

### Major Grid Events for Aug, 2017\_ Northern Region

S. No	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event (As reported)	Generati on Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unreserved (in MU)
				Date	Time	Date	Time	Time					
1	NR	1.400/200kv 315 MVA ICT 2 at Wagoora 2.400/220kv 315 MVA ICT 4 at Wagoora 3.220KV Wagoora-Pampore - 2	POWERGRID	10-08-2017	11:54	10-08-2017	12:09	00:15	While availing planned shutdown at 220kv Bus-2 of 400/220kv Wagoora (PG), necessary switching operations performed. Non uniform opening of bus isolators of 220kv Wagoora- Pampore ckt-2 resulted into current imbalance, earth fault element of OC & EF relay which was installed on Bus Coupler picked up and tripped bus coupler. The total current from 400/220kv ICT 2&4 was flew through bus isolator of 89B of Pampore II line and bus isolator bursted. 400/220kv 315MVA ICT 2 & 4 of Wagoora (PG) tripped on backup earth fault.	0	180	GD1	0.009
2	NR	1.220kv Hisar(PG)-Hisar-IA(HVPLN) 2 2.220kv Hisar(PG)-Hisar-IA(HVPLN) 1	POWERGRID/Haryana	12-08-2017	19:58	12-08-2017	21:14	01:16	B-phase jumper of the 220kv Hisar(PG)- sharwal(HVPLN) line snapped at Powergrid Hisar end leads to tripping of the 220kv Hisar-Sharwal ckt 1. At 19:58hrs R-N fault occurred at Hisar end leads to tripping of 220kv Hisar(PG)-Hisar-IA(HVPLN) ckt-1&2	0	300	GD1	0.38
3	NR	1.400kv Akal-Jodhpur 2 2.400KV Akal-Barmer 1	Rajasthan	13/08/2017	05:12	13-08-2017	05:40	00:28	400kv Akal-Jodhpur line tripped on R-Y phase to earth fault. Further, 400kv Barmer-Akal line also tripped at the same time from Barmer end. After opening of 400kv Akal-Barmer line from Barmer end, line was charged from Akal end only and it resulted into over voltage in the line. Over voltage protection also operated after 3second and send the DT command to Akal end.	400	0	GD1	
4	NR	1.400/220kv 500 MVA ICT 2 of Dhuri 2.400/220kv 500 MVA ICT 3 of Dhuri	Punjab	19/08/2017	10:47	19-08-2017	11:51	01:04	400/220kv 500MVA ICT 2 & 3 of Dhuri trippeddue to operation of ICT Bucholz protection. From PMU,slight voltage dip observed in all phases. Voltage recovered in 80msec	0	350	GD1	0.35
5	NR	1.400kv Dhuri -Rajpura -1 2.400kv Dhuri -Rajpura -2 3.400kv/220kv 500 MVA ICT 3 of Rajpura 4. 400kv/220kv 500 MVA ICT 4 of Dhuri 5. 400kv Bus 2 of Rajpura	Punjab	19/08/2017	13:10	19-08-2017	15:57	02:47	400kv Dhuri –Rajpura ckt 1&2,Rajpura 400kv Bus-2, Rajpura 500 MVA ICT 3 & 500MVA ICT 4 of Dhuri tripped on disturbance by 400kv (411bay)Y phase CT of ICT 4 of Rajpura station. From PMU, Max dip observed in Y phases.	0	400	GD1	0.2
6	NR	1.400kv RAPS C(NPC)-Shujalpur(PG) 2 2.400kv RAPS C(NPC)-Shujalpur(PG) 1	POWERGRID/ NPCIL	24/08/2017	17:03	24-08-2017	18:13	01:10	AT RAPP C end , Distance relay (Zone-2) sensed in 400kv RAPP - Shujalpur circuit 1 & 2, whereas the mal functioning of SOTF(Switch-On-To Fault) feature triggered three phase tripping for the detected fault of both the circuits. From PMU,Max dip observed in Y phase. The similar type of fault observed on 24-08-2017 at 15:17hrs, i.e triggering three phase tripping on single phase fault on 400kv RAPP C-Kota line	0	0	GI2	

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				Date	Time	Date	Time	Time					
7	NR	1.400kVAllahabad Rewa Road - Panki 2.400kV Allahabad Rewa Road - Banda - 1 3.400kV Allahabad Rewa Road - Banda -2 4.400/220kV 315MVA ICT-1 of Banda	UP	25/08/2017	20:51	25-08-2017	22:06	01:15	400kV Allahabad Rewa Road-Banda 1 & 2, 400kV Allahabad Rewa Road-Panki and 315MVA 400/220kV ICT-1 of Banda tripped during R phase-earth fault on 400kV Allahabad Rewa Road-Panki line.  From PMU, Max dip observed in R phase, fault clearing time approx 560msec. Probable lines tripped from remote end (Zone-2 protection)	0	0	GI2	
8	NR	1.220kV Dhauliganga-Bareilly 2.70MW Unit #1 & 4 of Dhauliganga	NHPC/UP	25-08-2017	17:04	25-08-2017	17:45	00:41	220kV Dhauliganga-Bareilly tripped on Power swing. 220kV 70MW Dhauliganga Unit #1 tripped on Over frequency and Unit #4 of Dhauliganga tripped on Reverse power protection. From PMU, Oscillations observed for 28sec	140	0	GD1	
9	NR	1. 800kV Agra - Biswanath Cherialli Line -1 2. 800kV Agra - Biswanath Cherialli Line -2	POWERGRID	26/08/2017	12:25	26-08-2017	16:07	03:42	DC earth fault occurred on HVDC Agra-Biswanath Cherialli line-1&2. Fault distance 232 Kms from Biswanath Chariali end. From PMU, Two restart attempts observed.	0	0	GI2	
10	NR	1.220kv Bareilly(UP)-Dhauliganga(NHPC) 2.220kV Dhauliganga(NHPC)-Pithoragarh(PG) 3.70MW Unit 1,2,3,4 of Dhauliganga	NHPC/ UP/ POWERGRID	29/08/2017	11:31	29-08-2017	11:58	00:27	220kV Dhauliganga(NHPC)-Pithoragarh(PG) line tripped on mal switching operation of NIT switch at 220kV Pithoragarh end. 220kV Bareilly(UP)-Dhauliganga(NHPC) tripped on Out of step protection and finally 220kV 70MW Dhauliganga Unit 1,2,3,4,5&6 tripped on Over frequency protection due to loss of evacuation.	400	0	GD1	
11	NR	1.500kV HVDC Mohindergarh-Mundra Pole 1 2.400kV Mohindergarh(Adani)- Bhiwani(PG)-1 3.400kV Mohindergarh(Adani)- Dhanonda(HVPNL) -2	Adani/Haryana/ POWERGRID	29/08/2017	16:27	29-08-2017	16:48	00:21	Mal operation of Bus bar protection of 400kV Bus-1 and Bus 2 leads to tripping of evacuation lines ( 400kV Mohindergarh-Bhiwani ckt 1, 400kV Mohindergarh-Dhanonda ckt 2) caused blocking of HVDC Mohindergarh-Mundra Pole 1 on Commutation failure. HVDC Mohindergarh-Mundra Pole 2 was already under shut down. From PMU, dip observed in all three phases at 16:26:58.120hrs, and finally HVDC tripped at 16:27:14.160hrs.	0	0	GI 2	
12	NR	1.400kV Kota(PG)-RAPS C(NPC) 2.Chittorgarh II(RVPNL)-RAPS C(NPC)	Rajasthan/NPCIL / POWERGRID	29/08/2017	16:32	29-08-2017	17:38	01:06	R phase to earth fault occurred on 400kV RAPP C-Kota(PG) ckt 1 .Due to false unhealthy signal of RAPP C end breaker its auto enclosure was blocked. Hence, maser trip initiated and all three phase of the line tripped from RAPP C end. Further, 400kV RAPP C -Chittorgarh line tripped on mal-operation of stub protection (Tee section differential protection)	0	0	GI 2	

### Major Grid Events for Aug, 2017\_ Western Region

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						
1	WR	Tripping of 1.400 kV APL-Sami 1 2.FSC of 400 kV APL-Sami 1 3.600 MW APL Unit 6	APL/PGCIL	10-08-2017	15:03	10-08-2017	16:00	00:57	400 kV Mundra – Sami 1 tripped due to the mal operation of Line Reactor PRV at Sami end. Due to this tripping, parallel circuit 400 kV Mundra – Sami 2 got loaded above 1000 MW which satisfied the SPS Stage IV condition and APL Unit 6 tripped on SPS Stage IV Condition.	522	Nil	GI-2	Nil
2	WR	Tripping of 1.400/220 kV, 315 MVA Pithampur ICT 1 2.400/220 kV, 315 MVA Pithampur ICT 2 3.220 kV Pithampur-Pithampur(Sector 1) 4.220 kV Pithampur-Badnagar 5.220 kV Pithampur Interconnector 1 6.220kV Pithampur Interconnector 2	MPPTCL	12-08-2017	03:33	12-08-2017	05:07	01:34	R phase PT of 220 kV Main Bus 2 bursted resulting in operation of 220 kV Bus Bar protection of main bus 1 & 2 and all connected 220 kV elements.	Nil	Nil	GI-1	Nil
3	WR	Tripping of 1.220 kV Asoj-Jambuva 2.220 kV Asoj-Waghodia 3.220 kV Asoj-Wanakbori 4.220 kV Asoj-Mogar 1 5.220 kV Asoj-Mogar 2 6.220 kV Asoj-Chandrapura 1 7.220 kV Asoj-Chandrapura 2 8.220 kV Asoj-Vyankantpura 9.400/220 kV, 500 MVA Asoj ICT 1 10.400/220 kV 315 MVA Asoj ICT 3	GETCO	08-08-2017	11:21	08-08-2017	12:03	00:42	220 kV side R phase PI of 400/220 kV ICT-2 connected to Bus 2 broke down, resulting in tripping of 220 kV Buses 1 and 2 along with all connected elements.	Nil	139	GI-1	0.0625
4	WR	Tripping of 1.400/220 kV, 500 MVA ICT 2 2.400/220 kV, 500 MVAICT 4 3.400 kV Asoj-Indore 2 4.400 kV Asoj-Vadodara 1 5.400 kV Asoj-SSP 6.400 kV Asoj-Chorania 1 7.400 kV Asoj-Chorania 2	GETCO	09-08-2017	18:03	09-08-2017	19:18	01:15	The break down of B phase Suspension Insulator string of 400 kV Main Bus 2 led to the tripping of Main Bus 2 on Bus bar protection operation.	Nil	Nil	GI-2	Nil
5	WR	Tripping of 1.220 kV Itarsi(PG)-Itarsi 2 2.220 kV Itarsi(PG)-Hosangabad 1	PGCIL	10-08-2017	02:18	11-08-2017	11:22	33:04	Bus Bar protection operation on 220 kV side of Itarsi PG led to the tripping of 220 kV Main bus 1 and all connected elements.	Nil	Nil	GI-1	Nil
6	WR	Tripping of 1.220 kV Warora-Bhugaon 2 2.220 kV Warora-WPCL 1 3.220 kV Warora-WPCL 2 4.135 MW WPCL Unit 3 5.135 MW WPCL Unit 4	MSETCL	11-08-2017	23:23	11-08-2017	23:55	0:32	Y phase CT of 220 kV Warora-Bhugaon circuit 2 blasted at Warora resulted in tripping of 220 kV Warora - WPCL D/C. Due to the loss of evacuation path 135 MW WPCL Unit 3&4 tripped.	270	Nil	GD-1	Nil

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				Date	Time	Date	Time						
7	WR	Tripping of 1.220 kV Parli old GCR-Harangul 1 2.220 kV Parli old GCR-Osmanabad 3.220 kV Parli old GCR-GRL 2 4.220 kV Parli old GCR-GRL 3 5.220 kV Parli old GCR-GRL 4 6.220 kV Parli old GCR-NTPS 2 7.220 kV Parli old GCR-Station 2 8.220 kV Parli old GCR-Unit 8 Link line 1 9.250 MW Parli Unit 6 10.250 MW Parli Unit 7	MSETCL	17-08-2017	06:32	17-08-2017	09:00	2:28	B phase wave trap upper jumper of 220 kV Harangul circuit 1 opened and during this opening, sparking was observed and wave trap caught fire and got unwound and came nearer to the ground, resulted in B phase to Earth fault. Zone 1 Distance protection was operated on the line and at the same time Bus bar protection of Zone II also operated resulting in tripping of all the elements connected to 220 kV Bus 2.	417	283	GI-1	0.0817
8	WR	Tripping of 1.220 kV Kalwa-Apta 2.108 MW Uran Unit 5 3.108 MW Uran Unit 6 4.120 MW Uran A(O) Unit 1	MSETCL	19-08-2017	03:40	19-08-2017	06:10	02:30	R phase CT and LA of 220 kV Kalwa -Apta bursted at Apta end which results in heavy voltage dip and caused tripping of Uran generating units.	280	234	GI-1	0.1096
9	WR	Tripping of 1.220 kV Mahalakshmi - Amona 2.220 kV Tillari - Amona 3.220 kV Mapusa - Amona	GOA	19-08-2017	11:00	19-08-2017	11:31	00:31	B phase to earth fault on one of the lines. It was observed that the fault on the line cleared from both ends in Zone 1. Further one or both ends of the line has attempted A/R also after 1 second. The reason for multiple tripping could not be identified and indicate overreaching of relay or wiring/logic issue.	Nil	80	GI-1	0.0413
10	WR	Tripping of 1.220 kV Mahalakshmi - Amona 2.220 kV Tillari - Amona	GOA	19-08-2017	13:02	19-08-2017	13:44	00:42	Tripped at Amona end only due to the wiring problem at Amona Substation	Nil	Nil	GI-1	Nil
11	WR	Tripping of 1.220 kV Mahalakshmi - Amona 2.220 kV Tillari - Amona 3.220 kV Mapusa - Amona	GOA	20-08-2017	13:24	20-08-2017	14:09	00:45	B phase to earth fault on one of the lines. It was observed the fault on the line cleared after 840 ms. The delayed fault may be the reason for the multiple trippings observed.	Nil	100	GI-1	0.025
12	WR	Tripping of 1.220 kV Mahalakshmi - Amona 2.220 kV Tillari - Amona	GOA	20-08-2017	17:42	20-08-2017	18:16	00:34	Tripped at Amona end only due to the wiring problem at Amona Substation	Nil	Nil	GI-1	Nil
13	WR	Tripping of 1.220 kV Mahalakshmi - Amona 2.220 kV Tillari - Amona	GOA	21-08-2017	04:42	21-08-2017	05:20	00:38	Tripped due to the relay maloperation at Amona substation	Nil	Nil	GI-1	Nil
14	WR	Tripping of 1.220 kV Mahalakshmi - Amona 2.220 kV Tillari - Amona 3.220 kV Mapusa - Amona	GOA	21-08-2017	12:28	21-08-2017	12:43	00:15	B phase to earth fault on one of the lines. It was observed that the fault on the line cleared after 1140 ms. The delayed fault is the reason for the multiple trippings observed.	Nil	200	GD-1	0.1090
15	WR	Tripping of 1.Sarni 210 MW Unit 9 2.Sarni 210 MW Unit 8 3.400 kV Sarni-ISP 4.400 kV Sarni-Seoni 5.400 kV Sarni-Asta 1 6.Sarni Station Transformer 11 7.400 kV Bus Coupler 8.400 kV 63 MVAR Bus Reactor 1 9.400/220kV, 500 MVA ICT 1	MPGCL	24-08-2017	21:05	24-08-2017	22:35	01:30	While synchronizing sarni Unit 9,GT of Unit got bursted resulting in Bus bar protection operation of Main bus 1 and tripping of all the connected elements.	178	Nil	GI-2	Nil
16	WR	Tripping of 1.220 kV Mahalakshmi - Amona 2.220 kV Tillari - Amona 3.220 kV Mapusa - Amona 4.220 kV Amona-Ponda 3	GOA	26-08-2017	09:43	26-08-2017	10:05	00:22	B phase to earth fault on one of the lines. It is observed the fault on the line is cleared after 1020 ms. The delayed fault clearance is the reason for the multiple tripping observed	Nil	70	GD-1	0.08697

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				Date	Time	Date	Time	Time					
17	WR	Tripping of 1.220 kV Mahalakshmi - Amona 2.220 kV Tillari - Amona	GOA	29-08-2017	15:29	29-08-2017	16:06	00:37	Breakers tripped at Amona end only due to internal circuit problems at Amona.	Nil	15	GI-1	0.00925
18	WR	Tripping of 1.500 kV HVDC Mundra-Mohendargarh Pole 1 2.660 MW APL Mundra Unit 8	APL	29-08-2017	16:27	29-08-2017	17:19	00:52	Bus Bar protection operated at AC side of Mohendargarh S/s and due to SPS operation 660 MW APL Unit 8 tripped.	502	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 quantum of load/generation loss is based on details given by SLDC and utility and may vary later with updated details.*

Major Grid Events for Aug, 2017_Eastern Region													
Sl. No.	Region	Name of major elements	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Load Loss in MU
				Date	Time	Date	Time	Time					
1	ER	220 kv Meramundali - TSPPP D/C. 220 kv Meramundali - Bhanjanagar D/C. 220 kv Meramundali - Duburi old D/C . 220 kv Meramundali - TTPS D/C. 220 kv Meramundali - BSL D/C. 220 kv Meramundali - Nalco D/C. 220 kv Meramundali - Bidansi S/c 3*100 MVA 220/132 KV ATR.	OPTCL	10-Aug-17	13:07	1-Aug-17	14:59	01:52	At 13:07 hrs, one mentally challenged person entered into the substation and tried to climb the switchyard tower. To avoid unwanted accident all the emanating lines / ICTs from 220KV Meramundali were hand tripped.	30	120	GD-I	0.224
2	ER	220 kV Ranchi - Hatia D/C 220 kV Patratu - Hatia D/C 220/132 kV ATR at Hatia	JUSNL	12-Aug-17	11:45	3-Aug-17	11:51	00:06	220 kV Ranchi - Hatia D/C and 220 kV Patratu - Hatia D/C along with all 220/132 kV ATR at Hatia end tripped due to DC failure of Hatia S/S.	0	78	GD-I	0.0078
3	ER	400KV Teesta III-Dikchu S/C	ISTS	4-Aug-17	13:46	4-Aug-17	14:00	00:14	400 KV Teesta III-Dikchu S/C tripped at 13:46 Hrs due to operation of directional O/c relay at Teesta III end. Same line did not trip from Dikchu end. In PMU data, no voltage dip has been observed. As per Teesta III end DR of 400 kV Teesta III Dikchu S/C, Dir. O/C picked up at 13:46:27.677 hrs, B phase current was 1.3 kA. As per Teesta III end DR of Teesta III Rangpo Cable, B/up O/C and B/up E/F picked up at 13:46:27.462 hrs. Initially current was high (1.3 kA) in all three phases. Later B phase current reduced. (final I/C 1kA)	101	0	GD-I	0
4	ER	315 MVA 400/220 kV ICT- II 220 KV Bakreswar-Satgachia I 220KV Bakreswar-Bidhannagar I 220 kV B/C at Bakreswar	WBPDC	11-Aug-17	16:05	11-Aug-17	18:31	02:26	At 16:05 hrs all elements connected to Bakreswar 220 kV bus - I along with unit #III & #IV tripped due to operation of bus bar protection (96A) and Bus bar differential (87C, Check zone). At the same time R-N fault has been reported at 0.5 km from Bakreswar in 220 kV Bakreswar - Sadaipur - II. In PMU data, no fault has been captured at 16:05 hrs. However a 23 kV voltage dip in R phase has been observed at 16:01 hrs, which was cleared within 80 ms.	284	0	GD-I	0

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5	ER	HVDC Sasaram B/B converter 765/400 KV 1500 MVA ICT - I 400/220 KV ICT - I & II at Sasaram 220 KV Sasaram-Nandokhar S/C 220 KV Sasaram -Ara S/C 220 KV Sasaram -Dehri S/C 220 kV Sasaram - Sahupuri S/C	ISTS	12-Aug-17	14:51	12-Aug-17	15:30	00:39	While availing emergency s/d of 220 kV bus I (East side) at Sasaram, HVDC Sasaram B/B, along with 765/400 kV 1500 MVA ICT - I and 400/220 kV ICT - I & II tripped resulting tripping of all 220 kV feeders eliminating from Sasaram followed by total supply of failure at 220 kV switchyard at Sasaram. As per preliminary information, while transferring all elements to 220 KV Bus II from 220 kV bus I, flashover occurred in 220 kV Bus - I side isolator of 400/220 kV ICT-II. It is suspected that isolator wasn't properly switched off before closing the earth switch.	0	209	GD-I	0.13585
6	ER	220 kV Purnea - Madhepura D/C	BSPTCL	14-Aug-17	08:55	14-Aug-17	09:40	00:45	132 kV Supaul - Phoolparas D/C, 132 kV Kataiya - Duhabi S/C and 132 kV Kataiya - Forbisgunj T/C were under breakdown due to flood condition. At 08:55 hrs 220 kV Purnea - Madhepura D/C tripped on Y-B-N fault causing power failure at Madhepura, Supaul & Kataiya.	0	60	GD-I	0.045
7	ER	400KV Teesta III-Rangpo S/C	ISTS	16-Aug-17	12:18	17-Aug-17	11:34	23:16	At 12:18 Hrs, 400 KV RANGPO - TEESTA-3 S/C tripped on B-N fault (Rangpo end: B-N, Z-II, F/C 4.49 kA, 54.7 km; Teesta III end: B-N, Z-I) resulting in outage of units # I, II, III, IV, V & VI (879 MW) at Teesta - III and unit I & II at Dikchu (100 MW) due to loss of evacuation path. Attempt was taken to charge the line from Rangpo end at 12:41 hrs but it immediately tripped in SOTF.	979	0	GD-I	0
8	ER	400/132 kV ICTs at Banka	ISTS	21-Aug-17	13:50	21-Aug-17	14:02	00:12	At 13:04 Hrs, 132 KV Banka-Sultanganj D/C tripped due to B-N fault. While attempting charging of Ckt II at 13:30 Hrs, it tripped on SOTF. Along with this line, both 400/132 KV ICTs at Banka also tripped.	0	84	GD-I	0.0168
9	ER	220 KV Waria-Mejia d/c 220 KV Waria-Bidhannagar(WB) D/C 220 KV Waria-Purulia D/C 3 x 150 MVA 220/132 ATR 132 KV Waria -Burdwan D/C 132 KV Waria -Ramkanali S/C 132 KV Waria -Jamuria S/C 132 KV Waria -Kalipahari D/C 132 KV Waria -ASP(Alloy steel plant) D/C	DVC	27-Aug-17	07:36	27-Aug-17	09:58	02:22	Due to massive fire hazard at 132/33/3.3 kV station transformer # III at Waria all 220 kV and 132 kV feeders are hand tripped resulting in total power failure at surrounding area. In Durgapur PMU data, delayed clearance (700 ms) of Y-B phase fault (15 kV voltage dip) has been observed at 07:35 hrs.	0	323	GD-I	0.764433333

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10	ER	220 kV Bus -I at CTPS B 220 KV CTPS B-CTPS A-I 220 KV CTPS B- Dhanbad-II 220 KV CTPS B-Bokaro B-I	DVC	28-Aug-17	13:25	28-Aug-17	14:35	01:10	Due to bursting of R phase CT of U # VIII GT at CTPS B, 220 KV CTPS B-CTPS A-I, 220 KV CTPS B- Dhanbad-II, 220 KV CTPS B-Bokaro B-I & CTPS B unit # 7 and # 8 tripped along with bus - I at CTPS B. Consequently 400/220 kV ICT at Bokaro A loading became more than 299 MW. After opening of 220 kV Bokaro B - Jamshedpur D/C and 220 kV Dhanbad - Giridih D/C at 13:30 hrs, ICT loading got reduced to 255 MW. Further at 15:15 hrs, 132 kV Bokaro - Konar S/C and 132 kV Bokaro - Bari S/C were opened to reduce 400/220 kV ICT loading.	406	0	GD-I	0
11	ER	132 KV Siliguri-Kurseong S/C 132 KV Siliguri Melli S/C 132 KV Rangit-Rangpo S/C	ISTS	30-Aug-17	05:15	30-Aug-17	05:54	00:39	At 5:15 hrs. 132 KV Siliguri-Kurseong S/C, 132 KV Siliguri Melli S/C and 132 KV Rangit-Rangpo S/C tripped on R-B-N fault. As a result, all running units of Rangit(3 x 20 MW) tripped on over frequency and subsequently,132 KV Rangit-Kurseong S/C and 132 KV Rangit-Sagbari S/C were hand tripped.	60	2.5	GD-I	0.001625
12	ER	132 KV Siliguri-Kurseong S/C 132 KV Siliguri Melli S/C 132 KV Rangit-Rangpo S/C	ISTS	31-Aug-17	00:39	31-Aug-17	01:56	01:17	At 00:39 hrs. 132 KV Siliguri-Kurseong S/C, 132 KV Siliguri Melli S/C and 132 KV Rangit-Rangpo S/C tripped on R-B-N fault. As a result, all running units of Rangit(3 x 20 MW) tripped on over frequency and subsequently,132 KV Rangit-Kurseong S/C and 132 KV Rangit-Sagbari S/C were hand tripped.	60	3.5	GD-I	0.004491667



### Major Grid Events for Aug, 2017 Southern Region

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event <i>(As reported)</i>	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unserviced (MU)
				Date	Time	Date	Time						
1	SR	1) 230kV Karamadai - Karuvulur 2) 230kV Karamadai - Arasur 3) 230kV Karamadai - Thudiyalur 4) 230kV Karamadai - Ingur 5) 230kV Karamadai - Kundah ph-3 6) 230kV Karamadai - Pushep 7) 230/110kV ICT 1&2 8) 400/230kV ICT-1,2&3	TNEB	10-Aug-17	03:40	10-Aug-17	05:49	2 hrs 9 mins	Complete outage of 230kV Karamadai substation: As per FIR received triggering incident was B-phase PT burst on 230kV Karamadi Bus. The incident led to operation of Bus bar protection resulting in tripping of all the connected elements and complete outage of 230kV Karamadai station	0	0	GD-I	-
2	SR	1) 230kV Tharamani - Sriperumbudur 2) 230kV Tharamani - Sholinganallur 3) 230kV Tharamani - Kalvindapattu 4) 230kV Tharamani - Mylapore 5) 230kV Tharamani - RA puram 6) 230/110kV ICT-1,2,3&4	TNEB	12-Aug-17	11:55	12-Aug-17	12:20	25 mins	Complete Outage of 230kV Tharamani Substation of Tamilnadu. 230kV Tharamani – Kalvindapattu circuit tripped at both ends on Y-phase to ground fault. Following this tripping, 230kV Tharamani – Sholinganallur (KITS park) got overloaded. This resulted in jumper cut between bus isolator and CT on Y-phase of 230kV Tharamani – Sholinganallur feeder leading to operation of bus bar protection.	0	236 MW	GD-I	0.1471
3	SR	1) 400kV Coastal energen - Tuticorin PS Ckt-1&2 2) Coastal Energen U#1&2	CEPL	9-Aug-17	17:54	8-Aug-17	18:10	16 mins	Complete Outage of 220kV Coastal energen power Station. Nagjheri Power House.400kV Coastal Energen - Tuticorin PS Ckt-1 & 2 tripped due direct trip receive in PLCC Channel-2. Running units of Coastal Energen also tripped due to tripping of the evacuating lines. Main bays of Coastal – Tuticorin PS line-1&2 were out of service due to 400kV bus-1 shutdown. At tuticorin PS end both the lines were in service through the tie-breakers.	554 MW	0	GD-I	-
4	SR	1) 220kV Nagjheri - Kodalalli 1&2 2) 220kV Nagjheri - Ambewadi 1&2 3) 220kV Nagjheri - Hubli 1&2	KPTCL	11-Aug-17	19:51	11-Aug-17	20:45	54 mins	Complete Outage of 220kV Nagjheri Power House. while desynchronizing Unit-3, R-phase of Generator Circuit Breaker did not open due to mechanical problem. Continuous trip command was sent by the protection system to the breaker trip coil which resulted in the burning of tripping coils (TC-1 & TC-2) of R-phase. LBB operated for Unit-3 CB and this tripped all the six lines viz. Nagjheri -Kodalalli-1&2, Nagjheri – Ambewadi -1&2, Nagjheri - Hubli-1&2 and North Bus Sectionalizer Breaker.	440 MW	0	GD-I	-

S.No.	Region	Name of Elements (Tripped/Manually opened)	Owner / Agency	Outage		Revival		Outage Duration	Event <i>(As reported)</i>	Generation Loss (MW)	Load Loss (MW)	Category as per CEA Grid Standards	Energy Unserviced (MU)
				Date	Time	Date	Time	Time					
5	SR	1) 400kV Coastal energen - Tuticorin PS 2) Coastal Energen U#1&2	CEPL	19-Aug-17	11:09	19-Aug-17	11:23	14 mins	Complete Outage of 220kV Coastal energen power Station. As per FIR furnished from CEPL, 400kV Coastal Energen - Tuticorin PS ckt-1&2 got tripped due direct trip receive in PLCC Channel-2. Running units of Coastal Energen also tripped due to tripping of the evacuating lines. There was no tripping of breakers at Tuticorin PS end. However breakers of line-1&2 tripped at CEPL on direct trip receive in PLCC channel-2. No fault was observed from PMU data polts	325 MW	0	GD-I	-

### Major Grid Events for Aug, 2017\_North-Eastern Region

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 Balipara - Khupi Line	NEEPCO & DoP, Arunachal Pradesh	10-Aug-17 00:00:00	01-Aug-17 20:07:00	#####	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 18:01 Hrs on 01.08.2017, 132 kV Balipara - Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	23	0.000	0.065	GD-I
2	NER	132 kV Loktak - Ningthoukhong Line	MSPCL	12-Aug-17 00:00:00	02-Aug-17 12:18:00	#####	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 as 132 kV Loktak - Ningthoukhong 1 Line gets overloaded in case of keeping these lines in loop). At 11:57 Hrs on 02.08.17, 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	18	0.000	0.006	GD-I
3	NER	132 kV Agartala - Rokhia I & II Lines	TSECL	02-Aug-17 12:55:00	02-Aug-17 13:39:00	00:44:00	Monarchak Power Station, Rokhia Power Station, Gumti Power Station, Rabindranagar, Udaipur, and Boxanagar areas of Tripura Power System were connected with rest of NER Grid through 132 kV Agartala - Rokhia I & II lines (132 kV Palatana-Udaipur line was manually opened at both ends due to planned shutdown since 09:44 Hrs on 02.08.2017, 66 kV Gumt - Amarpur line, 66 kV Rokhia - Badarghat line and 66 kV Udaipur - Gokulnagar line were kept open due to phase sequence issue). At 12:55 Hrs on 02.08.2017, 132 kV Agartala - Rokhia I & II lines tripped. Due to tripping of these elements, Monarchak Power Station, Rokhia Power Station, Gumti Power Station, Rabindranagar, Udaipur, and Boxanagar areas of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	131	38	0.094	0.027	GD-I
4	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	02-Aug-17 21:06:00	02-Aug-17 21:15:00	00:09:00	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima line ( 132 kV Karong - Kohima line kept open as 132 kV Dimapur(PG)-Kohima line gets overloaded in case of keeping this line in loop, 132 kV Wokha - Kohima line kept open due to improper relay coordination of Dimapur-Kohima-Wokha link & 66 kV Tuensang - Likhimro line kept open for construction activities). At 21:06 Hrs on 02.08.2017, 132 kV Dimapur(PG) - Kohima line tripped. Due to tripping of these elements, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	18	0.000	0.003	GD-I
5	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	06-Aug-17 18:03:00	06-Aug-17 18:40:00	00:37:00	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima line ( 132 kV Karong - Kohima line kept open as 132 kV Dimapur(PG)-Kohima line gets overloaded in case of keeping this line in loop, 132 kV Wokha - Kohima line kept open due to improper relay coordination of Dimapur-Kohima-Wokha link & 66 kV Tuensang - Likhimro line kept open for construction activities). At 18:03 Hrs on 06.08.2017, 132 kV Dimapur(PG) - Kohima line tripped. Due to tripping of these elements, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	16	22	0.010	0.013	GD-I
6	NER	132 kV Aizawl - Zungtui Line	POWERGRID	07-Aug-17 12:06:00	07-Aug-17 17:10:00	05:04:00	Zuangtui area of Mizoram power system was connected with rest of NER Grid through 132 kV Aizawl - Zuangtui line. At 12:06 Hrs on 07.08.2017, 132 kV Aizawl- Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	30	0.000	0.142	GD-I
7	NER	132 kV Lekhi - Nirjuli Line	DoP, Arunachal Pradesh & POWERGRID	08-Aug-17 07:51:00	08-Aug-17 08:20:00	00:29:00	Nirjuli area of Arunachal Pradesh Power System and Gohpur Area of Assam Power System were connected with rest of NER Grid through 132 kV Lekhi - Nirjuli line ((132 kV Balipara-Gohpur line & Bus Coupler CB of Gohpur kept open as 132 kV Ranganadi-Lekhi line gets overloaded in case of keeping these lines in loop ). At 07:51 Hrs on 08.08.2017, 132 kV Lekhi - Nirjuli line tripped. Due to tripping of this element, Lekhi area and Gohpur area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	13	0.000	0.006	GD-I

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
8	NER	132 kV Palatana - Surajmaninagar Line, 132 kV AGTCCPP - Kumarghat Line , 132 kV Agartala - AGTCCPP 1 Line , 132 kV Agartala - AGTCCPP 2 Line , 132 kV Palatana - Udaipur Line , 132 kV P K Bari - Kumarghat Line	POWERGRID, TSECL	09-Aug-17 05:17:00	09-Aug-17 05:40:00	00:23:00	Bangladesh (South Comilla) Power system, AGTCCPP and Tripura Power System were connected with rest of NER Grid through 132 kV Palatana - Surajmaninagar I line, 132 kV Palatana - Udaipur I line, 132 kV Kumarghat – P K Bari I line and 132 kV AGTCCPP - Kumarghat I line (132 kV P K Bari – Silchar I line was under outage since 13:40 Hrs on 10.07.2017 to avoid electrocution from falling of ERS system as entire area is flooded, 132 kV P K Bari – Silchar II line was under outage since 06:07 Hrs on 02.04.2017 due to tower collapsed at Loc N. 124, 125, 126, 137, 138 and 139, 132 kV & 132 kV Dullavcherra – Hailakandi I line was under outage since 06:06 Hrs on 02.04.2017 due to tower collapsed at Loc No. 134). At 05:17 Hrs on 09.08.2017, 132 kV Palatana - Surajmaninagar I line, 132 kV Palatana - Udaipur I line, 132 kV Kumarghat – P K Bari I line and 132 kV AGTCCPP - Kumarghat I line tripped. Due to tripping of these elements, Bangladesh (South Comilla) power system, AGTCCPP and Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to no source in this area.	245	278	0.381	0.350	GD-II
9	NER	132 kV Dimapur (PG) - Kohima I Line	POWERGRID & DoP, Nagaland	09-Aug-17 13:09:00	09-Aug-17 13:20:00	00:11:00	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima line (132 kV Karong - Kohima line kept open as 132 kV Dimapur(PG) - Kohima line gets overloaded in case of keeping this line in loop, 132 kV Wokha - Kohima line kept open due to improper relay coordination of Dimapur-Kohima-Wokha link & 66 kV Tuensang - Likhimro line kept open for construction activities). At 13:09 Hrs on 09.08.2017, 132 kV Dimapur(PG) - Kohima 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	0.000	0.003	GD-I
10	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	09-Aug-17 17:42:00	09-Aug-17 17:49:00	00:07:00	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima line ( 132 kV Karong - Kohima line kept open as 132 kV Dimapur(PG)-Kohima line gets overloaded in case of keeping this line in loop, 132 kV Wokha - Kohima line kept open due to improper relay coordination of Dimapur-Kohima-Wokha link & 66 kV Tuensang - Likhimro line kept open for construction activities). At 17:42 Hrs on 09.08.2017, 132 kV Dimapur(PG) - Kohima 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	0.000	0.003	GD-I
11	NER	132 kV Monarchak - Rokhia Line	TSECL	09-Aug-17 13:59:00	09-Aug-17 14:12:00	00:13:00	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia line (132 kV Monarchak - Udaipur line was under outage since 12:22 Hrs on 09.08.2017). At 13:59 Hrs on 09.08.2017, 132 kV Monarchak - Rokhia line tripped. Due to tripping of these elements, Monarchak Power Station and Rabindranagar area of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	68	7	0.012	0.002	GD-I
12	NER	132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) I & II Lines, 132 kV Doyang - Mokokchung (DoP, Nagaland) Line	POWERGRID & DoP, Nagaland	09-Aug-17 21:05:00	09-Aug-17 21:30:00	00:25:00	Mokokchung area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang-Mokokchung (DoP, Nagaland) I line, 132 kV Mokokchung (DoP, Nagaland)-Mokokchung (PG) I & II lines. (132 kV Mokokchung(DoP, Nagaland) - Marianai(AS) is under long outage & 66 kV Tuensang - Likhimro line kept open for construction activities). At 21:05 Hrs on 09.08.2017, 132 kV Doyang-Mokokchung (DoP, Nagaland) I line, 132 kV Mokokchung (DoP, Nagaland)-Mokokchung (PG) I & II lines tripped. Due to tripping of these elements, Mokokchung area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	24	0.000	0.053	GD-I
13	NER	132 kV Aizawl - ZungtuiLine	POWERGRID	09-Aug-17 23:02:00	10-Aug-17 01:49:00	02:47:00	Zuangtui area of Mizoram Power System was connected with rest of NER Grid through 132 kV Aizawl- Zuangtui line. At 23:02 Hrs on 09.08.2017, 132 kV Aizawl- Zuangtui I line tripped. Due to tripping of this element, Zuangtui area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	31	0.000	0.111	GD-I

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 Mokokchung (PG) - Mokokchung (DoP, Nagaland) I Line, 132 kV Doyang - Mokokchung (DoP, Nagaland) Line	POWERGRID & DoP, Nagaland	09-Aug-17 23:20:00	10-Aug-17 00:03:00	00:43:00	Mokokchung area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang-Mokokchung (DoP, Nagaland) line, 132 kV Mokokchung (DoP, Nagaland)-Mokokchung (PG) II line. (132 kV Mokokchung (DoP, Nagaland) - Mokokchung (PG) I line is tripped at 21:05 Hrs on 09.08.2017 and was not restored, 132 kV Mokokchung(DoP, Nagaland) - Marianai(AEGCL) is under long outage & 66 kV Tuensang - Likhimro line kept open for construction activities). At 23:20 Hrs on 09.08.2017, 132 kV Doyang-Mokokchung (DoP, Nagaland) line, 132 kV Mokokchung (DoP, Nagaland)-Mokokchung (PG) II line tripped. Due to tripping of these elements, Mokokchung area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	19	0.000	0.017	GD-I
15	NER	132 kV Agartala - Rokhia I & II Lines	TSECL	10-Aug-17 00:26:00	10-Aug-17 00:55:00	00:29:00	Monarchak Power Station, Rokhia Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Agartala-Rokhia I & II lines and 132 kV Monarchak - Rokhia line ( 132 kV Monarchak - Udaipur I Line was under shutdown since 12:30 Hrs on 09.08.2017, 66 kV Bagafa-Belonia line & 66 kV Rokhia-Badarghat line were kept open due to phase sequence issue). At 00:26 Hrs on 10.08.2017, 132 kV Agartala-Rokhia I & II lines and 132 kV Monarchak - Rokhia line tripped. Due to tripping of these elements, Monarchak Power Station, Rokhia Power Station and Rabindranagar area were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	99	5	0.058	0.003	GD-I
16	NER	132 kV Agia - Mendipathar Line	MePTCL	10-Aug-17 22:55:00	10-Aug-17 23:08:00	00:13:00	Nangalbibra, Medipathar, Nongstoin and Rongkhon areas of Meghalaya Power System were connected with rest of NER Grid through 132 kV Agia - Medipathar line and 132 kV Mawngap - Nongstoin line . At 22:55 Hrs on 10.08.2017, 132 kV Agia - Medipathar line and 132 kV Mawngap - Nongstoin line tripped. Due to tripping of these element, Nangalbibra, Medipathar, Nongstoin and Rongkhon areas were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.	0	32	0.000	0.010	GD-I
17	NER	132 kV Monarchak - Rokhia Line & 132 kV Monarchak - Udaipur Line	TSECL	11-Aug-17 10:41:00	11-Aug-17 10:46:00	00:05:00	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia line & 132 kV Monarchak - Udaipur line. At 10:42 Hrs on 11.08.2017, 132 kV Monarchak - Rokhia line & 132 kV Monarchak - Udaipur line tripped. Due to tripping of these elements, Monarchak Power Station and Rabindranagar area of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	60	7	0.013	0.002	GD-I
18	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	13-Aug-17 12:22:00	13-Aug-17 12:32:00	00:10:00	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima line ( 132 kV Karong - Kohima line kept open as 132 kV Dimapur(PG)-Kohima line gets overloaded in case of keeping this line in loop, 132 kV Wokha - Kohima line kept open due to improper relay coordination of Dimapur-Kohima-Wokha link & 66 kV Tuensang - Likhimro line kept open for construction activities). At 12:22 Hrs on 13.08.2017, 132 kV Dimapur(PG) - Kohima 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	0.000	0.003	GD-I
19	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	14-08-2017 12:01:00	14-08-2017 12:09:00	00:08:00	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima line ( 132 kV Karong - Kohima line kept open as 132 kV Dimapur(PG)-Kohima line gets overloaded in case of keeping this line in loop, 132 kV Wokha - Kohima line kept open due to improper relay coordination of Dimapur-Kohima-Wokha link & 66 kV Tuensang - Likhimro line kept open for construction activities). At 12:09 Hrs on 14.08.2017, 132 kV Dimapur(PG) - Kohima 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	18	0.000	0.003	GD-I

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
20	NER	132 kV Dimapur (PG) - Kohima I Line	POWERGRID & DoP, Nagaland	15-08-2017 12:03:00	15-08-2017 12:13:00	00:10:00	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima line ( 132 kV Karong - Kohima line kept open as 132 kV Dimapur(PG)-Kohima line gets overloaded in case of keeping this line in loop, 132 kV Wokha - Kohima line kept open due to improper relay coordination of Dimapur-Kohima-Wokha link & 66 kV Tuensang - Likhimro line kept open for construction activities). At 12:03 Hrs on 15.08.2017, 132 kV Dimapur(PG) - Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	21	17	0.004	0.003	GD-I
21	NER	132 kV Palatana - Udaipur Line, 132 kV Monarchak - Udaipur Line & 132 kV Monarchak - Rokhia Line	TSECL	16-08-2017 12:45:00	16-08-2017 13:05:00	00:20:00	Monarchak Power Station, Rabindranagar and Udaipur areas of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia I line and 132 kV Palatana - Udaipur I line ( 66 kV Gokulnagar - Badarghat I line, 66 kV Bagafa - Belonia I line and 66 kV Udaipur - Jatan Bari I line were kept open due to phase sequence issue). At 12:45 Hrs on 16.08.2017, 132 kV Monarchak - Rokhia I line and 132 kV Palatana - Udaipur I line tripped. Due to tripping of these elements, Monarchak Power Station, Rabindranagar area and Udaipur area of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	59	24	0.042	0.017	GD-I
22	NER	132 kV Loktak - Ningthoukhong I Line	MSPCL	16-08-2017 13:39:00	16-08-2017 14:18:00	00:39:00	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 as 132 kV Loktak-Ningthoukhong I line gets overloaded in case of keeping these lines in loop). At 13:39 Hrs on 16.08.2017, 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	27	0.000	0.022	GD-I
23	NER	132 kV Imphal (MSPCL) - Imphal (PG) I & II Lines	POWERGRID & MSPCL	17-08-2017 11:13:00	17-08-2017 11:22:00	00:09:00	Capital area & Karong area of Manipur Power System were connected with rest of NER Grid through 132 kV Imphal-Imphal I & II lines (132 kV Kakching-Kongba line kept open as 132 kV Yurembam - Yaingangpokpi line gets overloaded in case of keeping this line in loop & 132 kV Karong-Kohima line kept open as 132 kV Dimapur(PG)-Kohima line gets overloaded in case of keeping this line in loop). At 11:13 Hrs on 17.08.2017, 132 kV Imphal-Imphal I & II lines tripped. Due to tripping of these elements, Capital area & Karong area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	47	0.000	0.011	GD-I
24	NER	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) II Line	DoP, Nagaland	19-08-2017 13:11:00	19-08-2017 14:40:00	01:29:00	Dimapur area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (DoP, Nagaland) II line (132 kV Dimapur (PG)-Dimapur (DoP, Nagaland) I line was under outage since 08.06.2016). At 13:11 Hrs on 19.08.2017, 132 kV Dimapur (PG)-Dimapur (DoP, Nagaland) II line tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	55	0.000	0.083	GD-I
25	NER	132 kV Lekhi - Ranganadi Line	DoP, Arunachal Pradesh & POWERGRID	19-08-2017 13:54:00	19-08-2017 14:00:00	00:06:00	Lekhi area & Capital area of Arunachal Pradesh Power System and Gohpur Area of Assam Power System were connected with rest of NER Grid through 132 kV Ranganadi-Lekhi line (132 kV Balipara-Gohpur line & Bus Coupler CB of Gohpur kept open as 132 kV Ranganadi-Lekhi line gets overloaded in case of keeping these lines in loop ). At 13:54 Hrs on 19.08.2017, 132 kV Ranganadi-Lekhi line tripped. Due to tripping of this element, Lekhi area & Capital area & Gohpur area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	80	0.000	0.008	GD-I
26	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, Arunachal Pradesh	20-08-2017 10:40:00	20-08-2017 11:05:00	00:25:00	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 10:40 Hrs on 20.08.2017, 132 kV Balipara-Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	12	0	0.005	GD-I

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
27	NER	132 kV Agartala - Rokhia Line , 132 kV Monarchak - Rokhia Line & 132 kV Monarchak - Udaipur Line	TSECL, TPGL, NEEPCO	21-08-2017 08:40:00	21-08-2017 09:04:00	00:24:00	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia line and 132 kV Monarchak - Udaipur line. At 08:40 Hrs on 21.08.2017, 132 kV Monarchak - Rokhia line and 132 kV Monarchak - Udaipur line tripped. Due to tripping of these elements, Monarchak Power Station and Rabindranagar area of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	111	4	0.044	0.002	GD-I
28	NER	132 kV Palatana - Udaipur line, 132 KV Agartala - Rokhia 1 Line & 132 KV Agartala - Rokhia 2 Line	TSECL	21-08-2017 23:45:00	21-08-2017 23:52:00	00:07:00	Monarchak Power Station, Rokhia Power Station, Rabindranagar and Udaipur areas of Tripura Power System were connected with rest of NER Grid through 132 kV Palatana - Udaipur I line and 132 KV Agartala - Rokhia 1&2 Lines (66 kV Rokhia - Badarghat I line, 66 kV Gokulnagar - Badarghat I line, 66 kV Bagafa - Belonia I line and 66 kV Amarpur - Gumti I line were kept open due to phase sequence issue). At 23:45 Hrs on 21.08.2017, 132 kV Palatana - Udaipur I line and 132 KV Agartala - Rokhia 1&2 Lines tripped. Due to tripping of these elements, Monarchak Power Station, Rokhia Power Station, Rabindranagar and Udaipur areas of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	132	60	0.046	0.039	GD-I
29	NER	132 kV Monarchak - Rokhia Line & 132 kV Monarchak - Udaipur Line	TSECL	22-08-2017 13:12:00	22-08-2017 13:43:00	00:31:00	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia I line and 132 kV Monarchak - Udaipur I line. At 13:12 Hrs on 22.08.2017, 132 kV Monarchak - Rokhia I line and 132 kV Monarchak - Udaipur I line tripped. Due to tripping of these elements, Monarchak Power Station and Rabindranagar area of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	110	4	0.226	0.002	GD-I
30	NER	132 kV Khliehriat (MePTCL) - Khliehriat (PG) 1 Line, 132 kV Khliehriat (MePTCL) - Khliehriat (PG) 2 Line, 132kV NEHU- NEIGRIHMS Line & 132 kV Mustem- Khliehriat Line	POWERGRID, MePTCL	23-08-2017 13:45:00	23-08-2017 13:51:00	00:06:00	MLHEP and Khliehriat area of Meghalaya Power System was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line and 132 kV Mustem-Khliehriat line (132 kV Lumshnong - Panchgram line is under long outage). At 13:45 Hrs on 23.08.2017, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS I line and 132 kV Mustem-Khliehriat I line tripped. Due to tripping of these elements, MLHEP & Khliehriat area were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	126	3	0.088	0.001	GD-I
31	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, Arunachal Pradesh	24-08-2017 13:50:00	24-08-2017 14:31:00	00:41:00	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 13:50 Hrs on 24.08.2017, 132 kV Balipara-Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	25	0	0.17	GD-I
32	NER	132 kV Monarchak - Rokhia Line & 132 kV Monarchak - Udaipur Line	TSECL	26-08-2017 17:14:00	26-08-2017 17:25:00	00:11:00	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia line and 132 kV Monarchak - Udaipur line. At 17:14 Hrs on 26.08.2017, 132 kV Monarchak - Rokhia line and 132 kV Monarchak - Udaipur line tripped. Due to tripping of these elements, Monarchak Power Station and Rabindranagar area of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	108	5	0.14	0.001	GD-I
33	NER	132 kV Monarchak - Rokhia Line	TSECL	27-08-2017 09:21:00	27-08-2017 09:28:00	00:07:00	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia line (132 kV Monarchak - Udaipur I line was under shutdown since 09:18 Hrs on 27.08.2017). At 09:21 Hrs on 27.08.2017, 132 kV Monarchak - Rokhia line tripped. Due to tripping of this element, Monarchak Power Station and Rabindranagar area of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	87	5	0.131	0.001	GD-I

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
34	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	29-08-2017 12:49:00	29-08-2017 12:57:00	00:08:00	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima line ( 132 kV Karong - Kohima line kept open as 132 kV Dimapur(PG)-Kohima line gets overloaded in case of keeping this line in loop, 132 kV Wokha - Kohima line kept open due to improper relay coordination of Dimapur-Kohima-Wokha link & 66 kV Tuensang - Likhimro line kept open for construction activities). At 12:49 Hrs on 29.08.2017, 132 kV Dimapur(PG) - Kohima 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.	18	8	0.002	0.001	GD-I
35	NER	132 kV Balipara - Khupi 1 Line	NEEPCO & DoP, Arunachal Pradesh	29-08-2017 17:14:00	29-08-2017 17:35:00	00:21:00	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 17:14 Hrs on 29.08.2017, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	20	0	0.007	GD-I
36	NER	132 kV Khliehriat (MePTCL) - Khliehriat (PG) 1 & 2 Lines, 132 kV NEHU-NEIGRIHMS Line, 132 kV Mustem - NEHU Line and 132 kV Khliehriat (MePTCL) - Lumshnong Line	POWERGRID, MePTCL, MePGCL	31-08-2017 13:28:00	31-08-2017 13:31:00	00:03:00	MLHEP , Khliehriat and Lumshnong area of Meghalaya Power System were connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line, 132 kV NEHU - Mustem line and 132 kV Khliehriat (MePTCL) - Lumshnong Line (132 kV Lumshnong - Panchgram line is kept open for SPS-I requirement). At 13:28 Hrs on 31.08.2017, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line, 132 kV NEHU - Mustem line and 132 kV Khliehriat (MePTCL) - Lumshnong Line tripped. Due to tripping of these elements, MLHEP, Khliehriat and Lumshnong area were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	105	28	0.025	0.007	GD-I
37	NER	132 kV Aizawl - Luangmual Line and 132 kV Aizawl - Melriat Line	POWERGRID , P&ED, Mizoram	31-08-2017 13:35:00	31-08-2017 14:12:00	00:37:00	Luangmual and Zuangtui area of Mizoram Power System was connected with rest of NER Grid through 132 kV Aizawl- Melriat line & 132 kV Aizawl- Luangmual line. At 13:35 Hrs on 31.08.2017, 132 kV Aizawl- Melriat line & 132 kV Aizawl- Luangmual line tripped. Due to tripping of these elements, Luangmual and Zuangtui areas were separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	43	0.000	0.027	GD-I
38	NER	132 kV Monarchak - Rokhia Line	TSECL	31-08-2017 15:46:00	31-08-2017 16:02:00	00:16:00	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Rokhia line (132 kV Monarchak - Udaipur line was under shutdown since 12:45 Hrs on 31.08.2017). At 15:46 Hrs on 31.08.2017, 132 kV Monarchak - Rokhia line tripped. Due to tripping of this element, Monarchak Power Station and Rabindranagar area of Tripura Power System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.	101	10	0.175	0.003	GD-I



### Major Grid Events for Aug, 2017\_North Eastern Region

S.No	Region	State(s) Involved	Name of Elements	Owner / Agency	Date & Time	Date & Time	Outage Duration	Event (Brief Details)	Generation Loss (MW)	Load Loss MW	Category as per CEA Grid Standards	Energy Unserved (MU)
1	NER	Palatana	Palatana Unit GTG-1 & Palatana Unit STG-1	#####	02-08-2017 10:21:00	02-08-2017 11:15:00	#####	Palatana GTG 1 & STG 1 tripped at 10:21 Hrs on 02.08.17 due to High Exhaust temperature spread. (Revision of schedule from Block No. 46 on 02.08.17)	234	-	GI-II	0.211
2	NER	Palatana	Palatana Unit GTG-1 & Palatana Unit STG-1	#####	02-08-2017 21:00:00	02-08-2017 21:45:00	#####	Palatana GTG 1 & STG 1 tripped at 21:00 Hrs on 02.08.17 due to High Exhaust temperature spread trip. (Revision of schedule from Block No. 88 on 02.08.17)	232	-	GI-II	0.174
3	NER	Doyang	Doyang Unit 2 & Unit 3	NEEPCO	03-08-2017 10:13:00	03-08-2017 13:00:00	02:47:00	Doyang Unit 2 & Unit 3 tripped at 10:13 Hrs on 03.08.17 due to Governor/ EHG problem and heavy jerk problem respectively. (Revision of schedule from Block No. 53 on 03.08.17)	49	-	GI-I	0.136
4	NER	Doyang	Doyang Unit 2 & Unit 3	NEEPCO	06-08-2017 18:40:00	06-08-2017 18:45:00	00:05:00	Doyang Unit 2 & Unit 3 tripped at 18:40 Hrs on 06.08.17 Due to Governor/ EHG problem and Heavy jerk problem respectively. (Revision of schedule from Block No. 76 on 06.08.17)	47	-	GI-I	0.004
5	NER	Doyang	Doyang Unit 2 & Unit 3	NEEPCO	07-08-2017 17:25:00	07-08-2017 18:15:00	00:50:00	Doyang Unit 2 & Unit 3 tripped at 17:25 Hrs on 07.08.17 due to power swing in 132 kV Wokha - Mokochung line. (Revision of schedule from Block No. 74 on 07.08.17)	47	-	GI-I	0.039
6	NER	AGBPP	AGBPP Unit 8	NEEPCO	09-08-2017 02:30:00	09-08-2017 03:15:00	00:45:00	AGBPP Unit 8 tripped at 02:30 Hrs on 09.08.17 due to tripping of Gas Compressor 2. (Revision of schedule from Block No. 14 on 09.08.17)	25	-	GI-II	0.019
7	NER	AGBPP	AGBPP Unit 3, Unit 4 & Unit 8	NEEPCO	10-08-2017 02:10:00	10-08-2017 03:00:00	00:50:00	AGBPP Unit 3, Unit 4 & Unit 8 tripped at 02:10 Hrs on 10.08.17 due to tripping of Gas Compressor 2. (Revision of schedule from Block No. 13 on 10.08.17)	91	-	GI-II	0.076
8	NER	Kopili	Kopili Unit 1	NEEPCO	19-08-2017 02:01:00	19-08-2017 02:30:00	00:29:00	Kopili Unit 1 tripped at 02:01 Hrs on 19.08.17 due to Stator Earth Fault. (Revision of schedule from Block No. 11 on 19.08.17)	35	-	GI-II	0.017

S.No	Region	State(s) Involved	Name of Elements	Owner / Agency	Date & Time	Date & Time	Outage Duration	Event (Brief Details)	Generation Loss (MW)	Load Loss MW	Category as per CEA Grid Standards	Energy Unserved (MU)
9	NER	Khandong	Khandong Unit 2	NEEPCO	20-08-2017 12:30:00	20-08-2017 14:15:00	01:45:00	Khandong Unit 2 tripped at 12:30 Hrs on 20.08.17 due to Rotor Earth Fault. (Revision of schedule from Block No. 58 on 20.08.17)	22	-	GI-I	0.039
10	NER	AGBPP	AGBPP Unit 7	NEEPCO	22-08-2017 05:55:00	22-08-2017 07:00:00	1:05:00	AGBPP Unit 7 tripped at 05:55 Hrs on 22.08.17 due to Prime mover failure. (Revision of schedule from Block No. 29 on 22.08.17)	12	-	GI-II	0.025
11	NER	AGTCCPP	AGTCCPP Extn STG-1 & AGTCCPP Extn STG-2	NEEPCO	22-08-2017 18:11:00	22-08-2017 18:15:00	0:04:00	AGTCCPP Extn STG 1 & STG 2 Units tripped at 18:11 Hrs on 22.08.17 due to Prime mover failure. (Revision of schedule from Block No. 74 on 22.08.17)	32	-	GI-I	0.002
12	NER	BgTTP	BgTTP Unit 1	NTPC	23-08-2017 18:15:00	23-08-2017 19:17:00	1:02:00	BgTTP Unit 1 tripped at 18:15 Hrs on 23.08.17 due to Prime mover failure. (Revision of schedule from Block No. 80 on 23.08.17)	50	-	GI-II	0.075
13	NER	BgTTP	BgTTP Unit 1	NTPC	24-08-2017 09:40:00	24-08-2017 11:45:00	2:05:00	BgTTP Unit 1 tripped at 09:40 Hrs on 24.08.17 due to Prime mover failure. (Revision of schedule from Block No. 48 on 24.08.17)	164	-	GI-II	0.341
14	NER	AGTCCPP	AGTCCPP Unit 4	NEEPCO	24-08-2017 18:08:00	24-08-2017 18:45:00	0:37:00	AGTCCPP Unit 4 tripped at 18:08 Hrs on 24.08.17 due to over current. (Revision of schedule from Block No. 76 on 24.08.17)	17	-	GI-I	0.011
15	NER	AGTCCPP	AGTCCPP Unit 1	NEEPCO	25-08-2017 00:17:00	25-08-2017 00:45:00	0:28:00	AGTCCPP Unit 1 tripped at 00:17 Hrs on 25.08.17 due to over current. (Revision of schedule from Block No. 4 on 25.08.17)	18	-	GI-I	0.008
16	NER	AGTCCPP	AGTCCPP Unit 1	NEEPCO	25-08-2017 16:32:00	25-08-2017 17:15:00	0:43:00	AGTCCPP Unit 1, Unit 2 & Extn STG 1 tripped at 16:32 Hrs on 25.08.17 due to Prime mover failure. (Revision of schedule from Block No. 70 on 25.08.17)	51	-	GI-I	0.054
17	NER	BgTTP	BgTTP Unit 1	NTPC	26-08-2017 15:26:00	26-08-2017 17:15:00	1:49:00	BgTTP Unit 1 tripped at 15:26 Hrs on 26.08.17 due to Stator Earth Fault. (Revision of schedule from Block No. 70 on 26.08.17)	190	-	GI-II	0.345
18	NER	Kopili	Kopili Unit 3	NEEPCO	30-08-2017 10:08:00	30-08-2017 11:00:00	00:52:00	Kopili Unit 3 tripped at 10:08 Hrs on 30.08.2017 due to operation of GT PRV. (Revision of schedule from Block No.45 on 30.08.17)	40	-	GI-II	0.035