

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



| Sl No. | Category of Grid Event (GI for 2/ GD-1 to GD-5) | Affected Area | Time and Date of occurrence of Grid Event | Time and Date of Restoration | Duration (H:MM) | Loss of generation / loss of load during the Grid Event | | % Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event | | Antecedent Generation/Load in the Regional Grid* | | Brief details of the event (pre fault and post fault system conditions) | Elements Tripped |
|--------|---|---------------|---|------------------------------|-----------------|---|----------------|---|------------------|--|----------------------|---|---|
| | | | | | | Generation Loss(MW) | Load Loss (MW) | % Generation Loss(MW) | % Load Loss (MW) | Antecedent Generation (MW) | Antecedent Load (MW) | | |
| 1 | GI-2 | HARYANA | 02-Feb-2022 12:24 | 02-Feb-2022 13:54 | 1:30 | 0 | 0 | 0.000 | 0.000 | 33362 | 40659 | At 12:24 Hrs, 400 KV Dadri(NT)-Maharabnigh(PG) Ckt-1 tripped on R-N phase to earth fault. As per DR of Dadri end, fault location is 0% from Dadri end and fault current is approx. 43kA from Dadri end. At the same time, 400 KV Dadri(NT)-Mandola(PG) Ckt-2 tripped on Over voltage protection operation at Dadri end and 500 KV HVDC Rihand-Dadri (PG) Ckt-1&2 both tripped on low voltage. As per DR of 400KV Dadri-Mandola ckt-2 of Dadri end, over voltage(1.4pu) in Y-ph is observed. Due to tripping of Rihand-Dadri HVDC ckt-1&2, reduction in power order of 500kV Rihand-Dadri HVDC of approx. 1200MW is observed and due to which SPS case-2 of HVDC Rihand-Dadri triggered which further resulted into tripping of 220kV Mandola-Narela ckt-2 and 220kV Mandola-Gopalpur ckt-1&2. As per PMU, R-N phase to earth fault is observed. As per SCADA, load relief of approx. 280MW is observed in Delhi control area due to SPS case-2 operation and around 250MW generation reduction at Rihand TPS. No load relief is observed in UP, Rajasthan, Haryana and Punjab control area and no generation reduction is observed at Singrauli TPS. In antecedent condition, 400 KV Dadri(NT)-Maharabnigh(PG) Ckt-1 and 400 KV Dadri(NT)-Mandola(PG) Ckt-2 were carrying 288MW & 338MW respectively. Multiple elements tripping at 400/220kV Dadri(NT) | 1) 400 KV Dadri(NT)-Maharabnigh(PG) (PG) Ckt-1 2) 220 KV Mandola(PG)-Narela(DT) (DTL) Ckt-2 3) 220 KV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-2 4) 500 KV HVDC Rihand-Dadri (PG) Ckt-2 5) 400 KV Dadri(NT)-Mandola(PG) (PG) Ckt-2 6) 220 KV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-1 7) 500 KV HVDC Rihand-Dadri (PG) Ckt-1 |
| 2 | GD-1 | RAJASTHAN | 04-Feb-2022 13:15 | 04-Feb-2022 13:36 | 0:21 | 1882 | 0 | 4.272 | 0.000 | 44058 | 49454 | At 13:15 Hrs, 765 KV Bhadla_2 (PG)-Fatehgarh_II(PG) (PFTL) Ckt-2 tripped on R-N fault after unsuccessful A/R operation. At the same time, solar generation drop of approx. 1100MW is observed connected at Fatehgarh2. Out of 1100MW around 700MW solar generation revised till 13:22 Hrs. As per PMU, R-N fault with unsuccessful A/R operation is observed. As per SCADA, drop in solar generation of approx. 1100MW is observed. Again at 13:22Hrs, main CB at Bhadla2 of 765kV Bhadla2-Fatehgarh2 ckt-2 was closed. At the same time, over voltage occurred which led to tripping of 220/33kV ICTs at Renew Sunwave, Renew Solar Urja & Renew Jharkhand3 and incomers & inverter blocks at AHEJL & Renew Jharkhand3. As per PMU, voltage spike of approx. 33kV phase voltage followed by sustained over voltage for around 5-6sec is observed. As per SCADA, drop in solar generation of approx. 1882MW is observed. Out of 1882MW around 680MW revised within 2 minutes. Grid Event of drop in solar generation of approx. 1882MW at Fatehgarh2(PG) | 1) 765 KV Bhadla_2 (PG)-Fatehgarh_II(PG) (PFTL) Ckt-2 |
| 3 | GD-1 | J & K | 06-Feb-2022 01:45 | 06-Feb-2022 03:32 | 1:47 | 0 | 185 | 0.000 | 0.551 | 29671 | 33578 | R-N phase to earth fault occurred due to 132kV Bus-1 CVT blasted at Jammu(Gladni) (JKPTCL) S/5. 220 KV Sala(NH)-Jammu(PDD) (PG) Ckt-1 & Ckt-2 both tripped on this fault. At the same time, 220 KV Samba(PG)-Jammu(PDD) (PG) Ckt-1 also tripped on fault in 2.3 (60.93km). As per PMU, R-N phase to earth fault with delayed clearance in 1080ms is observed. As per SCADA, load loss of approx. 185MW is observed in J&K control area. In antecedent condition, 220 KV Sala(NH)-Jammu(PDD) (PG) Ckt-1 & Ckt-2 and 220 KV Samba(PG)-Jammu(PDD) (PG) Ckt-1 were carrying 52MW, 47MW & 84MW respectively. | 1) 220 KV Samba(PG)-Jammu(PDD) (PG) Ckt-1 2) 220 KV Sala(NH)-Jammu(PDD) (PG) Ckt-2 3) 220 KV Sala(NH)-Jammu(PDD) (PG) Ckt-1 |
| 4 | GI-2 | UTTAR PRADESH | 08-Feb-2022 08:59 | 08-Feb-2022 12:27 | 3:28 | 0 | 0 | 0.000 | 0.000 | 44451 | 51480 | At 08:59 Hrs, 400KV Vindhyachal-Singrauli ckt-1 was opened to take the line under planned shutdown. At the same time, 70 KV Vindhyachal(PG) Pole-1 & Pole-2 both tripped due to operation of fast circuit breaker (LCB) logic of block-1 & block-2. As per PMU, no fault is observed. In antecedent condition, 400KV Vindhyachal-Singrauli ckt-1, 70 KV Vindhyachal(PG) Pole-1 & Pole-2 were carrying 183MW, 175MW & 175MW respectively. | 1) 70 KV Vindhyachal(PG) Pole-2, 70 KV Vindhyachal(PG) Pole-1 |
| 5 | GD-1 | RAJASTHAN | 11-Feb-2022 11:45 | 11-Feb-2022 12:17 | 0:32 | 2286 | 0 | 5.129 | 0.000 | 44566 | 50804 | At 11:45 Hrs, 240MVA reactor of 765kV Fatehgarh2-Bhadla2 ckt-1 at Fatehgarh2 was opened. With the opening of line reactor, sudden voltage rise of approx. 40kV in phase voltage of 765kV Fatehgarh2-Bhadla2 ckt-2 at Bhadla2 end is observed. On this sudden voltage spike, drop in generation at few of RE stations is also observed. Due to drop in generation, sustain over voltage for around 6 sec is observed. At the same time, 765 KV Bhadla_2 (PG)-Fatehgarh_II(PG) (PFTL) Ckt-1, 765 KV Ajmer-Bhadla_2 (PG) Ckt-1, 400 KV Fatehgarh_II(PG)-Fatehgarh Pooling(FBTL) (FBTL) Ckt-1, 220 KV Fatehgarh_II(PG)-Renew SunWave SL_FGRAH_PG (RSWPL) (RENEW SUN WAVE (RSWPL)) Ckt-1 and 220 KV Fatehgarh_II(PG)-EDEN_SL_FGRAH_PG (ERCP) (EDEN (ERCP)) Ckt-1 all tripped on over-voltage protection operation. As per PMU, sudden voltage spike of 40kV in phase voltage followed by sustained voltage of approx. 82kV for around 6 sec is observed. As per SCADA, solar generation loss of approx. 2286MW connected at Fatehgarh2 is observed. As per PMU, sudden drop in generation during voltage transient at Renew Sunbright, EDEN Solar, Adani Hybrid & AHEJL RE station is observed. In antecedent condition, bus voltages at 765KV, 400KV & 220KV bus at Fatehgarh2 were 762kV, 394kV & 216kV respectively. | 1) 765 KV Bhadla_2 (PG)-Fatehgarh_II(PG) (PFTL) Ckt-1 2) 400 KV Fatehgarh_II(PG)-Fatehgarh Pooling(FBTL) (FBTL) Ckt-1 3) 220 KV Fatehgarh_II(PG)-Renew SunWave SL_FGRAH_PG (RSWPL) (RENEW SUN WAVE (RSWPL)) Ckt-1 4) 765 KV Ajmer-Bhadla_2 (PG) Ckt-1 5) 220 KV Fatehgarh_II(PG)-EDEN_SL_FGRAH_PG (ERCP) (EDEN (ERCP)) Ckt-1 6) 220 KV Fatehgarh_II(PG)-Renew_Jharkhand 3 SL_FGRAH_PG (RSEJ3PL) (RENEW SUN WAVE (RSWPL)) Ckt-1 7) 220 KV Fatehgarh_II(PG)-Renew_Jharkhand 3 SL_FGRAH_PG (RSEJ3PL) Ckt-1 |
| 6 | GD-1 | RAJASTHAN | 11-Feb-2022 11:57 | 11-Feb-2022 12:17 | 0:20 | 1600 | 0 | 3.662 | 0.000 | 43689 | 51249 | At 11:57Hrs, charging attempt of 765kV Fatehgarh2-Bhadla2 ckt-1 was taken which led to sudden voltage spike. At the same time, drop in solar generation connected at Fatehgarh2 of approx. 1600MW is observed as per SCADA. | 1) 765 KV Bhadla_2 (PG)-Fatehgarh_II(PG) (PFTL) Ckt-1 2) 400 KV Fatehgarh_II(PG)-Fatehgarh Pooling(FBTL) (FBTL) Ckt-1 3) 220 KV Fatehgarh_II(PG)-Renew SunWave SL_FGRAH_PG (RSWPL) (RENEW SUN WAVE (RSWPL)) Ckt-1 4) 400 KV Fatehgarh Pooling(FBTL)-Adani RenewPark_SL_FGRAH_FBT (AREPRL) (AREPRL) Ckt-1 5) 765 KV Bikaner-Bhadla_2 (PG) Ckt-1, 220 KV Renew SunBright_SL_FGRAH_PG (RSBPL)-Fatehgarh_II(PG) (RENEW SUN BRIGHT (RSEJ3PL)) Ckt-1 |
| 7 | GD-1 | RAJASTHAN | 11-Feb-2022 12:38 | 11-Feb-2022 13:12 | 0:34 | 2807 | 0 | 6.316 | 0.000 | 44445 | 50682 | At 12:38 Hrs, main CB at Bhadla2 end of 765kV Bhadla2-Ajmer ckt-1 was closed. At the same time, sustained over voltage for around 6 sec occurred. On this over voltage, 765 KV Bikaner-Bhadla_2 (PG) Ckt-1, 765 KV Bhadla_2 (PG)-Fatehgarh_II(PG) (PFTL) Ckt-1, 400 KV Fatehgarh_II(PG)-Fatehgarh Pooling(FBTL) (FBTL) Ckt-1, 400 KV Fatehgarh Pooling(FBTL)-Adani RenewPark_SL_FGRAH_FBT (AREPRL) (AREPRL) Ckt-1, 220kV lines from Fatehgarh2 to Renew Sunwave, Renew Sunbright, Renew Jharkhand3 & EDEN and 220kV feeders from Bhadla(PG) to Mahindra solar & Azure PSS 41 all tripped on over voltage protection operation. As per PMU, sustained over voltage for around 6sec is observed. As per SCADA, bus voltages at 765kV, 400kV & 220kV bus at Fatehgarh2 rose up to 811kV, 425kV & 234kV and solar generation loss of approx. 2807MW connected at Fatehgarh2(PG) & Bhadla(PG) is observed. In antecedent condition, bus voltages at 765kV, 400kV & 220kV bus at Fatehgarh2 were 736kV, 380kV & 208kV respectively. | 1) 765 KV Bhadla_2 (PG)-Fatehgarh_II(PG) (PFTL) Ckt-1 2) 400 KV Fatehgarh_II(PG)-Fatehgarh Pooling(FBTL) (FBTL) Ckt-1 3) 220 KV Fatehgarh_II(PG)-Renew SunWave SL_FGRAH_PG (RSWPL) (RENEW SUN WAVE (RSWPL)) Ckt-1 4) 220 KV Fatehgarh_II(PG)-EDEN_SL_FGRAH_PG (ERCP) (EDEN (ERCP)) Ckt-1 5) 400 KV Fatehgarh Pooling(FBTL)-Adani RenewPark_SL_FGRAH_FBT (AREPRL) (AREPRL) Ckt-1 6) 220/33 KV 100 MVA ICT 1 at Mahindra SL_BHD_PG (MAHINDRA) 7) 220 KV Bhadla(PG)-Mahindra SL_BHD_PG (MAHINDRA) (MAHINDRA) (MAHINDRA) Ckt-1 8) 220 KV AzurePSS41_SL_BHD_PG (APFOL)-Bhadla(PG) (Azure) Ckt-1 9) 765 KV Bikaner-Bhadla_2 (PG) Ckt-1, 220 KV Renew SunBright_SL_FGRAH_PG (RSBPL)-Fatehgarh_II(PG) (RENEW SUN BRIGHT (RSEJ3PL)) Ckt-1 10) 220 KV Fatehgarh_II(PG)-Renew_Jharkhand 3 SL_FGRAH_PG (RSEJ3PL) Ckt-1 |

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|--------|--|---------------|---|------------------------------|------------------|---|----------------|---|------------------|--|----------------------|---|--|
| | | | | | | Generation Loss(MW) | Load Loss (MW) | % Generation Loss(MW) | % Load Loss (MW) | Antecedent Generation (MW) | Antecedent Load (MW) | | |
| 8 | GI-1 | RAJASTHAN | 11-Feb-2022 13:25 | 11-Feb-2022 13:30 | 0:05 | 1500 | 0 | 3.476 | 0.000 | 43157 | 46180 | At 13:25 Hrs, again charging attempt of 765kV Fatehgarh2-Bhadla2 ckt-1 was taken led to voltage spike. At the same time, drop in solar generation connected at Fatehgarh2 of approx. 1500MW is observed as per SCADA. | 1) 33kV Inverters blocks at RENEW Solar Urja 2) 33kV Inverters blocks at RENEW Sunwave 3) 33kV Inverters blocks at Adani Hybrid 4) 33kV Inverters blocks at AHEJ3L 5) 33kV Inverter blocks at AHEJ3L |
| 9 | GD-1 | RAJASTHAN | 11-Feb-2022 13:55 | 11-Feb-2022 13:58 | 0:03 | 1500 | 0 | 3.610 | 0.000 | 41546 | 44007 | At 13:55 Hrs, charging attempt of 765kV Bhadla2-Bikaner ckt-1 was taken which led to voltage spike. At the same time, drop in solar generation connected at Fatehgarh2 of approx. 1500MW is observed as per SCADA. However line was successful charged. | 1) 220/33kV ICT-1&2 at RENEW Solar Urja 2) 33kV Inverters blocks at RENEW Sunwave 3) 33kV Inverters blocks at Adani Hybrid 4) 33kV Inverters blocks at AHEJ3L 5) 33kV Inverter blocks at AHEJ3L |
| 10 | GI-1 | RAJASTHAN | 11-Feb-2022 14:24 | 11-Feb-2022 14:28 | 0:04 | 1500 | 0 | 3.683 | 0.000 | 40728 | 43152 | At 14:24 Hrs, drop in solar generation connected at Fatehgarh2 of approx. 1500MW is observed as per SCADA. As per SOE, no switching operation is observed. | 1) 33kV Inverters blocks at RENEW Solar Urja 2) 33kV Inverters blocks at RENEW Sunwave 3) 33kV Inverters blocks at Adani Hybrid 4) 33kV Inverters blocks at AHEJ3L 5) 33kV Inverter blocks at AHEJ3L |
| 11 | GI-2 | UTTAR PRADESH | 14-Feb-2022 05:11 | 14-Feb-2022 06:22 | 1:11 | 0 | 0 | 0.000 | 0.000 | 29432 | 35413 | LBB of line CB of 220kV Meerut-Gajraula ckt (217 bay) operated on fault in CB operation lockout at Meerut end. Due to LBB operation, 400/220 kV 315 MVA ICT 2 & 400/220kV 500MVA ICT-4 at Meerut(PG) and 220kV feeders to NARA, Meerut-2, Gajraula, Charla and Simbholi tripped. As per PMU, no fault is observed. In antecedent condition, 400/220 kV 315 MVA ICT 2 & 400/220kV 500MVA ICT-4 at Meerut(PG) were carrying 57MW & 79MW respectively. | 1) 220 KV Meerut(PG)-Charla(UP) (UP) Ckt-1 2) 220 KV Meerut(PG)-Modipuram(UP) (PG) Ckt-2 3) 400/220 KV 500 MVA ICT 4 at Meerut(PG) 4) 220 KV Meerut(PG)-Gajraula(UP) (UP) 5) 220KV Bus 3 at Meerut(PG) 6) 400/220 KV 315 MVA ICT 2 at Meerut(PG) 7) 220 KV Meerut(PG)-Simbholi(UP) (PG) Ckt-1 8) 220 KV Meerut(PG)-Nara(UP) (PG) Ckt-1 |
| 12 | GI-2 | PUNJAB | 14-Feb-2022 17:19 | 14-Feb-2022 17:55 | 0:36 | 0 | 0 | 0.000 | 0.000 | 38630 | 45420 | During normalization of 220kV Bus-1 which was under shutdown, B-N phase to earth fault occurred due to damage of 206 bay B-Ph isolator. On this fault, bus bar protection operated which resulted into tripping of 400/220kV 315MVA ICT-1&2, 500MVA ICT-3 at Patiala(PG) and 220kV feeders connected Nabha, Bahadurgarh, Rajpura, Ablowal. As per PMU, B-N phase to earth fault with delayed clearance in 800ms is observed. In antecedent condition, 400/220kV 315MVA ICT-1&2, 500MVA ICT-3 at Patiala(PG) were carrying 70MW, 69MW & 107MW respectively. | 1) 220 KV Patiala(PG)-Nabha(PS) (PSTCL) Ckt-2 2) 220 KV Bahadurgarh(PS)-Patiala(PG) (PSTCL) Ckt-1 3) 400/220 KV 315 MVA ICT 1 at Patiala(PG) 4) 400/220 KV 500 MVA ICT 3 at Patiala(PG) 5) 220 KV Patiala(PG)-Nabha(PS) (PSTCL) Ckt-1 6) 400/220 KV 315 MVA ICT 2 at Patiala(PG) 7) 220 KV Patiala(PG)-Rajpura(PS) (PSTCL) Ckt-1 8) 220 KV Patiala(PG)-Ablowal(PS) (PSTCL) Ckt-1 9) 220 KV Patiala(PG)-Ablowal(PS) (PSTCL) Ckt-2 |
| 13 | GD-1 | RAJASTHAN | 15-Feb-2022 14:35 | 15-Feb-2022 16:54 | 2:19 | 890 | 0 | 2.099 | 0.000 | 42410 | 44097 | R-B phase to phase fault occurred at 33kV side of AHEJ3L RE station which led to tripping of solar blocks at AHEJ3L. During same time, drop in solar generation observed at ADANI & RENEW RE stations connected at Fatehgarh2 & Fatehgarh1. Due to sudden power drop, rise in voltage is observed. Further after 5-6sec, 765kV Bikaner-Khetri ckt-2 tripped on over voltage protection operation at Bikaner end. As per PMU, R-B phase to phase fault followed by over voltage is observed. As per DR submitted and PMU, voltage went up to 105% only (permissible range). As per SCADA, solar generation loss of approx. 890MW is observed. In antecedent condition, 765kV bus voltage at Bikaner was 784kV and total solar generation evacuating from Fatehgarh2 was 2539MW. | 1) 765 KV Bikaner(PG)-Khetri (PKTSL) (BKT) Ckt-2 |
| 14 | GD-1 | J & K | 19-Feb-2022 21:45 | Not revived yet 00:00 | | 0 | 120 | 0.000 | 0.287 | 32081 | 41883 | 220 KV Kishenpur(PG)-Mir Bazar(PDD) (PDD) Ckt-1 and 220 KV Kishenpur(PG)-Ramban(PDD) (PDD) Ckt-1 both tripped due to collapse of tower no. 320. Both lines were on same tower. As per PMU, R-N fault followed by R-X-B three phase fault is observed. As per SCADA, load loss of approx. 120MW is observed in J&K control area. In antecedent condition, 220 KV Kishenpur(PG)-Mir Bazar(PDD) (PDD) Ckt-1 and 220 KV Kishenpur(PG)-Ramban(PDD) (PDD) Ckt-1 were carrying 103MW & 91MW respectively. | 1) 220 KV Kishenpur(PG)-Mir Bazar(PDD) (PDD) Ckt-1, 2) 220 KV Kishenpur(PG)-Ramban(PDD) (PDD) Ckt-1 |
| 15 | GI-2 | UTTAR PRADESH | 21-Feb-2022 10:46 | 21-Feb-2022 12:13 | 1:27 | 0 | 0 | 0.000 | 0.000 | 45836 | 52795 | Main bay 400kV Gorakhpur-Gorakhpur (PG) ckt-2 at Gorakhpur(UP) end was under shut down and the line was charged through transfer breaker. At 10:46 Hrs, B phase disc insulator string of transfer bus got damaged and Z-3 bus bar protection operated. However, transfer breaker of the line didn't open as the status of isolator contact was not present. Due to this, bus bar protection of Bus-1 & 2 operated which resulted into tripping of 400/220 kV 500 MVA ICT 1, 315MVA ICT 2 and 240MVA ICT-3 at Gorakhpur(UP) and 400 KV Gorakhpur(PG)-Gorakhpur(UP) (PG) Ckt-1, Ckt-2 & 400 KV Azamgarh Gorakhpur (UP) Ckt-1. As per PMU, B-N phase to earth fault with delayed clearance in 440ms is observed. In antecedent condition, 400/220 kV 500 MVA ICT 1, 315MVA ICT 2 and 240MVA ICT-3 at Gorakhpur(UP) and 400 KV Gorakhpur(UP) and 400 KV Gorakhpur(PG)-Gorakhpur(UP) (PG) Ckt-1, Ckt-2 & 400 KV Azamgarh-Gorakhpur (UP) Ckt-1 were carrying 135MW, 85MW, 62MW, 123MW, 123MW & 38MW respectively. | 1) 400/220 KV 500 MVA ICT 1 at Gorakhpur(UP) 2) 400/220 KV 315 MVA ICT 2 at Gorakhpur(UP) 3) 400/220 KV 240 MVA ICT 3 at Gorakhpur(UP) 4) 400 KV Gorakhpur(PG)-Gorakhpur(UP) (PG) Ckt-1 5) 400 KV Gorakhpur(PG)-Gorakhpur(UP) (PG) Ckt-2 6) 400 KV Azamgarh-Gorakhpur (UP) Ckt-1 |
| 16 | GD-1 | RAJASTHAN | 24-Feb-2022 10:51 | 24-Feb-2022 11:46 | 0:55 | 550 | 0 | 1.214 | 0.000 | 45295 | 51217 | 220 KV Bhadla - TPREL Solar Ckt-1 Tripped on R-Y phase to phase fault on line differential protection operation from TPREL end, fault occurred due to R-phase jumper broken at Tower no. 127(L.7km from Bhadla(PG) end). At the same time, 220 KV Bhadla(PG)-Saurya Urja Solar(SU) [Saurya Urja] Ckt-1 also tripped from Saurya Urja end only on Z-1 (over reach) distance protection operation. Due to tripping of both these lines, solar generation loss of 272MW at Tata Power(TPREL) & 252MW at Saurya Urja-1 occurred. At the same time, momentarily power dip of 140MW at ACME Solar, 25MW each at Adani Bhadla1&2, 75MW at AHEJ3L, 24MW at AHEJ2L, 183MW at Renew Solar Urja & 200MW at Renew Sunwave is observed. As per PMU, R-Y phase to phase fault is observed. As per SCADA, solar generation loss of approx. 550MW is observed. In antecedent condition, TPREL, Saurya Urja-1, ACME, Adani Bhadla 1&2, AHEJ3L, AHEJ2L, Renew Solar Urja & Renew Sunwave RE stations were generating 272MW, 252MW, 209MW, 84MW, 231MW, 112MW, 256MW & 279MW respectively. | 1) 220 KV Bhadla(PG)-Saurya Urja Solar(SU) [Saurya Urja] Ckt-1 2) 220 KV Bhadla(PG)-TPREL Solar(TP) [Tata Power] Ckt-1 |
| 17 | GI-2 | UTTAR PRADESH | 28-Feb-2022 22:51 | 01-Mar-2022 01:21 | 2:30 | 0 | 0 | 0.000 | 0.000 | 32579 | 38231 | 400 KV Orai-Paricha (UP) Ckt-2 tripped on R-N phase to earth fault from Paricha end only. Line successfully autoreclosed from Orai end but tripped from Paricha end without A/R operation. At the same time, 400/220 kV 240 MVA ICT 2 at Orai(UP) also tripped on maloperation of REF protection. As per PMU, R-N phase to earth fault is observed. In antecedent condition, 400 KV Orai-Paricha (UP) Ckt-2 & 400/220 kV 240 MVA ICT 2 at Orai(UP) were carrying 40MW & 62MW respectively. | 1) 400 KV Orai-Paricha (UP) Ckt-2 2) 400/220 kV 240 MVA ICT 2 at Orai(UP) |

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| | | | | | | Generation Loss(MW) | Load Loss (MW) | % Generation Loss(MW) | % Load Loss (MW) | Antecedent Generation (MW) | Antecedent Load (MW) | | |
| 1 | GD-1 | WR | 01-Feb-22 17:23 | 01-Feb-22 17:37 | 0:14 | - | 67 | - | 0.001 | 58676 | 56358 | At 17:22 Hrs/01-02-2022, 220 kV Padghe- Nalsopara- Vasai line tripped on R-Y phase fault. Due to the delayed clearance of fault, 220 kV Vasai- Kamba tripped from Kamba end. With this 220 kV Vasai Substation blacked out. 67 MW load loss reported at Vasai by MSLDC. | Tripping of 1.220 kV Padghe- Nalsopara- Vasai 2.220 kV Vasai- kamba |
| 2 | GI-1 | WR | 04-Feb-22 01:21 | 04-Feb-22 01:43 | 0:22 | 80 | - | 0.002 | - | 48835 | 47608 | At 01:21 Hrs/04-02-2022, 400kV SSP-Kasor tripped on Y-E fault. At the same time, SSP CHPH Units 1&3 tripped on link line (line connected between GT and Switchyard) directional over current & E/F protection operation. Generation loss of 80 MW is reported by NCA. | Tripping of 1.400 kV SSP- Kasor 2.50 MW SSP CHPH Unit-1&3 |
| 3 | GI-2 | WR | 09-Feb-22 01:23 | 09-Feb-22 10:50 | 9:27 | - | - | - | - | 52377 | 48749 | Multiple EHV lines tripping occurred around Pune in night & early morning hours of 09-02-2022. As reported by MSETCL, the tripping have occurred due to foggy atmosphere coupled with the dusty/ hilly/pollution prone areas. Tripping started at 01:23hrs with tripping 220 kV Chinchwad- Chakan S/c on Y-E fault (insulator flashover at location 37), 220 kV Talegaon- GM S/c at 02:10 hrs on Y-E fault (insulator string flashover at GM switchyard, restored at 02:45hrs), 220 kV Chinchwad- Chakan S/c again at 03:12 hrs on Y-E fault (decapping of insulator at location 37), 400 kV Pune(PG)- Chakan S/c at 03:39 hrs on B-E fault (insulator decapping at location 24), 400 kV Lonikhand- Chakan S/c at 04:31 hrs on Y-E fault (insulator decapping at location 43), 400 kV Lonikhand II- Karjat 2 at 05:24 hrs on Y-E fault (insulator decapping at location 399), 400 kV Lonikhand II- Karjat-1 at 05:52 hrs on Y-E fault (insulator decapping at location 402 & 411), 400 kV Lonikhand- Karad S/c at 06:02 hrs on Y-E fault (jumper opening at location 4). As reported MSLDC, To control the loading in the remaining lines in Pune area 100 kV Talegaon, 132 kV Chakan, 220 kV Khatapur & 220 kV Hinjenwadi-I loads were shifted to 100 kV Khopoli, 220 kV Alephata, 400 kV Bableshwar & 220 kV Kandalgaon. Manual load shedding of about 989 MW was carried out in Pune, Chakan and PCMC areas. | Tripping of 1.220 kV Chinchwad- Chakan 2.220 kV Talegaon-GM 3.400 kV Pune(PG)- Chakan 4.400 kV Lonikhand II- Karjat 1&2 5.400 kV Lonikhand- Karad 6.400 kV Lonikhand- Chakan |
| 4 | GD-1 | WR | 15-Feb-22 08:53 | 15-Feb-22 10:11 | 1:18 | - | 233 | - | 0.004 | 64074 | 61803 | At 08:53 Hrs/15-02-2022, LBB (Internal LBB of HV BU OC&E/F relay) of 220/33 kV 50MVA Malegaon ICT-2 operated and resulted in tripping of 220 kV Malegaon Main Bus and all the connected elements. It is learnt that 220/33, 50MVA ICT-2 having LTS scheme implemented through O/C relay of ICT to trip 33 kV feeders. However, due to the non extension of tripping command to 33 kV feeders resulted in ICT-2 LBB operation. Load loss of 233 MW occurred due to the event. | Tripping of 1.220 kV Malegaon Main Bus 2.220 kV Malegaon- Dhule 3.220 kV Malegaon- Shivaji Nagar 4.220 kV Malegaon- Satana 5.220 kV Malegaon- Sayana 6.220 kV Malegaon- Kalwan 1&2 7. 220/33kV ICT-1, 2 8. 220/132kV ICT-1,2 |
| 5 | GI-1 | WR | 22-Feb-22 13:57 | 22-Feb-22 14:24 | 0:27 | - | - | - | - | 61584 | 60931 | At 13:57 Hrs/22-02-2022, LBB protection of 220 kV Jhanor-Haldarwa-3 operated at Haldarwa end due to delayed clearance of fault and resulted in tripping of 220 kV Haldarwa Bus 1 and all the connected elements. No load loss. | Tripping of 1.220 kV Haldarwa Bus 1 2.220 kV Haldarwa- Dahej 3.220 kV Haldarwa- GPEC 1 4.220 kV Haldarwa- Jhanor 1&3 5.220 kV Haldarwa- KAPP 1 6.220 kV Haldarwa- Jambuva |
| 6 | GI-1 | WR | 27-Feb-22 00:59 | 27-Feb-22 01:31 | 0:32 | - | - | - | - | 54149 | 52207 | At 00:59 Hrs/27-02-2022, While test charging of 220 kV Jabalpur-Narsinghpur-2 (which tripped at 00:39 Hrs on R-E fault), bus bar protection operated and resulted in tripping of 220kV Jabalpur (Sukha) Bus-2 and all the connected elements. | Tripping of 1.220 kV Jabalpur(Sukha) Bus 2 2.220 kV Jabalpur(Sukha)- Jabalpur 2 3.220 kV Jabalpur(Sukha)- Panagar 2 4.220 kV Jabalpur(Sukha)- Narsinghpur 2 5.400/220 kV 500 MVA Jabalpur ICT 3 |
| 7 | GD-1 | WR | 27-Feb-22 09:49 | 27-Feb-22 10:05 | 0:16 | 401 | 850 | 0.006 | 0.014 | 62427 | 60527 | South Mumbai area load is being fed from Trombay (TPC) generation and through 220kV lines from Salsette, Kalwa, Mulund, Kharghar, Bhira & 110kV Khopoli. Six tie lines out of ten were under planned outage from Trombay & Khopoli. Load of about 850MW was fed via remaining four tielines & 401MW of internal generation, net import was about 450 MW through these tielines. At 08:44hrs 220 kV Mulund-Trombay(MSETCL)-S/c on R-Y phase fault (conductor snapping). At 09:49hrs, 220 kV Kalwa-Trombay(MSETCL)-S/c tripped on B-E fault at Trombay end only and A/R successfully at Kalwa end. Prior to the tripping, loading on 220 kV Kalwa-Trombay(MSETCL)-S/c was around 285 MW. After tripping of 220 kV Kalwa-Trombay(MSETCL)-S/c, the loading on 220 kV Salsette-Trombay(TPC)-2 increased to 1.5 kA (more than 550 MW) and same tripped on over current protection. With the above tripping, the major feeding lines to south Mumbai was lost and 110 kV Khopoli-Dadvi-S/c, last line tripped on three phase Zone 1 Distance protection operation due to Overloading. As reported by TPC, after the tripping of 220 kV lines and 110 kV lines, an island with a load of 850 MW and TATA generation was formed. The island consists of Bhira, Dharavi, Trombay, Carnac, Backbay, Mahalaxmi, Parel and BKC. Due to imbalance of load and generation in formed island, frequency of the island declined and resulted in df/dt relay operation and there was a load relief of 366 MW obtained due to the ROCOF relay operation. Even though the load tripping was taken place, the obtained relief was not sufficient to arrest the fall in frequency and Trombay U # 5 & 8 tripped on under frequency. 220 kV Chembur-Trombay(MSETCL) 1&2 tripped on Under frequency protection operation at Chembur end. | Tripping of 1. 220 kV Mulund-Trombay(MSETCL) S/C 2. 220 kV Kalwa-Trombay(MSETCL) S/C 3.220 kV Salsette-Trombay(TPC)-2 4. 110 kV Khopoli-Dadvi S/C 5. 220 kV Chembur- Trombay(MSETCL) 1&2 6.Trombay Units 5 & 8 7. 25MW one unit at Bhira |

Details of Grid Events during the Month of February 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 | 04-Feb-22 21:56 | 04-Feb-22 22:48 | 0:52 | 0 | 70 | 0.00% | 0.18% | 35270 | 38231 | Complete Outage of 220kV/33kV Gopalpura Station and 220kV/66kV Kaduvinakote(Hole Narsipura) SS of KPTCL: As per the report submitted, triggering incident was 33kV feeder fault in 220kV/33kV Gopalpura SS. At the same time, 220kV BBP operated due to suspected DC leakage at 220kV Gopalpura Station and all the feeders connected to bus bar got tripped. Since, 220kV/66kV Kaduvinakote(Hole Narsipura) SS was radially fed from 220kV Gopalpura SS, this further resulted in the complete outage of 20kV/66kV Kaduvinakote(Hole Narsipura) SS. | 1. 220kV Gopalpura-Hasan 2. 220kV Gopalpura-Mysore 3. 220kV Gopalpura-Hole Narsipura - 1&2 |
| 2 | GD-1 | Karnataka | 08-Feb-22 16:15 | 08-Feb-22 17:25 | 1:10 | 0 | 0 | 0.00% | 0.00% | 45021 | 50415 | Complete Outage of 220kV/33kV Ostro Kannada Wind Plant : As per the report submitted, triggering incident was fault in 33kV feeder at 220kV/33kV Ostro Kannada Wind Plant. At the same time, 220kV Hiriyur Ostro Kannada line tripped only at Ostro Kannada end along with 220kV/33kV 160MVA transformer at Ostro Kannada on operation of Over current protection. Due to tripping of the only connected line , there was complete loss of supply at 220kV/33kV Ostro Kannada Wind Plant. | 1. 220kV Hiriyur Ostro Kannada 2. 220kV/33kV 160MVA Transformer at Ostro Kannada |
| 3 | GD-1 | Andhra Pradesh | 08-Feb-22 15:52 | 08-Feb-22 16:07 | 0:15 | 204 | 0 | 0.44% | 0.00% | 46274 | 51610 | Complete Outage of 220kV/132kV Srisaillam RB Generating Station of APGENCO: As per the report submitted, triggering incident was failure of Unit-7 Bus-1 Isolator while transferring the Unit from Bus-1 to Bus-2. Due to non-operation of BBP at 220kV Srisaillam RB, fault was cleared at remote ends. This resulted in complete outage of 220kV/132kV Srisaillam RB generating station. | 1. 220kV Srisaillam RB - Dindi 2. 220kV Srisaillam RB - Domalpentia 3. 220kV Srisaillam RB - N'sagar 4. 220kV Srisaillam RB - Podili 5. 220kV Srisaillam RB - Somayajulapally 6. 220kV Srisaillam RB - Bilakalagudur 7. 220kV Srisaillam RB - Mydukur 8. 220kV Srisaillam RB- Markapur 9. 220kV Srisaillam RB - Tallapalli-1 10. 220kV Srisaillam RB - Tallapalli-2 11. 220/132kV ICT at Srisaillam Right bank 12. 110MW Srisaillam Right bank Hydro Generator-4,5&6 |
| 4 | GD-1 | Andhra Pradesh | 22-Feb-22 08:15 | 22-Feb-22 09:19 | 1:04 | 750 | 1400 | 1.73% | 2.73% | 43377 | 51318 | Grid Occurrence in Rayalseema Area of AP : During antecedent conditions, 400kV/220kV Gooty ICT-1,2, & 3 and 400kV/220kV Cuddapah ICT#1, 2, & 3 were under hand tripped condition for physical regulation. Triggering incident was opening of bus coupler at 220kV Borraipalli SS resulting the loss of 550MW from 220kV Urvakonda SS to 220kV Kalyandurg SS via 220kV Borraipalli SS. At the same time U#5 at 220kV RYTPP got tripped due to overload and subsequently connecting lines in Rayalseema area and running units at 220kV RYTPP (U# 1, 2 and 4) got tripped. This resulted in complete loss of supply at 220kV RYTPP, 220kV/132kV Hindupur SS, 220kV/132kV Gollapuram SS, 220kV/132kV Pulivendula SS, 220kV/132kV Kondapuram SS, 220kV/132kV Yerraguntla SS, 220kV/132kV Thimapuram SS, 220kV side of 400kV/220kV Chinakampalli SS, 220kV/132kV Kadapa SS, 220kV/132kV Mydukur SS and 220kV/132kV Ramagiri SS. | 1. 220kV RYTPP Yerraguntla Line-2 2. 220kV Chinakampalli Kadapa 3. 220kV Pulivendula RYTPP Line-2 4. 220kV Pulivendula Gollapuram Line-2 5. 220kV Hindupur Shahapuram Line-1 & 2 6. 220kV Anantapur Thimapuram Line-1 & 2 7. 220kV Alipura- BTPS 8. 220kV Urvakonda Borraipalli Line-2&4 9. 220kV Srisaillam RB Mydukur 10. 220kV Anantapur Kalyandurg Line-1 |
| 5 | GI-1 | Andhra Pradesh | 02-Feb-22 20:14 | 02-Feb-22 22:15 | 2:01 | 97 | 0 | 0.26% | 0.00% | 37806 | 41365 | Tripping of 220kV Bus-1 and Bus-2 of 220kV/132kV Srisaillam RB Generating Station of APGENCO: As per the report submitted, triggering incident was failure of opening of unit-1 circuit breaker during deparallel operation at 220kV/132kV/11kV Srisaillam RB SS. Unit-1 isolator was manually opened which resulted in sparks and immediately 220kV Bus-1, Bus-2 BBP operated and all the elements connected to the buses got tripped. 132kV Bus was intact during the event. | 1. Generator Unit-3 2. 220kV Srisaillam RB Dindi 3. 220kV Srisaillam RB N'sagar 4. 220kV Srisaillam RB Domalpentia 5. 220kV Srisaillam RB Podili 6. 220kV Srisaillam RB Markapuram 7. 220kV Srisaillam RB Mydukur 8. 220kV Srisaillam RB B-Gudur 9. 220kV Srisaillam RB Tallapalli-1&2 10. Srisaillam RB S.Pallu-1 |
| 6 | GI-1 | Andhra Pradesh | 04-Feb-22 10:45 | 04-Feb-22 13:44 | 2:59 | 0 | 150 | 0.00% | 0.28% | 49928 | 52801 | Tripping of 220kV Bus-2 of 220kV Vizag Switching Station(VSS) of APTRANSCO: As per the report submitted, triggering incident was B phase jumper failure of 220kV VSS Gajuwaka PGCL line-1 at 220kV VSS. Immediately, 220kV bus-2 BBP operated and all the feeders connected to bus-2 got tripped at VSS. | 1. 220kV VSS Parawada 2. 220kV VSS Gajuwaka PGCL-1&2 3. 220kV VSS MRS-1 4. 220kV VSS Kalpakka-2 5. 220kV VSS Pendurthy-1 6. 400kV/220kV Gajuwaka ICT-1&2 |
| 7 | GI-1 | Kerala | 07-Feb-22 15:40 | 07-Feb-22 16:37 | 0:57 | 121 | 0 | 0.26% | 0.00% | 46660 | 51158 | Multiple Tripping in 220kV Sabarigiri PH of KSEB: As per the report submitted, 220kV Edamon-1&3, 220kV Theni line and all running units (U#3, 5 and 6) got tripped at 220kV Sabarigiri PH due to DC supply failure. Details awaited. | 1. 220kV Sabarigiri Edmon line-1&3 2. 220kV Sabarigiri Theni line 3. 220kV/66kV SOMVA Station Transformer 3. 220kV Sabarigiri U#3, 5 and 6 |
| 8 | GI-2 | Karnataka | 11-Feb-22 06:42 | 11-Feb-22 11:29 | 4:47 | 0 | 0 | 0.00% | 0.00% | 37058 | 42733 | Tripping of 400kV Bus-2 of 400kV/220kV Raichur Thermal Power Station of KPCL: As per the report submitted, triggering incident was operation of 400kV Bus-2 BBP at Raichur TPS end and all the elements connected to 400kV Bus-2 got tripped. Details awaited | 1. 400kV Raichur -Raichur_PG-1 |

Details of Grid Events during the Month of February 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) | | |
| 9 | GI-1 | Telangana | 14-Feb-22 07:35 | 14-Feb-22 08:45 | 1:10 | 0 | 0 | 0.00% | 0.00% | 40909 | 45026 | Tripping of 220kV Bus-1&2 at 400kV/220kV/132kV Gajwel SS of TSTRANSCO: As per the report submitted, triggering incident was fault in 220kV Gajwel Medchal Line-2. At the same time BBP of Bus-1&2 operated at 220kV Gajwel resulting in the tripping of all elements connected to the buses. Further details awaited. | 1. 400kV/220kV Gajwel ICT-1,2,3&4 2. 220kV Medchal Gajwel line-1 and 2 3. 220kV Gajwel Akkaram line-1 and 2 4. 220kV Gajwel Minpur |
| 10 | GI-1 | Telangana | 14-Feb-22 10:39 | 14-Feb-22 11:24 | 0:45 | 0 | 0 | 0.00% | 0.00% | 50790 | 53896 | Tripping of 220kV Bus-2 at 400kV/220kV/132kV Gajwel SS of TSTRANSCO: As per the report submitted, triggering incident was suspected maloperation of BBP of 220kV Gajwel Bus-2 resulting in the tripping of all feeders and ICTs connected to the Bus-2. Further details awaited. | 1. 400kV/220kV Gajwel ICT-1 & 3 2. 220kV Medchal Gajwel line-1 and 2 3. 220kV Gajwel Akkaram line-1 and 2 4. 220kV Gajwel Minpur |
| 11 | GI-1 | Andhra Pradesh | 24-Feb-22 07:54 | 24-Feb-22 08:13 | 0:19 | 0 | 0 | 0.00% | 0.00% | 44044 | 51751 | Multiple Tripping at 400kV/220kV Ghani SS of APTRANSCO: As per the report submitted, while shifting a 220kV feeder from Bus-2 to Bus-1 at 400kV/220kV Ghani SS, sparks were observed in the isolators and over current protection of ICTs connected to buses operated and all the 3 ICTs got tripped. 400kV Bus was intact during this event. | 1. 400kV/220kV Ghani ICT-1,2&3 |

Details of Grid Events during the Month of February 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) | | |
| 2 | GD-1 | Godda, Jasidih | 03-Feb-22 07:37 | 03-Feb-22 12:24 | 04:47 | 0 | 92 | 0.00% | 0.52% | 25085 | 17659 | At 07:37 Hrs on 3rd February 2022, 220 kV Dumka-Godda D/c and 220 kV Dumka-Jasidih D/c tripped on O/V, leading to total power failure at Godda, Jasidih. Inclement weather reported during the event. | 220 kV Dumka-Godda D/c 220 kV Dumka-Jasidih D/c |
| 3 | GD-1 | Godda | 04-Feb-22 02:30 | 04-Feb-22 13:11 | 08:41 | 0 | 22 | 0.00% | 0.18% | 18754 | 12382 | At 02:30 Hrs on 4th February 2022, 220 kV Dumka-Godda-2 tripped on O/V, leading to total power failure at Jasidih. 220 kV Dumka-Godda 1 already tripped on O/v at 01:58 Hrs. Inclement weather reported during the event. | 220 kV Dumka-Godda D/c |
| 4 | GD-1 | Tenughat, Dumka, Godda, Jasidih | 04-Feb-22 05:53 | 04-Feb-22 10:09 | 04:16 | 0 | 10 | 0.00% | 0.08% | 21330 | 12825 | At 05:53 Hrs on 04th February 2022, all emanating lines from 220 kV Tenughat (TVNL) tripped. Two running units at Tenughat also tripped. This resulted in 300 MW generation loss at Tenughat power plant. Govindpur and downstream areas were being radially fed through 220 kV Tenughat-Govindpur-2 only. This led to load loss of around 10 MW at Deoghar, Dumka, Pakur, Giridih, Jamua, Saria, Godda, Jasidih. Inclement weather was persisting in major areas of Jharkhand at the time of the event. | 220 kV Tenughat-Patratu 220 kV Tenughat-Biharsharif 220 kV Tenughat-Govindpur-2 |
| 5 | GD-1 | Rongnichu | 09-Feb-22 17:48 | 09-Feb-22 18:03 | 00:15 | 0 | 0 | 0.00% | 0.00% | 24893 | 16725 | At 17:48 Hrs on 09th February 2022, during testing of relays at Rongnichu, 220 kV Rangpo-Rongnichu D/c tripped from Rongnichu end only. Consequently, Rongnichu S/s became dead. No generation loss occurred as both units of Rongnichu was under overhauling. | 220 kV Rangpo-Rongnichu D/c |
| 6 | GD-1 | Teesta 3 | 25-Feb-22 13:27 | 25-Feb-22 14:50 | 01:23 | 0 | 0 | 0.00% | 0.00% | 24255 | 16379 | At 13:27 Hrs on 25th February 2022, 400 kV Teesta 3-Rangpo-1 and 400 kV Teesta 3-Dikchu tripped due to R_B_N fault. Consequently, Teesta 3 S/s became dead. No generation or load loss occurred as all hydro units at Teesta 3 was out of bar. | 400 kV Teesta 3-Rangpo 400 kV Teesta 3-Dikchu |
| 7 | GD-1 | Jaynagar, Balimela, Upper Kolab | 27-Feb-22 11:17 | 27-Feb-22 12:21 | 01:04 | 90 | 40 | 0.37% | 0.24% | 24450 | 16659 | At 11:17 Hrs on 27th February 2022, R_ph wave trap of 220 kV Jaynagar-Lakshmpur-1 burnt at Jaynagar end. Total power failure occurred at 220/132 kV Jaynagar, 220 kV Balimela, Upper Kolab S/s. 220 kV Bus-1 at Jeypore (PG) along with 400/220 kV ICT-1 & 3 also tripped. 40 MW load loss occurred at Jaynagar. Two running units at Upper Kolab and one unit at Balimela tripped leading to 90 MW generation loss (Upper Kolab-40 MW, Balimela-50 MW) | 220 kV Jaynagar-Lakshmpur D/c 220 kV Jaynagar-Balimela T/c 220 kV Jaynagar-Jeypore Q/c 220 kV Jaynagar-Upper Kolab D/c 220 kV Upper Kolab-Therubali 2*220/132 kV ATR at Jaynagar 220 kV Bus-1 at Jeypore 400/220 kV ICT-1&3 at Jeypore |



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

| Sl No. | Category of Grid Event (GI 1 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-4 | Surajmaninagar(TSECL) area of Tripura Power System | 13-Feb-22 05:57 | 13-Feb-22 08:55 | 2:58:00 | 0 | 81 | 0.00% | 5.39% | 1781 | 1503 | <p>Surajmaninagar(TSECL) Area of Tripura Power System including South Comilla (Bangladesh) load was connected with the rest of NER Grid through 132 kV Palatana - Surajmaninagar line, 132 kV Agartala - Surajmaninagar D/C lines, 132 kV Budhjungnagar - Surajmaninagar line and 132 kV Surajmaninagar(ST)- Surajmaninagar Line.</p> <p>At 05:57 Hrs dtd 13.02.2022, 132 kV Bus of Surajmaninagar S/S of Tripura became dead due to tripping of all the connected lines on LBB protection at Surajmaninagar end. Due to tripping of these elements, Surajmaninagar(TSECL) Area of Tripura Power System including South Comilla (Bangladesh) load was separated from rest of NER Grid and subsequently collapsed due to no source in this area.</p> <p>Power Supply to Surajmaninagar(TSECL) Area of Tripura Power System was restored by charging 132 kV Agartala - Surajmaninagar(TSECL) D/C at 08:55 hrs on 13.02.2022. Further power was extended to Bangladesh at 12:28 hrs on 13.02.2022..</p> | 132 kV Palatana - Surajmaninagar line, 132 kV Comilla - Surajmaninagar D/C lines, 132 kV Agartala - Surajmaninagar D/C lines, 132 kV Budhjungnagar - Surajmaninagar line 132 kV Surajmaninagar(ST)- Surajmaninagar line |
| 2 | GD-4 | Luangmual, Melriat & Lunglei areas of Mizoram Power System | 17-Feb-22 01:16 | 17-Feb-22 03:51 | 2:35:00 | 0 | 26 | 0.00% | 1.64% | 1677 | 1587 | <p>Luangmual, Melriat & Lunglei areas of Mizoram Power System were connected with the rest of NER Grid through 132 kV Aizawl(PG)- Luangmual Line. 132 kV Serchip-Lunglei was under out of service to avoid overloading of 132 kV Aizawl-Lungmual line.</p> <p>At 01:16 hrs on 17.02.2022, 132 kV Aizawl(PG) -Luangmual line tripped . Due to tripping of this element, Luangmual, Melriat & Lunglei areas of Mizoram Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas.</p> <p>Power supply was extended to Luangmual, Melriat & Lunglei areas of Mizoram Power System by charging 132 kV Aizawl(PG) -Luangmual line at 03:51 hrs on 17.02.2022.</p> | 132 kV Aizawl(PG) -Luangmual line |
| 3 | GD-4 | Bornagar area of Assam Power System | 24-Feb-22 12:52 | 24-Feb-22 13:05 | 0:13:00 | 0 | 41 | 0.00% | 2.00% | 1944 | 2053 | <p>Bornagar area of Assam Power System was connected with the rest of NER Grid through 132 kV Dhaligaon-Bornagar Line. 132 kV Bornagar-Rangli line was under shutdown due to Corridor clearance.</p> <p>At 12:52 hrs on 24.02.2022, 132 kV Dhaligaon-Bornagar line tripped . Due to tripping of this element, Bornagar area of Assam Power System was separated from rest of NER Grid and subsequently collapsed due to no source available in this area.</p> <p>Power was extended to Bornagar area of Assam Power System by charging 132 kV Dhaligaon-Bornagar Line at 13:05 Hrs on 24.02.2022.</p> | 132 kV Dhaligaon-Bornagar line |
| 4 | GD-4 | Nongstoin and Mawngap areas of Meghalaya Power System | 24-Feb-22 22:22 | 24-Feb-22 22:31 | 0:09:00 | 0 | 24 | 0.00% | 1.15% | 2119 | 2084 | <p>Nongstoin and Mawngap areas of Meghalaya Power System was connected with the rest of NER Grid through 132kV Nangalibra - Nongstoin line, 132kV Umiam I - Mawngap D/C lines. 132kV Mawlai - Mawngap line were under outage to control the overloading of 132kV Umiam III - Umiam I D/C lines.</p> <p>At 22:22 hrs on 24.02.2022, 132kV Nangalibra - Nongstoin line, 132kV Umiam I - Mawngap D/C lines tripped. Due to tripping of these elements, Nongstoin and Mawngap areas of Meghalaya Power System were separated from rest of NER Grid and subsequently collapsed due to no source available in these areas.</p> <p>Power was extended to Nongstoin and Mawngap areas of Meghalaya Power System by charging 132 kV Nangalibra - Nongstoin line at 23:31 Hrs on 24.02.2022.</p> | 132kV Nangalibra - Nongstoin line 132kV Umiam I - Mawngap D/C lines |
| 5 | GD-4 | Kohima area of Nagaland Power System | 25-Feb-22 17:12 | 25-Feb-22 17:44 | 0:32:00 | 0 | 28 | 0.00% | 1.27% | 2607 | 2199 | <p>Kohima area of Nagaland Power System was connected with the rest of NER Grid through 132 kV Kohima - Wokha line and 132 kV Karong -Kohima line. 132 kV Dimapur-Kohima line was under emergency shutdown for rectification of CB of 132 kV Dimapur - Kohima line at Kohima due to malfunctioning of mechanical gears.</p> <p>At 17:12 Hrs on 25.02.2022, 132 kV Kohima - Meluri line, 132 kV Kohima - Wokha line and 132 kV Karong - Kohima line tripped . Due to tripping of these elements, Kohima area of Nagaland Power System was separated from rest of NER Grid and subsequently collapsed due to no source available in this area.</p> <p>Power was extended to Kohima area by charging 132 kV KarongKohima line at 17:44 Hrs on 25.02.2022.</p> | 132 kV Kohima - Meluri line 132 kV Kohima - Wokha line 132 kV Karong - Kohima line |
| 6 | GD-4 | Capital load (Shillong) along with Nehu, Mawlai, Neighrims, Umiam and Cherrapunji areas of Meghalaya Power System | 25-Feb-22 19:11 | 25-Feb-22 19:21 | 0:10 | 13 | 91 | 0% | 4% | 2731 | 2319 | <p>Capital load (Shillong) along with Nehu, Mawlai, Neighrims, Umiam, Cherrapunji areas of Meghalaya Power System were connected with the rest of NER Grid through 132 kV Umiam III-Umiam I D/C lines, 132 kV Neighrims-Khlehriat line and 132 kV Umiam I-Mawngap D/C lines. 132 kV Mawngap-Mawlai line were opened to reduce overloading of 132 kV Umiam III - Umiam I D/C lines. 132 kV Nehu-Mawlyndep line was opened to reduce overloading of 132 kV Khlehriat-Mustem line.</p> <p>At 19:11 hrs on 25.02.2022, 132 kV Umiam III-Umiam I D/C lines, 132 kV Neighrims-Khlehriat line and 132 kV Umiam I-Mawngap D/C lines tripped . Due to tripping of these elements, Capital load (Shillong) along with Nehu, Mawlai, Neighrims, Umiam, Cherrapunji areas of Meghalaya Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas.</p> <p>Power was extended to Nehu by charging 132kV Umiam III - Umiam I 1 line at 19:21 Hrs, 132 kV Umiam I - Umiam line at 19:23 hrs and 132kV Umiam - Nehu line at 19:24 Hrs on 25.02.2022.</p> | 132 kV Umiam III-Umiam I D/C lines 132 kV Neighrims-Khlehriat line 132 kV Umiam I-Mawngap D/C lines |
| 7 | GD-4 | Kohima area of Nagaland Power System | 25-Feb-22 22:05 | 25-Feb-22 22:52 | 0:47 | 0 | 15 | 0% | 1% | 1948 | 1771 | <p>Kohima area of Nagaland Power System was connected with the rest of NER Grid through 132 kV Kohima - Wokha line and 132 kV Karong - Kohima line. 132 kV Dimapur-Kohima line was under emergency shutdown for rectification of CB at Kohima end due to malfunctioning of mechanical gears.</p> <p>At 22:05 Hrs on 25.02.2022, 132 kV Kohima - Meluri line, 132 kV Kohima - Wokha line and 132 kV Karong - Kohima line tripped . Due to tripping of these elements, Kohima area of Nagaland Power System was separated from rest of NER Grid and subsequently collapsed due to no source available in this area.</p> <p>Power was extended to Kohima area of Nagaland Power System by charging 132 kV Karong-Kohima line at 22:52 Hrs on 25.02.2022.</p> | 132 kV Kohima - Meluri line 132 kV Kohima - Wokha line 132 kV Karong - Kohima line |