

Details of Grid Events during the Month of Sept 2024 in Northern Region



Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HEMM)	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)		
						(GI for GI 2/ GD-1 to GD-5)							
1	GI-1	Himachal Pradesh	05-09-2024 11:40	05-09-2024 13:30	01:50	0	90	0.000	0.138	58567	65019	<p>i)800/220KV Dehar(BBMB) has double main bus arrangement at 400kV voltage level and single bus arrangement at 220kV voltage level.</p> <p>ii)As reported, at 11:40 hrs, 220 KV Dehar-Gangawali (BBMB) Ckt-2 tripped on R-N phase to earth fault with fault distance of 16.28km and fault current of Ir=4.8kA from Dehar end. Line tripped on zone-1 distance protection from Dehar end.</p> <p>iii)At the same time 132 KV Dehar(BBMB)-Kangoo(H) (HPPTCL) Ckt & 220 KV Dehar(BBMB)-Kangoo(H) (HP) Ckt-1 also tripped from Dehar end. 220 KV Dehar(BBMB)-Kangoo(H) (HP) Ckt-1 tripped on backup protection. Reason of tripping of 132 KV Dehar(BBMB)-Kangoo(H) (HPPTCL) Ckt is yet to be received.</p> <p>iv)As per PMU at Panchkula(PG), R-N phase to earth fault with fault clearing time of 120 msec is observed.</p> <p>v)As per SCADA, change in demand of approx. 90 MW is observed in HP control area.</p>	<p>1)220 KV Dehar(BBMB)-Kangoo(H) (HP) Ckt-1</p> <p>2)220 KV Dehar-Gangawali (BBMB) Ckt-2</p> <p>3)132 KV Dehar(BBMB)-Kangoo(H) (HPPTCL) Ckt</p>
2	GD-1	Uttarakhand & Himachal Pradesh	05-09-2024 11:54	05-09-2024 12:25	00:31	335	189	0.573	0.290	58456	65133	<p>i)During antecedent condition, all the four 30MW units of Khodri HEP, all four 60 MW units of Chhibro HEP, 11.25MW Unit-2 & Unit-3 of Dhakrani HEP and both 30 MW units of Giri HEP were running and total active power generation of Khodri HEP, Chhibro HEP, Dhakrani HEP & Giri HEP were approx. 90 MW, 200 MW, 19 MW & 58 MW (as per SCADA). Total generation of Chhibro HEP was evacuating through 220 KV Khodri-Chhibro (UK) Ckt-1 & 2. 11.25 MW Unit-1 of Dhakrani HEP and 220 KV Saharanpur(UP)-Khodri(UP) (UP) Ckt were not in service during the event. ii)As reported, at 11:54 hrs, 220 KV Khodri(UP)-Saraswan(UP) (UP) Ckt tripped on R-N phase to earth fault with fault distance of 44 km & 61 km and fault current of 2.5 kA & 2 kA from Khodri(UP) and Saraswan(UP) end respectively. Line tripped on zone-1 distance protection from both ends. iii)At the same time, 220 KV Khodri(UP)-Majri(UP) (UP) Ckt tripped on over voltage protection from both the ends and 30 MW Giri - Unit-1 & 220 KV Khodri-Jhajra (UK) Ckt also tripped (exact reason of tripping is yet to be received). iv)Due to tripping of 220kV lines from Khodri(UP) end, all the four 30MW units of Khodri(UP), all four 60 MW units of Chhibro(UP) and 11.25MW Unit-2 & Unit-3 of Dhakrani(UP) tripped due to loss of evacuation path.</p> <p>v)As per PMU at Saharanpur(PG), R-N phase to earth fault with fault clearing time of 80msec is observed. vi)Due to tripping all 220kV lines at Khodri(UP) and all generating Units at Khodri HEP(UP), Chhibro HEP(UP) and Dhakrani HEP(UP), blackout occurred at 220kV Khodri(UP), 220kV Chhibro(UP) & 132kV Dhakrani(UP). vii)As per SCADA, change in demand and generation of approx. 50 MW and 308 MW respectively in Uttarakhand control area. However, SLDC-Uttarakhand reported generation loss of approx. 307 MW and load loss of approx. 29 MW in Uttarakhand control area. viii)As per SCADA, change in demand and generation of approx. 140 MW and 28 MW in HP control area. However, SLDC-HP reported load loss of approx. 160 MW in HP control area.</p>	<p>1)220 KV Khodri(UP)-Majri(UP) (UP) Ckt-1</p> <p>2)220 KV Khodri(UP)-Majri(UP) (UP) Ckt-2</p> <p>3)220 KV Khodri(UP)-Saraswan(UP) (UP) Ckt</p> <p>4)220 KV Khodri-Jhajra (UK) Ckt</p> <p>5)30 MW Khodri Unit-1</p> <p>6)30 MW Khodri Unit-2</p> <p>7)30 MW Khodri Unit-3</p> <p>8)30 MW Khodri Unit-4</p> <p>9)60 MW Chhibro Unit-1</p> <p>10)60 MW Chhibro Unit-2</p> <p>11)60 MW Chhibro Unit-3</p> <p>12)60 MW Chhibro Unit-4</p> <p>13)11.25 MW Dhakrani Unit-2</p> <p>14)11.25 MW Dhakrani Unit-3</p> <p>15)30 MW Giri - Unit-1</p>
3	GD-1	Uttar Pradesh	10-09-2024 13:18	10-09-2024 14:05	00:47	0	268	0.000	0.407	59493	65808	<p>i)220KV Nara(UP) has main and transfer bus scheme at 220kV level.</p> <p>ii)As reported, at 13:18 hrs, due to lightning and inclement weather conditions, R-N phase to earth fault occurred on 220kV main bus which led to bus bar protection operation at Nara(UP) 5/s.</p> <p>iii)Due to bus bar protection operation, all elements connected to 220kV main bus i.e. 220 KV Meerut(PG)-Nara(UP) (PG) Ckt, 220 KV Nara(UP)-Roorkee(UP) (UP) Ckt, 220 KV Nara-Jansath (UP) Ckt, 220 KV Nara-Muzaffarnagar (UP) Ckt, 200/132kV 160MVA ICT-1 & 200MVA ICT-2 tripped at Nara(UP) 5/s which led to blackout at 220kV Nara(UP) 5/s.</p> <p>iv)As per PMU at Roorkee(PG), R-N phase to earth fault with delayed fault clearance time of 320msec is observed.</p> <p>v)As per SCADA, change in demand of approx. 120 MW & 60 MW in UP and Uttarakhand control area respectively. However, SLDC-UP has reported load loss of approx. 208 MW in UP control area.</p>	<p>1)220 KV Meerut(PG)-Nara(UP) (PG) Ckt</p> <p>2)220 KV Nara(UP)-Roorkee(UP) (UP) Ckt</p> <p>3)220 KV Nara-Jansath (UP) Ckt</p> <p>4)220 KV Nara-Muzaffarnagar (UP) Ckt</p> <p>5)200/132kV 160MVA ICT-1 at Nara(UP)</p> <p>6)200/132kV 200MVA ICT-2 at Nara(UP)</p>
4	GD-1	Uttarakhand, Himachal Pradesh & Uttar Pradesh	11-09-2024 08:17	11-09-2024 08:39	00:22	308	233	0.603	0.403	51107	57813	<p>i)During antecedent condition, all the four 30MW units of Khodri HEP, all four 60 MW units of Chhibro HEP, 11.25MW Unit-2 & Unit-3 of Dhakrani HEP and both 30 MW units of Giri HEP were running and total active power generation of Khodri HEP, Chhibro HEP, Dhakrani HEP & Giri HEP were approx. 90 MW, 200 MW, 19 MW & 58 MW (as per SCADA). Total generation of Chhibro HEP was evacuating through 220 KV Khodri-Chhibro (UK) Ckt-1 & 2. 11.25 MW Unit-1 of Dhakrani HEP was not in service during the event.ii)As reported, at 08:17 hrs, B-phase IA of HV side of 220/132kV 100 MVA ICT burst which caused B-N phase to earth fault. On this fault, 220/132kV 100 MVA ICT didn't trip (exact reason yet to be received).iii)On this fault, all four 30MW units of Khodri HEP & all four 60 MW units of Chhibro HEP tripped on over current protection. 220 KV Khodri(UP)-Saranpur(UP) (UP) Ckt tripped on directional earth fault protection from Giri(UP) end. iv)220kV lines from Khodri(UP) to Giri(UP) ckt-1, Saraswan(UP), Jhajra(UP), Chhibro(UP) ckt-1 & 2 and Saharanpur(UP) ckt tripped on zone-2 distance protection from remote end. It is reported that, at Khodri(UP) end, time setting in zone-4 distance protection is kept at 1000msec. Due to more time delay in zone-4 distance protection at Khodri(UP) end as compared to time delay of zone-2 distance protection of remote ends, all 220kV lines (except 220 KV Khodri(UP)-Giri(UP) (UK) Ckt-2) from Khodri(UP) 5/s tripped from remote ends. v)At the same time, 11.25 MW Dhakrani Unit-2 & Unit-3 also tripped (exact reason of tripping is yet to be received).vi)As per PMU at Saharanpur(PG), B-N phase to earth fault with delayed fault clearing time of 440 msec is observed. vii)Due to tripping all 220kV lines at Khodri(UP) and all generating Units at Khodri HEP(UP), Chhibro HEP(UP) and Dhakrani HEP(UP), blackout occurred at 220kV Khodri(UP), 220kV Chhibro(UP) & 132kV Dhakrani(UP). viii)As per SCADA, change in demand and generation of approx. 50 MW and 310 MW respectively in Uttarakhand control area. However, SLDC-Uttarakhand reported generation loss of approx. 308 MW and load loss of approx. 38 MW in Uttarakhand control area. ix)As per SCADA, change in demand of approx. 195 MW in HP control area.</p>	<p>1)220 KV Khodri(UP)-Majri(UP) (UP) Ckt-2</p> <p>2)220 KV Khodri(UP)-Majri(UP) (UP) Ckt-1</p> <p>3)220 KV Khodri(UP)-Saraswan(UP) (UP) Ckt</p> <p>4)220 KV Khodri-Jhajra (UK) Ckt</p> <p>5)220 KV Khodri(UP)-Saranpur(UP) (UP) Ckt</p> <p>6)30 MW Khodri Unit-1</p> <p>7)30 MW Khodri Unit-2</p> <p>8)30 MW Khodri Unit-3</p> <p>9)30 MW Khodri Unit-4</p> <p>10)60 MW Chhibro Unit-1</p> <p>11)60 MW Chhibro Unit-2</p> <p>12)60 MW Chhibro Unit-3</p> <p>13)60 MW Chhibro Unit-4</p> <p>14)11.25 MW Dhakrani Unit-2</p> <p>15)11.25 MW Dhakrani Unit-3</p> <p>16)132kV Khodri-Chhibro (UK) Ckt-1</p> <p>17)132kV Khodri-Chhibro (UK) Ckt-2</p>
5	GI-2	Uttar Pradesh	11-09-2024 10:03	11-09-2024 11:05	01:02	350	0	0.597	0.000	58587	64190	<p>i)265/400KV Obra-C TPS(UP) has one and half breaker bus scheme at 400kV & 765kV level.ii)During antecedent condition, 660 MW Unit-1 at Obra-C TPS was generating approx. 350 MW and 400 KV Jaunpur -Obra_C_TPS (UP) Ckt was anti-theft charged from Obra-C end. iii)As reported, at 10:03 hrs, 400 KV Jaunpur -Obra_C_TPS (UP) Ckt tripped on R-N phase to earth fault with fault current of Ir=6.8kA and fault distance of approx. 35.49km from Obra-C TPS(UP) end. Line tripped on zone-1 distance protection from Obra-C end.</p> <p>iv)At the same time, 400 KV Obra_C_TPS-Obra_B (UP) Ckt tripped on over current protection from Obra-B end. During the event, the current recorded was approx. Ir=7.5kA at Obra-B end. It is reported that over current protection is enabled with current setting of 2kA and time setting of definite time characteristic without any time delay at Obra-B end for 400 KV Obra_C_TPS-Obra_B (UP) Ckt. v)Due to tripping of 400 KV Obra_C_TPS-Obra_B (UP) Ckt, both 100MVA station transformers became dead with led to tripping of 660 MW Obra_C_TPS(UP) - Unit-1 due to disruption in auxiliary supply of Unit-1. It is reported that, auxiliary supply of 660 MW Unit-1 at Obra-C TPS is tapped from both 100 MVA SF6 insulated transformer) and 40 MVA UAT(Unit auxiliary transformer) which does not provide the redundancy in the auxiliary supply of 660 MW Unit-1 at Obra-C TPS. vi)As per PMU at Anpara(UP), R-N phase to earth fault with fault clearing time of 80 msec is observed.vii)As per DR of Obra-B end of 400 KV Obra_C_TPS-Obra_B (UP) Ckt, line tripped on over current protection with max current observed was approx. Ir=7.5kA.viii)As per SCADA, no change in demand of UP control area. However, SLDC-UP has reported generation loss of approx. 350 MW at Obra-C TPS (as per SCADA also).</p>	<p>1)400 KV Obra_C_TPS-Obra_B (UP) Ckt</p> <p>2)400 KV Jaunpur -Obra_C_TPS (UP) Ckt</p> <p>3)660MW Obra_C_TPS(UP) - UNIT-1</p>

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
6	GI-2	Rajasthan	13-09-2024 02:49	13-09-2024 05:01	02:12	1125	0	2.579	0.000	43616	52184	<p>i)800/220kV Akal(RS) has one and half breaker scheme at 400kV level and double main and transfer bus scheme at 220kV level.ii)During antecedent condition, 400/220 kv 500 MVA ICT-1 & ICT-2 were connected to 400kV bus-1 and 400/220 kv 315 MVA ICT-3 & 500 MVA ICT-4 were connected to 400kV bus-2. iii)As reported, at 02:49 hrs, Y-phase jumper of 220kV bus-1 of 220kV Akal-Bhensara Ckt-1 and R-phase jumper of 220kV bus-2 of 220kV Akal-Bhensara Ckt-2 snapped which created bus fault on both 220kV buses at Akal(RS). iv) On this fault, 400/220 kv 500 MVA ICT-1, ICT-2 tripped on earth fault protection and 400/220 kv 315 MVA ICT-3 & 500 MVA ICT-4 tripped on over current protection at Akal(RS) S/s. 220kV lines from Akal(RS) to Giral & Amarsagar tripped on zone-4 distance protection from Akal(RS) end. v)220kV Akal-Bhensara Ckt-1 tripped only from Bhensara end on zone-2 distance protection on R-Y phase to phase fault with fault distance of 53.2km and with fault current of Ir=2.87kA & Iy=2.88kA. vi)220kV Akal-Bhensara Ckt-2 tripped only from Bhensara end on zone-1 distance protection on R-Y-B three phase fault with fault current of Ir=1.5kA, Iy=1.2kA & Iu=5.5kV)As per PMU at Bhadla(PG), R-B phase to phase fault converted into R-Y-B three phase fault with delayed fault clearance time of 1120 msec is observed.viii)Due to tripping of all four ICTs at Akal(RS), evacuation path lost for all the wind power plants connected at 220kV bus-1 & bus-2 at Akal(RS). On this, both 220kV buses became dead at Akal(RS) S/s. ix)During this event, dip in Rajasthan wind generation of approx. 1295 MW is observed out of which approx. 170 MW recovered within 13 minutes. (As per SCADA).x)As per SCADA, no change in demand is observed in Rajasthan control area.</p>	<p>1)800/220 kv 500 MVA ICT 1 at Akal(RS) 2)800/220 kv 500 MVA ICT 2 at Akal(RS) 3)800/220 kv 315 MVA ICT 3 at Akal(RS) 4)800/220 kv 500 MVA ICT 4 at Akal(RS) 5)220 kv Akal-Giral Ckt 6)220 kv Akal-Amarsagar Ckt 7)220kV Akal-Bhensara Ckt-1 8)220kV Akal-Bhensara Ckt-2</p>
7	GD-1	Rajasthan	13-09-2024 13:15	13-09-2024 20:10	06:55	770	0	1.302	0.000	59120	60174	<p>i)Generation of 220/33kV Azure Power 34 (APTFI) (IP) station evacuates through 220 kv Bhadla(PG)-Azure Power 34 Solar(APTFI) (APTFI) Ckt. During antecedent condition, Azure Power 34 (APTFI) (IP) station was generating approx. 132MW (as per PMU). ii)As reported, at 13:05hrs, 220 kv Bhadla(PG)-Azure Power 34 Solar(APTFI) (APTFI) Ckt tripped due to B-N phase to earth fault (B phase jumper broken); fault sensed in zone-1 from APTFL end (exact reason and location of fault yet to be shared). iii)Due to tripping of 220 kv Bhadla(PG)-Azure Power 34 Solar(APTFI) (APTFI) Ckt, Azure Power 34 (APTFI) (IP) S/s lost its connectivity from grid and blackout occurred at 220/33kV Azure Power 34 (APTFI) (IP) S/s. iv)As per PMU at Bhadla(PG), R-Y phase to phase fault is observed with fault clearing time of 80ms. Voltage dipped upto 0.881 p.u. at Bhadla(PG). v)As per PMU, solar generation loss of approx. 132 MW is observed at Azure Power 34 (APTFI) (IP). vi)As per SCADA, during this event, dip in solar generation of approx. 770 MW is observed in NR control area. vii)Due to a significant dip in RE generation, frequency dropped by 0.13 Hz (from 50.229 Hz to 50.099 Hz). viii)As per SCADA, no change in demand is observed in Rajasthan control area.</p>	<p>1)220 kv Bhadla(PG)-Azure Power 34 Solar(APTFI) (APTFI) Ckt</p>
8	GD-1	Delhi	17-09-2024 15:05	17-09-2024 15:18	00:13	0	290	0.000	0.452	58751	64228	<p>i)220kV Park Street(DTL) S/s has double main bus arrangement at 220kV level. 220kV Dev Nagar(DTL) has only one 220kV line i.e. 220kV Dev Nagar-Park Street (DTL) Ckt. ii)During antecedent condition, incoming power at Park Street(DTL) through 220kV Park Street-Pragati (DTL) Ckt-1 & 2 were approx. 175 MW & 110 MW respectively. 220kV bus coupler was in open condition. iii)As reported, power flow was not equal in 220kV Park Street-Pragati (DTL) Ckt-1 & Ckt-2 before 15:05 hrs. At 15:05 hrs, 220kV bus coupler was attempted to close at Park Street(DTL) S/s to make equal power flow in both circuits and to avoid over loading of 220kV Park Street-Pragati (DTL) Ckt-1. iv)As 220kV bus coupler closed at Park Street(DTL) S/s, 220kV Park Street-Pragati (DTL) Ckt-1 tripped only from Park Street(DTL) end on over current protection which led to complete shifting of power flow of 220kV Park Street-Pragati (DTL) Ckt-1 to 220kV Park Street-Pragati (DTL) Ckt-2. Due to over loading, 220kV Park Street-Pragati (DTL) Ckt-2 also tripped from Pragati(DTL) end on over current protection. v)Due to tripping of 220kV Park Street-Pragati (DTL) Ckt-1 & Ckt-2, blackout occurred at 220kV Park Street(DTL) and 220kV Dev Nagar(DTL). vi)As per PMU at Maharan Bagh(PG), no fault is observed in the system. However, fluctuation in voltage was observed. vii)As per SCADA, change in demand of approx. 330 MW is observed in Delhi control area. However, SLDC-Delhi has reported load loss of approx. 290 MW.</p>	<p>1)220kV Park Street-Pragati (DTL) Ckt-1 2)220kV Park Street-Pragati (DTL) Ckt-2</p>
9	GI-2	Uttar Pradesh	17-09-2024 20:09	17-09-2024 22:15	02:06	0	0	0.000	0.000	48097	65626	<p>i)765/400/220kV Unnao(UP) has double main and transfer bus scheme at 400kV level. ii)During antecedent condition, 400kV lines from Unnao(UP) to Agra(UP), Jehta_Hardoi Road(UP) & Bareilly Ckt-1 and 765/400 kv 1000 MVA ICT-1 & 400/220kV 315 MVA ICT-3 were connected to 400kV bus-2 at unnao(UP) S/s. iii)As reported, at 20:09 hrs, B-N phase to earth fault occurred on 400 kv Agra-Unnao (UP) Ckt with fault distance of approx. 174km & 86km from Agra(UP) and Unnao(UP) end respectively. Line tripped from Agra(UP) end on receiving DT from Unnao(UP) end but B-phase pole of line CB could not properly open from Unnao(UP) end which led to LBB operation in bay of 400 kv Agra-Unnao (UP) Ckt at Unnao(UP) end. iv)On LBB operation at Unnao(UP) S/s, all elements connected to 400kV bus-2 (400kV lines from Unnao(UP) to Agra(UP), Jehta_Hardoi Road(UP) & Bareilly Ckt-1 and 765/400 kv 1000 MVA ICT-1 & 400/220 kv 315 MVA ICT-3) tripped at Unnao(UP) S/s. v)As per PMU at Unnao(UP), B-N phase to earth fault with delayed fault clearance time of 520msec is observed. vi)As per SCADA, no change in demand of UP control area.</p>	<p>1)800 kv Agra-Unnao (UP) Ckt 2)800 kv Unnao(UP)-Jehta_Hardoi Road (UP) (PG) Ckt-1 3)800/220 kv 315 MVA ICT 3 at Unnao(UP) 4)800 kv Bareilly-Unnao (UP) Ckt-2 5)765/400 kv 1000 MVA ICT 1 at Unnao(UP) 6)800kv Bus 2 at Unnao(UP) 7)805 BUS COUPLER BAY - 400KV BUS 1 AT UNNAO(UP) AND 400KV BUS 2 AT UNNAO(UP)</p>
10	GI-1	Delhi	18-09-2024 11:59	18-09-2024 12:05	00:06	0	245	0.000	0.378	61973	64761	<p>i)During antecedent condition, incoming power at Mehrauli(DTL) through 220kV Tughlakabad-Mehrauli (DTL) Ckt-1 & 2 were approx. 90 MW each and outgoing power from Mehrauli(DTL) to DIAL through 220kV Mehrauli (DTL)- DIAL Ckt-1 was approx. 27 MW. 220kV Mehrauli (DTL)- DIAL Ckt-2 was not in service. ii)As reported, at 11:59 hrs, 220kV Mehrauli (DTL)- DIAL Ckt-1 tripped on Y-B phase to phase fault (exact reason and location of fault is yet to be received). iii)Due to this fault, 220kV Tughlakabad-Mehrauli (DTL) Ckt-1 & 2 also tripped sensing the fault in zone-2 at Mehrauli end (exact reason yet to be shared). iv)As per PMU at Balasahgar(PG), Y-B phase to phase fault with fault clearing time of 80msec is observed. v)As per SCADA, change in demand of approx. 245MW is observed in Delhi control area. vi)During the same time, a dip in solar generation of approx. 740 MW is also observed in NR control area (as per SCADA) (inverter tripping details yet to be shared). vii)As reported by SLDC Delhi, at 12:05 hrs, supply at Mehrauli restored through 220 kv Vasant Kunj - Mehrauli (DTL) Ckt-1 & 2.</p>	<p>1)220kV Mehrauli (DTL)- DIAL Ckt-1 2)220kV Tughlakabad-Mehrauli (DTL) Ckt-1 3)220kV Tughlakabad-Mehrauli (DTL) Ckt-2</p>
11	GI-1	Uttarakhand & Himachal Pradesh	19-09-2024 11:53	19-09-2024 12:20	00:27	70	160	0.114	0.257	61190	62208	<p>i)During antecedent condition, all the four 30MW units of Khodri HEP & all four 60 MW units of Chhibro HEP were running and total active power generation of Khodri HEP & Chhibro HEP were approx. 90 MW & 200 MW (as per SCADA). Total generation of Chhibro HEP was evacuating through 220 kv Khodri-Chhibro (UK) Ckt-1 & 2. Loading of 220 kv Khodri(UK)-Majri(HP) (UK) D/C was approx. 145 MW. 30 MW Khodri Unit-3, 220 kv Khodri(UK)-Majri(HP) (UK) Ckt-1 & 220kV Khodri-Chhibro (UK) Ckt-2 connected to 220kV bus-1 and other elements connected to 220kV bus-2 at Khodri HEP. ii)As reported, at 11:53 hrs, 220 kv Khodri(UK)-Majri(HP) (UK) Ckt-2 tripped on R-N phase to earth fault with fault current of Ir=7kA & Iy=1.7kA and fault distance of approx. 15.7km & 25.4km from Khodri HEP(UK) & Gir(HP) end respectively. iii)On this fault, 30MW Unit-1, 2 & 3 of Khodri HEP tripped on over current protection. Due to tandem connection of Khodri HEP and Chhibro HEP, generation at Chhibro HEP backed down by approx. 160 MW within 8 minutes. iv)As reported, CB of 30 MW Unit-3 of Khodri HEP took approx. 210 msec in opening process which led to LBB operation of 30 MW Unit-3 bay at Khodri HEP. On LBB operation, 220 kv Khodri(UK)-Majri(HP) (UK) Ckt-1 and 220kV Khodri-Chhibro (UK) Ckt-2 also tripped from Khodri HEP end. v)As per PMU at Saharanpur(PG), R-N phase to earth fault with fault clearing time of 80 msec is observed. vi)As per SCADA, generation loss of approx. 70 MW in Uttarakhand control area. vii)As per SCADA and SLDC-HP, load loss of approx. 160 MW in HP control area.</p>	<p>1)220 kv Khodri(UK)-Majri(Gir)(HP) (UK) Ckt-2 2)220 kv Khodri(UK)-Majri(Gir)(HP) (UK) Ckt-1 3)220kV Khodri-Chhibro (UK) Ckt-2 4)30 MW Khodri Unit-1 5)30 MW Khodri Unit-2 6)30 MW Khodri Unit-3</p>

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
						(GI for GI 2/ GD-1 to GD-5)							
12	GI-2	Haryana	20-09-2024 16:05	20-09-2024 17:14	01:09	0	0	0.000	0.000	56131	62857	<p>i) During antecedent condition, 800 kV HVDC Kurukshetra(PG) Pole-1, 2, 3 & 4 were carrying approx. 250 MW each and hence total 1000 MW power was flowing from Champa to Kurukshetra.</p> <p>ii) As reported at 16:05 hrs, 800 kV HVDC Kurukshetra (PG) Pole-1 & 2 blocked due to tripping of AC filters at Champa end. (Reason of tripping of filters and bipole-1 only need to be shared.)</p> <p>iii) As 800 kV HVDC Kurukshetra(PG) Pole-1 and Pole-2 blocked, power flow of Pole-1 and Pole-2 shifted on Pole-3 and Pole-4 hence, there was no reduction in power order.</p> <p>iv) As per PMU, no fault is observed in the system. However, fluctuation in voltage was observed.</p> <p>v) As per SCADA, no change in demand of Haryana control area.</p>	<p>1) 800 kV HVDC Kurukshetra(PG) Pole-01</p> <p>2) 800 kV HVDC Kurukshetra(PG) Pole-02</p>
13	GI-2	Rajasthan	20-09-2024 12:00	20-09-2024 13:02	01:02	1790	0	4.104	0.000	43616	52184	<p>i) 800/220kV Jaisalmer(RS) has one and half breaker scheme at 400kV level and double main and transfer bus scheme at 220kV level.</p> <p>ii) During antecedent condition, Renew Solar, Fortum Solar, NTPC Renewable, ACME Aklera and Clean Solar was injecting approx. 107 MW, 240 MW, 160 MW, 260 MW and 250 MW respectively to Jaisalmer(RS) at 220kV level. Active power was going out to Akal(RS) through 220kV Jaisalmer(RS)-Akal Ckt-1 & 2 carrying approx. 235 MW each.</p> <p>iii) As reported, at 12:00 hrs, Y-phase jumper of 220kV Jaisalmer-Akal Ckt-2 broke at Jaisalmer end.</p> <p>iv) At the same time, bus bar protection operated at 220kV level of Jaisalmer and all the elements connected at 220kV level of Jaisalmer tripped and both the 220kV buses became dead.</p> <p>v) As per PMU at Fatehgarh3(PG), Y-N phase to earth fault with delayed fault clearance time of 600 msec is observed.</p> <p>vi) During this event, as per SCADA, solar generation loss of approx. 1070 MW is observed in Rajasthan control area. Dip in total solar generation of approx. 1790 MW is observed in NR control area out of which 980 MW is recovered within 3 minutes.</p> <p>vii) As per SCADA, no change in demand is observed in Rajasthan control area.</p>	<p>1) 800/220 kV 500 MVA ICT 1 at Jaisalmer(RS)</p> <p>2) 800/220 kV 500 MVA ICT 2 at Jaisalmer(RS)</p> <p>3) 220kV Jaisalmer(RS)-Renew Solar Ckt</p> <p>4) 220kV Jaisalmer(RS)-Fortum Solar Ckt</p> <p>5) 220kV Jaisalmer(RS)-Akal Ckt-1</p> <p>6) 220kV Jaisalmer(RS)-Akal Ckt-2</p> <p>7) 220kV Jaisalmer(RS)-ACME Aklera Ckt</p> <p>8) 220kV Jaisalmer(RS)-Clean Solar Ckt</p> <p>9) 220kV Jaisalmer(RS)-NTPC Renewable Ckt</p>
14	GD-1	Rajasthan	21-09-2024 02:58	21-09-2024 04:37	01:39	0	0	0.000	0.000	46731	62228	<p>i) 220kV Mahindra Solar(IP) S/s has double main bus arrangement at 220kV level.</p> <p>ii) During antecedent condition, no solar generation at 220kV Mahindra Solar(IP). 220/33kV 100MVA ICT-3 and 33kV/415V 300kVA auxiliary transformer were connected on the same 23kV bus at Mahindra Solar(IP).</p> <p>iii) As reported at 02:58 hrs, Y-B double phase to earth fault occurred on 33kV/415V 300kVA auxiliary transformer which led to tripping of 220/33kV 100MVA ICT-3 on earth fault protection at Mahindra Solar(IP) S/s.</p> <p>iv) At the same time, 220/33kV 100MVA ICT-1 & ICT-2 and 220 kV Bhadla(PG)-Mahindra SL_BHD_PG (MAHINDRA) Ckt tripped on master trip relay operation (exact reason for operation of master trip relay is yet to be received).</p> <p>v) As per PMU at MHRP(IP), Y-B double phase to earth fault observed with fault clearing time of 80msec.</p> <p>vi) As per SCADA, no generation loss at 220kV Mahindra Solar(IP) S/s and no change in demand of Rajasthan control area (as per SCADA).</p>	<p>1) 220/33 kV 100 MVA ICT 3 at Mahindra_SL_BHD_PG (MAHINDRA)</p> <p>2) 220 kV Bhadla(PG)-Mahindra SL_BHD_PG (MAHINDRA) (MAHINDRA) Ckt</p> <p>3) 220/33 kV 100 MVA ICT 1 at Mahindra_SL_BHD_PG (MAHINDRA)</p> <p>4) 220/33 kV 100 MVA ICT 2 at Mahindra_SL_BHD_PG (MAHINDRA)</p>
15	GI-1	Haryana	23-09-2024 09:44	23-09-2024 12:54	03:10	0	75	0.000	0.102	62338	73243	<p>i) 220/132kV/33kV Hissar(BB) S/s has double main bus scheme at 220kV level.</p> <p>ii) As reported, at 09:44hrs, Y-phase clamp of 220 kV Hissar-Sangrur (BB) Ckt-2 burnt and jumper snapped.</p> <p>iii) During the same time, all the lines connected at 220kV Bus-1 at Hissar(BB) also tripped (Exact reason yet to be shared).</p> <p>iv) As per DR and details received, 220 kV Hissar-Sangrur (BB) Ckt-1 & 2 tripped from Sangrur end only sensing the fault in zone-2. Fault current was 966.2A and 1.036kA respectively and fault distance was 169.2km and 167.1km respectively from Sangrur end.</p> <p>v) 220 kV Hissar(BB)-Hissar IA(HV) (HVPNL) Ckt-1 tripped from Hissar(BB) end only sensing the fault in zone-4. Fault current was 4.984kA and fault distance was 468.2m from Hissar(BB) end.</p> <p>vi) 220 kV Hissar(BB)-Hissar IA(HV) (HVPNL) Ckt-2 tripped from both the ends sensing the fault in zone-4 at Hissar(BB) end and zone-2 at Hissar IA(HV) end. Fault current was 3.676kA and 4.392 kA and fault distance was 0m and 5.023km from Hissar(BB) and Hissar IA(HV) end respectively.</p> <p>vii) Due to tripping of all the elements connected to bus-1, 220kV Bus-1 at Hissar(BB) became dead.</p> <p>viii) As per PMU at Hissar(PG), R-N phase to earth fault (phase sequence issue observed) with delayed fault clearing time of 360ms is observed.</p> <p>ix) As per SCADA, change in demand of approx. 75MW is observed in Haryana control area.</p>	<p>1) 220 kV Hissar(BB)-Hissar IA(HV) (HVPNL) Ckt-1</p> <p>2) 220 kV Hissar(BB)-Hissar IA(HV) (HVPNL) Ckt-2</p> <p>3) 220 kV Hissar-Sangrur (BB) Ckt-1</p> <p>4) 220 kV Hissar-Sangrur (BB) Ckt-2</p> <p>5) 220kV Bus-1 at Hissar(BB)</p>
16	GD-1	Uttar Pradesh	23-09-2024 19:52	23-09-2024 22:09	02:17	0	700	0.000	0.963	55163	72675	<p>i) During antecedent condition, 400 kV Unnao-Agra(UF) Ckt was charged through transfer bus coupler at Unnao end which was coupled to 400kV Bus-1. i) As reported, at 19:52 hrs, due to blast in B-phase circuit breaker of transfer bus coupler, bus fault occurred at Unnao, but bus bar protection didn't operate (exact reason yet to be shared and bus bar relay is of static type). ii) As per DR, distance protection relay of one of the lines sensed fault in zone-4 at Unnao end and in 400 kV Unnao(UF)-Jehna_Hardoi Road (UP) (PG) Ckt-1 remote end sensed fault in zone-2. 400 kV Unnao-Panik (UP) Ckt, line tripped on SOF after unsuccessful A/R from Panik end (reason of the same not identified yet, suspected due to overreach of 2.1 DPs at Panik end as per DR). iii) 800/220 kV 315 MVA ICT 1 & 3 and 500 MVA ICT-2 at Unnao(UP) and 765/400 kV 1000 MVA ICT-1, 2 & 3 at Unnao 765(UP) tripped on O/C/F protection operation (after 700 ms to 800 ms). iv) As the elements connected at both the buses tripped, complete blackout occurred at 400/220kV Unnao(UP) S/s. v) During the same time, 765kV Unnao-Anpara-C Ckt and 765kV Unnao-Anpara-C Ckt tripped on over-voltage protection operation and complete blackout occurred at 765/400kV Unnao 765(UP) S/s. As per DR and event logger details, D1 received at Anpara-C and Anpara-C end. vi) As per PMU at Anpara-Th end, vii) Due to tripping of 400 kV Anpara-Th end, viii) Due to tripping of 400 kV Anpara-Th end, ix) SPS for safe evaluation of Generation of Anpara Complex* operated and thermal backing of approximately 1200 MW imposed on Anpara-Th, C & D. As per SPS log received from Anpara-D: At 19:52:39:100 hrs: Case-1 of SPS operated. At 19:52:44:100 hrs: Case-2 of SPS operated. At 19:52:45:100 hrs: Again Case-1 of SPS operated. x) As per information received from Anpara-D: At 19:53:11 hrs, 200 MW backdown started at Unit-7 however, it was not executed as observed from SCADA data (exact reason yet to be received). As per event logger details received, at 19:53:15 hrs, Unit-7 switched to manual mode from Auto mode. xi) As reported by Anpara-D, SPS backing command could not be executed in Unit-6 as machine was already kept in manual mode due to disturbance in parameters. During SPS Case-2 execution, Anpara-C GT-1 or GT-2 didn't trip through SPS command was sent (exact reason yet to be received from Anpara-C). xii) As per SCADA, change in demand of approx. 700 MW is observed in UP control area and generation backdown of ~510MW at Anpara-C (between 19:52 hrs-20:00 hrs) and ~325MW at Anpara-Th & ~75MW at Anpara-D (between 20:00 hrs-20:15 hrs) are also observed.</p>	<p>1) 400 kV Bareilly-Unnao (UP) Ckt-1</p> <p>2) 400 kV Bareilly-Unnao (UP) Ckt-2</p> <p>3) 400 kV Mohanlalganj (PG)-Unnao(UP) (PG) Ckt</p> <p>4) 400 kV Agra-Unnao (UP) Ckt</p> <p>5) 400 kV Unnao-Panik (UP) Ckt</p> <p>6) 400 kV Unnao(UP)-Jehna_Hardoi Road (UP) (PG) Ckt-1</p> <p>7) 400 kV Unnao(UP)-Jehna_Hardoi Road (UP) (PG) Ckt-2</p> <p>8) 400/220 kV 315 MVA ICT 1 at Unnao(UP)</p> <p>9) 400/220 kV 315 MVA ICT 2 at Unnao(UP)</p> <p>10) 400/220 kV 315 MVA ICT 3 at Unnao(UP)</p> <p>11) 765/400 kV 1000 MVA ICT 1 at Unnao 765(UP)</p> <p>12) 765/400 kV 1000 MVA ICT 2 at Unnao 765(UP)</p> <p>13) 765/400 kV 1000 MVA ICT 3 at Unnao 765(UP)</p> <p>14) 765 kV Anpara_C 1 TFS-Unnao 765(UP) Ckt</p> <p>15) 765 kV Anpara_C2(UAN)-Unnao 765(UP) (UP) Ckt</p>
17	GD-1	Delhi	24-09-2024 12:52	24-09-2024 13:01	00:09	0	338	0.000	0.420	69883	80387	<p>i) 220kV Narela(DT1) S/s has double main bus arrangement at 220kV level. ii) During antecedent condition, incoming power at Narela(DT1) through 220 kV Mandola(PG)-Narela(DV) (DT1) D/C was approx. 330MW. 220 kV Mandola(PG)-Narela(DV) (DT1) D/C was feeding load of 220kV Narela(DT1) and 220kV DSID(DT1). 220 kV Mandola(PG)-Narela(DV) (DT1) D/C, 220kV Narela DSID(DT1) D/C, 220/66kV 100MVA ICT-1, ICT-2 & ICT-3 were connected to 220kV bus at Narela(DT1) S/s. 220kV DSID(Bawana) (DT1) D/C was not in service. 220kV bus coupler was in open condition at Narela(DT1) S/s. iii) As reported, at 12:52hrs, 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-2 tripped on B-N phase to earth fault with fault distance of 8.47km from Narela end. As per DR, 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-2 tripped on B-N phase to earth fault with fault current of I_b=7.9kA & I_r=8.9kA from Narela(DT1) and Mandola(PG) end respectively. Line tripped on zone-1 distance protection from both ends. A/R operation not observed from both ends (exact reason yet to be received). iv) Due to tripping of 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-2, complete load shifted on 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-1. 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-1 also tripped approx. 75 seconds after the tripping of 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-2 on Y-B-N double phase to earth fault. (exact reason and location of fault is yet to be received). v) As per DR of 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-1, B-N phase to earth fault converted into Y-B-N double phase to earth fault with fault current of I_b=3.7kA & I_r=4.2kA and I_b=9.9kA & I_r=10.6kA from Narela(DT1) and Mandola(PG) end respectively. Line tripped on zone-1 distance protection from Narela(DT1) end and on zone-2 distance protection from mandola(PG) end. A/R initiated at Narela(DT1) end. vi) As per PMU at Mahanani Bagh(PG), B-N phase to earth fault followed by B-N phase to earth fault converted into Y-B phase to earth fault with fault clearing time of 120msec and 240msec is observed. vii) Due to tripping of 220 kV Mandola(PG)-Narela(DV) (DT1) D/C, 220/66kV 100MVA ICT-1, ICT-2 & ICT-3 at 220kV Narela(DT1) S/s and complete 220kV DSID(DT1) S/s became dead which led to blackout of 220kV DSID(DT1) S/s. viii) As per SCADA, change in demand of approx. 300 MW is observed in Delhi control area. However, S/D-C Delhi has reported loss of approx. 218 MW. ix) During the tripping event, 220MW load of 220kV DSID(Bawana) (DT1) S/s. x) As per SCADA, change in demand of approx. 100 MW is observed in Delhi control area. S/D-C Bawana (DT1) D/C closed and load of 220kV DSID(DT1) S/s normalized (as per S/D-C Delhi).</p>	<p>1) 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-1</p> <p>2) 220 kV Mandola(PG)-Narela(DV) (DT1) Ckt-2</p>
18	GD-1	Haryana	29-09-2024 19:41	29-09-2024 20:40	00:59	0	190	0.000	0.285	50716	66734	<p>i) 220/132kV Fatehabad(HR) S/s has double main bus scheme at 220kV level.</p> <p>ii) As reported, at 19:41hrs, R phase CT of 220kV Bus Coupler at Fatehabad(HR) blasted which led to bus bar protection operation at both the buses of 220kV level at Fatehabad(HR).</p> <p>iii) Due to tripping of all the connected elements to both the buses at 220kV Fatehabad(HR), supply lost to 132kV level also and complete blackout occurred at 220/132kV Fatehabad(HR) S/s.</p> <p>iv) As per Hissar(PG), R-N phase to earth fault with fault clearing time of 120ms is observed.</p> <p>v) As per SCADA, change in demand of approx. 190MW was observed in Haryana control area.</p>	<p>1) 220 kV Fatehabad(PG)-Fatehabad(HR) (HVPNL) Ckt-1</p> <p>2) 220 kV Fatehabad(PG)-Fatehabad(HR) (HVPNL) Ckt-2</p> <p>3) 220 kV Hissar(PG)-Fatehabad(HR) (HVPNL) Ckt-1</p> <p>4) 220 kV Hissar(PG)-Fatehabad(HR) (HVPNL) Ckt-2</p> <p>5) 220 kV Rama-Fatehabad(HR) Ckt</p> <p>6) 220kV Bus-1 at Fatehabad(HR)</p> <p>7) 220kV Bus-2 at Fatehabad(HR)</p> <p>8) 220/132kV ICT-1 at Fatehabad(HR)</p> <p>9) 220/132kV ICT-2 at Fatehabad(HR)</p> <p>10) 220/132kV ICT-3 at Fatehabad(HR)</p>

Details of Grid Events during the Month of Sept 2024 in Western Region



Sl No.	Category of Grid Event (GI for GI2/ 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				Antecedent Generation/Load in the Regional Grid*		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Loss of generation / loss of load during the Grid Event	Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)		
1	GD-1	WR	02-09-2024 00:42	02-09-2024 06:12	05:30	20	-	0.03%	-	60833	49353	At 00:42 Hrs / 02-09-2024, 220 kV Bhuj-Gadhhsisa tripped on B-E fault. It is observed from DRs that Autorecloser didn't attempt at Gadhhsisa end for single phase fault and three phase tripped observed at Bhuj End. During patrolling spare conductor of other utility was lying on 220 kV Bhuj-Gadhhsisa. Generation loss of 20 MW occurred at Gadhhsisa (Renew Power) Wind Power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj-Gadhhsisa
2	GD-1	WR	03-09-2024 02:37	03-09-2024 06:30	03:53	73	-	0.12%	-	59110	49851	At 02:37 Hrs / 03-09-2024, 220kV Sayali-Vapi II-1 & 2 tripped on R-E fault (ckt-1 tripped from Vapi II end only) and 220kV Sayali Switching Substation became dead. As informed by sterile fault was in Z-1 220 kV Sayali-Vapi II-1 (1.1 km from Vapi II end). As seen from DRs, 3 phase trip issued for a single phase fault at vapi end of 220 kV Sayali-Vapi II-1 circuit and line tripped from Vapi end only. Also, 220 kV Sayali-Vapi II-2 tripped on Z-3 distance protection operation at Vapi end without any time delay. The trippings were not in order. Load loss of 73 MW occurred at of 220kV Alok Industries Ltd (which is being fed radially through 220 kV Sayali) due to the event.	Tripping of following Elements: 1. 220 kV Vapi II Sayali-1 2. 220 kV Vapi II Sayali-2 3. 220kV Sayali-Alok Industries Ltd 4. Sayali - 220 kV - Bus-1 5. Sayali - 220 kV - Bus-2
3	GI-2	WR	03-09-2024 06:50	03-09-2024 09:42	02:52	1267	-	2.07%	-	61153	55048	At 06:50 hrs / 03-09-2024, 400 kV Kakrapar(3&4)-Navsari-ckt-1 tripped on R-E fault at 400 kV Navsari end. Simultaneously, at 400 kV Kakrapar(3&4), 400 kV Kakrapar(3&4)-Navsari-ckt-1 and 400 kV Kakrapar(3&4)-bus2 tripped on LBB protection operation. As seen from PMU plot, fault did not persist for 200 msec, hence LBB protection operation was not in-order. As informed by NCLC Kakrapar(3&4), the operation of LBB relay was not as per intent. The LBB current element is set at 20 % of C primary = 20 % of 2000 A = 400 A with a time delay of 200 millisecond. During R-E fault on 400 kV Kakrapar(3&4)-Navsari-ckt-1 at 06:50 Hrs, R phase fault got cleared in 95 milliseconds. However, due to relay's internal CB fail element logic issue, by seeing the other 2 phases (Y&B phases) current more than the set value, the relay has initiated LBB trip after 200 milliseconds of LBB initiation.	Tripping of following Elements: 1. 400 kV Kakrapar(3&4)-Navsari(PG)-1&2 2. Kakrapar(3&4) Unit-3&4 (700 MW) 3. 400/21 kV Kakrapar 3&4-GT3 4. 400 kV Kakrapar 3&4-Bus-2
4	GD-1	WR	03-09-2024 22:40	04-09-2024 15:36	16:56	6	-	0.01%	-	64255	54712	At 22:40 Hrs / 03-09-2024, As informed by Alfanar 220 kV Bhuj-Nanavalka tripped on B-E fault, but is seen from DRs R-B phase to phase fault occurred. During patrolling it was found that the suspension insulator on Tower No. 39/0 B phase and Tower- No 36/0 Y phase Tension insulator had failed. Multiple test charging were taken but line tripped on SOTF it is inferred that thorough patrolling had not been carried out before attempting test charging. Generation loss of 6 MW occurred at Nanavalka (Alfanar) Wind Power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220kV Bhuj-Nanavalka
5	GI-2	WR	04-09-2024 11:42	05-09-2024 15:59	28:17	31	-	0.05%	-	61961	54955	At 11:42 Hrs / 04-09-2024, 220 kV Bhuj II-Morjar (Srijan) tripped on R-E fault. During patrolling it was found that a tension insulator failed at tower number AP-05A. Generation loss of 31 MW occurred at Morjar (Srijan) Wind Power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj II-Morjar (Srijan)
6	GD-1	WR	06-09-2024 13:10	06-09-2024 16:49	03:39	268	-	0.44%	-	60449	53360	At 13:09 hrs / 06-09-2024, 220 kV Bhawingshpura-Bus-1 and all connected elements tripped on Bus bar protection operation due to actuation of Overcurrent relay (50/51). 220 kV Bhawingshpura-Kanwani-1, 220 kV Bhawingshpura-Khandwa-1 and 220/33 kV Bhawingshpura-ICT-1 tripped leading to generation loss of 118 MW. Prior to the incident, 220/33 kV Bhawingshpura-ICT-1 tripped on over current protection operation at 12:50 hrs. Generation loss of 269 MW Bhawingshpura and Kanwani (Masaya Solar) Solar Pwer Plant occurred due to the event.	Tripping of following Elements: 1. 220 kV Bhawingshpura-Kanwani-1 2. 220 kV Bhawingshpura-Khandwa-1 3. 220 kV Bhawingshpura-Bus-1 4. 220/33 kV Bhawingshpura-ICT-1
7	GD-1	WR	10-09-2024 00:31	10-09-2024 00:31	00:00	59	-	0.09%	-	65831	54447	At 00:31 Hrs / 10-09-2024, 220 kV Bhuj-Gadhhsisa tripped on Y-B fault at Bhuj end. During patrolling it was found that Tower Number 46/0 was damaged from Cage section. Generation loss of 59 MW occurred at Gadhhsisa (Renew Power) Wind Power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj-Gadhhsisa
8	GD-1	WR	11-09-2024 17:29	11-09-2024 18:58	01:29	80	-	0.12%	-	66030	55745	At 17:29 hrs / 11-09-2024, 400 kV Vapi II-Bus-1&2 tripped on bus bar protection operation due to maloperation of Main Control Unit-2 relay and all elements connected tripped from 400 kV Vapi II side only. As informed by Sterilite, no abnormalities were found during inspection and the tripping may be due to moisture ingress due to heavy rainfall. 220 kV Sayali station connected to Vapi II became dark due to tripping of 220 kV Vapi II-Sayali-1&2. Load loss of 80 MW occurred at of 220kV Alok Industries Ltd (which is being fed radially through 220 kV Sayali) due to the event.	Tripping of following Elements: 1. 400 kV Vapi II-Bus-1&2 2. 400kV Vapi II-Vapi(PG)-1&2 3. 400 kV kakrapar(3&4)-Vapi II-1&2 4. 400/220 kV Vapi II-ICT-1&2 (500 MVA) 5. 400 kV Vapi II-Bus Reactor 6. 220 kV Vapi II-Sayali-1&2
9	GD-1	WR	15-09-2024 17:03	15-09-2024 18:39	01:36	65	-	0.10%	-	63084	56252	At 17:03 hrs / 15-09-2024, 220 kV Aurangabad-Shendra tripped at 17:03 hrs due to LA blast of 220 kV Aurangabad-Shendra-1 at Shendra end. Details not received from both ends. As informed by SLDC Maharashtra, 220 kV Aurangabad-Shendra-1&2 tripped. Tripping of 220/132 kV Shendra-ICT-1 (100 MVA) and 220/33 kV Shendra-ICT-1&2 (50 MVA) and 220 kV Aurangabad-Shendra-2 may be due to bus bar protection operation. Load loss of 65 MW occurred due to the event.	Tripping of following Elements: 1. 220 kV Aurangabad-Shendra-1&2 2. 220/132 kV Shendra-ICT-1 (100 MVA) 3. 220/33 kV Shendra-ICT-1&2 (50 MVA)
10	GI-2	WR	17-09-2024 15:31	17-09-2024 18:14	02:43	-	-	-	-	65953	55356	At 15:31 hrs / 17-09-2024, Bus bar protection operated in 400 kV DGEN-Bus-2 due to failure of LA of 400/220 kV DGEN-ICT-1, resulting in tripping of all connected elements to 400 kV DGEN-Bus-2. No generation loss occurred due to the event.	Tripping of following Elements: 1. 400/220 kV DGEN-ICT-1 2. 400 kV DGEN-Bus-2 3. 400 kV DGEN-Bus Reactor 4. 400/22 kV DGEN-GT-1 5. 400 kV Navsari-DGEN-1
11	GD-1	WR	19-09-2024 15:03	19-09-2024 15:52	00:49	30	-	0.04%	-	71847	64660	At 15:03 hrs / 19-09-2024, 220 kV Dayapar sub-station AC supply cable and DC supply cable of 220/33 kV Dayapar-ICT-1 got punctured resulting in tripping of 220 kV Bhuj-Dayapar-1&2 and 220/33 kV Dayapar-ICT-1,2,3&4. Generation loss of 30 MW occurred at Dayapar (J) Wind Power Plant due to the event.	Tripping of following Elements: 1. 220 kV Bhuj-Dayapar-1&2 2. 220/33 kV Dayapar-ICT-1,2,3&4
12	GD-1	WR	24-09-2024 01:09	30-09-2024 23:59	166:50	72	-	0.10%	-	70692	57265	At 01:03 Hrs / 24-09-2024, 220kV Bhuj- Gadhhsisa line tripped on Y-ph to earth fault. During patrolling it was found tower damaged on top section due to conductor theft. of spare line on Same tower no T15/0. Generation loss of 59 MW occurred at Gadhhsisa (Renew Power) Wind Power plant due to loss of evacuation path. Remarks- This line is still out	Tripping of following Elements: 1. 220kV Bhuj-Gadhhsisa
13	GD-1	WR	30-09-2024 16:36	01-10-2024 08:41	16:05	-	272	-	0.46%	70673	58831	At 16:36 hrs / 30-09-2024, 220 kV Kalwa-Gigaplex tripped on Y-E fault due to snapping of conductor. At the same time raise in frequency from 49.996 Hz to 50.044 Hz, Voltage dip in Pune_PG and Padghe PMU and dip in Mumbai demand observed. Load loss of around 270 MW was observed (from SCADA). However, Maharashtra has reported that no load loss occurred due to the tripping	Tripping of following Elements: 1. 220 kV Kalwa-Gigaplex ckt

Details of Grid Events during the Month of Sept 2024 in Southern Region



Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HHEMM)	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	KARNATAKA	01-09-2024 03:15	01-09-2024 04:21	01:06	0	164	0.00%	0.48%	42145.12	33985.58	Tripping of 220kV Bus of 400kV/220kV Kalaburgi SS, 220kV Bus-2 of 220kV/110kV Sedam, 220kV Bus-1 of 220kV/110kV Shahpur SS and complete outage of 220kV/110kV Gangapur SS, 220kV/110kV Humnabad SS, 220kV/110kV Kapanoor SS & 220kV/110kV Halabarga stations and 220kV Avada IPP: During antecedent conditions, due to bus split conditions at 220kV level of 220kV/110kV Sedam SS and 220kV/110kV Shahapur SS, 220kV Bus-2 of 220kV/110kV Sedam, 220kV Bus-1 of 220kV/110kV Shahpur SS, 220kV/110kV Nimbarga SS, 220kV/110kV Humnabad SS, 220kV/110kV Kapanoor SS & 220kV/110kV Halabarga stations and 220kV Avada IPP are being radially fed from 220kV Bus-1 and Bus-2 of Kalaburgi SS. The triggering incident was tripping of 400kV/220kV kalburgi ICT-1 and 2 on operation of over-flux relays on the IV side, leading to 220kV Bus 1 and Bus-2 outage at 400kV/220kV Kalaburgi SS which return led to outage of all radial connected buses and stations.	400KV/220KV KALABURAGI-ICT-1, 400KV/220KV KALABURAGI-ICT-2
2	GD - 1	ANDHRA PRADESH , TAMILNADU	05-09-2024 10:14	05-09-2024 10:27	00:13	0	177	0.00%	0.36%	52802.16	48589.41	Complete Outage of 230kV/110kV Gummudiipundi SS: During antecedent conditions, Gummudiipundi Substation was radially connected through 230kV Gummudiipundi_Sulurpet Line. 230V Gummudiipundi_Suryadev and 230kV Gummudiipundi NCTPS were out of service for power regulation. As per the reports submitted, the triggering incident was Y-N fault in 230kV Gummudiipundi_Sulurpet Line. Tripping of only connected line led to complete outage of 230kV/110kV Gummudiipundi SS. Since 230kV Surya Dev, 230kV ARS, 230kV Mychelini, 230kV Cauvery, 230kV Thervoi Kandigoi, 230kV Kamachi are radially connected to 230kV/110kV Gummudiipundi SS, complete outage of 230kV/110kV Gummudiipundi SS led to complete outage of the radial connected stations also.	220KV-SULURPET-GUMMUDIPOONDI-1, GUMMUDIPOONDI - 230KV - Bus 1, GUMMIDIPOONDI - 230KV - Bus 2
3	GD - 1	TAMILNADU	09-09-2024 10:08	09-09-2024 10:24	00:16	41	73	0.08%	0.15%	51895.43	48620.26	Complete Outage 230kV/110kV Karaikudi SS: 230kV Karaikudi SS has double bus with bus coupler but all elements are connected to single bus. As per the reports submitted, the triggering incident was R-phase jumper cut in 230kV Karaikudi karaikudi_PG Line-2 between breaker and isolator causing a bus fault. Immediately, 230kV BBP operated and all elements connected to the bus tripped. Tripping of all elements connected to 230kV Bus resulted in tripping of 230kV bus of 230kV/110kV Karaikudi SS. Subsequently, other two 110kV source feeders tripped on fault and over current protection. This led to complete outage of 230kV/110kV Karaikudi SS.	230KV-KARAIKUDI-KARAIKUDI(TN)-1, 230KV-KARAIKUDI-KARAIKUDI(TN)-2, KARAIKUDI(TN) - 230KV
4	GD - 1	TAMILNADU	12-09-2024 21:54	12-09-2024 22:00	00:06	0	1463	0.00%	2.98%	48613.17	49013.48	Complete Outage of 400kV/230kV/110kV MANALI, 400kV/230kV PULIYANTHOPE, 230kV VYSARPADI, 230kV/110kV TONDARPET, 230kV/110kV BASIN_BRIDGE, 230kV/33kV MYLAPORE_GIS, 230kV/110kV CMRL_CENTRAL, 230kV/33kV TNEB_HQ, 230kV/110kV RAPURAM and 230kV/110kV MYLAPORE: During antecedent conditions, 230kV VYSARPADI was radially fed from 400kV/230kV PULIYANTHOPE and due to outage of 230kV Tharamani Rapuram line, 230kV Tharamani Mylapore line, 230kV Tharamani KITZ line, 230kV Rapuram Mambalam line and 230kV Mylapore Mylapore_GIS line on load regulation, 230kV/110kV TONDARPET, 230kV/110kV BASIN_BRIDGE, and 230kV/33kV MYLAPORE_GIS, 230kV/110kV CMRL_CENTRAL, 230kV/33kV TNEB_HQ, 230kV/110kV RAPURAM and 230kV/110kV MYLAPORE were radially fed from 400kV/230kV/110kV MANALI and 230kV NCTPSC S1-1. Due to the tripping of both 400kV connected Manali lines, and 230kV grid connected lines, there was loss of supply to 400kV/230kV/110kV MANALI, 400kV/230kV PULIYANTHOPE, 230kV VYSARPADI, 230kV/110kV TONDARPET, 230kV/110kV BASIN_BRIDGE, 230kV/33kV MYLAPORE_GIS, 230kV/110kV CMRL_CENTRAL, 230kV/33kV TNEB_HQ, 230kV/110kV RAPURAM and 230kV/110kV MYLAPORE.	400KV NCTPSC STAGE-II MANALI LINE-1 ALAMATHY MANALI LINE-1&2 NCTPS TONDARPET LINE-1&2 NCTPS KILPAUK LINE-1 KARATTUR KILPAUK_GIS LINE-1 ALAMATHY MOSUR LINE-1&2 KORATTUR MANALI LINE-1 ALAMATHY KOYAMBEDU LINE-1 ALAMATHY MOSUR LINE-1
5	GD - 1	TAMILNADU	12-09-2024 23:36	13-09-2024 01:38	02:02	0	329	0.00%	0.71%	47134.84	46312.54	Complete Outage of 400kV/220kV Tharamani SS of TANTRANSCO: As per the reports submitted, during antecedent conditions, 230kV Mylapore Tharamani line and 230kV Rapuram Tharamani lines were under outage for load regulation. The triggering incident was YN fault in 230kV Sriperumbudur Tharamani line due to Y phase dropper cut at Tharamani end, and the line tripped. At the same time, 230kV Kalventhapattu Tharamani line tripped on operation of DEF protection only at Tharamani end. Tripping of these two lines resulted in the complete outage of 400kV/230kV/110kV Tharamani GIS and 230kV/110kV Tharamani SS.	230KV-SRIPERUMBADUR_TN-THARAMANI-1, 230KV-KALVENDAPATTU-THARAMANI
6	GD - 1	KARNATAKA	18-09-2024 06:10	18-09-2024 10:16	04:06	0	21	0.00%	0.04%	44693.0	50788.0	Complete Outage of 220kV Kalyani SS and 220kV Bus-2 outage at 400kV/220kV Munirabad SS: 220kV Kalyani Steel was being radially fed from 220kV Munirabad Bus-2. As per the reports submitted, the triggering incident R-N fault in 220kV Bus-2. Immediately, 220kV BBP operated and all elements connected to 220kV Bus-2 tripped. This led to outage of 220kV Bus-2 of Munirabad and complete outage of 220kV Kalyani Steel.	220KV-LINGAPUR-MUNIRABAD_KAR-2, 400KV/220KV MUNIRABAD-ICT-2, 220KV-MUNIRABAD-KALYANI-1, MUNIRABAD_KAR - 220KV - Bus 2
7	GD - 1	PONDICHERRY	20-09-2024 13:49	20-09-2024 14:25	00:36	0	128	0.00%	0.21%	56641.7	62248.0	Complete Outage of 230kV/110kV Villianur SS of Puducherry: In the antecedent conditions, 230kV Neyveli-Villinur was under idle charged condition due to power regulation and hence 230/110kV Villinur was radially connected via 230kV Puducherry-Villinur line. As per the reports submitted, the triggering is the B-N fault in 230kV Puducherry-Villinur line. With the tripping of only radial line connected to 230/110kV Villinur led to the complete outage of 230kV/110kV Villianur SS of Puducherry.	230KV-PUDUCHERRY-VILLIANUR-1
8	GD - 1	KARNATAKA	21-09-2024 19:25	21-09-2024 23:05	03:40	0	296	0.00%	0.61%	51698.17	48571.65	Complete Outage of 220kV/66kV Kolar SS, 220kV/66kV Sarjapura SS, 220kV/66kV Bangarpet SS of KPTCL: 220kV/66kV Malur SS was operating with split bus condition at 220kV level with 220kV Kolar Kolar_PG line-1&2 radially feeding 220kV Malur Bus-2. 20kV/66kV Sarjapura SS was being radially fed from 220kV Malur Bus-2. 220kV/66kV Bangarpet SS was being radially fed from 220kV/66kV Kolar SS. As per the reports submitted, the triggering incident was tripping of 220kV Kolar Kolar_PG line-1&2 on RYB-N fault. Tripping of both these lines led to complete outage of 220kV/66kV Kolar SS which return led to complete outage of 220kV/66kV Bangarpet SS, 220 Bus-2 of Malur and 220kV/66kV Sarjapura SS.	220KV-KOLAR_KAR-KOLAR_AC-1, 220KV-KOLAR_KAR-KOLAR_AC-2, KOLAR_KAR - 220KV - Bus 1

Details of Grid Events during the Month of Sept 2024 in Southern Region



Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HHEMM)	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	GD - 1	KARNATAKA	29-09-2024 17:51	29-09-2024 17:58	00:07	0	298	0.00%	0.67%	43568	44624	Complete Outage of 220kV Exora SS, 220kV ITI and 220kV Vikas Tech Park SS and Tripping of 220kV Bus-1 of 400kV/220kV Hoody SS of KPTCL: 400kV/220kV Hoody SS was operating with bus split condition at 220kV level with 220kV Hoody Malur line being the only source. 220kV Exora SS, 220kV ITI and 220kV Vikas Tech Park SS were being radially fed from 220kV Hoody Bus-1. As per the reports submitted, the triggering incident was tripping of 220kV Hoody Malur Line-1 on . Tripping of the only connected line resulted in outage of 220kV Bus-1 of 400kV/220kV Hoody SS which inturn resulted in complete outage of 220kV Exora SS, 220kV ITI and 220kV Vikas Tech Park SS.	220KV-HOODY-MALUR-1
10	GI-1	TELANGANA , ANDHRA PRADESH, TELANGANA	01-09-2024 06:22	01-09-2024 07:50	01:28	640	0	1.57%	0.00%	40698.3	35277.08	Tripping of 220kV Bus-1 and Bus-2 of 220kV/132kV Nsagar PH Generating station of TSGENCO: As per the reports submitted, the triggering incident was Y-N fault in 220kV Nagarjunasagar-Chalalpurthy feeder at a distance of 2.4 KM from Nsagar end. At Nsagar end, the fault was sensed in zone-1. The earth fault current recorded was 22.5 KA, and the fault was cleared within 87ms. At the same time, other 220kV Nsagar PH lines except 220kV Nsagar Tallappally Line-2 tripped due to LBB maloperation. After 5mins, 220kV Nsagar Tallappally Line-2 was hand tripped at Tallappally end due to overloading. Subsequently, PTRs of 220kV Nsagar PH tripped on overloading and Units tripped on over frequency due to loss of evacuation. This led to outage of 220kV Bus-1 and Bus-2 of 220kV/132kV Nsagar PH Generating station. 132kV was in service during the event.	220KV-NAGARJUNASAGAR_AP-NAGARJUNASAGAR_TS-87ms, 220KV-NAGARJUNASAGAR_AP-NAGARJUNASAGAR_TS-2, 220KV-NAGARJUNASAGAR_TS-CHALAKURTHY-1, 220KV-SRISAILAM_RIGHT_BANK-NAGARJUNASAGAR_TS-1
11	GI-1	KERALA	04-09-2024 20:17	05-09-2024 01:08	04:51	0	123	0.00%	0.27%	49085.97	46105.16	Tripping of 220kV Bus-2 and 220kV Bus Section-1A of 400kV/220kV Madakathara SS of KSEB: As per the reports submitted, Y-phase insulator on the 220 kV side in Bus Section 2B of the 220/110 Madakathara Transformer-2 experienced a flashover resulting in a bus fault. Immediately, Bus -2 operated tripping all elements connected to 220kV Bus section 2-A and 2-B. Both bus sections are connected through an isolator. At the same time, elements connected to 220kV Bus section 1-A also tripped.	400KV/220KV MADAKATHARA-ICT-3, 220KV-MADAKATHARA-SHORNUUR-1, 220KV-MADAKATHARA-CHALAKUDY-1, MADAKATHARA - 220KV - Bus 2, 220KV-PALAKKAD-MADAKATHARA-1, 220KV-LOWER PERIYAR MADAKATHARA-1
12	GI-1	TELANGANA , ANDHRA PRADESH	11-09-2024 20:17	11-09-2024 21:21	01:04	172	0	0.35%	0.00%	49287.14	47482.61	Tripping of 220kV Bus-2 of Lower Sileru PH of APGENCO: As per the reports submitted, at 20:16 hours, an internal Y-Phase fault occurred in Unit-2, leading to operation of GT Buchholtz and GT Differential Protections. These protections triggered the master trip relays, causing the unit to trip and the generator breaker to open. However, the LBB Group-B protection relay operated at Lower Sileru because the CT input for the Unit-2 LBB overcurrent relays was being taken from the generator side CTs. Immediately, all elements connected to 220kV Bus-2 got tripped.	220KV-ASUPAKA-LOWER_SILERU-1, 220KV-LOWER_SILERU-Chintur-1, LOWER_SILERU - 220KV - Bus 2
13	GI-1	ANDHRA PRADESH	13-09-2024 10:05	13-09-2024 10:23	00:18	0	0	0.00%	0.00%	55205.93	57984.6	Tripping of 220kV Bus-2 of 220kV Lower Sileru PH of APGENCO: As per the reports submitted, while deparallelizing Unit-3, Y-pole failed to open. LBB failed to open and other lines connected to 220kV Bus-2 were handtripped.	220KV-ASUPAKA-LOWER_SILERU-1, 220KV-LOWER_SILERU-Chintur-1
14	GI-1	TAMILNADU	19-09-2024 11:14	19-09-2024 11:34	00:20	308	322	0.55%	0.52%	56151.16	62183.13	Tripping of 230kV Bus-2 of 400kV/230kV Alamathy SS and Complete Outage of 230kV OPG generating station of TANTRANSCO: As per the reports submitted, a B-phase fault occurred on the LV side, leading to the operation of differential protection. As the fault was not cleared within 200 milliseconds, the LBB protection operated on the 230kV Bus 2. The fault was cleared in approximately 328 milliseconds, hence reverse zone protection operated on the 230kV Alamathy-Manali 1 feeder and the 230kV Alamathy-Koyembedu feeder, both connected to 230kV Bus-1 at the Alamathy end. 230kV Alamathy OPG Line-2 which is connected to 230kV Alamathy Bus-2 tripped on LBB operation. Subsequently, 230kV Alamathy OPG Line-1 tripped on over loading. Tripping of both lines led to complete outage of 230V OPG generating station.	230KV-ALAMATHY-TIRUVERKADU-1, 230KV-ALAMATHY-MANALI-1, 230KV-ALAMATHY-KOYAMBEDU-1, 230KV-ALAMATHY-MANALI-2, 230KV-ALAMATHY-OPG-2, 400KV/230KV ALAMATHY-ICT-5, 230KV-ALAMATHY-MOSUR-2, ALAMATHY - 230KV - Bus 2
15	GI-1	ANDHRA PRADESH , TELANGANA	20-09-2024 17:00	20-09-2024 19:30	02:30	392	0	0.76%	0.00%	51454.83	57035.05	Tripping of 220kV Bus-2 of 220kV Nsagar PH of TGGENCO: As per the reports submitted, the triggering incident was B-N fault in 220kV Nagarjunasagar-Srisaialam RB feeder. At the same time, other 220kV Nsagar PH lines connected to 220kV Bus-2 tripped due to LBB maloperation. This led to outage of 220kV Bus-2 of 220kV/132kV Nsagar PH Generating station.	220KV-NAGARJUNASAGAR_AP-NAGARJUNASAGAR_TS-2, 220KV-NAGARJUNASAGAR_AP-NAGARJUNASAGAR_TS-3, 220KV-SRISAILAM_RIGHT_BANK-NAGARJUNASAGAR_TS-1, 220KV-NAGARJUNASAGAR_TS-CHALAKURTHY-1
16	GI-1	ANDHRA PRADESH, TELANGANA	20-09-2024 20:30	20-09-2024 21:54	01:24	192	0	0.39%	0.00%	49231.29	49574.77	Tripping of 220kV Bus-2 of 220kV Nsagar PH of TGGENCO: As per the reports submitted, the triggering incident was B-N fault in 220kV Nagarjunasagar-Srisaialam RB feeder. At the same time, other 220kV Nsagar PH lines connected to 220kV Bus-2 tripped due to LBB maloperation. This led to outage of 220kV Bus-2 of 220kV/132kV Nsagar PH Generating station.	220KV-NAGARJUNASAGAR_AP-NAGARJUNASAGAR_TS-2, 220KV-NAGARJUNASAGAR_AP-NAGARJUNASAGAR_TS-3, 220KV-SRISAILAM_RIGHT_BANK-NAGARJUNASAGAR_TS-1, 220KV-NAGARJUNASAGAR_AP-CHALAKURTHY-1
17	GI-2	TAMILNADU	22-09-2024 19:15	22-09-2024 21:39	02:24	133	0	0.27%	0.00%	48495.89	44380.54	Tripping of 400kV Bus-1 of 400kV/230kV NLC St-II: As per the reports submitted, the triggering incident was B-phase insulator failure in 400kV Bus-1 in 400kV/230kV NLC St-II causing a B-N fault in 400kV Bus-1. Immediately, 400kV Bus-1 BBP operated tripping all elements connected to Bus-1.	400KV-NEYVELI_TS2_EXP-PUGALUR-1, 400KV-NAGAPATTNAM_PS-NEYVELI_TS1_EXP-1, 400KV/230KV NEYVELI_TS-II-ICT-1
18	GI-1	TELANGANA , ANDHRA PRADESH	30-09-2024 12:55	30-09-2024 13:27	00:32	160	0	0.31%	0.00%	51330.26	56558.11	Tripping of 220kV Bus-2 of 220kV Lower Sileru PH of APGENCO During antecedent conditions, 220kV Lower Sileru PH was operating with bus split conditions. As per the reports submitted, the triggering incident was tripping of 220kV Asupaka Lower Sileru line on B-N fault and the line tripped. Tripping of the only connected line led to tripping of units on over frequency. This led to outage of 220kV Bus-2 of 220kV Lower Sileru PH.	220KV-ASUPAKA-LOWER_SILERU-1, LOWER_SILERU - 220KV - Bus 2
19	GI-1	TAMILNADU	30-09-2024 17:24	30-09-2024 18:05	00:41	0	0	0.00%	0.00%	47497	50624	Tripping of 230kV Bus-1 of 400kV/230kV Karamadai SS of TANTRANSCO As per the reports submitted, the triggering incident was B-N fault near 400kV/230kV ICT-1. Immediately, differential protection operated and but LV side breaker failed to open. Subsequently, LBB operated and all elements connected to the 230kV Bus-1 tripped.	230KV-PUSHEP-KARAMADAI-1, 230KV-INGUR-KARAMADAI-1, 400KV/230KV KARAMADAI-ICT-1, 230KV-KUNDAH3-KARAMADAI-1, 230KV-KARAMADAI-KARUVALUR-2

Details of Grid Events during the Month of Sept 2024 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 (HHEMM)	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 for GI 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
No GD/GI reported in Eastern region in the month of September 2024													

Details of Grid Events during the Month of Sept 2024 in North 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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
	(GI for GI 2/ GD-1 to GD-5)												
1	GD I	Mokokchung(PG), Mokokchung(NL) and Longnak area of Nagaland Power System	02-09-2024 15:36	02-09-2024 16:55	01:19	0	23	0.00%	0.76%	2471	3019	Mokokchung(PG), Mokokchung(NL) and Lognak area of Nagaland Power system are connected with rest of NER Grid through 220kV Mariani(PG)-220kV Mokokchung(220kV) ckt 1 and ckt 2 and through 132kV Doyang – Mokokchung, 132kV Doyang – Mokokchung line tripped at 15:34 hrs of 02-09-2024. At 15:36 Hrs of 02-09-2024, 220kV Mariani(PG)-Mokokchung(PG) ckt 1 and ckt 2. Due to tripping of these elements, Mokokchung(PG), Mokokchung(NL) and Lognak area of Nagaland Power system were isolated from NER Grid. Power was extended to Mokokchung area of Nagaland Power System by charging 220kV Mariani(PG)-Mokokchung(PG) ckt 1 at 16:55hrs of 02-09-2024.	220kV Mariani(PG)-Mokokchung(PG) I & II lines
2	GD I	Gossaigaon Area of Assam Power System	03-09-2024 10:32	03-09-2024 11:11	00:39	0	6	0.00%	0.23%	2518	2622	Gossaigaon area of Assam Power System was connected with NER Power system via 132kV Dhaligaon-Gossaigaon-Gauripur link (132 kv Gauripur- Gossaigaon was kept open due to system requirement). At 10:32 Hrs of 03-09-2024, 132 kv Dhaligaon-Gossaigaon line tripped due to which Gossaigaon area of Assam Power System was isolated from NER Grid and collapsed due to no source available in the area. Power supply was extended by charging 132 kv Dhaligaon-Gossaigaon line at 11:11 Hrs of 03.09.2024.	132 kv Dhaligaon-Gossaigaon line
3	GD I	Rengpang area of Manipur Power System	03-09-2024 10:36	03-09-2024 15:29	04:53	0	1	0.00%	0.04%	2531	2627	Rengpang area of Manipur Power System was connected with rest of NER Grid through 132 kv Loktak-Rengpang line. 132kV-Jiribam-Rengpang line was under long outage since 18:18 Hrs of 17.11.2023. At 10:36 Hrs of 03-09-2024, 132kV Loktak-Rengpang line tripped. Due to tripping of this element, Rengpang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area. Power was extended to Rengpang area by charging 132 kv Loktak-Rengpang line at 15:29 Hrs of 03.09.2024.	132 kv Loktak – Rengpang line
4	GD I	Wokha area of Nagaland Power System	05-09-2024 09:31	05-09-2024 09:43	00:12	0	3	0.00%	0.12%	2292	2497	Wokha area of Nagaland Power System was connected with connected to NER Power system via 132kV Wokha-Chiephobozou, and 132 kv Sanis-Wokha lines. At 08:45 Hrs of 05.09.2024, 132 kv Wokha-Chiephobozou line tripped due to which Wokha area of Nagaland Power System was isolated from NER Grid and collapsed due to no source available in these area. Power supply was extended to Wokha area of Nagaland Power System by charging 132kV Wokha-Chiephobozou line at 09:43 Hrs of 05.09.2024.	132 kv Wokha-Chiephobozou line
5	GD I	Rongkhon, Ampati and Phulbari area of Meghalaya Power System and Ganol HEP of Meghalaya Power System	06-09-2024 09:34	06-09-2024 09:47	00:13	0	28	0.00%	1.04%	2384	2688	Rongkhon, Ampati and Phulbari area of Meghalaya Power System and Ganol HEP were connected with rest of NER Grid via 132 kv Nangalbira-Rongkhon Line. At 09:34 Hrs of 06.09.2024, 132 kv Nangalbira-Rongkhon Line tripped. Due to tripping of these elements, Rongkhon, Ampati and Phulbari area of Meghalaya Power System and Ganol HEP were isolated from NER Grid and collapsed due to load generation mismatch in these areas. Power was extended to Rongkhon, Ampati and Phulbari area of Meghalaya Power System and Ganol HEP by charging 132 kv Nangalbira-Rongkhon Line at 09:47 Hrs of 06.09.2024.	132 kv Nangalbira-Rongkhon Line
6	GD I	Leshka Generating station of Meghalaya Power System	06-09-2024 22:06	06-09-2024 22:24	00:18	25	0	0.74%	0.00%	3380	3397	Leshka Generating station of Meghalaya Power System was connected with rest of NER Grid via 132 kv Myntdu Leshka - Khleihriat D/C Lines. At 22:06 Hrs of 06.09.2024, 132 kv Myntdu Leshka - Khleihriat D/C Lines tripped. Due to tripping of these elements, Leshka Generating station of Meghalaya Power System was isolated from NER Grid and collapsed due to loss of evacuation path. Leska Generating is connected with the rest of the grid by charging 132 kv Myntdu Leshka - Khleihriat 1 at 22:24.	132 kv Myntdu Leshka - Khleihriat D/C Lines

Details of Grid Events during the Month of Sept 2024 in North Eastern Region



Sl No.	Category of Grid Event (GI for GI-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)		
7	GD I	Mokokchung(NL) and Longnak areas of Nagaland Power System	07-09-2024 15:43	07-09-2024 17:23	01:40	0	29	0.00%	0.90%	2413	3218	Mokokchung(NL) and Longnak areas of Nagaland Power System were connected with connected to NER Power system via 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1 Line, 132 kV Mokokchung (PG) -Mokokchung (DoP, Nagaland) 2 Line, 132 kV Doyang - Mokokchung (DoP, Nagaland) Line and 132 kV Mokokchung-Longnak Line. At 08:45 Hrs of 05.09.2024, 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1 Line, 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 2 Line, 132 kV Doyang - Mokokchung (DoP, Nagaland) Line and 132 kV Mokokchung-Longnak Line tripped due to which Mokokchung(NL) and Longnak areas of Nagaland Power System were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended to Mokokchung(NL) area of Nagaland Power System by charging 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1 Line at 17:23 Hrs of 07.09.2024. 132 kV Mokokchung (PG) -Mokokchung (DoP, Nagaland) 2 Line charged at 17:42 Hrs of 07.09.2024.	132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1 Line, 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 2 Line, 132 kV Doyang - Mokokchung (DoP, Nagaland) Line and 132 kV Mokokchung-Longnak Line
8	GD I	Deomali area of Arunachal Pradesh Power System	07-09-2024 17:16	08-09-2024 16:32	23:16	0	1	0.00%	0.03%	2441	3098	Deomali area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV AGBPP-Deomali line. At 17:16 Hrs of 07-09-2024, 220 kV AGBPP-Deomali line tripped. Due to tripping of this element, Deomali area of Arunachal Pradesh Power System got isolated from NER Grid and collapsed due to no source available in this area. Power was extended to Deomali area by charging 220 kV AGBPP-Deomali line at 16:32 Hrs of 08.09.2024.	220 kV AGBPP-Deomali line
9	GD I	Ziro, Daporizo, Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa, Rupai, Margherita areas of Assam Power System	07-09-2024 18:09	07-09-2024 18:29	00:20	0	72 MW Assam & 42 MW Arunachal Pradesh	-	-	3117	3680	Ziro, Daporizo, Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa, Rupai, Margherita areas of Assam Power System were connected with connected to NER Power system via 132 kV Rupai – Tinsukia line and 132 kV Margherita – Tinsukia line. 132kV Ranganadi-Ziro line was under PSD since 08:44 Hrs of 07-09-2024. At 18:19 Hrs of 07-09-2024, 132 kV Rupai – Tinsukia line and 132 kV Margherita –Tinsukia line tripped due to which Ziro, Daporizo, Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa, Rupai, Margherita areas of Assam Power System were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended to Chapakhowa, Rupai, Margherita areas of Assam Power System by charging 132 kV Margherita –Tinsukia line at 18:27 Hrs and by charging 132 kV Rupai – Tinsukia line at 18:29 Hrs of 07.09.24. Subsequently power supply was extended to Ziro area of Arunachal Pradesh Power System by charging 132kV Ranganadi-Ziro line at 18:29 Hrs of 07.09.24. Power supply was extended to Daporizo, Along, Pasighat by charging 132 kV Ziro-Daporizo line at 19:29 Hrs of 07.09.24. Power supply was extended to Roing, Tezu, Namsai areas of Arunachal Pradesh Power System by charging 132 kV Roing Chapakhowa D/C lines at 19:15 Hrs and 132 kV Roing-Tezu and 132 kV Tezu-Namsai lines at 19:38 Hrs and 19:40 Hrs 07.09.24 respectively.	132 kV Rupai – Tinsukia line and 132 kV Margherita –Tinsukia line
10	GD I	Mokokchung(NL) areas of Nagaland Power System	07-09-2024 21:36	07-09-2024 22:35	00:59	0	33	0.00%	0.93%	3277	3554	Mokokchung(NL) area of Nagaland Power System were connected with NER Power system via 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1 Line, 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 2 Line, 132 kV Doyang - Mokokchung (DoP, Nagaland) Line was under emergency shutdown since 19:39 Hrs of 07-09-2024. Also, 132 kV Mokokchung(NL)-Longnak line tripped at 15:43 Hrs of 07.09.2024. At 21:36 Hrs of 07.09.2024, 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1 Line, 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 2 Line tripped due to which Mokokchung(NL) area of Nagaland Power System was isolated from NER Grid and collapsed due to no source available in this area.	132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 1 Line, 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) 2 Line, 132 kV Doyang - Mokokchung (DoP, Nagaland) Line
11	GD I	Renggang area of Manipur Power System	09-09-2024 02:31	09-09-2024 15:45	13:14	0	1	0.00%	0.04%	2241	2659	Renggang area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak-Renggang line. 132kV-Jiribam-Renggang line was under long outage since 18:18 Hrs of 17.11.2023. At 02:31 Hrs of 09-09-2024, 132 kV Loktak-Renggang line tripped. Due to tripping of this element, Renggang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area. Power was extended to Renggang area by charging 132 kV Loktak-Renggang line at 15:45 Hrs of 09.09.2024.	132 kV Loktak-Renggang line
12	GD I	400/220 kV Killing S/S of Meghalaya Power system	10-09-2024 07:21	10-09-2024 10:23	03:02	0	117	0.00%	4.28%	2621	2731	400 kV Killing S/S is connected with rest of NER grid via 400 kV Bongaigaon-Killing line, 400 kV Silchar-Killing line and 400/220 kV ICT-I at Killing. 220 kV Killing S/S is connected with rest of NER grid through 220 kV Misa-Killing D/C lines, 220 kV Mawngap-Killing D/C lines and 220/132 kV ICT-I&II at Killing. 220/132 kV ICT-I at Killing was under shutdown. At 07:21 Hrs of 10.09.2024, 400 kV Bongaigaon-Killing line, 400 kV Silchar-Killing line, 220 kV Misa-Killing D/C lines, 220 kV Mawngap-Killing D/C lines and 220/132 kV ICT-II at Killing tripped which caused blackout of Killing Bus of Meghalaya Power system. Power was extended to 220 kV Killing S/S by charging 220 kV Mawngap-Killing D/C lines at 10:09 Hrs of 10.09.2024. Power was extended to 400 kV Killing S/S by charging 400 kV Silchar-Killing line at 10:23 hrs of 10.09.2024.	400 kV Bongaigaon-Killing line, 400 kV Silchar-Killing line, 220 kV Misa-Killing D/C lines, 220 kV Mawngap-Killing D/C lines and 220/132 kV ICT-II at Killing
13	GD I	New Shillong Substation of Meghalaya Power System	10-09-2024 14:39	10-09-2024 15:14	00:35	0	0.5	0.00%	0.02%	2537	3018	New Shillong Substation of Meghalaya Power System was connected with rest of NER Grid through 220kV Mawngap-New Shillong line D/C lines. At 14:39 Hrs of 10-09-2024, 220 kV Mawngap-New Shillong line D/C lines tripped. Due to tripping of these elements, New Shillong Substation of Meghalaya Power System was isolated from NER Grid and collapsed due to no source available in this area. Power was extended New Shillong Substation of Meghalaya Power System by charging 220kV Mawngap-New Shillong line D/C line at 15:14 hrs of 10-09-2024.	220 kV Mawngap-New Shillong line D/C lines

Details of Grid Events during the Month of Sept 2024 in North Eastern Region



Sl No.	Category of Grid Event (GI for GI 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)		
14	GD I	Renggang area of Manipur Power System	11-09-2024 11:05	12-09-2024 11:53	24:48	0	1	0.00%	0.05%	2433	2222	Renggang area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak-Renggang line. 132kV-Jiribam-Renggang line was under long outage since 18:18 Hrs of 17.11.2023. At 11:05 Hrs of 11-09-2024, 132 kV Loktak-Renggang line tripped. Due to tripping of this element, Renggang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area. Power was extended to Renggang area by charging 132 kV Loktak-Renggang line at 11:53 Hrs of 12.09.2024.	132 kV Loktak-Renggang line
15	GD II	AGTCCPP Generating station of Tripura Power System	12-09-2024 13:43	12-09-2024 15:04	01:21	44	0	1.88%	0.00%	2343	2773	AGTCCPP Generating station of Tripura Power System was connected with NER Power system via 132 kV AGTCCPP - KUMARGHAT Line, 132 kV AGARTALA - AGTCCPP 2 Line and 132 kV AGTCCPP - P K Bari D/C lines. 132 kV AGTCCPP-Agartala 1 Line was in the process of taking ESD and breaker was closed at Agartala end and breaker for this line opened at AGTCCPP end only. At 13:43 Hrs of 12-09-2024, 132 kV AGTCCPP - KUMARGHAT Line, 132 kV AGARTALA - AGTCCPP 2 Line and 132 kV AGTCCPP - P K Bari D/C lines tripped due to which AGTCCPP Generating station of Tripura Power System was blackout due to loss of evacuation path. Power supply was extended to AGTCCPP Generating station of Tripura Power System by charging 132kV AGTCCPP - KUMARGHAT Line at 15:04 Hrs of 12-09-2024.	132 kV AGTCCPP - KUMARGHAT Line, 132 kV AGARTALA - AGTCCPP 2 Line and 132 kV AGTCCPP - P K Bari D/C lines
16	GD I	Renggang area of Manipur Power System	12-09-2024 23:39	14-09-2024 16:31	40:52	0	1	0.00%	0.05%	2433	2222	Renggang area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak-Renggang line. 132kV-Jiribam-Renggang line was under long outage since 18:18 Hrs of 17.11.2023. At 23:39 Hrs of 12-09-2024, 132 kV Loktak-Renggang line tripped. Due to tripping of this element, Renggang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area. Power was extended to Renggang area by charging 132 kV Loktak-Renggang line at 16:31 Hrs of 14.09.2024.	132 kV Loktak-Renggang line
17	GD I	Along area of Arunachal Pradesh Power System	13-09-2024 14:24	13-09-2024 17:45	03:21	0	5	0.00%	0.17%	2324	2929	Along area of Arunachal Pradesh Power System was connected with rest of NER Power system through 132 kV Basar-Along line. 132 kV Along - Pasighat Line was under continuous planned shutdown. At 14:24 Hrs of 13.09.2024, 132 kV Basar-Along line tripped. Due to tripping of this element, Along area of Arunachal Pradesh Power System was isolated from NER Grid and collapsed due to no source available in this area. Power is restored to the Along area of Arunachal Pradesh Power System by charging 132kV Along-Basar line at 17:45 Hrs of 13.09.2024.	132 kV Basar-Along line
18	GD I	Umiam Stage IV of Meghalaya Power System	16-09-2024 13:38	16-09-2024 14:23	00:45	54	0	2.22%	0.00%	2435	2827	Umiam Stage IV of Meghalaya Power System was connected with rest of NER Grid via 132 kV Umiam Stage IV-Umtru D/C Lines & 132kV Umiam Stage IV- Umiam Stage III D/C Lines. At 13:38 Hrs of 16-09-2024, 132 kV Umiam Stage IV-Umtru D/C Lines & 132kV Umiam Stage IV Umiam Stage III D/C Lines tripped. Due to the tripping of these lines, Umiam Stage IV of Meghalaya Power System was isolated from NER Grid. Power supply was extended to Umiam Stage IV of Meghalaya Power System by charging 132 kV Umiam Stage IV- Umiam Stage III Line 2 at 14:23 Hrs of 16-09-2024.	132 kV Umiam Stage IV-Umtru D/C Lines & 132kV Umiam Stage IV Umiam Stage III D/C Lines
19	GD I	Renggang area of Manipur Power System	18-09-2024 12:23	18-09-2024 12:47	00:24	0	1	0.00%	0.03%	2388	2976	Renggang area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak-Renggang line. 132kV-Jiribam-Renggang line was under long outage since 18:18 Hrs of 17.11.2023. At 12:23 Hrs of 18-09-2024, 132kV Loktak-Renggang line tripped. Due to tripping of this element, Renggang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to Renggang area of Manipur Power system by charging 132 kV Loktak-Renggang line at 12:47 hrs of 18-09-2024.	132kV Loktak-Renggang line

Details of Grid Events during the Month of Sept 2024 in North Eastern Region



Sl No.	Category of Grid Event (GI for GI-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)		
20	GD I	Mariani area of Assam Power System	18-09-2024 18:24	18-09-2024 18:43	00:19	0	1	0.00%	0.03%	3421	3787	132 kV Mariani S/S of Assam power system is connected with rest of NER grid via 132 kV Mariani-Golaghat line, 132 kV Mariani-Jorhat I&II lines and 132 kV Mariani-LTPS line. At 18:24 Hrs of 18.09.2024, all the lines connected to 132 kV Mariani S/S tripped due to spurious LBB operation of 132 kV Mariani-Jorhat I line. Power was extended to 132 kV Mariani S/S by charging 132 kV Mariani-Golaghat line at 18:43 Hrs of 18.09.2024.	132 kV Mariani-Golaghat line, 132 kV Mariani-Jorhat I&II lines and 132 kV Mariani-LTPS line.
21	GD I	Renggang area of Manipur Power System	19-09-2024 12:40	19-09-2024 16:32	03:52	0	1	0.00%	0.03%	2388	2976	Renggang area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak-Renggang line. 132kV-Jiribam-Renggang line was under long outage since 18:18 Hrs of 17.11.2023. At 12:40 Hrs of 19-09-2024, 132kV Loktak-Renggang line tripped. Due to tripping of this element, Renggang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area. Power was extended to Renggang area by charging 132 kV Loktak-Renggang line at 16:32 Hrs of 19.09.2024.	132 kV Loktak - Renggang line
22	GD I	Lumshnong area of Meghalaya Power System	21-09-2024 14:19	21-09-2024 14:58	00:39	0	20	0.00%	0.73%	2405	2741	Lumshnong area of Meghalaya Power System was connected with connected to NER Power system via 132 kV Lumshnong - Khliehriat Line. 132 kV Lumshnong - Panchgram Line was under outage since 12:58 Hrs of 21.09.2024. At 14:19 Hrs of 21.09.2024, 132 kV Lumshnong - Khliehriat Line tripped due to which Lumshnong area of Meghalaya Power System was isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to Lumshnong area of Meghalaya Power System by charging 132 kV Lumshnong - Panchgram Line at 14:30 Hrs of 21.09.2024.	32 kV Lumshnong - Khliehriat Line
23	GD I	Nongstoin area of Meghalaya Power System	21-09-2024 14:29	21-09-2024 14:58	00:29	0	7	0.00%	0.21%	3261	3358	Nongstoin area of Meghalaya Power System was connected with connected to NER Power system via 132 kV Nangalibra-Nongstoin line. 132kV Mawngap(Mawphlang)- Nongstoin already tripped at 12:52 Hrs of 21.09.2024 and it is under emergency Shutdown. At 14:29 Hrs of 21.09.2024, 132 kV Nangalibra-Nongstoin line tripped due to which Nongstoin area of Meghalaya Power System was isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to : Nongstoin area of Meghalaya Power System by charging 132 kV Nangalibra-Nongstoin line at 14:58 Hrs of 21.09.2024.	132 kV Nangalibra-Nongstoin line
24	GD I	Ziro, Daporijo, Basar, Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa areas of Assam Power System	24-09-2024 00:18	24-09-2024 01:57	01:39	0	12 MW in Arunachal Pradesh and 4 MW in Assam	-	-	2721	2908	Ziro, Daporijo, Basar, Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa areas of Assam Power System are connected with the rest of NER grid via 132 kV Panyor-Ziro line and 132 kV Rupa-Chapakhowa lines. Prior to the event, 132 kV Panyor-Ziro and 132 kV Ziro-Daporijo lines were under forced outage since 22:18 Hrs & 23:27 Hrs of 23.09.2024 respectively. 132 kV Ziro-Daporijo line tripped at 23:27 Hrs resulting in blackout of Ziro S/S as 132 kV Panyor-Ziro line was under outage. At 00:18 Hrs of 24-09-2024, 132 kV Rupa-Chapakhowa line tripped. Due to tripping of this line, Daporijo, Basar, Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa areas of Assam Power System was isolated from NER Grid and collapsed due to no source available in these areas. Power was extended to Chapakhowa area by charging 132 kV Rupa-Chapakhowa line at 01:35 Hrs of 24.09.2024. 132 kV Roing-Chapakhowa 1&2 were charged at 01:44 hrs & 01:57 hrs respectively and power extended to Daporijo, Basar, Along, Pasighat, Tezu, Namsai area of Arunachal Pradesh power system.	132 kV Rupa-Chapakhowa line
25	GD I	Daporijo, Basar, Along and Pasighat area of Arunachal Pradesh Power System	24-09-2024 19:17	24-09-2024 19:55	00:38	0	13	0.00%	0.39%	3415	3345	Daporijo, Basar, Along and Pasighat area of Arunachal Pradesh Power System were connected with rest of NER Power system through 132 kV Chapakhowa-Roing-Pasighat-Along-Basar-Daporijo link. 132 kV Ranganadi-Ziro was under forced outage since 22:18 Hrs of 23-09-2024. At 19:17 Hrs of 24.09.2024, 132 kV Roing-Pasighat line tripped. Due to tripping of this element, Daporijo, Basar, Along and Pasighat area of Arunachal Pradesh Power System were isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to Daporijo, Basar, Along and Pasighat areas of Arunachal Power System by charging 132 kV Roing-Pasighat at 19:55 Hrs.	132 kV Roing-Pasighat line

Details of Grid Events during the Month of Sept 2024 in North 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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
26	GD I	Ziro area of Arunachal Pradesh Power System	24-09-2024 21:16	25-09-2024 17:16	20:00	0	2	0.00%	0.06%	3401	3317	Ziro area of Arunachal Pradesh Power System was connected with rest of NER Power system through 132 kV Ziro-Daporijo line. 132kV Ranganadi-Ziro was under forced outage since 22:18 Hrs of 23-09-2024. At 21:16 Hrs of 24.09.2024, 132 kV Ziro-Daporijo line tripped. Due to tripping of this element, Ziro area of Arunachal Pradesh Power System was isolated from NER Grid and collapsed due to no source available in this area. Power was extended to Ziro area by charging 132 kV Ziro-Daporijo line at 17:16 Hrs of 25.09.2024.	132 kV Ziro-Daporijo line
27	GD I	Daporijo, Basar, Along and Pasighat area of Arunachal Pradesh Power System	24-09-2024 23:15	24-09-2024 23:59	00:44	0	16	0.00%	0.52%	3089	3086	Daporijo,Basar, Along and Pasighat area of Arunachal Pradesh Power System were connected with rest of NER Power system through 132 kv Roing-Pasighat line. 132kV Ranganadi-Ziro was under forced outage since 22:18 Hrs of 23-09-2024 and 132kV Daporijo-Ziro line declared faulty since 21:16 Hrs of 24-09-2024. At 23:15 Hrs of 24.09.2024, 132 kV Roing-Pasighat line tripped. Due to tripping of this element, Daporijo, Basar, Along and Pasighat area of Arunachal Pradesh Power System were isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to Pasighat area of Arunachal Power System by charging 132 kv Roing-Pasighat at 23:59 Hrs.	132 kv Roing-Pasighat line
28	GD I	Daporijo, Basar, Along and Pasighat area of Arunachal Pradesh Power System	25-09-2024 01:17	25-09-2024 01:56	00:39	0	14	0.00%	0.49%	2751	2834	Daporijo,Basar, Along and Pasighat area of Arunachal Pradesh Power System were connected with rest of NER Power system through 132 kv Roing-Pasighat line. 132kV Ranganadi-Ziro was under forced outage since 22:18 Hrs of 23-09-2024 and 132kV Daporijo-Ziro line declared faulty since 21:16 Hrs of 24-09-2024. At 01:17 Hrs of 25.09.2024, 132 kV Roing-Pasighat line tripped. Due to tripping of this element, Daporijo, Basar, Along and Pasighat area of Arunachal Pradesh Power System were isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to Daporijo, Basar, Along and Pasighat areas of Arunachal Power System by charging 132 kV Roing-Pasighat at 01:56 Hrs of 25.09.2024.	32 kv Roing-Pasighat line
29	GD I	Pasighat area of Arunachal Pradesh Power System	25-09-2024 03:47	25-09-2024 04:32	00:45	0	2	0.00%	0.08%	2542	2509	Pasighat area of Arunachal Pradesh Power System was connected with rest of NER Power system through 132 kv Pasighat - Roing line. 132kV Ranganadi-Ziro was under forced outage since 22:18 Hrs of 23-09-2024 and 132kV Daporijo-Ziro line declared faulty since 21:16 Hrs of 24-09-2024. 132kV Daporijo-Basar-Along-Pasighat link was under outage since 01:56 Hrs of 25.09.24. At 03:47 Hrs of 25.09.2024, 132 kV Roing-Pasighat line tripped. Due to tripping of this element, Daporijo, Basar, Along and Pasighat area of Arunachal Pradesh Power System were isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to Pasighat area of Arunachal Power System by charging 132 kv Roing-Pasighat at 04:32 Hrs of 25.09.2024.	132 kv Roing-Pasighat line
30	GD I	Bokajan area of Assam Power System	25-09-2024 16:24	25-09-2024 16:51	00:27	0	1	0.00%	0.04%	2557	2594	Bokajan area of Assam Power System was connected with rest of NER Power system through 132 kV Sarupathar-Bokajan line & 132 Dimapur-Bokajan line. At 16:24 Hrs of 25.09.2024, 132 kV Sarupathar-Bokajan line & 132 Dimapur-Bokajan line tripped. Due to tripping of these elements, Bokajan area of Assam Power System was isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to Bokajan area of Assam Power System by charging 132 kV Sarupathar-Bokajan at 16:51 Hrs of 25.09.2024.	132 kV Sarupathar-Bokajan line & 132 Dimapur-Bokajan line