

Northern Region-Event Report for April 2019

| S.No. | Region | Name of Elements (Tripped/Manually opened) | Affected Area | Owner/ Agency | Outage | | Revival | | Duration | Event (As reported) | Generation Loss(MW) | Load Loss(MW) | Category as per CEA Grid Standards |
|-------|--------|---|------------------|--------------------------------|-----------|-------|-----------|-------|----------|--|------------------------|------------------|--|
| | | | | | Date | Time | Date | Time | | | | | |
| 1 | NR | 1) 220kV Bawana(DTL)-Kanjhawala(DTL) ckt-1 2) 315 MVA ICT 2 at 400/220kV Bawana(DTL) 3) 315 MVA ICT 4 at 400/220kV Bawana(DTL) 4) 315 MVA ICT 6 at 400/220kV Bawana(DTL) | Delhi | Delhi | 4-Apr-19 | 12:04 | 4-Apr-19 | 12:56 | 00:52 | 220kV Bawana(DTL)-Kanjhawala(DTL) ckt-1 tripped due to 3-Ph fault and 315 MVA ICT 2, 315 MVA ICT 4 and 315 MVA ICT 6 at 400/220kV Bawana(DTL) tripped due to operation of bus bar protection on 220kV Bus II at 400/220kV Bawana(DTL). As per PMU, R-B fault followed by 3-phase fault is observed in the system. In antecedent conditions, 315 MVA ICT 2 and 315 MVA ICT 4 at 400/220kV Bawana(DTL) carrying 113 MW each. | 17 | 200 | GD-1 |
| 2 | NR | 1) 765KV Lalitpur(UP)-Fatehabad(UP) ckt-1 2) 660 MW Unit#1 at 765kV Lalitpur TPS(LPGCL) 3) 660 MW Unit#3 at 765kV Lalitpur TPS(LPGCL) 4) 220kV Lalitpur TPS(UP)-Lalitpur(UP) ckt-1 5) 220kV Lalitpur TPS(UP)-Lalitpur(UP) ckt-2 6) 220kV Lalitpur TPS(UP)-Jhansi(UP) ckt-1 7) 220kV Lalitpur TPS(UP)-Jhansi(UP) ckt-2 | Uttar Pradesh | UP | 6-Apr-19 | 3:21 | 6-Apr-19 | 03:56 | 00:35 | 765KV Lalitpur(UP)-Fatehabad(UP) ckt-2 tripped on Y-B fault at 0132 Hrs. After charging the circuit from Fatehabad(UP) end(LPGCL end breaker was open), 765KV Lalitpur(UP)-Fatehabad(UP) ckt-1 tripped on DT received from Fatehabad(UP) end(overvoltage at Fatehabad(UP) end). Due to SPS operation 220kV lines Jhansi D/C and Lalitpur D/C tripped and Unit#1 & #3 tripped on Eco inlet flow low. As per PMU, No fault is observed in the system. In antecedent conditions, Unit#1 & #3 carrying 362 MW & 368 MW respectively. | 700 | | GD-1 |
| 3 | NR | 1) 400 kV Bus 1 at 400/220kV Gurgaon(PG) 2) 400kV Ballabgarh(PG)-Gurgaon(PG) 3) 400kV Gurgaon(PG)-Manesar(PG) ckt-1 4) 400kV Daultabad(HVPLN)-Gurgaon(PG) ckt-1 5) 315 MVA ICT 1 at 400/220kV Gurgaon(PG) | Haryana | POWERGRID & Haryana | 6-Apr-19 | 18:39 | 6-Apr-19 | 20:58 | 02:19 | 400kV Bus 1 at 400/220kV Gurgaon(PG) tripped due to operation of Bus bar protection leading to tripping of all associated elements of 400kV Bus 1. As per PMU, no fault is observed in the system. In antecedent conditions, 315 MVA ICT 1 carrying 89 MW. | | | GI-2 |
| 4 | NR | 1) 400kV Kala Amb(PKATL)-Karchamwangtoo(JSW) ckt-1 2) 400kV Kala Amb(PKATL)-Karchamwangtoo(JSW) ckt-2 | Himachal Pradesh | PKATL, JSW & POWERGRID | 8-Apr-19 | 8:59 | 8-Apr-19 | 09:53 | 00:54 | 400kV Kala Amb(PKATL)-Karchamwangtoo(JSW) ckt-1 & 2 tripped on RYB fault at 166.6km & 153.2km respectively from Kala Amb S/S. As per PMU, three phase fault is observed. In antecedent conditions, 400kV Kala Amb(PKATL)-Karchamwangtoo(JSW) ckt-1 & 2 carrying 166 MW each. | | | GI-2 |
| 5 | NR | 1) 400kV Bus 1 at 400/220kV Akal(Raj) 2) 315 MVA ICT 1 at 400/220kV Akal(Raj) 3) 50 MVAR (400kV) B/R at 400/220kV Akal(Raj) 4) 400kV Akal(Raj)-Kankani(Raj) ckt-1 | Rajasthan | Rajasthan | 8-Apr-19 | 17:30 | 8-Apr-19 | 19:21 | 01:51 | Bus bar protection of 400kV Bus 1 at 400/220kV Akal(Raj) operated inadvertently during testing of 315 MVA ICT-2 leading to tripping 315 MVA ICT 1, 50 MVAR (400kV) B/R and 400kV Akal(Raj)-Kankani(Raj) ckt-1. As per PMU, No fault is observed in the system. In antecedent conditions, 400kV Akal(RRVPLN)-Kankani(RRVPLN) ckt-1 carrying 64 MW. | | | GI-2 |
| 6 | NR | 1) 315 MVA ICT-1 at 400/220kV Muradnagar(UP) 2) 500 MVA ICT-2 at 400/220kV Muradnagar(UP) 3) 220kV Muradanagar(UP)-Loni(UP) 4) 220 KV Muradnagar(UP)-Faridnagar(UP) 5) 220 KV Muradnagar400(UP)-Muradnagar220(UP) ckt-1 6) 132kV elements at 220/132kV Muradnagar(UP) | Uttar Pradesh | UP | 10-Apr-19 | 10:45 | 10-Apr-19 | 12:19 | 01:34 | 315 MVA ICT 1, 500 MVA ICT-2 of Muradnagar, 220kV Muradanagar-Loni, 220 KV Muradnagar-Faridnagar, 220 KV Muradnagar400(UP)-Muradnagar220(UP) ckt-1 and 132kV elements at 220/132kV Muradnagar(UP) elements tripped on R-N fault. As per PMU, R-N fault followed by Y-N fault with delayed clearance is observed in the system. In antecedent conditions, 315 MVA ICT 1, 500 MVA ICT-2 carrying 79 MW & 123 MW respectively. | | 500 | GD-1 |
| 7 | NR | 1) 400kV G.Noida 765(UP)-Noida sec-148(UP) ckt 1 2) 400kV G.Noida 765(UP)-Noida sec-148(UP) ckt 2 3) 400kV Bus 1 at 400/220kV Noida sec-148(UP) 4) 400kV Bus 2 at 400/220kV Noida sec-148(UP) 5) 500MVA ICT 1 at 400/220kV Noida sec-148(UP) | Uttar Pradesh | UP | 10-Apr-19 | 17:53 | 10-Apr-19 | 19:10 | 01:17 | 400kV G.Noida 765(UP)-Noida sec-148(UP) ckt 1 & 2 tripped due to operation of Bus bar protection at 400/220kV Noida sec-148(UP). As per PMU, No fault is observed in the system. In antecedent conditions, 400kV G.Noida 765(UP)-Noida sec-148(UP) ckt 1 carrying 196 MW. | | | GI-2 |
| 8 | NR | 1) 400kV Anta(Raj)-Chabra(Raj) ckt-1 2) 400kV Anta(Raj)-Chabra(Raj) ckt-2 3) 400kV Anta(Raj)-Kawai(Adani) ckt-1 | Rajasthan | Rajasthan & Adani | 16-Apr-19 | 16:54 | 16-Apr-19 | 17:32 | 00:38 | 400kV Anta(Raj)-Kawai(Adani) ckt-1 tripped on B-N fault, 50km from Kawai(Adani) end. At the same time, 400kV Anta(Raj)-Chabra(Raj) ckt-1 & 2 also tripped on phase to earth fault. As per PMU, B-N fault with unsuccessful autoreclosing is observed. | | | GI-2 |
| 9 | NR | 1) 220kV RAPP B(NPCIL)-Chittorgarh(Raj)(PG) ckt-1 2) 220kV RAPP B(NPCIL)-Chittorgarh(Raj)(PG) ckt-2 3) 220kV RAPP B(NPCIL)-Kota(Raj) | Rajasthan | Rajasthan, NPCIL and POWERGRID | 16-Apr-19 | 18:27 | 16-Apr-19 | 18:35 | 00:08 | 220kV RAPP B(NPCIL)-Chittorgarh(Raj)(PG) ckt-1 & 2 tripped on R-N fault at a distance 223km & 211km respectively from RAPP-B end. At the same time, 220kV RAPP B(NPCIL)-Kota(Raj) also tripped (Showing fault distance 308km) from Kota end. 220kV RAPP B(NPCIL)-Debari(Raj) was already under shutdown. As per PMU, R-N fault with delayed clearance is observed. In antecedent conditions, 220kV RAPP B(NPCIL)-Chittorgarh(Raj)(PG) ckt-1 and 220kV RAPP B(NPCIL)-Kota(Raj) carrying 94 MW and 88 MW respectively. | | | GI-2 |
| 10 | NR | 1) 765KV Lalitpur(UP)-Fatehabad(UP) ckt-2 2) 660 MW Unit#1 at 765kV Lalitpur TPS(LPGCL) 3) 765 kV Bus 1 at 765kV Lalitpur TPS(LPGCL) 4) 765 kV Bus 2 at 765kV Lalitpur TPS(LPGCL) 5) 315 MVA ICT 1 at 765kV Lalitpur TPS(LPGCL) 6) 315 MVA ICT 2 at 765kV Lalitpur TPS(LPGCL) 7) 220kV Lalitpur TPS(UP)-Lalitpur(UP) ckt-1 8) 220kV Lalitpur TPS(UP)-Lalitpur(UP) ckt-2 9) 220kV Lalitpur TPS(UP)-Jhansi(UP) ckt-1 10) 220kV Lalitpur TPS(UP)-Jhansi(UP) ckt-2 | Uttar Pradesh | UP | 16-Apr-19 | 20:27 | 16-Apr-19 | 22:34 | 02:07 | 765KV Lalitpur(UP)-Fatehabad(UP) ckt-1 was open on high voltage and 765KV Lalitpur(UP)-Fatehabad(UP) ckt-2 tripped on Y-B fault at 140km from Lalitpur TPS(LPGCL) end. Due to SPS operation 220kV lines Jhansi D/C and Lalitpur D/C tripped and Unit#1 tripped on Eco inlet flow low. As per PMU, Y-B fault is observed in the system. In antecedent conditions, Unit#1 generating 360 MW. | 360 | | GD-1 |

| S.No. | Region | Name of Elements (Tripped/Manually opened) | Affected Area | Owner/ Agency | Outage | | Revival | | Duration | Event (As reported) | Generation Loss(MW) | Load Loss(MW) | Category as per CEA Grid Standards |
|-------|--------|--|------------------|------------------------------|-----------|-------|-----------|-------|----------|--|------------------------|------------------|--|
| | | | | | Date | Time | Date | Time | | | | | |
| 11 | NR | 1) 400kV Hapur 765(UP)-Muradnagar(UP) 2) 400kV Ataur(UP)-Muradnagar(UP) | Uttar Pradesh | UP | 18-Apr-19 | 4:30 | 18-Apr-19 | 05:26 | 00:56 | 400kV Hapur 765(UP)-Muradnagar(UP) tripped on B-N fault. At the same time, 400kV Ataur(UP)-Muradnagar(UP) tripped on B-N fault, 0.0967km from Muradnagar(UP) end (Pole discrepancy, tripped only at Muradnagar end). As per PMU, B-N fault is observed in the system. In antecedent conditions, 400kV Hapur 765(UP)-Muradnagar(UP) and 400kV Ataur(UP)-Muradnagar(UP) carrying 89 MW and 23 MW respectively. | | | GI-2 |
| 12 | NR | 1) 400 kV Bus 1 at 400/220kV Sarnath(UP) 2) 400 kV Bus 2 at 400/220kV Sarnath(UP) 3) 400kV Sarnath(UP)-Varanasi(PG) ckt-1 4) 400kV Sarnath(UP)-Varanasi(PG) ckt-2 5) 400kV Sarnath(UP)-Anpara(UP) ckt-1 6) 400kV Sarnath(UP)-Anpara(UP) ckt-2 7) 400kV Anpara(UP)-Mau(UP) 8) 500 MVA ICT 1 at 400kV Sarnath(UP) 9) 500 MVA ICT 2 at 400kV Sarnath(UP) 10) 315 MVA ICT 1 at 400kV Sarnath(UP) 11) 400kV Azamgarh(UP)-Sarnath(UP) | Uttar Pradesh | UP | 19-Apr-19 | 13:41 | 19-Apr-19 | 14:47 | 01:06 | A fire accident occurred on newly commissioned 500MVA ICT 1 at 400kV Sarnath(UP) which caused the operation of Bus Bar protection at 400kV Sarnath(UP), all the 400kV lines emanating from Sarnath(UP) including ICTs tripped. As per PMU, B-N fault followed by R-N fault is observed in the system. In antecedent conditions, 500 MVA ICT 1 & 2 carrying 114 MW & 118 MW respectively. | | 250 | GD-1 |
| 13 | NR | 1) 220kV Dhauliganga(NHPC)-Pithoragarh(PG) 2) 220kV Bareilly(UP)-Dhauliganga(NHPC) | Uttarakhand | NHPC, UP and POWERGRID | 21-Apr-19 | 0:15 | 21-Apr-19 | 00:59 | 00:44 | 220kV Dhauliganga(NHPC)-Pithoragarh(PG) and 220kV Bareilly(UP)-Dhauliganga(NHPC) tripped due to mal operation in control circuit at Dhauliganga(NHPC) end. As per PMU, No fault is observed in the system. In antecedent conditions, Unit#1 and Unit#3 generating 70 MW each. | 140 | | GD-1 |
| 14 | NR | 1) 220 kV Bus I & II at Khetri 2) 220 kV Khetri- Ratanar ckt-1 & 2 3) 220 kV Khetri- Babi ckt-1 & 2 4) 220 kV Khetri- Dari(BBMB) ckt-1 & 2 5) 220 kV Khetri- Chirava 6) 220 kV Khetri- Jhunjhunu 7) 220 kV Khetri- Behr and 50/35/35 MVA ICT -I, II & III at Khetri 8) 220 KV Bus-I at Dadri (BBMB) 9) 220 kV Dadri (BBMB) - Mahendergarh 10) 220 kV Dadri (BBMB) - Bhiwanct-1 & 311) 220 kV Dadri (BBMB) - Lula Ahir 12) 220 kV Dadri (BBMB) - Samaypu. 13) 100 MVA ICT-I at Dadri (BBMB) | Rajasthan | Rajasthan and BBMB | 23-Apr-19 | 21:59 | 23-Apr-19 | 23:30 | 01:31 | A blast in R-Ph CT of 220 kV Khetri- Jhunjunu line at Khetri occurred. Due to non-clearance of fault both 220 kV bus bar protection at 220kV Khetri(Raj) operated. BBMB informed that Main CB stuck of 220 kV Dadri (BBMB)- Khetri-I line at Dadri(BBMB) end, LBB protection operated at Dadri (BBMB), causing bus bar protection operation of Bus-1 resulting into 05 nos of 220 kV line associated with Bus-1 and 100 MVA ICT-1 tripped. As per PMU, Y-N fault followed by R-Y fault is observed. In antecedent conditions, 220 kV Khetri- Jhunjhunu & 220 kV Khetri- Chirava carrying 53 MW & 62 MW respectively. | | 120 | GD-1 |
| 15 | NR | 1) 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 2) 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-3 | Jammu & Kashmir | POWERGRID | 25-Apr-19 | 22:25 | 25-Apr-19 | 22:37 | 00:12 | 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 tripped Y-B fault, 118.2km from Kishenpur(PG) end. At the same time, 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-3 also tripped on R-N fault, 103km from Kishenpur(PG) end. As per PMU, R-Y-B fault followed by R-N fault is observed. In antecedent conditions, 400kV Kishenpur(PG)-New Wanpoh(PG) ckt-1 & 3 carrying 34 MW & 33 MW respectively. | | | GI-2 |
| 16 | NR | 1) 400kV Bus 1 at 400kV Parbati(3) HEP(NHPC) 2) 400kV Parbati(3) HEP(NHPC)-Sainj HEP(HPPCL) 3) 400kV Parbati(3) HEP(NHPC)-Parbati Pool(PG) | Himachal Pradesh | NHPC/HPPCL/ POWERGRID | 26-Apr-19 | 4:30 | 26-Apr-19 | 06:28 | 01:58 | During synchronization of unit no- 4 bus bar protection operated at 400kV Parbati(3) HEP(NHPC) resulting in tripping of 400kV Parbati(3) HEP(NHPC)-Sainj HEP(HPPCL) and 400kV Parbati(3) HEP(NHPC)-Parbati Pool(PG). As per PMU, R-N fault with no auto-reclosing attempt is observed in the system. | 30 | | GD-1 |
| 17 | NR | 1) 220kV Tanakpur(NHPC)-Sitarganj(PG) 2) 220kV Cbganj(UP)-Tanakpur(NHPC) 3) 132kV Mahendranagar(Nepal)-Tanakpur(NHPC) 4) 40 MW Units#1, #2 and #3 at 220kV Tanakpur(NHPC) | Uttarakhand | NHPC, POWERGRID & UP | 26-Apr-19 | 20:08 | 26-Apr-19 | 21:34 | 01:26 | LBB Operated due to fire in Bus Coupler at 220kV Tanakpur(NHPC) resuting in tripping of 220kV Tanakpur(NHPC)-Sitarganj(PG), 220kV Cbganj(UP)-Tanakpur(NHPC), 132kV Mahendranaar(Nepal)-Tanakpur(NHPC) and Units#1, #2 and #3. As per PMU, B-N fault with delayed clearance is observed. In antecedent conditions, Units#1, #2 and #3 generating 31MW, 31MW & 32MW respectively. | 90 | | GD-1 |

| S.No. | Region | Name of Elements (Tripped/Manually opened) | Affected Area | Owner/ Agency | Outage | | Revival | | Duration | Event (As reported) | Generation Loss(MW) | Load Loss(MW) | Category as per CEA Grid Standards |
|-------|--------|---|---------------|-------------------------|-----------|-------|-----------|-------|----------|---|------------------------|------------------|--|
| | | | | | Date | Time | Date | Time | | | | | |
| 18 | NR | 1) 220kV Tanakpur(NHPC)-Sitarganj(PG) 2) 220kV Cbganj(UP)-Sitarganj(PG) | Uttarakhand | POWERGRID, NHPC & UP | 28-Apr-19 | 14:12 | 28-Apr-19 | 14:50 | 00:38 | 220kV Tanakpur(NHPC)-Sitarganj(PG) tripped on B-N fault, 23.5 Km from Sitarganj(PG) end. At the same time, 220kV Cbganj(UP)-Sitarganj(PG) also tripped on B-N fault, 27.4 km from Sitarganj(PG) end. As per PMU, multiple B-N faults are observed in the system. In antecedent conditions, 100 MVA ICT 1 and 2 carrying 26 MW & 21 MW respectively. | | | GI-2 |
| 19 | NR | 1) 400kV Dasna(UP)-Hapur 765(UP) ckt-1 2) 400kV Dasna(UP)-Hapur 765(UP) ckt-2 3) 400kV Bus 1 at 400/220kV Dasna(UP) 4) 315 MVA ICT 1 at 400/220kV Dasna(UP) 5) 315 MVA ICT 2 at 400/220kV Dasna(UP) | Uttar Pradesh | UP | 29-Apr-19 | 13:11 | 29-Apr-19 | 16:16 | 03:05 | 400kV Dasna(UP)-Hapur 765(UP) ckt-2 tripped on R-N fault. Bus bar protection of 400kV Bus 1 at 400/220kV Dasna(UP) operated leading to tripping of 315 MVA ICT 1 and 400kV Dasna(UP)-Hapur 765(UP) ckt-2. As per PMU, Multiple R-N faults are observed. In antecedent conditions, 400kV Dasna(UP)-Hapur 765(UP) ckt-1 & 2 carrying 24 MW each. | | 48 | GD-1 |
| 20 | NR | 1) 400 kV Bus 1 at 400/220kV Obra TPS(UP) 2) 315 MVA ICT 1 at 400/220kV Obra TPS(UP) 3) 200 MW Unit#9 at 400/220kV Obra TPS(UP) | Uttar Pradesh | UP | 29-Apr-19 | 14:21 | 29-Apr-19 | 17:00 | 02:39 | 400 kV Bus 1 and 315 MVA ICT 1 tripped due to operation of LBB protection of breaker of unit-09. As per PMU, No fault is observed in the system. In antecedent conditions, Unit#9 generating 108 MW and 315 MVA ICT 1 carrying 110 MW. | 108 | | GD-1 |

Western Region-Event Report for April 2019

| S.No | Region | Name of Elements | Owner/Agency | Outage | | Revival | | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Category as per CEA standards | Energy Unserved (MU) |
|------|--------|---|--------------|------------|-------|------------|-------|-----------------|--|----------------------|----------------|-------------------------------|----------------------|
| | | | | Date | Time | Date | Time | Time | | | | | |
| 1 | WR | Tripping of 1.400 kV Kasor- Rajgad 2 2.400/220 kV 315MVA Kasor ICT 3 3.400 kV 50 MVAR Kasor Bus Reactor 4.400 kV Kasor Bus Coupler | GETCO | 01-04-2019 | 08:58 | 01-04-2019 | 10:48 | 01:50 | At 400 kV Kasor s/s, B phase conductor from pantograph isolator broken and fell over the IPS tube of Y phase pantograph isolator of 400 kV Rajgad 2. This created Y-B phase fault in 400 kV Kasor Bus1 and it tripped with all the elements connected on Bus bar protection operation. | Nil | Nil | GI-2 | Nil |
| 2 | WR | Tripping of 1.400 kV Aurangabad(MH)-Deepnagar 2.400 kV Aurangabad(MH)-Aurangabad(PG) 2 3.400 kV Aurangabad(MH)-Pune 2 4.400/220 kV 315 MVA Aurangabad(MH) ICT 1&2 | MSETCL | 03-04-2019 | 17:14 | 03-04-2019 | 18:17 | 01:03 | At 400 kV Aurangabad(MH), 400 kV Bus 1 bus bar protection operated and all the elements connected to 400 kV Bus 1 tripped. At the time of tripping new bus bar relay comissioning/testing work was under progress. Tripping from the New bus bar scheme was kept isolated but through the LBB wiring the positive supply got extended to old bus bar scheme and 400 kV Bus 1 tripped. | Nil | Nil | GI-2 | Nil |
| 3 | WR | Tripping of 1.220 kV Borivali-Kalwa 2.220 kV Borivali-Khargar 2 3.220 kV Borivali-Tarapur 4.220 kV Borivali-TATA 4 5.220 kV Borivali-Bhandup 6.220 kV Borivali-AEML Borivali 2 7.220 kV Borivali-Gorai 2 | MSETCL | 08-04-2019 | 01:10 | 08-04-2019 | 03:27 | 02:17 | At 220 kV Borivali s/s, 220 kV Bus 1 and 2 tripped on Bus bar protection when there was a through fault on 220 kV Borivali-Kalwa. 220 kV Tarapur line Y phase CT cable from Marshalling box to the Bus bar relay panel found damaged and replaced with a new one. | Nil | Nil | GI-1 | Nil |
| 4 | WR | Tripping of 1.400 kV Aurangabad(MH)-Deepnagar 2.400 kV Aurangabad(MH)-Aurangabad(PG) 2 3..400/220 kV 315 MVA Aurangabad(MH) ICT 1&2 | MSETCL | 12-04-2019 | 12:50 | 12-04-2019 | 13:07 | 00:17 | At 400 kV Aurangabad(MH), 400 kV Bus 1 bus bar protection operated and all the elements connected to 400 kV Bus 1 tripped due to DC leakage. | Nil | Nil | GI-2 | Nil |
| 5 | WR | Tripping of 1.400/220kV Chandrapur-II ICT 2 2.400 kV Chandrapur 2 Bus 1 3.400 kV Bhadravathi-Chandrapur IV 4.500 MW Chandrapur-II Unit-8 5.500 MW Chandrapur-II Unit-9 6.300 MW Dhariwal(STU) Unit 7.300 MW Dhariwal(CTU) Unit | MSETCL | 12-04-2019 | 15:25 | 12-04-2019 | 17:35 | 02:10 | At 400 kV Chandrapur-II s/s, R-phase pole of 500MVA ICT-2 tie breaker blasted, resulting in Bus-1 busbar protection operation. As the fault was persistent, LBB of tie bay operated, and Main bay of ICT-2 (on Bus-2) tripped. During the event, Chandrapur Unit-8(500MW) & Unit-9(500MW), and Dhariwal units (2X300MW) tripped causing generation loss of 1421MW (Ex-bus). 400kV Chandrapur –Bhadrawati-4 tripped at Bhadravati end only. | 1421 | Nil | GI-2 | Nil |
| 6 | WR | Tripping of 1.400 kV Nagothane-Padghe 1&2 2.400 kV Nagothane-Dhabol 1 3.400/220 kV 315 MVA Nagothane ICT 1&2 4.400/220 kV 500 MVA Nagothane ICT 3 5.400 kV Nagothane Bus coupler | MSETCL | 13-04-2019 | 22:50 | 14-04-2019 | 00:26 | 01:36 | At 400 kV Nagothane s/s, Bus coupler bay, IPS Tube between B-ph CT and 400 kV Bus 2 fell down and created B phase fault. 400 kV Bus 1,2 and all its connected elements tripped on Bus bar protection operation. | Nil | Nil | GI-2 | Nil |
| 7 | WR | Tripping of 1.220 kV Pithampur Interconnector 2 2.220 kV Pithampur-Badnagar 3.400/220 kV 315 MVA Pithampur ICT 2 | MPPTCL | 15-04-2019 | 00:49 | 15-04-2019 | 01:22 | 00:33 | At 400/220 kV Pithampur s/s, R phase CT of 220 kV TBC blasted resulted in tripping of all the elements connected to 220 kv bus 2 on bus bar protection operation. 220 kV Pithampur Interconnector 2 was connected to 220 kV Bus 2 through 220 kV TBC due to the problem in Main breaker. | Nil | Nil | GI-1 | Nil |
| 8 | WR | Tripping of 1.400 kV Pithampur-Singhaji 1&2 2.400 kV Khandwa-Indore 1&2 3.220 kV Omkareshwar-Barwaha 4.220 kV Omkareshwar-Nirmanani | MPPTCL/PGCIL | 16-04-2019 | 18:34 | 20-04-2019 | 20:19 | 97:45 | 765 kV Khandwa-Dhule line which was under construction collapsed and fell over the 400 kV Pithampur-Singhaji 1&2, 400 kV Khandwa-Indore 1&2, 220 kV Omkareshwar-Barwaha and 220 kV Omkareshwar-Nirmanani and resulted in tripping of the lines on distance protection operation. | Nil | Nil | GI-2 | Nil |
| 9 | WR | Tripping of 1.400/220 kV Wanakbori ICT 1 2.210 MW Wanakbori Unit 4 | GSECL | 27-04-2019 | 00:59 | 27-04-2019 | 03:42 | 02:43 | At 400 kV Wanakbori power station, 400/220 kV ICT 1 & Unit 4 GT Tie bay B phase CT blasted and resulted in tripping of the main bays of the above said elements. | 152 | Nil | GI-2 | Nil |

| S.No | Region | Name of Elements | Owner/Agency | Outage | | Revival | | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Category as per CEA standards | Energy Unserved (MU) |
|------|--------|--|--------------|------------|-------|------------|-------|-----------------|---|----------------------|----------------|-------------------------------|----------------------|
| | | | | Date | Time | Date | Time | Time | | | | | |
| 10 | WR | Tripping of 1.400 kV Wanakbori-Asoj 2.400 kV Wanakbori-Dhegam 1 3.400 kV Wanakbori-Soja 1 4.210 MW Wanakbori Units 4,6&7 | GSECL | 27-04-2019 | 21:21 | 27-04-2019 | 23:05 | 01:44 | At 400 kV Wanakbori power station, 400 kV Soja 1 & Unit 7 GT Tie bay B phase CT blasted and resulted in tripping of 400 kV Bus 2, 400 kV Wanakbori-Asoj,400 kV Wanakbori-Dehgam 1, 400 kV Wanakbori-Soja 1 and 210 MW Wanakbori Units 4,6&7 | 460 | Nil | GI-2 | Nil |
| 11 | WR | Tripping of 1.220 kV Pithampur-Badnagar 2.220 kV Pithampur Interconnector 1&2 3.400/220 kV 315 MVA Pithampur ICT 1&2 | MPPTCL | 28-04-2019 | 07:28 | 28-04-2019 | 08:16 | 00:48 | At 400/220 kV Pithampur s/s, R phase CT of 220 kV Pithampur Interconnector blasted and all the elements connected to 220 kv Bus 1 and 2 tripped. | Nil | Nil | GI-1 | Nil |
| 12 | WR | Tripping of 1.400 kV Wanakbori-Asoj 2.210 MW Wanakbori Unit 5 | GSECL | 28-04-2019 | 22:46 | 29-04-2019 | 01:19 | 02:33 | At 400 kV Wanakbori power station, 400 kV Asoj & Unit 5 GT Tie bay CT blasted and resulted in tripping of the main bays of the above said elements. | 147 | Nil | GI-2 | Nil |
| 13 | WR | Tripping of 1.400 kV Parli(MH)-Lonikhand 1 2.400 kV Parli(MH)-Nanded 1&2 3.400 kV Parli(MH)- Chandrapur 4.400 kV Parli(MH)-Parli(PG) 5.400/220 kV Parli(MH) ICT 3 | MSETCL | 29-04-2019 | 18:07 | 29-04-2019 | 19:14 | 01:07 | At 400 kV Parli(MH) s/s, Y phase CT of 400 kV Chandrapur blasted and resulted in tripping of all the elements connected to 400 kV Bus 2 on Bus bar protection operation. | Nil | Nil | GI-2 | Nil |
| 14 | WR | Tripping of 1.220 kV Seoni(MP)-Seoni(PG) 1&2 2.220/132 kV 160 MVA Seoni(MP) ICTs 1&2 | MPPTCL | 29-04-2019 | 18:10 | 29-04-2019 | 18:49 | 00:39 | At 220 kV Seoni(MP) s/s, 220 kV bus coupler B phase CT blasted and resulted in tripping of 220 kV Seoni(MP)-Seoni(PG) 1&2 and 220/132 kV 160 MVA Seoni(MP) ICTs 1&2. 132 kV Lalbuara, Pench, Mandla and Seoni load got affected due to the event. | Nil | 135 | GD-1 | 0.08775 |
| 15 | WR | Tripping of 1.400 kV Wanakbori-Dhegam 1 2.210 MW Wanakbori Units 4,5&7 | GSECL | 29-04-2019 | 23:04 | 30-04-2019 | 00:04 | 01:00 | At 400 kV Wanakbori power station,while closing the tie breaker (408) of Dehgam line and Unit 6 GT at Wanakbori,tie line-1 tie breaker tripped due to which 400kV main bus-2 got isolated. Due to isolation of 400kV Bus-2, Unit-4, Unit-5 and Unit-7 tripped due to loss of evacuation path. | 400 | Nil | GI-2 | Nil |

Disclaimer : The Above details are based on the preliminary/flash report of the event and may change after finalisation of the detailed report.The qunatum of load/generation loss is based on details given by SLDC and utility and may vary later with updated details.

Southern Region-Event Report for April 2019

| Sl. No. | Region | Name of Elements (Tripped/Manually opened) | Owner / Agency | Outage | | Revival | | Outage Duration | Event (As reported) | Generation Loss (MW) | Load Loss (MW) | Category as per CEA Grid Standards | Energy Unserved (MU) |
|---------|--------|--|----------------|-----------|------------|-----------|------------|-----------------|---|----------------------|----------------|------------------------------------|----------------------|
| | | | | Date | Time (Hrs) | Date | Time (Hrs) | Time | | | | | |
| 1 | SR | All connected elements at 400kV UV konda and 400kV Talaricheruvu viz. 1. 400kV Jammalamadugu Narnoor line-1 and 2 2. 400kV UV Konda Talaricheruvu line-1 and 2 3. 400kV Jammalamadugu Talaricheruvu line-1 4. 400kV UV Konda Mahaboobnagar line-1 | APTRANSCO | 8-Apr-19 | 16:12 | 8-Apr-19 | 17:03 | 51 mins | Complete outage of 400kV Uravakonda and 400kV Talaricheruvu Substations of APTRANSCO : Triggering incident was R-N fault in 400kV Jammalamadugu Narnoor line-1 and B-N fault in 400kV Jammalamadugu Narnoor line-2. Distance protection at both the ends sensed the fault in Zone-1. At the same time, 400kV Jammalamadugu Talaricheruvu line-1 tripped on overvoltage protection at Talaricheruvu end and DT was sent to Jammalamadugu end. 400kV UV Konda Mahaboobnagar line-1 and 400kV UV Konda Talaricheruvu line-2 tripped at UV Konda end on overvoltage protection and DT was sent to Mahaboobnagar and Talaricheruvu end respectively. 400kV UV Konda Talaricheruvu line-1 tripped at Talaricheruvu end only due to trip coil issue and the same needs review. This led to complete loss of supply at 400kV UV Konda and 400kV Talaricheruvu stations. Subsequently due to loss of 400kV evacuating lines, wind generators at 220kV level got tripped, resulting in the loss of 315 MW wind generation. | 315 | ---- | GD-1 | ---- |
| 2 | SR | All connected elements at 220kV Kadakola viz. 1. 220kV Kadakola Mysore line-1 and 2 2. 220kV Kadakola Chamrajpet line-1 and 2 3. 230kV Kadakola Kaniyampet | KPTCL | 8-Apr-19 | 22:48 | 8-Apr-19 | 23:47 | 59 mins | Complete outage of 220kV Kadakola substation of KPTCL : Triggering incident was B-ph fault in 220kV Kadakola Mysore line-1 and 2. Distance protection operated at both the ends and lines were tripped. After the tripping of 220kV Kadakola Mysore lines, other connected 220kV lines were handtripped at Kadakola end to avoid tripping due to overloading. This resulted in complete loss of supply at 220kV Kadakola SS . | ---- | 250 | GD-1 | 0.25 |
| 3 | SR | All connected elements at 220kV Hubli SS and 220kV Nagjheri Power House | KPTCL and KPCL | 10-Apr-19 | 18:09 | 10-Apr-19 | 19:36 | 1 hr 25 mins | Complete outage of 220kV Hubli substation of KPTCL : Triggering incident was fault in Bus-1 at 220kV Hubli due to failure of locking mechanism of Y and B-phase earth isolator switch blades of 220kV Hubli-Bidnal ckt-1. BBP of Bus-1 operated and all connected elements got tripped at 220kV Hubli. Since 220kV Hubli SS was under single bus operation. This resulted in complete loss of supply at 220kV Hubli SS. Complete outage of 220kV Nagjheri Power station of KPCL : At the same time, 220kV Nagjheri Ambewadi line-1 and 220kV Nagjheri Bidnal lines tripped on overcurrent protection. Since 220kV Nagjheri Ambewadi line-2 and 220kV Nagjheri Kodasalli line-1 & 2 were under shutdown in the antecedent due to maintenance, running units #1,4,5 and 6 at Nagjheri tripped due to loss of evacuating lines. This resulted in complete loss of supply at 220kV Nagjheri SS. | 450 | 60 | GD-1 | 0.063 |
| 4 | SR | 1. 220 kV Areakode -Kozhikode 1, 2 and 3 2. 220kV Areakode - Nallalam 1 and 2 3. 220kV Areakode - Kanjirode 4. 220kV Areakode - Orkatterri (Vadakara) 5. 220kV Areakode - Shornur 6. 220kV Areakode - Madakathara 7. 220kV Areakode Malaparamba 8. 400kV Mysore Kozhikode 2 | KSEB | 10-Apr-19 | 23:05 | 10-Apr-19 | 23:42 | 37 mins | Complete Outage of North Kerala and 220kV Areakode Substation of KSEB: 220kV Areakode SS was under split bus operation during antecedent conditions. It was intended to shift 220/110kV, 160 MVA Transformer at Areakode from bus-1 to bus-2. During shifting, both the buses got coupled through R and Y ph bus isolators. This resulted in R-Y ph bus fault and bus bar protection operated at 220kV Areakode SS. Trip was not extended to all connected elements and hence few lines tripped on operation of distance protection at remote end. The tripping of connected 220kV lines resulted in the complete outage of Northern region of Kerala . | 225 | 750 | GD-1 | 0.142 |

Eastern Region-Event Report for April 2019

| Sl. No. | Region | Name of major elements tripped | Owner / Agency | Outage | | Revival | | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Category as per CEA Grid Standards | Loss of Energy(in MU) |
|---------|--------|--|----------------|-----------|-------|-----------|-------|-----------------|---|----------------------|----------------|------------------------------------|-----------------------|
| | | | | Date | Time | Date | Time | Time | | | | | |
| 1 | ERLDC | 220 kV STPS - Chandil S/C 220/132 kV ATRs at STPS 220 kV STPS - New Bishnupur S/C 220 kV STPS - Hura S/C 220 kV STPS Asansol S/C STPS unit #5 & #6 | WBPDCL | 5-Apr-19 | 15:03 | 5-Apr-19 | 17:51 | 02:48 | As per WB SLDC, bus II at Santaldih S/S was under shutdown. At 15:03 hrs total power failure occurred at Santaldih S/S due to flash over at B phase isolator of ST-III resulting tripping all feeders connected to S/S | 480 | 40 | GD-I | 0.1120 |
| 2 | ERLDC | HVDC Talcher Kolar pole I | ISTS | 11-Apr-19 | 13:39 | 11-Apr-19 | 13:33 | 23:54 | On 11-04-19 at 13:01 hrs +/-500 KV Talcher Kolar HVDC Pole 1 got blocked due to Emergency switch off signal receipt from Kolar end resulting reduction of power flow from 2000 MW to 1000 MW. Pole 2 was operated in metallic return mode after the incident. Due to event generation back down occurred at GMR and at JITPL | 190 | 0 | GI-II | 0.0000 |
| 3 | ERLDC | 400 kV Teesta III Kishangunj S/C 400 kV Rangpo - Kishangunj S/C | ISTS | 12-Apr-19 | 23:55 | 13-Apr-19 | 00:51 | 00:56 | 400 kV Rangpo-Binaguri circuits were under planned outage for HTLS Reconductoring work. At 23:55 Hrs, R-Y phase to phase fault occurred on 400 kV Teesta 3-Kishanganj circuit resulting in its tripping. This led to evacuation of entire Sikkim hydro complex power through 400 kV Rangpo-Kishangunj single circuit. However, backup over current protection which was kept enabled for this circuit at Kishangunj end operated causing its tripping. This led to Isolation of Sikkim Hydro complex (1908 MW) with Gangtok Load (17 MW) and the island collapsed due to large load generation imbalance causing total blackout of 400/220/132 kV Rangpo, 400 kV Teesta V, 400 kV Teesta 3, 400/132 kV Dikchu, 220 kV Jorethang, 220 kV Tashiding, 132 kV Chujachen and 132 kV Gangtok substations. The large generation loss led to frequency drop by 0.15 Hz in the Indian grid (50.029 Hz to 49.859 Hz). | 1908 | 17 | GD-I | 0.0159 |
| 4 | ERLDC | 400 kV Teesta III Kishangunj S/C 400 kV Rangpo - Kishangunj S/C 400/132 kV ICT at Dikchu | ISTS | 16-Apr-19 | 23:30 | 17-Apr-19 | 00:04 | 00:34 | 400 kV Rangpo-Binaguri circuits were under planned outage for HTLS Reconductoring work. At 23:32 Hrs, Resistive fault occurred in the Y phase on 400 kV Rangpo-Kishangunj circuit. This has led to tripping of circuit on Direction Earth Fault trip from Kishangunj end which has sent the direct trip to Rangpo end. With this fault, Dikchu 400/132 kV ICT tripped on Backup Overcurrent protection causing tripping of both its units. In addition, during this fault, Jorethang Unit 2 also tripped on generator protection. The SPS associated with this circuit did not operate at Rangpo End. With this, the entire power shifted on 400 kV Teesta 3-Kishanganj circuit. The power evacuation through a long path has resulted in low voltage at Teesta3, Rangpo and Teesta 5 and 220 kV generating station connected. As the line loading on 400 kV Teesta3-Kishanganj circuit was 1538 MW with voltage going to 360 kV, the SPS for Line overloading at Teesta 3 end operated tripping its unit 1. However, this did not reduce the loading on the line below the set limit of 2000 Amps. The low voltage persisted at Teesta 3 generating plant and after 5 minutes, the Teesta 3 Unit 2,3,4 and 6 tripped on minimal impedance stage 2 protection operation. After the loading on the 400 kV Teesta 3-Kishanganj circuit reduced to 747 MW and Voltage at Teesta3 has improved to 392 kV. | 1118 | 0 | GI-II | 0.0000 |
| 5 | ERLDC | 220 kV Biharshariff-Tenughat S/C 400/220 kV ICT I & II at Biharshariff | JUSNL | 17-Apr-19 | 10:16 | 17-Apr-19 | 17:59 | 07:43 | 220 kV Ranchi – Hatia D/C was out of service. At 10:16 hrs 220 kV Biharshariff-Tenughat S/C tripped on R-N resulting into islanding of Hatia load with 2 running units of Tenughat and one unit of CPP Inland power. Island could not survive due to generation load imbalance (390MW of generation against load of 150MW) leading to the load loss of around 150 MW at Hatia/ Namkum/Lohardangha /Kamdara area in Jharkhand system and loss of two running units of Tenughat and 1 running unit of CPP Inland. 315 MVA ICT-I & II of Biharshariff tripped sensing the fault of 220 kV Biharshariff-Tenughat S/C. As per PMU data, fault was cleared within 200 ms. | 390 | 165 | GD-I | 1.2733 |
| 6 | ERLDC | 220 kV Muzaffarpur - Hazipur New - II 220 kV bus II at Muzaffarpur 400/220 kV ICT -III at Muzaffarpur 220 kV Muzaffarpur - Dhalkebar II | ISTS | 18-Apr-19 | 10:16 | 18-Apr-19 | 10:48 | 00:32 | At 10:16 hrs 220 kV Muzaffarpur - Hazipur - II, 220 kV bus II at Muzaffarpur, 400/220 kV ICT -III at Muzaffarpur and 220 kV Muzaffarpur - Dhalkebar II tripped. | 0 | 0 | GI-I | 0.0000 |
| 7 | ERLDC | 220 kV Patna Khagul S/C | JUSNL | 27-Apr-19 | 12:47 | 27-Apr-19 | 13:03 | 00:16 | 220 kV Arrah Khagul D/C were out of service due to reduce the loading of 220 kV Patna Sipara S/C. 220 kV Khagul Sipara S/C was under breakdown prior to the incident. So Khagul was connected to only one source i.e. Patna. At 12:47 hrs 220 kV Patna Khagul S/C tripped on B-N fault resulting total power failure at Khagul S/C. | 0 | 147 | GD-I | 0.0392 |
| 8 | ERLDC | 220 kV Patratu-Tenughat S/C 220 kV Patratu-Hatia I 220 kV Patratu-Hatia II 132 kV Patratu-Patratu D/C 132 kV Patratu - Hatia (old) S/C 132 kV Patratu - Kanke S/C | JUSNL | 29-Apr-19 | 12:37 | 29-Apr-19 | 13:22 | 00:45 | At 12:37 Hrs, all lines emanating from 220 kV Patratu S/s tripped leading to a total power failure of the S/S | 0 | 65 | GD-I | 0.0488 |
| 9 | ERLDC | 765 KV Bus I at Angul 765/400 kV ICT IV 765 KV Angul Jharsuguda IV. | ISTS | 30-Apr-19 | 02:15 | 30-Apr-19 | 03:37 | 01:22 | At 2:15hrs, 765 KV Bus I at Angul tripped on Bus bar protection due to B ph bursting of CT associated with Tie bay of 765 KV Angul Jharsuguda IV. At the same time,1500 MVA 765/400 kV ICT IV also tripped on back up O/C protection. | 0 | 0 | GD-I | 0.0000 |

NER-Grid Disturbances for April-2019

| Sl. No. | Region | Name of Element | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards |
|---------|--------|----------------------------------|------------------------------|---------------------------|------------------------------|-----------------|--|----------------------|----------------|-----------------------|-----------------|------------------------------------|
| 1 | NER | 132 kV Loktak-Ningthoukhong line | MSPCL | 01-Apr-19 23:55 | 02-Apr-19 00:05 | 10 mins | Ningthoukhong area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak - Ningthoukhong line. 132 kV Imphal(PG) - Ningthoukhong line & 132 kV Kakching-Kongba line kept open (for overloading of 132 kV Loktak-Ningthoukhong line). At 23:55 Hrs on 01.04.2019, 132 kV Loktak-Ningthoukhong line tripped. Due to tripping of this element, Ningthoukhong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 17 | 0 | 0.003 | GD 1 |
| 2 | NER | 132 kV Doyang - Sanis line | DoP Nagaland | 02-Apr-19 13:50 | 02-Apr-19 14:15 | 25 mins | Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang - Sanis line.(132 kV Dimapur-Kohima line is under shutdown since 13:59 Hrs of 26.02.19 for rectification work due to blasting and excavation works on National Highway, 132 kV Karong - Kohima line is idle charged from Kohima end as this line is quite old and due to weak jumper arrangement, the power flow in this line is limited to 30 MW & 66 kV Tuensang - Likhimro line is kept open due to construction activities.) At 13:50 Hrs on 02.04.2019, 132 kV Doyang - Sanis line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 22 | 0 | 0.011 | GD 1 |
| 3 | NER | 132 kV Doyang - Sanis line | DoP Nagaland | 02-Apr-19 14:28 | 02-Apr-19 15:29 | 1 hrs 1 mins | Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang - Sanis line.(132 kV Dimapur-Kohima line which is under shutdown since 13:59 Hrs of 26.02.19 for rectification work due to blasting and excavation works on National Highway, 132 kV Karong - Kohima line which is idle charged from Kohima end as this line is quite old and due to weak jumper arrangement, the power flow in this line is limited to 30 MW & 66 kV Tuensang - Likhimro line kept open due to construction activities.) At 14:28 Hrs on 02.04.2019, 132 kV Doyang - Sanis line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 20 | 0 | 0.02 | GD 1 |
| 4 | NER | 132 kV Ranganadi - Ziro line | POWERGRID | 02-Apr-19 14:36 | 02-Apr-19 15:02 | 26 mins | Ziro area of Arunachal Power System was connected with rest of NER Grid radially through 132 kV Ranganadi - Ziro line. At 14:36 Hrs on 02.04.2019, 132 kV Ranganadi-Ziro line tripped. Due to tripping of this element, Ziro area of Arunachal Pradesh was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 17 | 0 | 0.012 | GD 1 |
| 5 | NER | 132 kV Lekhi - Pare line | POWERGRID, DoP AP and NEEPCO | 02-Apr-19 21:07 | 02-Apr-19 21:33 | 26 mins | Lekhi Area & Nirjuli area of Arunachal Pradesh Power System were connected with rest of NER Grid through 132 kV Lekhi - Pare line. (132 kV Lekhi - Itanagar line was kept open due to CT ratio restriction & 132 kV Gohpur – Nirjuli line was opened at 17:58 Hrs to avoid over loading of 132 kV Pare – Lekhi line) At 22:07 Hrs on 02.04.2019, 132 kV Lekhi - Pare line tripped. Due to tripping of this line, Lekhi Area & Nirjuli area were separated from rest of NER Grid and subsequently collapsed due to no source in these areas. | 0 | 28 | 0 | 0.012 | GD 1 |
| 6 | NER | 400 kV Palatana-Silchar 2 line | NETC, POWERGRID & TSECL | 03-Apr-19 16:01 | 03-Apr-19 16:20 | 19 mins | Tripura Power System except P.K Bari area, Bangladesh Power System, Palatana Units and AGTCCPP Units were connected with rest of NER Grid through 400 kV Silchar - Palatana 2 line, 132 kV AGTTP - Kumarghat line & 132 kV PK Bari-Kamalpur line (400 kV Silchar - Palatana 1 line was under emergency shutdown, 132 kV Baramura – Gamaitilla line was under shutdown and 132 kV Ambassa – Kamalpur line was kept open to avoid over loading). At 16:01 Hrs, 400 kV Palatana-Silchar 2 tripped. Subsequently, SPS-2 operated at Palatana and SPS-1 operated at Silchar. Palatana GTG 1 & GTG 2 tripped at 16:01 Hrs and consequently STG 1 & 2 tripped. Monarchak GTG tripped at 16:01 Hrs and STG at 16:01 Hrs. Due to tripping of ICTs at Palatana and subsequent tripping of units in Tripura Power System, power flow shifted to 132 kV Agartala–Dhalabil–Kamalpur-P.K Bari link and 132 kV Kumarghat-AGTCCPP-Agartala link. 132 kV P.K Bari-Kamalpur line tripped at 16:02 Hrs and consequently 132 kV Kumarghat-AGTCCPP line tripped on over current. Due to tripping of these elements, Tripura Power System, were separated from rest of NER Grid and subsequently collapsed due to no source in the system. | 823 | 236 | 0.261 | 0.075 | GD 5 |

| Sl. No. | Region | Name of Element | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards |
|---------|--------|---|---------------------------|---------------------------|------------------------------|-----------------|--|----------------------|----------------|-----------------------|-----------------|------------------------------------|
| 7 | NER | 132 kV Biswanath Chariali - Pavoi I and II lines, 132 kV Sonabil- Pavoi line and 132 kV Sonabil - Gohpur line | AEGCL | 04-Apr-19 23:24 | 04-Apr-19 23:35 | 11 mins | Pavoi - Gohpur Area of Assam Power System was connected with the rest of NER Grid through 132 kV Biswanath Chariali - Pavoi I and II lines, 132 kV Sonabil- Pavoi line and 132 kV Sonabil - Gohpur line (132 kV Bus Coupler at Gohpur was kept opened for overloading of 132 kV Pare - Lekhi Line) At 23:24 Hrs on 04.04.2019, 132 kV Biswanath Chariali - Pavoi I and II lines, 132 kV Sonabil- Pavoi line and 132 kV Sonabil - Gohpur line tripped. Due to tripping of these element, PavoiGohpur Area of Assam Power System was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 40 | 0 | 0.007 | GD 1 |
| 8 | NER | 132 kV Doyang - Sanis line | DoP, Nagaland | 13-Apr-19 15:50 | 13-Apr-19 17:33 | 1 hrs 43 mins | Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang - Sanis line.(132 kV Dimapur-Kohima line is under shutdown since 13:59 Hrs of 26.02.19 for rectification work due to blasting and excavation works on National Highway, 132 kV Karong - Kohima line is idle charged from Kohima end as this line is quite old and due to weak jumper arrangement, the power flow in this line is limited to 30 MW & 66 kV Tuensang - Likhimro line is kept open due to construction activities.) At 15:50 Hrs on 13.04.2019, 132 kV Doyang - Sanis line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 15 | 0 | 0.026 | GD 1 |
| 9 | NER | 132 kV Loktak- Ningthoukhong line | MSPCL | 13-Apr-19 18:21 | 13-Apr-19 18:40 | 19 mins | Ningthoukhong area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak - Ningthoukhong line. 132 kV Imphal(PG) - Ningthoukhong line & 132 kV Kakching - Kongba line kept open (for overloading of 132 kV Loktak- Ningthoukhong line). At 18:21 Hrs on 13.04.2019, 132 kV Loktak-Ningthoukhong line tripped. Due to tripping of this element, Ningthoukhong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 50 | 0 | 0.016 | GD 1 |
| 10 | NER | 132 kV Ranganadi - Ziro line | POWERGRID | 14-Apr-19 15:52 | 14-Apr-19 16:11 | 19 mins | Ziro area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Ranganadi - Ziro line. At 15:52 Hrs on 14.04.2019, 132 kV Ranganadi - Ziro line tripped. Due to tripping of this element, Ziro area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 15 | 0 | 0.005 | GD 1 |
| 11 | NER | 400 kV Silchar - Imphal(PG) 1 line | POWERGRID | 15-Apr-19 09:19 | 15-Apr-19 09:52 | 33 mins | Manipur Power System and Loktak Power Station were connected with rest of NER Grid through 400 kV Silchar - Imphal(PG) 1 line. 132 kV Karong - Kohima line kept idle charged from Kohima end and 132 kV Jiribam(MSPCL) - Rengpang line is under long outage. 400 kV Silchar- Imphal 2 line and 132 kV Jiribam (PG) - Loktak 2 line were under outage since 09:17 Hrs on 15.04.19. At 09:19 Hrs on 15.04.19, 400 kV Silchar - Imphal(PG) 1 line tripped. Due to tripping of these elements, Manipur Power System and Loktak Power Station were separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 84 | 0 | 0.0462 | GD 1 |
| 12 | NER | 132 kV Doyang - Sanis line | DoP, Nagaland | 16-Apr-19 10:29 | 16-Apr-19 11:17 | 48 mins | Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang - Sanis line. (132 kV Dimapur-Kohima line is under shutdown since 13:59 Hrs of 26.02.19 for rectification work due to blasting and excavation works on National Highway, 132 kV Karong - Kohima line is idle charged from Kohima end as this line is quite old and due to weak jumper arrangement, the power flow in this line is limited to 30 MW & 66 kV Tuensang - Likhimro line is kept open due to construction activities.) At 10:29 Hrs on 16.04.2019, 132 kV Doyang - Sanis line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area | 0 | 23 | 0 | 0.018 | GD 1 |
| 13 | NER | 132 kV Doyang - Mokokchung (DOP, Nagaland) and 220 kV Mariani (PG) - Mokokchung (PG) 1 & 2 lines | POWERGRID & DoP, Nagaland | 16-Apr-19 11:30 | 16-Apr-19 11:54 | 24 mins | Mokokchung (PG) substation and Mokokchung area of Nagaland Power System were connected with rest of NER Grid through 132 kV Doyang -Mokokchung (DOP, Nagaland) and 220 kV Mariani (PG) - Mokokchung (PG) 1 & 2 lines. 132 kV Mokokchung (DOP, Nagaland)-Marianai (AS) is under long outage & 66 kV Tuensang-Likimro line kept open for due to construction activities. At 11:30 Hrs on 16.04.2019, 132 kV Doyang - Mokokchung (DOP, Nagaland) and 220 kV Mariani (PG) - Mokokchung (PG) 1 & 2 lines tripped. Due to tripping of these elements, Mokokchung (PG) substation and Mokokchung area were separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 16 | 0 | 0.0064 | GD 1 |

| Sl. No. | Region | Name of Element | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards |
|---------|--------|--|---------------------------------|---------------------------|------------------------------|-----------------|--|----------------------|----------------|-----------------------|-----------------|------------------------------------|
| 14 | NER | 132 kV Doyang - Sanis line | DoP, Nagaland | 17-Apr-19 05:34 | 17-Apr-19 06:02 | 28 mins | Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang - Sanis line. (132 kV Dimapur-Kohima line is under shutdown since 13:59 Hrs of 26.02.19 for rectification work due to blasting and excavation works on National Highway, 132 kV Karong - Kohima line is idle charged from Kohima end as this line is quite old and due to weak jumper arrangement, the power flow in this line is limited to 30 MW & 66 kV Tuensang - Likhimro line is kept open due to construction activities.) At 05:34 Hrs on 17.04.2019, 132 kV Doyang - Sanis line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area | 0 | 19 | 0 | 0.009 | GD 1 |
| 15 | NER | 132 kV Loktak-Ningthoukhong line | MSPCL | 17-Apr-19 06:11 | 17-Apr-19 06:52 | 41 mins | Ningthoukhong area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak - Ningthoukhong line. 132 kV Imphal(PG) - Ningthoukhong line & 132 kV Kakching - Kongba line kept open for overloading of 132 kV Loktak-Ningthoukhong line. At 06:11 Hrs on 17.04.2019, 132 kV Loktak-Ningthoukhong line tripped. Due to tripping of this element, Ningthoukhong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 14 | 0 | 0.01 | GD 1 |
| 16 | NER | 132 kV Imphal (PG)- Imphal (MSPCL) I & II line | MSPCL & POWERGRID | 17-Apr-19 06:35 | 17-Apr-19 07:04 | 29 mins | Capital Area of Manipur Power System were connected with rest of NER Grid through 132 kV Imphal (PG)- Imphal (MSPCL) I & II lines. 132 kV Karong - Kohima line kept idle charged from Kohima end and 132 kV Kakching - Kongba line kept open for overloading of 132 kV Loktak-Ningthoukhong line. At 06:35 Hrs on 17.04.19, 132 kV Imphal (PG)- Imphal (MSPCL) I & II line tripped. Due to tripping of these elements, Capital Area of Manipur Power System were separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 55 | 0 | 0.027 | GD 1 |
| 17 | NER | 400 kV Silchar - Azara line, 400 kV Silchar - Byrnihat (Killing) line and 132 kV Byrnihat (Killing) - EPIP-2 (Norbong) 1 & 2 lines | NETC, OTPC, POWERGRID, MePTCL | 20-Apr-19 11:50 | 20-Apr-19 15:30 | 3 hrs 40 mins | Southern Part of NER Grid consisting of Tripura including Bangladesh Load, South Assam, Part of Meghalaya, Manipur including Myanmar load and Mizoram were connected with rest of NER Grid through 400 kV Silchar - Azara line, 400 kV Silchar - Byrnihat (Killing) line and 132 kV Byrnihat (Killing) - EPIP-2 (Norbong) 1 & 2 lines. 132 kV Byrnihat (Killing) - EPIP-1 D/C lines were under outage since due to tower collapse, 220 kV Kopili Bus A & B was under planned shutdown, 132 kV Dimapur (PG) -Imphal (PG) line was under shutdown, 132 kV Karong - Kohima line was in idle charged from Kohima end, 132 kV Sarusujai - Umtru 1 & 2 lines, 132 kV Kahlipara - Umtru 1 & 2 lines and 132 kV Mawngap - Nongstoin line kept open for system requirement. At 11:50:55.028 Hrs, 400 kV Silchar-Azara line tripped and at 11:50:55.094 Hrs, 400 kV Silchar-Byrnihat line tripped. Subsequently, SPS-3 operated at Palatana which in turn tripped HV side CB of GT-1 at 11:50:55.241 Hrs and GT-2 at 11:50:55.236 Hrs. GT-1 went to house load at 11:50:55.241 Hrs and finally tripped on Gas purge fault trip at 11:51:18.356 Hrs. Similarly, GT-2 went to house load at 11:50:55.246 Hrs. This tripping resulted in overloading of 132 kV Byrnihat-EPIP -II D/C line of Meghalaya which tripped on overcurrent at 11:50:56.729 Hrs. Due to tripping of these elements Mizoram, Manipur, South Assam, Part of Meghalaya Power System, Tripura including Bangladesh Load were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area. | 880 | 775 | 3.226 | 2.841 | GD 5 |
| 18 | NER | 132 kV Balipara - Bhalukpong-Khupi line | NEEPCO | 20-Apr-19 14:58 | 20-Apr-19 16:44 | 1 hrs 46 mins | Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara - Bhalukpong line. At 14:58 Hrs on 20.04.2019, 132 kV Balipara - Bhalukpong-Khupi line tripped. Due to tripping of these elements, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 17 | 0 | 0.03 | GD 1 |
| 19 | NER | 132 kV Ranganadi - Itanagar line, 132 kV Itanagar - Pare line and 132 kV Itanagar - Lekhi line | NEEPCO & DoP, Arunachal Pradesh | 20-Apr-19 19:28 | 20-Apr-19 20:54 | 1 hrs 26 mins | Itanagar (Chimpu) area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Ranganadi - Itanagar line and 132 kV Itanagar - Pare line (132 kV Itanagar - Lekhi line was kept open). At 19:28 Hrs on 20.04.2019, 132 kV Ranganadi - Itanagar line, 132 kV Itanagar - Pare line and 132 kV Itanagar - Lekhi line tripped. Due to tripping of these elements, Itanagar (Chimpu) area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 19 | 0 | 0.027 | GD 1 |
| 20 | NER | 132 kV Dimapur (PG)-Dimapur (DoP, Nagaland) I & II lines | POWERGRID & DoP, Nagaland | 24-Apr-19 14:12 | 24-Apr-19 14:43 | 31 mins | Dimapur area of Nagaland Power System was connected with the rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (NA) I & II lines. At 14:12 Hrs on 24.04.2019, 132 kV Dimapur (PG)-Dimapur (DoP, Nagaland) I & II lines tripped. Due to tripping of these elements, Dimapur area was separated from the rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 54 | 0 | 0.028 | GD 1 |

| Sl. No. | Region | Name of Element | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards |
|---------|--------|--|---------------------------------|---------------------------|------------------------------|-----------------|---|----------------------|----------------|-----------------------|-----------------|------------------------------------|
| 21 | NER | 132 kV Balipara - Bhalulpong- Khupi line | NEEPCO & DoP, Arunachal Pradesh | 27-Apr-19 08:25 | 27-Apr-19 08:45 | 20 mins | Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara - Bhalukpong - Khupi line. At 08:25 Hrs on 27.04.2019, 132 kV Balipara - Bhalulpong- Khupi line tripped. Due to tripping of these elements, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area. | 0 | 15 | 0 | 0.005 | GD 1 |

NER-Grid Incidents for April-2019

| Sl. No. | Region | Name of Element | Owner / Agency | Date and Time of Tripping | Date and Time of Restoration | Outage Duration | Event | Generation Loss (MW) | Load Loss (MW) | Generation Loss in MU | Load Loss in MU | Category as per CEA Grid Standards |
|---------|--------|-----------------|----------------|---------------------------|------------------------------|-----------------|--|----------------------|----------------|-----------------------|-----------------|------------------------------------|
| 1 | NER | AGTCCPP Unit-3 | NEEPCO | 02-Apr-19 18:14 | 02-Apr-19 19:15 | 1 hrs 1 mins | AGTCCPP Unit-3 tripped at 18:14 Hrs on 02-04-19 due to Stator earth fault. (Revision of schedule from Block No 78 on 02.04.19). | 15 | 0 | 0.02 | 0 | GI 1 |
| 2 | NER | AGBPP Unit 6 | NEEPCO | 09-Apr-19 16:10 | 09-Apr-19 16:30 | 20 mins | AGBPP Unit 6 tripped at 16:10 Hrs on 09.04.19 due to high vibration. (Revision of schedule from Block No 67 on 09.04.19). | 25 | 0 | 0.01 | 0 | GI 2 |
| 3 | NER | AGBPP Unit 7 | NEEPCO | 10-Apr-19 14:33 | 10-Apr-19 15:15 | 42 mins | AGBPP Unit 7 tripped at 14:33 Hrs on 10.04.19 due to high vibration. (Revision of schedule from Block No 62 on 10.04.19). | 30 | 0 | 0.02 | 0 | GI 2 |
| 4 | NER | AGTCCPP Unit 2 | NEEPCO | 13-Apr-19 20:03 | 13-Apr-19 20:30 | 27 mins | AGTCCPP Unit-2 tripped at 20:03 Hrs on 13-04-19 due to Earth Fault. (Revision of schedule from Block No 83 on 13.04.19). | 10 | 0 | 0.01 | 0 | GI 1 |
| 5 | NER | Loktak Unit 2 | NHPC | 16-Apr-19 12:12 | 16-Apr-19 13:00 | 48 mins | Loktak Unit 2 tripped due to high GT B-Ph Winding temperature at 12:12 Hrs on 16-04-19. (Revision of schedule from Block No 53 on 16.04.19). | 34 | 0 | 0.03 | 0 | GI 1 |
| 6 | NER | AGTCCPP Unit 1 | NEEPCO | 19-Apr-19 18:15 | 19-Apr-19 18:45 | 30 mins | AGTCCPP Unit 1 tripped due to NVD start at 18:15 Hrs on 19-04-19. (Revision of schedule from Block No 76 on 19.04.19). | 20 | 0 | 0.01 | 0 | GI 1 |
| 7 | NER | BgTPP Unit 3 | NTPC | 24-Apr-19 11:26 | 24-Apr-19 12:00 | 34 mins | BGTPP Unit-3 tripped at 11:26 Hrs on 24.04.19 due to Problem in Governor control valve. (Revision of schedule from Block No 49 on 24.04.19). | 139 | 0 | 0.08 | 0 | GI 2 |
| 8 | NER | Palatana STG II | OTPC | 25-Apr-19 02:55 | 25-Apr-19 03:30 | 35 mins | PALATANA STG 2 tripped at 02:55 Hrs on 25.04.19 due to opening of steam control valve. (Revision of schedule from Block No.15 on 25.04.19). | 100 | 0 | 0.06 | 0 | GI 2 |
| 9 | NER | AGTCCPP Unit 4 | NEEPCO | 25-Apr-19 14:05 | 25-Apr-19 14:45 | 40 mins | AGTCCPP Unit 4 tripped at 14:05 Hrs on 25-04-19 due to high lube oil temperature. (Revision of schedule from Block No 60 on 25.04.19). | 19 | 0 | 0.01 | 0 | GI 1 |
| 10 | NER | AGTCCPP Unit 1 | NEEPCO | 26-Apr-19 15:05 | 26-Apr-19 15:45 | 40 mins | AGTCCPP Unit 1 tripped at 15:05 Hrs on 26-04-19 due to earth fault at 11 kV bus. (Revision of schedule from Block No 64 on 26.04.19). | 18 | 0 | 0.01 | 0 | GI 1 |
| 11 | NER | BgTPP Unit 3 | NTPC | 27-Apr-19 00:11 | 27-Apr-19 01:15 | 1 hrs 4 mins | BGTPP Unit-3 tripped at 00:11 Hrs on 27.04.19 due to load fluctuation, Throttling Valve problem. (Revision of schedule from Block No 6 on 27.04.19). | 202 | 0 | 0.22 | 0 | GI 2 |
| 12 | NER | BgTPP Unit 1 | NTPC | 27-Apr-19 16:03 | 27-Apr-19 16:45 | 42 mins | BGTPP Unit-1 tripped at 16:03 Hrs on 27.04.19 due to flame failure. (Revision of schedule from Block No 68 on 27.04.19). | 132 | 0 | 0.09 | 0 | GI 2 |
| 13 | NER | AGTCCPP Unit 4 | NEEPCO | 27-Apr-19 19:21 | 27-Apr-19 20:00 | 39 mins | AGTCCPP Unit 4 tripped at 19:21 Hrs on 27-04-19 due to high oil temperature. (Revision of schedule from Block No 81 on 27.04.19). | 16 | 0 | 0.01 | 0 | GI 1 |
| 14 | NER | AGTCCPP Unit 1 | NEEPCO | 28-Apr-19 12:06 | 28-Apr-19 13:00 | 54 mins | AGTCCPP Unit 1 tripped at 12:06 Hrs on 28.04.19 due to loss of Communication with controller. (Revision of schedule from Block No.53 on 28.04.19). | 18 | 0 | 0.02 | 0 | GI 1 |