
11	GI-1	Tamil Nadu	02-Jun-22 11:45	02-Jun-22 12:10	25 mins	0	0	0.00%	0.00%	49693	48449	Tripping of 230kV Bus of 230kV/110kV Sembatty SS of TANTRANSCO: 230kV/110kV Sembatty SS has single Bus configuration at 230kV level. As per the reports submitted, the triggering incident was B-N fault in 230kV Mywadi Sembatty line. At Mywadi end, fault was sensed in zone-1, A/R operated and line tripped on persistent fault. At Sembatty end, fault was sensed in zone-1, B-pole got opened and A/R initiated. B-phase current was observed even after opening the pole, LBB operated and all the elements connected to 230kV Bus tripped. This resulted in tripping of 230kV Bus of 230kV/110kV Sembatty SS. 110kV Bus was intact during the event.	1. 230kV Sembatty Checkanurani 2. 230kV Mywadi Sembatty 3. 230kV Sembatty Karakudi_PG 4. 230kV Sembatty Theni 5. 230kV/110kV Auto Transformer-1,2&3 at Sembatty

Details of Grid Events during the Month of June 2022 in Southern 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	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)	Name of Elements (Tripped/Manually opened)
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
12	GI-2	Andhra Pradesh	09-Jun-22 16:20	09-Jun-22 18:56	2 hrs 36 mins	0	0	0.00%	0.00%	48223	47781	Tripping of 400kV Bus-3 of 400kV/220kV Kalpakka SS of APTRANSCO. As per the reports submitted, triggering incident was Bus-3 Y-phase CT failure in Bus sectionalizer connecting Bus-3 and Bus-1. Immediately, BBP operated and all the elements connected to 400kV Bus-3 got tripped at 400kV/220kV Kalpakka SS.	1. 400kV/220kV Kalpakka ICT-3 2. 400kV Gajuwaka Kalpakka-1 3. 400kV Simhadri Kalpakka-2
13	GI-2	Karnataka	15-Jun-22 17:56	15-Jun-22 18:21	25 mins	0	0	0.00%	0.00%	37857	41935	Tripping of 400kV Bus-1 at 400kV/220kV Nelamangala SS of KPTCL: In the antecedent conditions due to link rod cut in the limb to R-ph Breaker of 400kV Nelamangala-Hassan line the limb was closed without opening. With the closing of isolator for preparatory works, voltage was observed only in the R-phase limb for 400kV Nelamangala-Hassan feeder. As per the reports submitted, the triggering incident was the closing of 400kV Nelamangala-Talaguppa line at Nelamangala end after which a fault current was observed feeding 400kV Nelamangala-Hassan feeder for 1 min 30 sec of a magnitude of around 3kA in R-phase. As the fault was being fed for 1min and 30 sec, 400/220kV ICT-2 at Nelamangala tripped on operation of backup Earth fault protection, 400kV Nelamangala-Bidadi-1 and 2, 400kV Nelamangala-Devanahalli and 400kV Yelahanka-Nelamangala tripped on directional earth fault at Bidadi, Devanahalli and Yelahanka ends respectively. At the same time, LBB of 400kV Mysore Nelamangala line-2 maloperated at Nelamangala end causing tripping of 400kV Bus-1 at Nelamangala SS.	1. 400/220kV Nelamangala ICT-3 2. 400 kV Nelamangala - Bidadi-1 and 2 3. 400 kV Nelamangala - Hiriyur -2 4. 400 kV Nelamangala - Mysore -1 and 2 5. 400kV Nelamangala - Devanahalli-1 6. 400 kV Gooty - Nelamangala 7. 400 kV Hassan - Nelamangala 1 8. 400kV Yelahanka Nelamangala
14	GI-2	Karnataka	17-Jun-22 16:51	17-Jun-22 18:53	2 hrs 02 min	0	0	0.00%	0.00%	39465	44264	Tripping of 400kV Bus-2 at 400kV/220kV Guttur SS of KPTCL: As per the reports submitted, the triggering incident was the maloperation of Zone 2 Bus Bar protection operation in 400kV Bus-2 at 400kV/220kV Guttur SS. Immediately, all the elements connected to the Bus-2 tripped.	1. 400kV Dhoni Guttur- 1 2. 400 kV Kaiga - Guttur-2 3. 400 kV Guttur - Narendra-2 4. 400kV/220kV Guttur ICT-2

Details of Grid Events during the Month of June 2022 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
	(G1 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	Atri	14-06-2022 14:57	14-06-2022 15:50	00:53	0	100	0.00%	0.41%	28416	24370	At 14:57 Hrs, 220 kV Bus-1 & 2 at Atri tripped. As informed, switchyard lighting cable snapped and fell on 220 kV Bus-2 at Atri. Both 220 kV Buses tripped and total power failure occurred at Atri S/s. Around 100 MW load loss at Atri, banki and khurda reported by Odisha SLDC	220 kV Bus-1 & 2 at Atri 220 kV Atri-Pandiabili-D/c 220 kV Atri-Narendrapur D/c 220 kV Mendhasal-Atri-1
2	GD-1	Chatra	17-06-2022 11:36	17-06-2022 14:00	02:24	0	20	0.00%	0.09%	27946	21740	At 11:36 Hrs, 220 kV Daltonganj-Chatra D/c tripped due to R_N fault leading to total power failure at 220/132 kV Chatra S/s. Load loss of 20 MW reported during the event by Jharkhand SLDC. Inclement weather reported at Daltonganj and Chatra.	220 kV Daltonganj-Chatra D/c
3	GD-1	Chatra	18-06-2022 09:05	18-06-2022 09:55	00:50	0	15	0.00%	0.07%	27326	20764	At 09:05 Hrs, 220 kV Daltonganj-Chatra D/c tripped due to B_N fault leading to total power failure at 220/132 kV Chatra S/s. Load loss of 15 MW reported during the event by Jharkhand SLDC. Inclement weather reported during the event at Daltonganj and Chatra.	220 kV Daltonganj-Chatra D/c
4	GD-1	Meramundali	20-06-2022 16:31	20-06-2022 17:10	00:39	890	15	3.30%	0.07%	26934	20100	At 16:30 Hrs, R_ph fault occurred in 400 kV New Duburi-Meramundali-2 & B_ph fault occurred in 400 kV New Duburi-Meramundali-1. While clearing the fault of 400 kV New Duburi Meramundali-2, tie bay of the line at Meramundali remained stuck, which does not have LBB protection. This led to tripping of all elements in 400 kV Bus-1 at Meramundali. 400 kV JSPL S/s, 400 kV GMR (STU) S/s became dead. U#3 (350 MW) at GMR and U#1 (600 MW) at JITPL tripped. Total 890 MW generation loss occurred, and 15 MW net load loss occurred at JSPL.	400 kV Meramundali-Angul D/c 400 kV Meramundali-JSPL D/c 400 kV Meramundali-New Duburi D/c 400 kV Meramundali-Lapanga-2 400 kV Meramundali-Mendhasal-1 400 kV Meramundali-GMR (STU) 400/220 kV ICT-1 at Meramundali 125 MVAR Bus Reactor-1 at Meramundali 350 MW U#3 at GMR 600 MW U#1 at JITPL
5	GD-1	Daltonganj, Chatra, Garhwa	22-06-2022 15:25	22-06-2022 17:58	02:33	0	120	0.00%	0.53%	29254	22539	At 15:25 Hrs on 22nd June 2022, 220 kV Bus-1 & 2 at Daltonganj tripped on bus bar protection. Power supply to 220/132 kV Garhwa and Chatra S/s and radially fed downstream areas interrupted. As reported by SLDC Jharkhand, 120 MW load loss occurred at Daltonganj, Garhwa and Chatra.	220 kV Bus-1 & Bus-2 at Daltonganj 400/220 kV ICT-1 & 2 at Daltonganj 220 kV Daltonganj-Garhwa-D/c 220 kV Daltonganj-Chatra D/c 220/132 kV ICT-1 & 2 at Daltonganj 132 kV Daltonganj-Daltonganj D/c

Details of Grid Events during the Month of June 2022 in North Eastern Region



Sl No.	Category of Grid Event (G1 to G2/ 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	Leshka Generating Station of Meghalaya Power System	01-Jun-22 22:13	01-Jun-22 22:33	0:20:00	70	0	2.35%	0.00%	2976	2995	Leshka Generating Station of Meghalaya Power System was connected with the rest of NER Grid through 132 kV Myntdu Leshka - Khleihriat D/C lines. At 22:13 hrs on 01.06.2022, 132 kV Myntdu Leshka - Khleihriat D/C lines tripped. Due to tripping of these elements, Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Leshka Generating Station of Meghalaya Power System by charging 132 kV Leshka-Khleihriat(ME) 1 line at 22:33 hrs. on 01.06.22.	132 kV Myntdu Leshka - Khleihriat D/C lines
2	GD-I	Leshka Generating Station of Meghalaya Power System	02-Jun-22 03:07	02-Jun-22 03:15	0:08:00	48	0	2.11%	0.00%	2279	2271	Leshka Generating Station of Meghalaya Power System was connected with the rest of NER Grid through 132 kV Myntdu Leshka - Khleihriat D/C lines. At 03:07 hrs on 02.06.2022, 132 kV Myntdu Leshka - Khleihriat D/C lines tripped. Due to tripping of these elements, Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Leshka Generating Station of Meghalaya Power System by charging 132 kV Leshka-Khleihriat(ME) 1 line at 03:15 hrs. on 02.06.22.	132 kV Myntdu Leshka - Khleihriat D/C lines
3	GD-I	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System	02-Jun-22 14:46	02-Jun-22 15:13	0:27:00	0	24	0.00%	1.00%	2521	2408	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were connected with the rest of NER Grid through 132 kV Aizawl-Lungmual line. 132 kV Lunglei - Melriat was under shutdown to avoid overloading of 132 kV Aizawl-Lungmual line. At 14:46 hrs on 02.06.2022, 132 kV Aizawl-Lungmual line tripped. Due to tripping of this element, Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were separated from rest of NER Grid and subsequently collapsed due to no source in these areas. Power supply was extended to Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System by charging 132 kV Aizawl-Lungmual line at 15:13 hrs on 02.06.22.	132 kV Aizawl-Lungmual line
4	GD-I	Dhaligaon, Barpeta and part load of Bornagar area of Assam Power System	11-Jun-22 22:05	11-Jun-22 22:09	0:04:00	0	60	0.00%	2.14%	2243	2800	Dhaligaon, Barpeta and part load of Bornagar area of Assam Power System were connected with the rest of NER Grid through 132 kV BTPS - Dhaligaon D/C lines. 132 kV Nalabari-Barpeta line was kept open by Assam for system requirements. At 22:05 hrs on 11.06.2022, 132 kV BTPS - Dhaligaon D/C lines tripped. Due to tripping of these elements, Dhaligaon, Barpeta and part load of Bornagar area of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power supply was extended to Dhaligaon, Barpeta and part load of Bornagar area of Assam Power System by charging 132 kV BTPS - Dhaligaon D/C lines at 22:09 hrs on 11.06.22.	132 kV BTPS - Dhaligaon D/C lines
5	GD-I	Dhaligaon, Barpeta and part load of Bornagar area of Assam Power System	11-Jun-22 23:08	11-Jun-22 23:31	0:23:00	0	40	0.00%	1.54%	2326	2604	Dhaligaon, Barpeta and part load of Bornagar area of Assam Power System were connected with the rest of NER Grid through 132 kV BTPS - Dhaligaon D/C lines. 132 kV Nalabari-Barpeta line was kept open by Assam for system requirements. At 23:08 hrs on 11.06.2022, 132 kV BTPS - Dhaligaon D/C lines tripped. Due to tripping of these elements, Dhaligaon, Barpeta and part load of Bornagar area of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power supply was extended to Dhaligaon, Barpeta and part load of Bornagar area of Assam Power System by charging 132 kV BTPS - Dhaligaon 1 line at 23:31 hrs on 11.06.22.	132 kV BTPS - Dhaligaon D/C lines
6	GD-I	Leshka Generating Station of Meghalaya Power System	12-Jun-22 20:46	12-Jun-22 21:07	0:21	84	0	3%	0%	2583	2749	Leshka Generating Station of Meghalaya Power System was connected with rest of NER grid through 132 kV Myntdu Leshka - Khleihriat D/C lines. At 20:46 hrs on 12.06.22, 132 kV Myntdu Leshka - Khleihriat D/C lines tripped. Due to tripping of these elements, Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Leshka Generating Station of Meghalaya Power System by charging 132 kV Myntdu Leshka - Khleihriat 1 line at 21:07 hrs on 12.06.22.	132 kV Myntdu Leshka - Khleihriat D/C lines
7	GD-I	Lumshnong & Amrit Area of Meghalaya Power System	12-Jun-22 20:46	12-Jun-22 22:35	1:49	0	30	0%	1%	2583	2749	Lumshnong & Amrit Area of Meghalaya Power System was connected with rest of NER grid through 132 kV Lumshnong-Panchgram and 132 kV Khleihriat-Lumshnong lines. At 20:46 hrs on 12.06.22, 132 kV Lumshnong-Panchgram and 132 kV Khleihriat-Lumshnong lines tripped. Due to tripping of these elements, Lumshnong & Amrit Area of Meghalaya Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power supply was extended to Lumshnong & Amrit Area of Meghalaya Power System by charging 132 kV Khleihriat-Lumshnong line at 22:35 hrs on 12.06.22.	132 kV Lumshnong-Panchgram and 132 kV Khleihriat-Lumshnong lines.
8	GD-I	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System	14-Jun-22 15:03	14-Jun-22 15:50	0:47:00	0	30	0.00%	1.53%	2252	1956	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were connected with the rest of NER Grid through 132 kV Aizawl - Luangmual line. 132 kV Lunglei-Melriat line was under shutdown to avoid overloading of 132 kV Aizawl-Lungmual line. At 15:03 hrs on 14.06.22, 132 kV Aizawl-Lungmual line tripped. Due to tripping of this element, Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power was extended to Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System by charging 132 kV Aizawl-Lungmual line at 15:50 hrs on 14.06.22.	132 kV Aizawl-Lungmual line

Details of Grid Events during the Month of June 2022 in North Eastern Region



Sl No.	Category of Grid Event (G1 Ior 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-I	Leshka Generating Station of Meghalaya Power System	14-Jun-22 17:03	14-Jun-22 17:15	0:12:00	84	0	3.53%	0.00%	2380	2045	Leshka Generating Station of Meghalaya Power System was connected with rest of NER grid through 132 kV Myntdu Leshka - Kheihriat D/C lines. At 17:03 hrs on 14.06.22, 132 kV Myntdu Leshka - Kheihriat D/C lines tripped. Due to tripping of these elements, Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Leshka Generating Station of Meghalaya Power System by charging 132 kV Myntdu Leshka - Kheihriat 1 line at 17:15 hrs on 14.06.22.	132 kV Myntdu Leshka - Kheihriat D/C lines
10	GD-I	Leshka Generating Station of Meghalaya Power System	15-Jun-22 04:05	15-Jun-22 04:11	0:06:00	84	0	2.89%	0.00%	2905	1511	Leshka Generating Station of Meghalaya Power System was connected with rest of NER grid through 132 kV Myntdu Leshka - Kheihriat D/C lines. At 04:05 hrs on 15.06.22, 132 kV Myntdu Leshka - Kheihriat D/C lines tripped. Due to tripping of these elements, Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Leshka Generating Station of Meghalaya Power System by charging 132 kV Myntdu Leshka - Kheihriat 1 line at 04:11 hrs on 15.06.22.	132 kV Myntdu Leshka - Kheihriat D/C lines
11	GD-I	Dimapur (DoP, Nagaland) area of Nagaland Power System	15-Jun-22 09:22	15-Jun-22 10:06	0:44:00	0	21	0.00%	1.17%	3008	1795	Dimapur (DoP, Nagaland) area of Nagaland Power System was connected with the rest of NER Grid through 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) D/C lines. At 09:22 hrs on 15.06.22, 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) D/C lines tripped. Due to tripping of these elements, Dimapur (DoP, Nagaland) area of Nagaland Power System was separated from the rest of NER Grid and subsequently collapsed due to no source available in this area. Power was extended to Dimapur (DoP, Nagaland) area of Nagaland Power System by charging 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 line at 10:06 hrs on 15.06.22.	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) D/C lines
12	GD-I	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System	16-Jun-22 12:00	16-Jun-22 12:18	0:18:00	0	28	0.00%	1.68%	2546	1669	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were connected with the rest of NER Grid through 132 kV Aizawl - Luangmual line. 132 kV Lunglei - Melriat line was under shutdown to avoid overloading of 132 kV Aizawl-Lungmual line. At 12:00 hrs on 16.06.22, 132 kV Aizawl-Lungmual line tripped. Due to tripping of this element, Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power was extended to Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System by charging 132 kV Aizawl-Lungmual line at 12:18 hrs on 16.06.22.	132 kV Aizawl-Lungmual line
13	GD-I	Dhaligaon, Barpeta and part load of Bornagar areas of Assam Power System	16-Jun-22 23:06	16-Jun-22 23:12	0:06	0	34	0%	2%	3044	1755	Dhaligaon, Barpeta and part load of Bornagar areas of Assam Power System were connected with the rest of NER Grid through 132 kV BTPS - Dhaligaon D/C lines. 132 kV Nalabari-Barpeta & 132 kV Gossaigaon-Gauripur lines were kept open by Assam on system requirements. At 23:06 hrs on 16.06.2022, 132 kV BTPS - Dhaligaon D/C lines tripped. Due to tripping of these elements, Dhaligaon, Barpeta and part load of Bornagar areas of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power supply was extended to Dhaligaon, Barpeta and part load of Bornagar areas of Assam Power System by charging 132 kV BTPS - Dhaligaon D/C lines at 23:12 hrs on 16.06.22.	132 kV BTPS - Dhaligaon D/C lines
14	GD-I	Leshka Generating Station of Meghalaya Power System	17-Jun-22 07:03	17-Jun-22 07:17	0:14	84	0	3%	0%	3016	1633	Leshka Generating Station of Meghalaya Power System was connected with rest of NER grid through 132 kV Myntdu Leshka - Kheihriat D/C lines. At 07:03 hrs on 17.06.22, 132 kV Myntdu Leshka - Kheihriat D/C lines tripped. Due to tripping of these elements, Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Leshka Generating Station of Meghalaya Power System by charging 132 kV Myntdu Leshka - Kheihriat 1 line at 07:17 hrs on 17.06.22.	132 kV Myntdu Leshka - Kheihriat D/C lines
15	GD-I	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System	17-Jun-22 20:25	17-Jun-22 21:22	0:57	0	29	0%	1%	3126	2299	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were connected with the rest of NER Grid through 132 kV Aizawl - Luangmual line. 132 kV Lunglei - Melriat line was under shutdown to avoid overloading of 132 kV Aizawl-Lungmual line. At 20:25 hrs on 17.06.22, 132 kV Aizawl-Lungmual line tripped. Due to tripping of this element, Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power was extended to Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System by charging 132 kV Aizawl-Lungmual line at 21:22 hrs on 17.06.22.	132 kV Aizawl-Lungmual line
16	GD-I	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System	18-Jun-22 00:41	18-Jun-22 00:53	0:12	0	14	0%	1%	3066	1528	Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were connected with the rest of NER Grid through 132 kV Aizawl - Luangmual line. 132 kV Lunglei - Melriat was under shutdown to avoid overloading of 132 kV Aizawl-Lungmual line. At 00:41 hrs on 18.06.22, 132 kV Aizawl-Lungmual line tripped. Due to tripping of this element, Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas. Power was extended to Lungmual and Melriat (P&ED Mizoram) areas of Mizoram Power System by charging 132 kV Aizawl-Lungmual line at 00:53 hrs on 18.06.22.	132 kV Aizawl-Lungmual line

Details of Grid Events during the Month of June 2022 in North Eastern Region



Sl No.	Category of Grid Event (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)		
17	GD-I	EPIP-II and New Umtru Generating station of Meghalaya Power System	18-Jun-22 08:48	18-Jun-22 09:43	0:55	40	20	1%	1%	2961	1695	EPIP-II area and New Umtru Generating station of Meghalaya Power System were connected with rest of NER grid through 132 kV Killing-EPIP II D/C, 132 kV Umtru-EPIP II D/C, 132 kV New Umtru-EPIP II, 132 kV New Umtru-Umtru, 132 kV EPIP II -EPIP I D/C lines. At 08:48 hrs on 18.06.22, 132 kV Killing-EPIP II D/C, 132 kV Umtru-EPIP II D/C, 132 kV New Umtru-EPIP II, 132 kV New Umtru-Umtru, 132 kV EPIP II -EPIP I D/C lines tripped. Due to tripping of these elements, EPIP-II area and New Umtru Generating station of Meghalaya Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power supply was extended to EPIP-II area and New Umtru Generating station of Meghalaya Power System by charging 132 kV EPIP II -EPIP I at 09:43 hrs on 18.06.22	132 kV Killing-EPIP II D/C, 132 kV Umtru-EPIP II D/C, 132 kV New Umtru-EPIP II, 132 kV New Umtru-Umtru, 132 kV EPIP II - EPIP I D/C lines.
18	GD-I	Leshka Generating Station of Meghalaya Power System	19-Jun-22 09:20	19-Jun-22 09:33	0:13	84	0	3%	0%	2742	1641	Leska Generating station of Meghalaya Power System was connected with rest of NER grid through 132 kV Myntdu Leska - Khlelriat D/C lines. At 09:20 hrs on 19.06.22, 132 kV Myntdu Leska - Khlelriat D/C lines tripped. Due to tripping of these elements, Leska Generating station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path.	132 kV Myntdu Leska - Khlelriat D/C lines
19	GD-I	Pasighat, Roing, Tezu & Namsai Areas of Arunachal Power System	19-Jun-22 12:16	19-Jun-22 13:34	1:18	0	13	0%	1%	2144	1750	Pasighat, Roing, Tezu & Namsai Areas of Arunachal Power System were connected with the rest of NER Grid through 132 kV Along-Pasighat line. At 12:16 hrs on 19.06.2022, 132 kV Along-Pasighat line tripped. Due to tripping of this element, 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 Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System by charging 132 kV Along-Pasighat line at 13:34 hrs on 19.06.2022.	132 kV Along-Pasighat line
20	GD-I	Dimapur (DoP, Nagaland) area of Nagaland Power System	19-Jun-22 21:32	19-Jun-22 22:18	0:46	0	68	0%	3%	3018	2153	Dimapur (DoP, Nagaland) area of Nagaland Power System was connected with the rest of NER Grid through 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) D/C lines. At 21:32 hrs on 19.06.22, 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) D/C lines tripped. Due to tripping of these elements, Dimapur (DoP, Nagaland) area of Nagaland Power System was separated from rest of NER Grid and subsequently collapsed due to no source available in this area. Power was extended to Dimapur (DoP, Nagaland) area of Nagaland Power System by charging 132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) 1 line at 22:18 hrs on 19.06.22	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) D/C lines
21	GD-I	Leshka Generating Station of Meghalaya Power System	25-Jun-22 06:04	25-Jun-22 06:19	0:15	84	0	3%	0%	2940	2070	Leshka Generating Station of Meghalaya Power System was connected with rest of NER grid through 132 kV Leska-Khlelriat(ME) 2 line. 132 kV Leska-Khlelriat(ME) 1 line was under outage since 05:55 hrs on 25.06.2022. At 06:04 hrs on 25.06.22, 132 kV Leska-Khlelriat(ME) 2 line tripped. Due to tripping of this element, Leshka Generating Station of Meghalaya Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Leshka Generating Station of Meghalaya Power System by charging 132 kV Leska-Khlelriat(ME) 1 line at 06:19 hrs on 25.06.22.	132 kV Myntdu Leska - Khlelriat 2 line
22	GD-I	Tenga, Khupi & Dikshi HEP of Arunachal Pradesh Power System	26-Jun-22 18:19	26-Jun-22 18:35	0:16	13	21	0%	1%	2800	2608	Tenga, Khupi & Dikshi HEP of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Balpara-Tenga line. At 18:19 hrs on 26.06.22, 132 kV Balpara-Tenga line tripped. Due to tripping of this element, Tenga, Khupi & Dikshi HEP of Arunachal Pradesh Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power supply was extended to Tenga, Khupi & Dikshi HEP of Arunachal Pradesh Power System by charging 132 kV Balpara - Tenga line at 18:35 hrs of 26.06.22	132 kV Balpara-Tenga line
23	GD-I	Leshka Generating Station of Meghalaya Power System	28-Jun-22 02:30	28-Jun-22 02:48	0:18	84	0	3%	0%	3066	2110	Leshka Generating station of Meghalaya Power System was connected with rest of NER grid through 132 kV Myntdu Leska - khlelriat D/C lines At 02:30 hrs on 28.06.22, 132 kV Myntdu Leska - Khlelriat D/C lines tripped. Due to tripping of these elements, Leshka Generating station of Meghalaya Power System was separated from the rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Leshka Generating station of Meghalaya Power System by charging 132 kV Leska-Khlelriat(ME) 1 line at 02:48 hrs on 28.06.22.	132 kV Myntdu Leska - Khlelriat D/C lines
24	GD-I	Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System	28-Jun-22 10:43	28-Jun-22 11:10	0:27	15	6	1%	0%	2949	1986	Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Balpara - Tenga Line. At 10:43 hrs on 28.06.22, 132 kV Balpara - Tenga Line tripped. Due to tripping of this element, Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas. Power supply was extended to Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System by charging 132 kV Balpara - Tenga line at 11:10 hrs of 28.06.22	132 kV Balpara - Tenga line
25	GD-I	Along, Pasighat, Roing, Tezu & Namsai Areas of Arunachal Power System	28-Jun-22 16:00	28-Jun-22 18:31	2:31	0	13	0%	1%	3053	2043	Along, Pasighat, Roing, Tezu & Namsai Areas of Arunachal Power System were connected with the rest of NER Grid through 132 kV Daporijo-Along line. At 16:00 hrs on 28.06.2022, 132 kV Daporijo-Along line tripped. Due to tripping of this element, Along, 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. 132 kV Daporijo - Along line was declared faulty at 18:31 hrs on 28.06.22. Power supply was extended to Along, Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System by charging 132 kV Daporijo-Along line at 12:16 hrs on 29.06.2022.	132 kV Daporijo - Along line

Details of Grid Events during the Month of June 2022 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)		
26	GD-1	Nirjuli Area of Arunachal Pradesh Power System	28-Jun-22 12:32	28-Jun-22 12:51	0:19	0	20	1%	1%	2945	1993	Nirjuli area of Arunachal Power System was connected with the rest of NER Grid through 132 kV Pare-Lekhi and 132 kV Lekhi-Nirjuli lines. 132 kV Gohpur-Nirjuli line was under shutdown to control overloading of 132 kV Pare-Lekhi line. At 12:32 hrs on 28.06.2022, 132 kV Pare-Lekhi and 132 kV Lekhi-Nirjuli lines tripped. Due to tripping of these elements, Nirjuli area of Arunachal Power System was separated from the rest of NER Grid and subsequently collapsed due to no source available in this area. 132 kV Pare-Lekhi and 132 kV Lekhi-Nirjuli lines was declared faulty at 12:51 hrs on 28.06.22 due to tower collapse. 132 kV	132 kV Pare-Lekhi and 132 kV Lekhi-Nirjuli lines
27	GI-2	Assam	01-Jun-22 17:28	01-Jun-22 19:00	1:32	15	0	1%	0%	2294	2456	AGBPP Unit 7 tripped at 17:28 hours on 01-06-22 due to tripping of Gas boost compressor. Revision done from Block no. 77 on 01-06-22	AGBPP Unit 7
28	GI-1	Tripura	03-Jun-22 07:50	03-Jun-22 09:30	1:40	63	0	3%	0%	2485	2188	AGTCCPP Unit 3, AGTCCPP Unit 6 & AGTCCPP Unit 4 tripped at 07:50 hours on 03-06-22 due to UAT blast. Revision done from Block no. 39 on 03-06-22	AGTCCPP Unit 3, AGTCCPP Unit 6 & AGTCCPP Unit 4
29	GI-2	Tripura	07-Jun-22 12:35	07-Jun-22 14:00	1:25	320	0	14%	0%	2230	2438	Palatana Unit GT-1 tripped at 13:27 hours on 07-06-22 due to stator earth fault. and Palatana Unit ST-1 tripped due to tripping of GTG. Revision done from Block no. 57 on 07-06-22	Palatana Unit GT-1 & Palatana Unit ST-1
30	GI-2	Assam	10-Jun-22 17:22	10-Jun-22 19:00	1:38	227.5	0	8%	0%	2987	2396	BgTTP Unit 1 tripped at 17:28 hours on 01-06-22 due to AVR fault. Revision done from Block no. 77 on 10-06-22	BgTTP Unit 1
31	GI-2	Tripura	11-Jun-22 13:27	11-Jun-22 15:00	1:33	316	0	12%	0%	2669	2341	Palatana Unit GT-1 tripped at 13:27 hours on 11-06-22 due to loss of flame and Palatana Unit ST-1 tripped due to tripping of GTG. Revision done from Block no. 61 on 11-06-22	Palatana Unit GT-1 & Palatana Unit ST-1
32	GI-2	Assam	11-Jun-22 13:52	11-Jun-22 15:30	1:38	227.5	0	9%	0%	2405	2380	BgTTP Unit 3 tripped at 13:52 hours on 11-06-22 due to low drum level. Revision done from Block no. 61 on 11-06-22	BgTTP Unit 3
33	GI-2	Assam	14-Jun-22 18:06	14-Jun-22 19:30	1:24	144.5	0	5%	0%	3102	2294	Kameng Unit 2 tripped at 18:06 hours on 14-06-22 due to Thrust bearing temperature high. Revision done from Block no. 79 on 14-06-22	Kameng Unit 2
34	GI-2	Assam	16-Jun-22 03:11	16-Jun-22 04:30	1:19	144.5	0	6%	0%	2494	1417	Kameng Unit 2 tripped at 03:11 hours on 16-06-22 due to Thrust pad temperature high. Revision done from Block no. 19 on 16-06-22	Kameng Unit 2
35	GI-1	Tripura	17-Jun-22 22:45	18-Jun-22 00:30	1:45	31	0	1%	0%	2437	2046	AGTCCPP Unit 3 tripped at 22:45 hours on 17-06-22 due to Auxillary Power Failure. Revision done from Block no 3 on 18-06-22	AGTCCPP Unit 3