

Details of Grid Events during the Month of December 2022 in Northern Region



Sl No.	Category of Grid Event (G1 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	J&K	03-Dec-2022 21:19	03-Dec-2022 22:50	1:31	0	200	0.000	0.471	34480	42430	1. 220/132kV Ziankote S/s have two bus at 220kV side i.e., main bus & reserve bus. 2. During antecedent condition, 220kV Wagooza-Ziankote ckt-1&2 and 220kV Ziankote-Alustang ckt were connected at reserve bus and 220kV Amargarh-Ziankote Ckt-1&2 along with 220/132kV 150MVA Transformer-1,2&3 were connected at main bus. Both the bus were running in split mode. 3. During antecedent condition, 220kV Amargarh(NDIGRID) – Ziankote(KJ)PDD JK ckt-1 & ckt-2 were carrying ~140MW each. 4. As reported at 21:19 hrs, R-N phase to earth fault occurred on 220kV Amargarh(NDIGRID) – Ziankote(KJ)PDD JK ckt 1. Fault distance was ~12.05km and fault current was ~5.24kA from Amargarh end. At the same time, 220kV Amargarh(NDIGRID) – Ziankote(KJ)PDD JK ckt 1 also tripped. 5. As per PMU, R-N phase to earth fault which cleared within 120ms is observed. 6. As per SCADA, change in load of approx. 200MW occurred in J&K control area.	1) 220kV Amargarh(NDIGRID) – Ziankote(KJ)PDD JK ckt 1 2) 220kV Amargarh(NDIGRID) – Ziankote(KJ)PDD JK ckt 2
2	GD-1	Punjab	04-Dec-2022 01:20	04-Dec-2022 03:25	2:05	110	0	0.369	0.000	29817	35904	1. During antecedent condition, 210MW Unit-1,2,3,4&6 were running and generating approx. 58MW, 66MW, 66MW, 50MW & 61MW respectively. Unit-2, 4&6 & 220kV feeders to Jalandhar ckt-2, Jessore, Dasuya ckt-2 were connected at 220kV Bus-2 and Unit-1, Unit-3, 220/66kV 40MVA Transformer & 220kV feeders to Jalandhar ckt-1, Dasuya ckt-1 were connected at 220kV Bus-1. 2. As reported, 66MW Unit-6 was charged at 01:15hrs after half yearly maintenance work. At 01:20 hrs, B-Phase Suspension & Tension strings in 220 kV Pong S/yard at Gantry of U#6 damaged. On this fault, Unit-4&6, 220/66kV 40MVA transformer along with 220kV feeders to Jalandhar(ckt-2), Dasuya(ckt-1) tripped. Remaining elements remained intact. 3. As per PMU at Jalandhar (PG), B-N fault which cleared within 120ms is observed. 4. As per SCADA, total generation loss of approx. 110MW is observed at Pong HEP(BMBB).	1) 220 kV Jalandhar-Pong (BB) Ckt-2 2) 220 kV Pong(BB)-Dasuya(PS) (BB) Ckt-2 3) 66 MW Pong HPS - UNIT 4 4) 66 MW Pong HPS - UNIT 6 5) 220/66kV 40MVA Transformer-1 at Pong(BB)
3	GD-1	J&K	04-Dec-2022 20:57	04-Dec-2022 22:36	1:39	0	110	0.000	0.266	33436	41387	1. 220/66kV Hiranagar S/s have two bus at 220kV side i.e., main bus & reserve bus. 2. During antecedent condition, 220kV Hiranagar (PDD)-Samba(PS) (PG) ckt was under planned shutdown for HTLS conductor rewireing work. All the other elements i.e., 220kV Hiranagar-Ghatti (PDD JK) ckt-1 & ckt-2, 220 kV Samba(PG)-Hiranagar(PDD) (PG) ckt-1 & ckt-2, 220kV Hiranagar-Bishna (PDD JK) ckt and 220/132kV 200MVA Transformer-1&2 were connected at 220kV Main bus. 3. As reported at 20:57 hrs, R-N phase to earth fault occurred on 220kV Hiranagar-Ghatti (PDD JK) ckt-2. Fault distance and fault current were 7.1km & 3.3kA from Hiranagar end. On this fault, distance protection of 220kV Hiranagar-Ghatti (PDD JK) ckt-2 operated in Z-1 but due to pole discrepancy, line CB didn't open properly and thus fault didn't clear. As fault didn't clear and bus bar protection is also not available at Hiranagar S/s, 220kV Hiranagar-Ghatti (PDD JK) ckt-1, 220kV Hiranagar-Bishna (PDD JK) ckt, 220 kV Samba(PG)-Hiranagar(PDD) (PG) Ckt-1 & Ckt-2 all tripped from Hiranagar end only on earth fault overcurrent protection. 4. As per PMU at Kishepur(PG), no fault is observed in system. 5. As per DR submitted by Samba(PG), R-N phase to earth fault with delayed clearance in 680ms is observed. Samba end sensed fault in Zone-3. 6. As per SCADA, load loss of approx. 110MW observed in J&K(UT) & Ladakh(UT) control area. 7. As reported, after revival of 220kV Hiranagar (PDD)-Samba(PS) (PG) ckt, both bus are running in split mode and 220kV Hiranagar (PDD)-Samba(PS) (PG) ckt with 220kV Hiranagar-Ghatti (PDD JK) ckt-1 & ckt-2 are kept at Main Bus and remaining elements are kept at reserve bus.	1) 220kV Hiranagar-Ghatti (PDD JK) ckt-2 2) 220kV Hiranagar-Ghatti (PDD JK) ckt-1 3) 220kV Hiranagar-Bishna (PDD JK) ckt 4) 220 kV Samba(PG)-Hiranagar(PDD) (PG) Ckt-1 5) 220 kV Samba(PG)-Hiranagar(PDD) (PG) Ckt-2
4	GD-1	Punjab	06-Dec-2022 15:03	06-Dec-2022 18:57	3:54	132	0	0.287	0.000	46021	48959	1. During antecedent condition, 210MW Unit-2&3 were running and generating ~66MW each. Unit-2 & 220kV feeders to Jalandhar ckt-2, Jessore, Dasuya ckt-2 were connected at 220kV Bus-2 and Unit-3, 220/66kV 40MVA Transformer & 220kV feeders to Jalandhar ckt-1, Dasuya ckt-1 were connected at 220kV Bus-1. 2. As reported at 15:03 hrs, during synchronizing 66MW Unit-6 at Pong(BMBB) at 220kV Bus-1, B-phase pole of SF6 circuit breaker of the unit-6 got burst. It also damaged isolators/accessories of adjacent bays/circuits. On this fault bus bar protection of 220kV Bus-2 operated and elements i.e., 66MW Unit-2 & 220kV feeders to Jalandhar ckt-2, Jessore, Dasuya ckt-2 tripped. However, bus coupler didn't open and so fault cleared with the tripping of 66MW Unit-3, 220/66kV 40MVA transformer and 220kV feeders to Jalandhar ckt-1, Dasuya ckt-1 in 2-2 from remote end 3. As per PMU at Jalandhar (PG), R-N fault with delayed clearance in 480ms is observed. 4. As per SCADA, total generation loss of approx. 132MW is observed at Pong HEP(BMBB).	1) 220kV Bus-1 at Pong(BB) 2) 220kV Bus-2 at Pong(BB) 3) 220 kV Jalandhar-Pong (BB) Ckt-1 4) 220 kV Jalandhar-Pong (BB) Ckt-2 5) 220 kV Jalandhar(BB)-Dasuya(PS) (BB) Ckt-1 6) 220 kV Jalandhar(BB)-Dasuya(PS) (BB) Ckt-2 7) 220 kV Jalandhar(BB)-Jessore(H) (BB) Ckt 8) 66 MW Pong HPS - UNIT 6 9) 66 MW Pong HPS - UNIT 3 10) 220/66kV 40MVA Transformer-1 at Pong(BB)
5	GI-2	Rajasthan	09-Dec-2022 02:15	09-Dec-2022 04:28	2:13	0	0	0.000	0.000	27404	35214	1. During antecedent condition, 400kV Bus-IB was under shutdown to facilitate the testing of bus bar protection (SIEMENS bus bar relay) through 447 Bay (main bay of upcoming 400/220kV 500MVA ICT-VIII). 400/220kV 500MVA ICT-9 was the only element connected at 400kV Bus-IB via tie bay(443 bay). ICT-9 was further connected at 220kV side with 220kV ckt to ASEJOL-1&2 & NTPC DEVKOT. 2. It was assumed that tripping command would go to 444 bay/main bay of ICT-IX and 447 bay (main bay of upcoming ICT-VIII). In this case ICT-IX would remain intact with the tie bay (443 bay). 3. However as reported at 02:15 hrs, during testing, bus bar relay sent tripping command to 443 bay also (tie bay of ICT-IX). There was some issue related wiring configuration in SIEMENS bus bar relay. 4. As ICT-IX was charged through tie bay only (443 bay), it tripped with the tripping of tie CB and sent inter trip command to 220kV side. With this, 220kV Bus-IB&VIB became dead. 5. As per PMU, no fault in system is observed.	1) 400/220 kV 500 MVA ICT 9 at Fatehgarh_HIPG 2) 220 kV Fatehgarh_HIPG-Devkot SL_FTGHZ (NTPC_DEVKOT) (NTPC_DEVKOT) Ckt-1 3) 220 kV Fatehgarh_HIPG-ASEJOL_IB_FTGHZ (ASEJOL) Ckt-1 4) 220 kV Fatehgarh_HIPG-AHEJOL_PSS_IB_FGRAH_PG (AHEJOL) Ckt-2
6	GD-1	Punjab	13-Dec-2022 11:52	13-Dec-2022 14:36	2:44	165	0	0.320	0.000	51512	54281	1. As reported, at 11:52hrs on 13th Dec 2022, 400 kV Dehar(BB)-Panchkula(PG) (PG) Ckt-1 tripped on R-N phase to earth fault, fault distance was 24.6km(Z-1) & 104km (Z-2) from Panchkula & Dehar end respectively. 2. A. At the same time, 165MW Unit-4 at Dehar(BMBB) and 220/132kV 40MVA ICT-3 at Dehar(BB) also tripped. 3. As per PMU at Panchkula(PG) end, first R-N phase to earth fault occurred at 11:51:59hrs which cleared with the delay of ~640msec and again at 11:52:02hrs R-N phase to earth fault occurred. 4. As per SCADA, generation loss of approx. 165MW occurred due to tripping 165MW Unit-4 at Dehar(BB).	1) 400 kV Dehar(BB)-Panchkula(PG) (PG) Ckt-1 2) 165MW unit-4 at Dehar(BB) 3) 220/132kV 40MVA ICT-3 at Dehar(BB)
7	GD-1	Rajasthan	14-Dec-2022 15:07	14-Dec-2022 16:01	0:54	145	0	0.304	0.000	47691	49189	1. As reported, at 15:07hrs, 220 kV TATA Noorsar SL_BKN PG (TPGEL)-Bikaner(PG) (TPGEL) Ckt tripped on under voltage protection operation at TPGEL end. 2. As per PMU at TPGEL end, antecedent phase voltage of the line was ~128kV (line voltage 221kV) which is well in the operating range. 3.A s per PMU, loss of approx. 145MW RE generation occurred at TPGEL RE station due to tripping of the line (loss of evacuation path). 4. A s per the communication with TPGEL, under voltage protection was kept enable in both Main-1 & Main-2 relay. Same has been disabled now.	1) 220 kV TATA Noorsar SL_BKN PG (TPGEL)- Bikaner(PG) (TPGEL) Ckt-1
8	GD-1	Uttarakhand	16-Dec-2022 06:25	16-Dec-2022 07:05	0:40	32	0	0.079	0.000	40579	46728	1. During antecedent condition, 220kV Tanakpur-CB Ganj Ckt was in out condition. 40MW Unit-2 was running and generating approx. 32MW. All the elements i.e., Unit-2, Sitarganj line(carrying 24MW towards Tanakpur) & 220/132kV ICT (carrying 55MW towards Mahendargarh) were connected at 220kV Bus-2. 2. As reported, at 06:25hrs, during shutdown of 40MW Unit-3 at Tanakpur HEP, Y-Phase pole of CB got stuck, leading to the flow of unbalanced current into the GT neutral and Unit-3 tripped on GT neutral over current protection operation. 3. A. Y-ph pole is stuck, UB protection of Unit-3 also operated and sent tripping command to elements connected at bus-2. However, Sitarganj line & 220/132kV ICT didn't trip from Tanakpur end. 220kV Sitarganj line tripped from Sitarganj end only. 4. Further after 5-6 secs, due to flowing of unbalanced current in GT of Unit-2 also, Unit-2 tripped on neutral over current protection operation. 5. Due to loss of source from Sitarganj and Tanakpur, power supply to Mahendargarh lost. 6. As per PMU at Meerap(PG), no fault in system is observed. 7. As per SCADA, generation loss of approx. 32MW occurred at Tanakpur HEP. observed at Tanakpur HEP.	1) 220 kV Tanakpur(NH)-Sitarganj (PG) Ckt 2) 40MW Unit-2 at Tanakpur HEP

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
9	GD-1	Uttarakhand	18-Dec-2022 17:38	18-Dec-2022 18:25	0:47	32	0	0.077	0.000	41335	47420	1. During antecedent condition, 40MW Unit-2 was running and generating approx. 32MW. All the elements i.e., Unit-2, Sitargan line(carrying 24MW towards Sitargan), CB Ganj line (carrying 58MW towards Tanakpur) & 220/132kV ICT (carrying 52MW towards Mahendargarh) were connected at 220kV Bus-2, 220kV Bus-1 was under shutdown. 2. As reported, at 17:38hrs, during shutdown of 40MW Unit-3 at Tanakpur HEP, Y-phase pole of CB got stuck. However, as magnitude of unbalanced current flowing to GT neutral was very low, GT neutral over current protection didn't operate and LBB protection of Unit-3 CB also didn't initiate. 3. As Y-ph pole is stuck, to prevent reverse power flow in unit-3, CBs of Unit-2, CB Ganj Line and Sitargan Line were opened manually. 4. Due to opening of the elements, power flow to Mahendargarh also became zero. 5. As per PMU at Meerut(PG), no fault in system is observed. 6. As per SCADA, generation loss of approx. 32MW occurred at Tanakpur HEP observed. 7. As reported by NHP, fault in Y-ph pole of CB has been rectified on 19.12.2022.	1) 220 KV Tanakpur(NH)-Sitargan(PG) Ckt 2) 40MW Unit-2 at Tanakpur HEP 3) 220 KV Tanakpur(NH)-CB Ganj(LUP) (PG) Ckt
10	GD-1	Uttar Pradesh	19-Dec-2022 06:35	19-Dec-2022 10:39	4:04	440	0	1.107	0.000	39754	46330	1. During antecedent condition, 765 KV Bara-Mainpuri ckt-2 and 765/400kV 1500MVA ICT at Bara were carrying 1195MW & 333MW respectively. 660MW Unit-1,2&3 were generating approx. 508MW, 437MW & 588MW respectively. 2. As reported, at 06:35 hrs, 765 KV Bara-Mainpuri ckt-2 tripped on Y-N phase to earth fault after unsuccessful A/R operation. 3. As per PMU at Mainpuri(PG), Y-N phase to earth fault with unsuccessful A/R operation is observed. 4. Logic of SPS implemented at 765/400kV Bara TPS for Safe evacuation of its generation is: Case: If P is greater than or equal to 1250 MW where P is MW flow on HV side of 1500 MVA ICT (765/400 KV) at Bara TPS AND Main CB (707-52) & Tie CB (708-52) of 765 KV Bara-Mainpuri ckt-2 tripped (Along with 86A/B trip relay operated) Action: One of the three Units at Bara TPS shall trip based on the selection. 5. As per SPS logic, it operated and Unit-2 at Bara TPS tripped. 6. As per SCADA, generation loss of approx. 440MW at Bara TPS is observed.	1) 765 KV Bara-Mainpuri (UP) Ckt-2 2) 660 MW Bara TPS - UNIT 2
11	GD-1	Uttar Pradesh	20-Dec-2022 03:03	20-Dec-2022 13:44	10:41	505	0	1.722	0.000	29327	33482	1. During antecedent condition, 765 KV Bara-Mainpuri ckt-2 and 765/400kV 1500MVA ICT at Bara were carrying 1241MW & 223MW respectively. 660MW Unit-1,2&3 were generating approx. 482MW, 506MW & 477MW respectively. 2. As reported, at 03:03 hrs, 765 KV Bara-Mainpuri ckt-2 tripped on R-N phase to earth fault. 3. As per PMU at Mainpuri(PG), R-N phase to earth fault followed by B-N fault is observed. No A/R operation observed. 4. Logic of SPS implemented at 765/400kV Bara TPS for Safe evacuation of its generation is: Case: If P is greater than or equal to 1250 MW where P is MW flow on HV side of 1500 MVA ICT (765/400 KV) at Bara TPS AND Main CB (707-52) & Tie CB (708-52) of 765 KV Bara-Mainpuri ckt-2 tripped (Along with 86A/B trip relay operated) Action: One of the three Units at Bara TPS shall trip based on the selection. 5. As per SPS logic, it operated and Unit-2 at Bara TPS tripped. 6. As per SCADA, generation loss of approx. 506MW at Bara TPS is observed.	1) 765 KV Bara-Mainpuri (UP) Ckt-2 2) 660 MW Bara TPS - UNIT 2
12	GD-1	Haryana	20-Dec-2022 06:49	20-Dec-2022 13:59	7:10	1400	0	3.376	0.000	41468	47152	1. 400KV Jhajjar(APCL) has four (04) evacuating lines i.e., 400KV Jhajjar(APCL)-Mundka(DV) (APCL) Ckt-1&2 and 400 KV Jhajjar(APCL)-Daulatabad(HV) (HV) Ckt-1&2. During antecedent condition, 500 MW Jhajjar TPS (APCL) - UNIT 1,2&3 all were running and carrying approx. 1400MW. 2. As reported at 02:32hrs on 20.12.2022, 400KV Jhajjar(APCL)-Mundka(DV) (APCL) Ckt-2 tripped on Y-N phase to earth fault, fault distance was 13.5km from Jhajjar(APCL) end. Unsuccessful A/R operation observed at Jhajjar end. 3. Further at 06:47hrs, 400 KV Jhajjar(APCL)-Daulatabad(HV) (HV) Ckt-1 tripped on Y-N phase to earth fault, fault distance was ~25km from Jhajjar end. At the same time, 400 KV Jhajjar(APCL)-Daulatabad(HV) (HV) Ckt-2 tripped from Jhajjar end in 2.3 ~ 1023m along with 400/220kV 315MVA ICT-4 at Daulatabad(HV). It seems that fault of 400 KV Jhajjar(APCL)-Daulatabad(HV) (HV) Ckt-1 didn't clear from Daulatabad end within time which further led to the tripping of other elements on back up protection. 4. With the tripping of Mundka-2 & Daulatabad-1&2 lines, only one line i.e., 400KV Jhajjar(APCL)-Mundka(DV) (APCL) Ckt-1 was available for power evacuation and its MW loading increased to ~1400MW. 5. Further at 06:49hrs, 400KV Jhajjar(APCL)-Mundka(DV) (APCL) Ckt-1 also tripped on R-N phase to earth fault, fault occurred due to snapping of jumper at tower location no 119. 6. With the tripping of all four (04) lines at Jhajjar(APCL), all three 500MW running units at Jhajjar(APCL) tripped due to loss of evacuation path. 7. As per PMU at Gurgaon(PG), Y-N phase to earth fault with unsuccessful A/R at 02:32hrs, Y-N phase to earth fault with delayed clearance in 1240msec at 06:47hrs and R-N phase to earth fault cleared within 100msec is observed. 8. As per SCADA, generation loss of approx. 1400MW observed at Jhajjar(APCL) and change in load of approx. 85MW is observed in Haryana control area.	1) 400 KV Jhajjar(APCL)-Mundka(DV) (APCL) Ckt-2 2) 400 KV Jhajjar(APCL)-Daulatabad(HV) (HV) Ckt-1 3) 400 KV Jhajjar(APCL)-Daulatabad(HV) (HV) Ckt-2 4) 400 KV Jhajjar(APCL)-Mundka(DV) (APCL) Ckt-1 5) 400/220kV 315MVA ICT-4 at Daulatabad(HV) 6) 500 MW ISTPP (Jhajjar) - UNIT 1 7) 500 MW ISTPP (Jhajjar) - UNIT 2 8) 500 MW ISTPP (Jhajjar) - UNIT 3
13	GD-1	Haryana	20-Dec-2022 00:29	20-Dec-2022 03:55	3:26	0	150	0.000	0.409	30837	36697	1. As reported, at 00:29hrs on 20th Dec 2022, all the elements connected at 220kV Panipat(BMB) tripped on bus bar protection operation at BMB end. 2. As per the details received from Narela(DTI) end, fault was in its 2-2. 3. As per PMU at Dadri Thermal(NTPC) end, R-N & Y-N fault with delayed clearance of approx. 1080msec is observed. 4. As per SCADA, change in demand of approx. 150MW is observed in Haryana control area.	1) 400/220 KV 500 MVA ICT 2 at Panipat(BB) 2) 220 KV Panipat-Dhukote (BB) Ckt-1 3) 220 KV Panipat-Dhukote (BB) Ckt-2 4) 220 KV Panipat-Kurukshetra (BB) Ckt-1 5) 220KV Bus 1, 2 & 3 at Panipat(BB) 6) 220 KV Panipat(BB)-Chajpur(HV) (HV) Ckt-2 7) 220 KV Panipat(HV)-Panipat(BB) (HV) Ckt-2 8) 220 KV Panipat-Charhi Dadri (BB) Ckt-1 9) 400/220 KV 450 MVA ICT 1 at Panipat(BB) 10) 220 KV Panipat(HV)-Panipat(BB) (HV) Ckt-4 11) 220 KV Panipat(BB)-Chajpur(HV) (HV) Ckt-1 12) 220 KV Panipat(HV)-Panipat(BB) (HV) Ckt-3 13) 220 KV Panipat(BB)-Narela(DV) (BMB) Ckt-2 14) 220 KV Panipat(HV)-Panipat(BB) (HV) Ckt-1 15) 220 KV Panipat(BB)-Narela(DV) (BMB) Ckt-1 16) 220 KV Panipat(BB)-Narela(DV) (BMB) Ckt-3
14	GI-2	Uttar Pradesh	26-Dec-2022 06:57	26-Dec-2022 08:24	1:27	0	0	0.000	0.000	41071	47235	1. As reported at 06:57hrs, R-N phase to earth fault occurred on 220kV Auraiya-Railway ckt. On this fault, bus bar protection at 220kV side of 440/220kV Auraiya(NTPC) operated. 2. Due to bus bar protection operation, 400/220kV 315MVA ICT-1&2, 220/33kV 40MVA ICT at Auraiya and 220kV feeders to sikandra-1&2, Mehgaon and Railway tripped. 3. As per PMU at Agra(PG), R-N phase to earth fault with delayed clearance in 920ms is observed. 4. As per SCADA, no change in demand and generation is observed	1) 400/220 KV 315 MVA ICT 1 at Auraiya(NT) 2) 400/220 KV 315 MVA ICT 2 at Auraiya(NT) 3) 220 KV Auraiya(NT)-Sikandra(LUP) (PG) Ckt-1 4) 220 KV Auraiya(NT)-Sikandra(LUP) (PG) Ckt-2 5) 220 KV Auraiya(NT)-Mehgaon(MP) (MPSEB) Ckt-1 6) 220/33 KV 40 MVA ICT 1 at Auraiya(NT) 7) 220kV Auraiya-Railway ckt
15	GD-1	Rajasthan	27-Dec-2022 11:11	27-Dec-2022 11:36	0:25	0	450	0.000	0.776	51362	57993	1. As reported at 05:15hrs, 220kV Hindaun-220-Sikra(Bus)(Raj) ckt tripped on phase to earth fault. 2. Due to tripping of above line, loading of 400/220kV ICTs at Hindaun(Raj) increased. 3. With the increase in demand, loading of ICTs further increased (MVA loading of ICTs at 11:11hrs, ICT-1: 268MVA & ICT-2: 289MVA) and at 11:11hrs, 400/220kV 315MVA ICT-1&2 tripped on O/C protection operation. 4. As per PMU, no fault is observed in system. 5. As per SCADA, load loss of approx. 450MW is observed in Rajasthan control area.	1) 400/220 KV 315 MVA ICT -1 at Hindaun(Raj) 2) 400/220 KV 315 MVA ICT -2 at Hindaun(Raj)
16	GI-1	Punjab	30-Dec-2022 19:43	30-Dec-2022 21:06	1:23	0	0	0.000	0.000	43244	54814	1. As reported, at 19:43hrs, Y-ph PT of 220 KV Jalandhar-Jamapur (BB) Ckt-2 damaged at Jalandhar end and created bus fault on 220kV bus-2. On this bus fault, bus bar protection of 220kV bus-2 operated and all the elements connected at 220kV bus-2 at Jalandhar(BB) i.e., 220 KV Jalandhar-Jamapur (BB) Ckt-2, 220 KV Jalandhar-Pong (BB) Ckt-2, 220 KV Dasuya(PS)-Jalandhar(BB) (BMB) Ckt-2, 220 KV Jalandhar(BB)-Jamsher(PS) (BB) Ckt-2, 220/132kV 100MVA ICT-2&4 and 220/56kV 100MVA ICT-1 at Jalandhar(BB) at Jalandhar(BB) tripped. 2. Elements connected at 220kV bus-1 remained intact. 3. As per PMU at Jalandhar(PG), Y-N fault followed by R-B fault is observed. 4. As per SCADA, no change in demand of Punjab is observed. 5. As reported by BMB, damaged Y-phase PT of 220 KV Jalandhar-Jamapur (BB) Ckt-2 has been replaced.	1) 220KV Ckt-2 at Jalandhar(BB) 2) 220 KV Jalandhar-Jamapur (BB) Ckt-2 3) 220 KV Jalandhar-Pong (BB) Ckt-2 4) 220 KV Dasuya(PS)-Jalandhar(BB) (BMB) Ckt-2 5) 220 KV Jalandhar(BB)-Jamsher(PS) (BB) Ckt-2 6) 220/132kV 100MVA ICT-2 at Jalandhar(BB) 7) 220/132kV 100MVA ICT-4 at Jalandhar(BB) 8) 220/56kV 100MVA ICT-1 at Jalandhar(BB)

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
	(GI 1or 2/ GD-1 to GD-5)												
1	GD-1	WR	01-Dec-22 10:57	01-Dec-22 11:08	0:11	335	418	0.005	0.006	64987	64913	At 10:57 Hrs/01-12-2022, 400 kV Sugen- Uno Sugen, 400 kV Sugen- Pirana, 400 kV Sugen- Gandhar, 400 kV Sugen- Vapi, 220 kV Sugen- Kim 1&2 and 220/66 kV Sugen ICTs 1&2 tripped. Tripping of these elements were due to the erroneous trip command from islanding scheme. With these tripping, Sugen station got islanded from grid and feeding Surat load of 418 MW. Sugen Unit 1 was generating around 335 MW and due to load generation imbalance, Sugen Unit 1 tripped on Under frequency protection operation. As reported by Sugen, the spurious signal trip command was due to Islanding System PLC internal fault (as seen from the "Diagnostic Alarm"). 400/220 kV Sugen station went dark due to these tripping.	Tripping of 1. 400 kV Sugen- Unosugen 2. 400 kV Sugen- Pirana 3. 400 kV Sugen- Gandhar 4. 400 kV Sugen- Vapi 5. 220 kV Sugen- Kim 1&2 6. 220/66 kV Sugen ICTs 7. 382.5 MW Sugen Unit 1
2	GD-1	WR	01-Dec-22 14:59	01-Dec-22 15:41	0:42	-	100	-	0.002	61576	62531	At 14:59 Hrs/01-12-2022, Y Phase insulator string of 220 kV Amarkantak line failed at 220 kV Sidhi substation and resulted in tripping of all the elements connected to 220 kV Sidhi Buses 1&2. As reported by MP SLDC, there was a load loss of 100 MW due to the event. 220/132 kV Sidhi, 132 kV Deosar, 132 kV Madwas, 132 kV Sihawal and 132kV SS Rewa Sagra substations affected due to the event.	Tripping of 1. 220 kV Sidhi- Ammarkantak 2. 220 kV Sidhi- Rewa 3. 220 kV Sidhi- Hindalco 1&2 4. 220/132 kV 160 MVA Sidhi ICTs 1&2
3	GD-1	WR	06-Dec-22 09:05	06-Dec-22 11:13	2:08	-	-	-	-	65512	64636	At 09:05 Hrs/06-12-2022, 400 kV Mahan- Bilaspur 1 (which was out under Voltage regulation) was charged from Mahan end (with Bilaspur end isolator in open condition) and at the same time, 400 kV LR of Bilaspur 1 at Mahan end tripped due to issue in Voltage selection relay. This resulted in tripping of 400 kV Mahan-Bilaspur 1&2 on Over Voltage protection operation. As reported by PGCIL, 400 kV Mahan- Bilaspur 1 was charged from Mahan end without proper information/coordination with PGCIL end (with Bilaspur end isolator in open condition) which resulted in Over Voltage and tripping of the lines from Bilaspur end. There was no generation loss due to the event.	Tripping of 1. 400 kV Mahan- Bilaspur 1&2 2. 400 kV LR of Bilaspur 1 at Mahan end
4	GD-1	WR	09-Dec-22 09:45	09-Dec-22 10:00	0:15	-	739	-	0.012	65170	63510	At 09:45 Hrs/09-12-2022, 400/220 kV Chakan ICT 3, HV side CB was hand tripped due to heavy sparking in HV side 89A isolator. Instead on tripping 220 kV side CB of ICT3, ICT 2 220 kV side CB was tripped by operator. This resulted in loading of 400/220 kV Chakan ICT 1. Prior to these hand tripping, 400/220 kV Chakan ICTs 1,2&3 loading were 190 MW, 187 MW and 167 MW respectively. The total load of 220 kV side (546 MW) was fed by ICT 1 and resulted in overload and LTS operation. The load relief received from LTS operation (220 kV chakan- Bhosari 1 & Chinchwad ICTs tripping) was not sufficient and resulted in tripping of 400/220 kV Chakan ICT 1 on Over current protection operation. After the tripping of Chakan source, 220 kV MVMML, Bridge stone, Chakan Phase II, Volkswagon, Tetra pack substations went dark. 220 kV Chinchwad- Urse got overloaded and LTS operated, trip command was given to three transformers at Chinchwad end. Since the transformers already tripped during Chakan ICTs LTS operation, no load relief was obtained and 220 kV Urse- Chinchwad tripped on Overcurrent protection operation. 220 kV Lonikhand- Bhosari got overloaded and LTS operated, trip command given to two transformers at Bhosari and 46 MW load relief was obtained. 220 kV Bhosari 1- Bhosari 2 line & 220 kV Pirangut- Hinjanwadi line tripped on Over current protection operation. 220 kV Chinchwad, 132 kV Rahatani, Ganeshkhind, Varasgaon, 100 kV Talegaon, Pudumjee & Lonovala substations also went dark	Tripping of 1. 400/220 kV Chakan ICT 1 2. 220 kV Chinchwad- Urse 3. 220 kV Chakan- Bhosari 1 4. 220 kV Bhosari 1- Bhosari 2 5. 220 kV Pirangut- Hinjanwadi 2
5	GI-2	WR	12-Dec-22 04:11	12-Dec-22 06:17	2:06	300	-	0.006	-	48533	46404	At 04:11 Hrs/12-12-2022, While closing Main Bay of 400kV-Bina(MP)-JP Bina 1 at 400 kV Bina(MP) substation (during restoration of bypass arrangement after NHPTL testing as per approved restoration sequence), 250 MW JP Bina Units 1&2 Generator Transformers tripped on Standby Earth fault protection operation. As reported by MPPTCL, B phase pole of the above mentioned main bay was not closed due to AC supply fuse failure and resulted in tripping of other phases of CB on Pole discrepancy relay operation. There was a generation loss of around 300 MW due to the event.	Tripping of 1.250 MW JP Bina Units 1&2
6	GD-1	WR	12-Dec-22 20:58	12-Dec-22 21:30	0:32	-	-	-	-	57432	51046	At 20:58:23 Hrs/12-12-2022, 400 kV IndiraSagar-Indore 1&2 tripped on Over Voltage Stage I protection operation at IndiraSagar end. At 20:58:27 Hrs, 400 kV IndiraSagar- Satpura also tripped on Over Voltage Stage I protection operation at IndiraSagar end. Prior to the event, 400 kV IndiraSagar- Nagda tripped on Over Voltage Stage I protection operation at 20:40 Hrs. There was no generation loss due to the event.	Tripping of 1. 400 kV IndiraSagar- Indore 1&2 2.400 kV IndiraSagar- Satpura 3.400 kV IndiraSagar- Nagda
7	GI-2	WR	25-Dec-22 10:59	26-Dec-22 00:21	13:22	-	-	-	-	71055	68436	At 10:59:12 Hrs/25-12-2022, 765 kV Vadodara Bus 2 tripped on Bus bar protection due to R-E fault in 711 Bay. 765/400 kV Vadodara ICT 3 tripped along with 765 kV Bus 2 as tie bay was in open condition due to BR outage on Voltage regulation. At 10:59:21 Hrs, 765 kV Vadodara Bus 1 tripped on Bus bar protection due to R-E fault in 710 Bay. Due to these tripping, 765 kV Lakadia 1 LR at Vadodara which was charged as BR became dead. There was no load loss due to the event.	Tripping of 1. 765 kV Vadodara Buses 1&2 2. 765/400 kV Vadodara ICT 3

Details of Grid Events during the Month of December 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)		
8	GD-1	WR	25-Dec-22 11:04	25-Dec-22 12:27	1:23	-	140	-	0.002	70824	68102	At 11:04 Hrs/25-12-2022, 220 kV Popda- Vav tripped on R-E from Vav end on Zone 1 Distance protection operation due to metallic yarn fallen between loc.no. 32 & 33. The fault was not cleared at Popda end (Main 1 DPS ALSTOM P444 was in error mode and Main2 DPS ABB REL670 Binary Output was not configured. So both relays are failed to trip the CB) and resulted in tripping of 220/132 kV Popda ICTs & 220 kV Popda- Navsari(PG) 1&2 on LV side E/F protection operation and Directional E/F protection operation at Navari(PG) end respectively. 220 kV Popda- Navsari line tripped at Popda end only on E/F protection operation. 66 kV Popda- Sachin B & 66 kV Popda- Earthan lines tripped at Sachin and Earthan ends on E/F protection operation. Due to these tripping, 220/132/66 kV Popda went dark. There was a load loss of 140 MW due to the event.	Tripping of 1. 220 kV Popda- Vav 2. 220 kV Popda- Navsari(PG) 1&2 3. 220 kV Popda- Navsari 4. 220/132 kV Popda ICTs 1&2

Details of Grid Events during the Month of December 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	15-Dec-22 03:35	15-Dec-22 04:25	50mins	0	89	0.00%	0.31%	26757	29005	Complete Outage of 220kV/66kV Hiriyur_KA, 220kV/33kV Azure SS, and 220kV/33kV Enercon SS of KPTCL: 220kV/33kV Azure SS and 220kV/33kV Enercon SS are being radially fed from 220kV/66kV Hiriyur_KA SS. During antecedent conditions, all 220kV elements were connected to 220kV Bus-1 at 220kV/66kV Hiriyur_KA SS. As per the reports submitted, the triggering incident was operation of dead zone protection of 220kV Bus-1 at 220kV/66kV Hiriyur_KA SS. Immediately, all the elements connected to Bus-1 tripped resulting in complete outage of 220kV/66kV Hiriyur_KA SS. This further resulted in complete outage of 220kV/33kV Azure SS and 220kV/33kV Enercon SS.	1. 220kV Hiriyur_KA Azure 2. 220kV Hiriyur_KA Enercon 3. 220kV Hiriyur_KA Hiriyur_PG 4. 220kV Hiriyur_KA Madhugiri 5. 220kV Hiriyur_KA Talak 6. 220kV/66kV Hiriyur Transformer-1,2&3
2	GD-1	Kerala	16-Dec-22 13:07	16-Dec-22 14:20	1hr 13mins	0	335	0.00%	0.77%	44294	43460	Complete Outage of 220kV/110kV Pothencode SS, 220kV/110kV Edamon SS, 220kV/110kV Kattakada SS, 220kV/110kV Vizhinjam SS, and 220kV/110kV Vizhinjam port of KSEB: 220kV/110kV Edamon SS, 220kV/110kV Kattakada SS, 220kV/110kV Vizhinjam SS and 220kV/110kV Vizhinjam port are being radially fed from 220kV/110kV Pothencode SS. As per the reports submitted, 220kV Y-phase insulator failed in 220kV Trivandrum Pothencode Line-1 (connected to 220kV Bus-1 at Pothencode end) at 220kV/110kV Pothencode SS and the line fell on 220kV Bus-2. Immediately, 220kV Bus-1 and Bus-2 BPP operated and all the elements connected to the buses tripped. This resulted in a complete outage of 220kV/110kV Pothencode SS, 220kV/110kV Edamon SS, 220kV/110kV Kattakada SS, 220kV/110kV Vizhinjam SS and 220kV/110kV Vizhinjam port.	1. 220kV Edamon Pothencode Line-1&2 2. 220kV Pothencode Trivandrum Line-1,2,3&4 3. 220kV Pothencode Kattakada Line-1&2 4. 220kV Pothencode Vizhinjam 5. 220kV Pothencode Vizhinjam port
3	GI-1	Karnataka	04-Dec-22 15:33	04-Dec-22 17:45	2 hrs 12 mins	0	0	0.00%	0.00%	37697	40762	Tripping of 220kV Bus-1 of 400kV/220kV Kolar_PG SS of PGCIL SR-2: As per the reports submitted, the triggering incident was LBB maloperation while charging 400kV/220kV Kolar_PG ICT-2 which was connected to 220kV Bus-1. Immediately, all the elements connected to the 220kV Bus-1 tripped at 400kV/220kV Kolar_PG SS.	1. 220kV Kolar_PG Kolar line-1 2. 220kV Kolar_PG Chintamani line-1 3. 220kV Kolar_PG T Gollahalli Line-1
4	GI-2	Telangana	13-Dec-22 12:04	13-Dec-22 15:53	3hr 52mins	0	0	0.00%	0.00%	40210	39564	Tripping of 400kV Bus-2 of 400kV/220kV Maheshwaram_TG SS of TSTRANSCO: 400kV/220kV Maheshwaram SS has one and half breaker scheme at 400kV level. As per the reports submitted, the triggering incident was a B-N fault in 400kV Bus-2 at 400kV/220kV Maheshwaram SS. Immediately, BPP operated and all the main breakers connected to the Bus-2 got tripped. Mean while, 400kV/220kV Maheshwaram_TG ICT-1 got tripped on operation of REF protection and the same needs review.	1. 400kV/220kV Maheshwaram ICT-1
5	GI-1	Telangana	14-Dec-22 21:51	15-Dec-22 04:45	6 hrs 54 mins	0	0	0.00%	0.00%	31843	35021	Tripping of 220kV Bus of 220kV/132kV Tandur SS of TSTRANSCO: 220kV/132kV Tandur SS is operating with single bus configuration at 220kV level. During the antecedent conditions, 220kV Tandur Shankarpally line was hand tripped to control over voltage. At the same time, 220kV/132kV PTR-1 and 2 tripped at 220kV/132kV Tandur SS on over flux protection. Subsequently, 220kV Sedam Tandur line tripped only at Tandur end causing de-energization of 220kV Bus at 220kV/132kV Tandur SS. 132kV level was intact during the event.	1. 220kV Sedam Tandur 2. 220kV/132kV 100MVA PTR-1 & 2 at Tandur
6	GI-1	Telangana	23-Dec-22 04:20	23-Dec-22 05:06	46mins	0	0	0.00%	0.00%	28393	32817	Tripping of 220kV Bus-1 of 220kV Jurala PH of TSGENCO: 220kV Jurala PH is operating with double bus with bus coupler. During antecedent conditions, there was no generation at 220kV Jurala PH. As per the reports submitted, the triggering incident was R-N fault in 220kV Jurala Raichur_KA Line-1. At the same time, bus coupler tripped on over current protection. Tripping of only connected line and bus coupler resulted in de-energization of 220kV Bus-1 at 220kV Jurala PH.	1. 220kV Jurala Raichur_KA Line-1 2. 220kV Bus coupler at 220kV Jurala PH

Details of Grid Events during the Month of December 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
	(GI 1 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	Ramchandrapur	17.12.2022 11:23	17.12.2022 13:13	01:50	0	296	0.00%	1.56%	26756	19035	At 10:45 hrs, B_ph CT of 220 kV Ramchandrapur-Chalbasa-1 burst at Ramchandrapur, leading to operation of Bus Bar protection and 220 kV Bus-1 tripped. At 11:23 Hrs, 220 kV Main Bus-2 was made off by tripping remaining feeders as a safety precaution and to extinguish fire caused by CT blast. Consequently, total supply failed at Ramchandrapur. 296 MW load loss occurred at Adityapur, Rajkharasawan, Jadugoda and Golmuri	220 kV Ramchandrapur-Jamshedpur-1(400/220 kV ICT-1) 220 kV Ramchandrapur-Jamshedpur-3 (400/220 kV ICT-3) 220 kV Joda-Ramchandrapur 200 kV Chandil-Ramchandrapur 220 kV Ramchandrapur-Chalbasa-1 220 kV Ramchandrapur-Chalbasa-2
2	GI-2	Barh	22.12.2022 07:26	22.12.2022 16:34	09:08	620	0	2.57%	0.00%	24149	16035	At 07:26 Hrs, 400 kV Barh-Patna-3 tripped due to B_N fault. A/r attempt failed after dead time, however other two healthy phase of the line didn't trip at Barh. After around 11 seconds, other two phase tripped. At the same time, 660 MW U#1 at Barh also tripped, leading to generation loss of 620 MW at Barh.	400 kV Barh-Patna-3 660 MW Barh U#1
3	GD-1	Jayanagar, Balmela HEP	24.12.2022 12:05	24.12.2022 14:40	02:35	20	0	0.08%	0.00%	25568	18138	At 12:05 Hrs, 220/132 kV Jayanagar and 220 kV Balmela S/s became dead. One running unit, U#5 at Balmela tripped leading to a generation loss of 20 MW. No load loss occurred as entire load of Jayanagar was fed through Machkund. As per PMU, there was a high resistive fault in R_ph which persisted for around 5 seconds and subsequently evolved to a R_B_N fault.	220 kV Jayanagar-Laxmipur-1 220 kV Jayanagar-Laxmipur-2 220 kV Jayanagar-Upper Kolab D/c 220 kV Jayanagar-Balmela-3 220 kV Jayanagar-jeypore-1 220 kV Jayanagar-jeypore-4 220/132 kV ATR 1&2 at Jayanagar

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

Sl No.	Category of Grid Event (G1 to 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM:SS)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD 1	Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System	04-Dec-22 03:01	04-Dec-22 16:37	13:36:00	9	16	0.72%	1.04%	1243	1538	Tenga, Khupi areas & Dikshi HEP of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Balipara-Tenga line. At 03:01 Hrs on 04.12.22, 132 kV Balipara-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 Balipara - Tenga line at 16:37 Hrs on 04.12.22.	132 kV Balipara-Tenga line
2	GD 1	Pasighat, Roing, Tezu & Namsai areas of Arunachal Pradesh Power System	24-Dec-22 09:25	24-Dec-22 10:18	0:53:00	0	14	0.00%	0.67%	2219	2079	Pasighat, Roing, Tezu & Namsai areas of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Along-Pasighat line. At 09:25 Hrs on 24.12.22, 132 kV Along-Pasighat line tripped. Due to tripping of this element, Pasighat, Roing, Tezu & Namsai areas of Arunachal Pradesh 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 Pasighat, Roing, Tezu & Namsai areas of Arunachal Pradesh Power System by charging 132 kV Along-Pasighat line at 10:18 Hrs on 24.12.22	132 kV Along-Pasighat line
3	GD 1	Turiel HEP of Mizoram Power System	29-Dec-22 13:40	29-Dec-22 13:57	0:17:00	28	0	1.34%	0.00%	2096	1967	Turiel HEP of Mizoram Power System was connected with the rest of NER Grid through 132 kV Kolasib-Turiel line. At 13:40 Hrs on 29.12.22, 132 kV Kolasib - Turiel line tripped. Due to tripping of this element, Turiel HEP of Mizoram Power System was separated from rest of NER Grid and subsequently collapsed due to loss of evacuation path. Power supply was extended to Turiel HEP of Mizoram Power System by charging 132 kV Kolasib - Turiel line at 13:57 Hrs on 29.12.22	132 kV Kolasib - Turiel line
4	GD 1	Lungmual and Melriat areas of Mizoram Power System	29-Dec-22 15:46	29-Dec-22 16:10	0:24:00	0	54	0.00%	2.71%	2125	1992	Lungmual and Melriat 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 kept open to avoid O/L of 132 kV Aizawl-Luangmual line. At 15:46 Hrs on 29.12.22, 132 kV Aizawl - Luangmual line tripped. Due to tripping of this element, Lungmual and Melriat areas of Mizoram 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 Lungmual and Melriat areas of Mizoram Power System by charging 132 kV Aizawl - Luangmual line at 16:10 Hrs on 29.12.22	132 kV Aizawl - Luangmual line
5	GD 1	Lungmual and Melriat areas of Mizoram Power System	31-Dec-22 17:28	31-Dec-22 17:58	0:30:00	0	54	0.00%	1.99%	2958	2712	Lungmual and Melriat 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 kept open to avoid O/L of 132 kV Aizawl-Luangmual line. At 17:28 Hrs on 31.12.22, 132 kV Aizawl - Luangmual line tripped. Due to tripping of this element, Lungmual and Melriat areas of Mizoram 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 Lungmual and Melriat areas of Mizoram Power System by charging 132 kV Aizawl - Luangmual line at 17:58 Hrs on 31.12.22	132 kV Aizawl - Luangmual line
6	GI-I	Tripura	02-Dec-22 06:50	02-Dec-22 08:30	1:40	33	0	1%	0%	2464	2118	AGTCCPP Unit 4 tripped at 06:50 Hrs on 02-12-2022 due to Air filter different pressure high. Revision done from Block No.35 on 02-12-2022	AGTCCPP Unit 4
7	GI-II	Tripura	09-Dec-22 17:35	09-Dec-22 19:00	1:25	290	0	10%	0%	2924	2819	Palatana Module-1 tripped at 17:35 Hrs on 09-12-2022 due to tripping of LB6 GT. Revision done from Block No.77 on 09-12-2022	Palatana Module-1
8	GI-II	Tripura	13-Dec-22 11:41	13-Dec-22 13:30	1:49:00	356	0	20.24%	0.00%	1759	1785	Palatana Module-1 tripped at 11:41 Hrs on 13-12-2022 due to Gas turbine trip. Revision done from Block No.55 on 13-12-2022	Palatana Module-1
9	GI-II	Tripura	21-Dec-22 10:47	21-Dec-22 12:30	1:43:00	681	0	31.62%	0.00%	2154	1928	Palatana Unit GT-II tripped at 10:47 Hrs on 21-12-2022 due to loss of flame and Palatana Unit GT-I tripped due to generator protection operated. Revision done from Block No.51 on 21-12-22.	Palatana Module-1 & Palatana Module-2
10	GI-II	Assam	29-Dec-22 03:23	29-Dec-22 05:00	1:37:00	40	0	2.17%	0.00%	1845	1476	AGBPP Unit 5 tripped at 03:23 Hrs on 29-12-2022 due to inlet differential pressure high. Revision done from Block No.21 on 29-12-22	AGBPP Unit 5
11	GI-II	Tripura	31-Dec-22 11:11	31-Dec-22 13:00	1:49:00	204	0	9.07%	0.00%	2249	1991	Palatana Module-1 tripped at 11:11 Hrs on 31-12-2022 due to operation of generator protection. Revision done from Block No.53 on 11-12-2022	Palatana Module-1