Major Grid Events for July, 2018_Northern Region

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	Energy Unserved (in MU)
					Date	Time	Date	Time						
1	NR	1) 220kV Ziankot(JK)-Delina(JK) 2) 220kV Delina(JK)-Amargarh(NRSS29) 3) Unit#1 at 220kV Kishanganga(NHPC) 4) Unit#2 at 220kV Kishanganga(NHPC) 5) Unit#3 at 220kV Kishanganga(NHPC)	Jammu & Kashmir	NHPC, NRSS29 and J&K	2-Jul-18	18:57	2-Jul-18	23:19	04:22	220kV Ziankot(JK)-Delina(JK) & 220kV Delina(JK)-Amargarh(NRSS29) tripped. All three units at 220 kV Kishanganga(NHPC) also tripped due to evacuation problem. As per PMU data, R-N fault observed.	270		GD-1	
2	NR	1) 315 MVA ICT 1 at 400/220kV Muradnagar(UP) 2) 315 MVA ICT 3 at 400/220kV Muradnagar(UP) 3) 500 MVA ICT 2 at 400/220kV Muradnagar(UP) 4) 220 kV Muradnagar-Loni ckt 5) 220 kV Muradnagar-Muradnagar ckt	Uttar Pradesh	Uttar Pradesh	6-Jul-18	6:02	6-Jul-18	09:07	03:05	220 kV Blue phase CB (Circuit breaker) pole of 220 kV Muradnagar-Loni ckt bursted at 06:01hrs. 220 kV Muradnagar-Muradnagar ckt-I tripped on earth fault (E/F) protection. At the same time 315 MVA ICT 1, ICT 3 and 500 MVA ICT 2 at 400/220kV Muradnagar(UP) tripped on backup earth fault (E/F) protection. As per PMU, B-N fault observed with delayed clearance.		300	GD-1	0.90
3	NR	1) 400kV Jhatikara(PG)-Mundka(DTL) 1 2) 315 MVA ICT 3 at 400/220kV Mundka(DTL)	Delhi	Delhi & POWERGRID	7-Jul-18	22:02	7-Jul-18	23:58	01:56	400kV Jhatikara(PG)-Mundka(DTL) ckt-1 tripped on B-N fault at 7 km from Mundka(DTL) end. At the same time, 315 MVA ICT 3 at 400/220kV Mundka(DTL) also tripped. As per PMU, B-N fault observed. As per DR details of Jhatikara end, fault was transient in nature and line auto reclosed (A/R) from Jhatikara end but A/R didn't operate at Mundka end. Reason of tripping of ICT yet to be reported.			GI-2	
4	NR	1) 400kV Obra(UP)-Sultanpur(UP) 2) 400kV Lucknow(PG)-Sultanpur(UP) 3) 400kV Azamgarh(UP)-Sultanpur(UP) 4) 315 MVA ICT 1 at 400kV Sultanpur(UP) 5) 315 MVA ICT 2 at 400kV Sultanpur(UP) 6) 315 MVA ICT 3 at 400kV Sultanpur(UP)	Uttar Pradesh	Uttar Pradesh & POWERGRID	8-Jul-18	20:46	8-Jul-18	22:10	01:24	At 220kV substation Sultanpur, main bus B was under shutdown. After returning the shutdown at 20:16hrs, both 200MVA and 160MVA, 220/132kV transformers were taken on 220kV bus B and then 220kV side of 315MVA ICT- 3 was being transferred to 220kV bus B with closing of bus side isolator manually. During the closing of isolator, flashing occurred between isolator contacts which increased further. Upon seeing heavy flashing, operator moved away from the site of isolator and informed control room. At the occurrence of flashing, all 3numbers 400kV line at 400kV substation tripped from other end and 3 numbers 400/220kV ICTs were tripped manually. At 220kV substation, all charged 220kV lines and transformers were tripped manually. Which caused total outage of both 400 & 220 kV Sultanpur (UP) substations		600	GD-1	1.50
6	NR	1) 220kV Pragati(DTL)-Sarita Vihar(DTL) 2) 220kV Pragati(DTL)-Maharanibagh(PG) 3) Unit#2 at 220kV Pragati(DTL) 4) STG at 220kV Pragati(DTL)	Delhi	Delhi	12-Jul-18	17:15	12-Jul-18	18:20	01:05	220kV Pragati(DTL)-Sarita Vihar(DTL), 220kV Pragati(DTL)-Maharanibagh(PG) carrying 60 MW & 135 MW respectively tripped on R-N fault followed by B-N fault. Tripping of these lines caused islanding of Unit 2 and STG at 220kV Pragati(DTL) (generation 82 MW & 99 MW respectively) from the Grid and units tripped. Bus coupler was open at 220kV Pragati(DTL). Load loss due to operation of UFR is 146 MW (as reported by DTL).	178	146	GD-1	0.15
5	NR	1) 220kV Hiranagar(JK)-Samba(PG) 2) 220kV Hiranagar(JK)-Sarna(PSTCL)	Jammu & Kashmir	J&K, Punjab and POWERGRID	13-Jul-18	13:07	13-Jul-18	13:47	00:40	220kV Hiranagar(JK)-Sarna(PSEB) carrying 123 MW tripped due to B-phase jumper of line CT broken. At the same time, 220kV Hiranagar(JK)-Sarna(PSEB) also tripped as broken jumper fell on this line. Load loss seems to be around 250 MW(as per SCADA data)		250	GD-1	0.16
7	NR	1) 40 MW Unit#1 at 220kV Tanakpur HEP(NHPC) 2) 40MW Unit#2 at 220kV Tanakpur HEP(NHPC)	Uttarakhand	NHPC	17-Jul-18	0:09	17-Jul-18	00:47	00:38	40MW Unit#1 and Unit#2 tripped at 220 kV Tanakpur HEP(NHPC) as Generation overcurrent protection operated due to low voltage. As per PMU, No fault observed. Unit#1 & Unit#2 generating 31 MW & 30 MW respectively. At the time of tripping, Bus voltage at 220kV Tanakpur HEP(NHPC) is observed as 200kV. Senstive back up over current setting has been revised from 110% to 120% of full load current.	60		GD-1	
8	NR	1) 220kV Ziankot(JK)-Delina(JK) 2) 220kV Delina(JK)-Amargarh(NRSS29) 3) 110MW Unit#3 at 220kV Kishanganga(NHPC) 4) 220kV Kishanganga(NHPC)-Delina(JK) ckt 1 5) 220kV Kishanganga(NHPC)-Delina(JK) ckt 2	Jammu & Kashmir	NHPC, NRSS29 and J&K	18-Jul-18	3:29	18-Jul-18	04:35	01:06	110MW Unit#3 at 220 kV Kishanganga(NHPC) tripped due to evacuation problem as 220 kV Ziankot(JK)-Delina(JK) & 220kV Delina(JK)-Amargarh(NRSS29) carrying 63MW & 88MW respectively tripped. 220kV Kishanganga(NHPC)-Delina(JK) ckt 1 & 2 tripped due to DT received at 220kV Kishanganga(NHPC). As per PMU data, R-N fault observed.	82		GD-1	
9	NR	1) 450MVA ICT 1 at 400kV Panipat(BBMB) 2) 450MVA ICT 2 at 400kV Panipat(BBMB)	Haryana	BBMB	19-Jul-18	14:20	19-Jul-18	14:52	00:32	450MVA ICT 2 at 400 kV Panipat(BBMB) tripped on differential protection. At the same time, 450MVA ICT 1 at 400kV Panipat(BBMB) tripped on overloading. As per PMU, Fluctuations observed in the phase voltages.			GI-2	
10	NR	1) 40MW Unit#1 at 220kV Tanakpur HEP(NHPC) 2) 40MW Unit#2 at 220kV Tanakpur HEP(NHPC)	Uttarakhand	NHPC	19-Jul-18	1:04	19-Jul-18	01:54	00:50	40MW Unit#1 and Unit#2 tripped at 220kV Tanakpur HEP(NHPC) as Generation overcurrent protection operated due to low voltage. Similar incident occurred at 2140 Hrs of 18.07.18. As per PMU, No fault observed in both the incidents. Unit#1 & Unit#2 generating 30 MW each approx. At the time of tripping, Bus voltage at 220kV Tanakpur HEP(NHPC) is observed as 202kV at 0104 Hrs and 197kV at 2140 Hrs. Senstive back up over current setting has been revised from 110% to 120% of full load current.	60		GD-1	
11	NR	1) 400kV Bhiwani (BBMB)-Rajpura(PSTCL) 2) 400kV Rajpura(PSTCL)-Rajpura(TH)-1 3) 400kV Rajpura(PSTCL)-Rajpura(TH)-2 4) 400kV Dehar(BBMB)-Rajpura(PSTCL) 5) 700MW Unit#1 at Rajpura(TH) 6) 700MW Unit#2 at Rajpura(TH) 7) 500MVA ICT 3 at Rajpura(PSTCL) 8) 500MVA ICT 4 at Rajpura(PSTCL) 9) 400kV Bus 2 at Rajpura(PSTCL)	Punjab	Punjab & BBMB	23-Jul-18	3:15	23-Jul-18	06:20	03:05	OPGW cable joint broken and fell on 400 kV Bus bar-2 and bus bar protection operated at 400kV Bus 2 of Rajpura(PSTCL) leading to tripping of 400kV Rajpura(PSTCL)-Rajpura(TH)-1 & 2, 400kV Bhiwani (BBMB)-Rajpura(PSTCL), 400kV Dehar(BBMB)-Rajpura(PSTCL), 400 kV Rajpura unit-1 & 2 of 700MW capacity also tripped. As per PMU, three phase fault is observed. At the time of tripping, 400kV Rajpura(PSTCL)-Rajpura(TH)-1 & 2 carrying 269 MW & 281 MW; 500MVA ICT 3 & 4 carrying 215 MW each.	660		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	Energy Unserved (in MU)
					Date	Time	Date	Time						
12	NR	1) 220 kV Dhauliganga HEP-Pithoragarh (PG) ckt 2) 220 kV Dhauliganga HEP-CB Ganj (UP) ckt 3) 220 kV 70 MW Unit-1, 2, 3 & 4 at Dhauliganga HEP	Uttarakhand	NHPC, Uttar Pradesh and POWERGRID	25-Jul-18	14:49	25-Jul-18	17:30	02:41	After tripping of 220 kV Dhauliganga-Pithoragarh line, all 290MW generation of Dhauliganga HEP shifted to only line avaiable 220 kV Dhauliganga-CB Ganj (UP). It resulted into severe oscillation in the system. Oscillation sustained for ~24second. As per DR details, B-phase to earth fault in 220 kV Dhauliganga-Pithoragarh ckt. It seems line auto reclosed from Pithoragarh end only and line tripped from Dhauliganga end with out auto reclosing in the line. Fault again occurred in the breaker reclaim time of 25 second and breaker of Pithoragarh endof 220 kV DHauliganga-Pithoragarh ckt tripped. As per PMU data, oscillation of 0.8Hz mode observed in the system and Phase shift also observed between CB Ganj (UP) and Balia (PG) PMU plot of frequency due to oscillaiton in the system.	285		GD-1	
13	NR	1) 220 kV Delina (J&K)-Zainakote (J&K) ckt 2) 220 kV Delina (J&K)-Amargarh (NRSS-29) ckt 3) 220 kV Delina (J&K)-Kishanganga (NHPC) ckt-1 4) 220 kV Delina (J&K)-Kishanganga (NHPC) ckt-2 5) 220/132 kV 160MVA ICT at Delina (J&K) 6) 3*110 MW units at Kishanganga HEP (NHPC)	Jammu & Kashmir	NHPC and J&K	25-Jul-18	20:31	25-Jul-18	22:41	02:10	R-Y phase to phase fault observed through PMU data. 220 kV bus fault resulted into tripping of all the connected elements from 220 kV Delina (J&K). All three running unit of 110MW at 220 kV Kishanganga HEP was also tripped due to evacuation constraints.	245		GD-1	
14	NR	1) 240 MVA 400/220 kV ICT-1 at Panki (UP) already tripped at 01:35hrs 2) 400 kV Panki (UP)-Kanpur (PG) ckt-1 3) 400 kV Panki (UP)-Kanpur (PG) ckt-2 4) 400 kV Panki (UP)-Unnao (UP) ckt 5) 400 kV Panki-Aligarh ckt 6) 400 kV Panki-Rewa Road (UP) ckt	Uttar Pradesh	Uttar Pradesh & POWERGRID	26-Jul-18	2:38	26-Jul-18	07:21	04:43	400/220 kV ICT-2 at Panki (UP) was already under long outage from 17.06.2018 due to blast in the ICT-2. 400/220 kV ICT-1 also tripped at 01:35hrs of 26th July 2018. At 02:38hrs, all 400 kV lines from 400 kV Panki (UP) tripped due to DC earth fault at the station.			GI-2	
15	NR	1) 240 MVA 400/220 kV ICT-1 at Panki(UP) 2) 400 kV Panki(UP)-Kanpur(PG) ckt-1 3) 400 kV Panki(UP)-Aligarh(UP) 4) 400 kV Panki(UP)-Rewa Road(UP)	Uttar Pradesh	Uttar Pradesh & POWERGRID	26-Jul-18	8:32	27-Jul-18	09:04	24.32	At 0832Hrs 400/220 kV ICT-1 & 400 kV Panki(UP)-Kanpur(PG) ckt-1 tripped on DC Earth fault. At 1559hrs, remaining two elements charged at 400kV Panki(UP) i.e 400 kV Panki(UP)-Aligarh(UP) & 400 kV Panki(UP)-Rewa Road(UP) tripped due to DC earth fault at the station. As per PMU data, No fault observed in the system.			GI-2	
16	NR	1) 220kV Bus 2 at 400/220kV Bhiwadi(PG) 2) 315MVA ICT 2 at 400/220kV Bhiwadi(PG) 3) 220kV Bhiwadi(PG)-Bhiwadi(Raj) Ckt-2 4) 220kV Bhiwadi(PG)-Rewari(HVPNL) Ckt-2 5) 220kV Bhiwadi(PG)-Mau(HVPNL) 6) 220kV Bhiwadi(PG)-Bawal(HVPNL) 7) 220kV Bhiwadi(PG)-Khush Ckt-2	Rajasthan	POWERGRID, Rajasthan & HVPNL	26-Jul-18	17:48	26-Jul-18	19:08	01:20	220kV Bhiwadi(PG)-Khushkhera(Raj) tripped in Zone-1 from Bhiwandi(PG) end on Y-B phase to phase fault. During fault detected in 220kV Bhiwadi(PG)-Khushkhera(Raj), mal-operation of Bus bar protection of 220kV Bus 2 at 400/220kV Bhiwadi(PG) leading to tripping of 315MVA ICT 2, 220kV Bhiwadi(PG)-Bhiwadi(Raj) Ckt-2, 220kV Bhiwadi(PG)-Rewari(HVPNL) Ckt-2 & 220kV Bhiwadi(PG)-Mau(HVPNL). In antecedent condition, 315MVA ICT 2 carrying 139 MW. As per SCADA data it seems that 315MVA ICT 3 carrying 129 MW also tripped. As per PMU, Y-B fault observed.		210	GD-1	0.28
17	NR	1) 450MVA ICT 1 at 400kV Panipat(BBMB) 2) 450MVA ICT 2 at 400kV Panipat(BBMB)	Haryana	BBMB	27-Jul-18	17:59	27-Jul-18	20:15	02:16	450MVA ICT 1 at 400kV Panipat(BBMB) tripped on PRD (Pressure Relief Device). At the same time, 450MVA ICT 2 at 400kV Panipat(BBMB) tripped on overloading. In antecedent condition, both the ICTs are carrying around 175 MW each.As per PMU, Fluctuations observed in the phase voltages.			GI-2	
18	NR	1) 200 MVA ICT1 at 400/220kV Rosa(UP) 2) 200 MVA ICT2 at 400/220kV Rosa(UP)	Uttar Pradesh	Uttar Pradesh	27-Jul-18	16:55	27-Jul-18	17:46	00:51	200 MVA ICT1 & ICT2 at 400/220kV Rosa(UP) tripped on DEF (back up earth fault) protection. In antecedent condition, both ICTs carrying 120MW each. As per PMU, Delayed clearance is observed with maximum dip in R phase voltage. It seems fault was in downward 220 kV network at 400/220 kV Roa TPS which have cleared with time delay and resulted into operation of back up earth fault protection of ICTs at 400/220 kV Rosa TPS.		216	GD-1	0.16
19	NR	1) 400kV Allahabad(PG)-Meja TPS(UP) Ckt-1 2) 400kV Allahabad(PG) - Kanpur New(PG) Ckt-2	Uttar Pradesh	POWERGRID & Uttar Pradesh	28-Jul-18	18:25	28-Jul-18	18:44	00:19	400kV Allahabad(PG)-Meja TPS(UP) ckt-1 & 400kV Allahabad(PG) - Kanpur New(PG) ckt-2 tripped due to lockout of tie breaker. As per PMU, fluctutations observed in the phase voltages. In antecedent condition, 400kV Allahabad(PG)-Meja TPS(UP) Ckt-1 & 400kV Allahabad(PG) - Kanpur New(PG) Ckt-2 carrying 118 MW & 133 MW respectively.			GI-2	
20	NR	1) 220kV Dhauliganga(NHPC)-Pithoragarh (PG) ckt 2) 220kV Dhauliganga(NHPC)-CB Ganj (UP) ckt 3) 70 MW Unit-1, 2, 3 & 4 at 220kV Dhauliganga(NHPC)	Uttarakhand	NHPC, Uttar Pradesh and POWERGRID	29-Jul-18	16:56	29-Jul-18	17:54	00:58	After tripping of 220 kV Dhauliganga-Pithoragarh line, all 285 MW generation of Dhauliganga HEP shifted to only line avaiable 220 kV Dhauliganga(NHPC)-CB Ganj(UP). It resulted into severe oscillation in the system. Oscilaltion sustained for ~14second. R-phase to earth failt in 220 kV Dhauliganga-Pithoragarh ckt. In antecedent conditions, 220kV Dhauliganga(NHPC)-Pithoragarh (PG) ckt carrying 150 MW. As per PMU data, oscillation of 0.8Hz mode observed in the system and Phase shift also observed between CB Ganj (UP) and Balia (PG) PMU plot of frequency due to oscillaiton in the system.	285		GD-1	
21	NR	1) 220kV Meerut(PG)-Modipuram(UP) Ckt-1 2) 220kV Meerut(PG)-Modipuram(UP) Ckt-2 3) 220kV Modipuram(UP)-Muzaffarnagar(UP) 4) 220kV Modipuram(UP)-Shatabdi(UP) 5) 132kV Modipuram(UP)-Kapsad 6) 200MVA 220/132kV ICT1 at 220kV Modipuram(UP) 7) 160MVA 220/132kV ICT2 at 220kV Modipuram(UP)	Uttar Pradesh	Uttar Pradesh & POWERGRID	30-Jul-18	9:40	30-Jul-18	11:12	01:32	R-Y phase to phase fault occured in 132 KV Kapsad-Modipuram line leads to LBB operation in both 132kV and 220kV side as breaker was stuck of the faulted line. As per PMU, R-Y fault with delayed clearance is observed. In antecednt conditions, 220kV Meerut(PG)-Modipuram(UP) Ckt-1 & 2 carrying 94 MW & 70 MW respectively. 220kV Modipuram(UP)-Muzaffarnagar(UP) & 220kV Modipuram(UP)-Shatabdi Nagar(UP) carrying 17 MW & 22 MW respectively.			GI-2	

Major Grid Events for July, 2018_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	Time					
1	WR	Tripping of 1.220/66 kV Vadavi ICT 1 2.220/66 kV Vadavi ICT 2 3. 220/66 kV Vadavi ICT 3	GETCO	14-07-2018	18:51	14-07-2018	20:00	01:09	At 220kV Vadavi S/s , 220/66 kV ICTs tripped due to the delayed fault clearance on 66 kV side.	Nil	160	GI-1	0.184
2	WR	Tripping of 1.400 kV Kansari-Bhinmal 2.400 kV Kansari-Varsana 3.400 kV Kansari-Veluda 4.400 kV 50 MVAR Kansari BR 5.400/220 kV 315MVA Kansari ICT 1 6.400/220 kV 315MVA Kansari ICT 3	GETCO	14-07-2018	22:09	15-07-2018	01:06	02:57	At 400kV Kansari S/s, Bus 1 and all the connected elements tripped on BB protection operation due to the 400 kV Buscoupler R phase CT failure.	Nil	Nil	GI-2	Nil
3	WR	Tripping of 1.400 kV SSP- Kasor 2.400 kV SSP-Dhule 1	NCA	16-07-2018	04:11	16-07-2018	04:48	00:37	400kV SSP-Asoj, Rajgarh-SSP D/C and SSP-Dhule-2 were opened to control over voltage. 400 kV SSP-Kasor and 400 kV SSP-Dhule 1 tripped at SSP on Over Voltage causing blackout at SSP. There was no generation at SSP.	Nil	Nil	GD-1	Nil
4	WR	Tripping of 1.400 kV Mansar- Bachhau 2.400 kV Mansar- Chorania 3.400/220 kV 315MVA Mansar ICT 1 4.400/220 kV 315MVA Mansar ICT 2	GETCO	17-07-2018	05:04	17-07-2018	11:31	06:27	At 400kV Mansar S/s, Bus 1 Bus bar protection operated due to flashover of R phase bus isolator causing tripping of all the 400 kV elements from Bus-1.	Nil	Nil	GI-2	Nil
5	WR	Tripping of 1.400/132 kV 200MVA Vindhyachal ICTs 1,2&3 2.132 kV Vindhyachal-Morwa 3.132 kV Vindhyachal-Waidhan 4.132 kV Morwa-Bina 5.132 kv Morwa-Anpara 6. +/- 500 kV HVDC Vindhyachal pole-1	NTPC/MPPTCL	23-07-2018	19:57	23-07-2018	21:00	01:03	At Vindhyachal S/s, all the 132 kV elements tripped due to the delayed clearance of fault on 132 kV Vindhyachal-Waidhan.	Nil	80	GI-1	0.084
6	WR	Tripping of 1.400 kV Bhusawal-Akola 2.400 kV Bhusawal-Deepnagar 2 3.400/132 kV 200 MVA Bhusawal ICT 1 4.400 kV Bhusawal Bus coupler	MSETCL	24-07-2018	20:38	25-07-2018	02:10	05:32	At Bhusawal S/s, 400 KV Bhusawal-Deepnagar ckt-2(the line was on Bus-1) Main Bus-2 side Pentograph Isolator corona ring damaged and flashover at support insulator occurred.This resulted in 400 kV Bus bar protection operation and tripping of all the elements connected to 400 kV Bus 1.	Nil	Nil	GI-2	Nil
7	WR	Tripping of 1. 765/400 kV 1500 MVA Tamnar ICT 1 2.765 kV Tamnar Bus 1 3.300 MW TRN Unit 1	PGCIL	30-07-2018	13:12	30-07-2018	13:53	00:41	At 765kV Tamnar S/s, while opening main bay 89 A isolator of ICT 1, R phase isolator stuck and sparking was observed which resulted in Bus bar protection operation and tripping of 765 kV Tamnar Bus 1 along with ICT 1.	226	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.

Major Grid Events for July, 2018_Southern Region

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	Date	Time	Time					
1	SR	1. 400kV Neyvelli Stg-2 (Exp) - Neyvelli Stg-2 2. 400kV Neyvelli Stg-2 (Exp) - Pugalur 3. Unit#2 at 400kv Neyvelli Stg-2 (Exp)	NLC	12-Jul-18	16:17	12-Jul-18	16:36	19 mins	**Complete Outage of 400kV Neyvelli Stg-2 (Exp) Station:** Triggering incident was Y-phase bus coupler string insulator failure. Bus bar protection operated for both Bus-1 and Bus-2 at 400kV Neyvelli Stg-2 (Exp) and all the connected elements tripped. This resulted in complete outage of 400kV Neyvelli Stg-2 (Exp).	200 MW	----	GD-1	---
2	SR	1. 400kV Kalikiri - Chittoor line-1 2. 400kV Kalikiri - Chittoor line-2	APTRANSCO	19-Jul-18	15:35	19-Jul-18	18:29	2 Hrs 54 mins	**Complete Outage of 400kV Kalikiri Station of APTRANSCO:** Triggering incident was R-phase fault at Tie Bay of 400kV/220kV Chittoor ICT#1 (HV side). ICT#1 tripped on operation of differential protection. At the same time, 400kV Kalikiri- Chittoor line-1 and 2 tripped at Kalikiri end only due to suspected relay maloperation. Tripping of 400kV Kalikiri Chittoor line-1 and 2 resulted in the complete outage of 400kV Kalikiri station.	----	---	GD-1	---
3	SR	1. 220kV Sharavathy - Shimoga Line-1 2. 220kV Sharavathy - Shimoga Line-2 3. 220kV Sharavathy - Shimoga Line-3 4. All running units at Sharavathy GS	KPCL & KPTCL	25-Jul-18	15:03	25-Jul-18	15:34	31 mins	**Complete Outage of 220kV Sharavathy Station of KPCL and 220kV Shimoga Station of KPTCL** : Triggering incident was bus fault at 220kV Shimoga substation due to snapping of R-phase jumper. Busbar protection at 220kV Shimoga substation did not operate resulting in operation of distance protection zone-2 at remote ends. This led to complete outage of 220kV Shimoga Substation. All running units at Sharavathy hydro power station also tripped due to tripping of evacuating lines connected to Shimoga. This led to complete outage at Sharavathy power station	440 MW	----	GD-1	----
4	SR	1. 400kV HNPCL - KV Kota line-1 2. 400kV HNPCL - KV Kota line-2 3. 400kV HNPCL - Kalpakka line-1 4. 400kV HNPCL - Kalpakka Line-2	APTRANSCO	29-Jul-18	13:20	29-Jul-18	16:24	3 Hrs 4 mins	**Complete Outage of 400kV HNPCL (Hinduja) station** : Triggering incident was Yph-Bph fault in 400kV HNPCL- KV Kota Line-2. Simultaneously, 400kV HNPCL-KV Kota line-1 and 400kV HNPCL – Kalpakka Line-1&2 also tripped due to tripping of remote breakers at KV Kota and Kalpakka end. As verbally informed, the relays at KV Kota and Kalpakka end maloperated due to improper configuration. This resulted in complete outage of 400kV HNPCL Station since all the evacuating lines tripped.	-----	----	GD-1	---
5	SR	1.400kV Manali - NCTPS-II 2. 400kV Manali - Alamatty 3. 400/230kV ICT-2 at Manali 4. 400/110kV ICT-3 at Manali	TANTRANSCO	18-Jul-18	10:14	18-Jun-18	11:06	52 mins	Multiple tripping at 400kV Manali Station:At the time of the incident, Station Battery-1 & 2 were feeding the station DC loads since LVAC sytem was under break down and due to that station battery chargers were not in service. During this time, both the Station DC supply voltages became very low and hence above equipment's Density Monitors gave trip reulting in multiple tripping at Manali SS.	---	----	GI-2	---
6	SR	1. 230kV Udumalpet - Aliyar 2. 230kV Udumalpet - Mywadi line-1 3. 230kV Udumalpet - Mywadi line-2 4. 230/110kV ICT #1,2&3	TANTRANSCO	31-Jul-18	13:02	31-Jul-18	13:33	31 mins	Tripping of Bus-1 at 230kV Udumalpet station: Triggering incident was fault in downstrean network due to which bus bar protection at 230kV Udumalpet station operated. This resulted in tripping of all the connected elements at 230kV Udumalpet. 230kV Udumalpet was in single bus operation due to bus coupler replacement works.	---	---	GI-1	---

Major Grid Events for July, 2018_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	Loss of Energy(in MU)
				Date	Time	Date	Time	Time					
1	ERLDC	400 kV Motihari - Gorakhpur - I	ISTS	4-Jul-18	10:52	4-Jul-18	11:22	00:30	400 kV Motihari - Barh D/C and 400 kV Motihari - Gorakhpur - II were under breakdown. 400 kV Motihari - Gorakhpur - I tripped at 10:52 hrs on O/V resulting total power failure at Motihari S/S as there is no other source.	0	200	GD-I	0.1000
2	ERLDC	220 kV TLDP - III - NJP S/C	WBSETCL	4-Jul-18	19:00	4-Jul-18	19:37	00:37	At 19:00 hrs 220 kV NJP - TLDP - III S/C tripped resulting total power failure at TLDP - III	136	0	GD-I	0.0000
3	ERLDC	400 kV Binaguri - Rangpo - I 400 kV Teesta III - Rangpo S/C	ISTS	10-Jul-18	08:14	10-Jul-18	08:39	00:25	At 08:14 hrs, 400 KV Binaguri Rangpo I tripped on RBN fault. 400 KV Teesta III Rangpo tripped at 08:14 hrs on SPS-2 operation. All running units of Teesta III and Dikchu tripped due to loss of evacuation path.	890	0	GD-I	0.0000
4	ERLDC	220 kV Purnea - Madhepura - I	BSPTCL	19-Jul-18	13:31	19-Jul-18	13:37	00:06	At 13:15 Hrs , 220 kV Madhepura-New Purnea-II tripped on BN fault. At 13:31 Hrs Purnea –Madhepura I also tripped duet to Y-B phase fault resulting total power failure at Madhepura S/S.	0	150	GD-I	0.0150
5	ERLDC	220 kV Ranchi - Hatia - II 220 kV Hatia - Patratu D/C	JUSNL	20-Jul-18	09:10	20-Jul-18	12:04	02:54	At 08:44 hrs 220 kV Ranchi - Hatia - I tripped on B-N fault along with 220/132 kV ICTSs at Hatia resulting loss of power supply at nearby area. Power was restored back at 09:02 hrs by charging ICTs. But 220 kV Ranchi - Hatia - II along with 220 kV Patratu - Hatia D/C tripped at 09:10 hrs resulting total power failure at Hatia S/S as well as nearby area.	0	78	GD-I	0.2262
6	ERLDC	400 kV Motihari - Gorakhpur - I	ISTS	20-Jul-18	19:00	20-Jul-18	19:20	00:20	400 kV Motihari - Barh D/C and 400 kV Motihari - Gorakhpur - II were under breakdown. 400 kV Motihari - Gorakhpur - I tripped at 19:00 hrs on gas compartment zone protection due to mal-operation of gas monitoring relay which shows low indication despite proper level being maintained.	0	280	GD-I	0.0933
7	ERLDC	400 kV Motihari - Gorakhpur - I	ISTS	21-Jul-18	07:11	21-Jul-18	08:53	01:42	400 kV Motihari - Barh D/C and 400 kV Motihari - Gorakhpur - II were under breakdown. 400 kV Motihari - Gorakhpur - I tripped at 07:11 hrs on gas compartment zone protection due to mal-operation of gas monitoring relay which shows low indication despite proper level being maintained.	0	110	GD-I	0.1870
8	ERLDC	220 KV Mejia-Waria I 220 KV Mejia Kalyaneshwari T/c 220 KV Mejia-Barjora II 220/132 kV ICT II & III 220 KV Maithon-Kalyaneshwari I 220 KV Kalyaneshwari-CTPS I	DVC	27-Jul-18	01:42	27-Jul-18	02:30	00:48	220 kV main bus II at Kalyaneswari and Mejia tripped resulting tripping of all elements connected to these buses due to LBB operation after non-opening of breakers at both ends on R-N fault at 220 kV Mejia - Kalyaneswari - I	328	0	GI-I	0.0000
9	ERLDC	400 kV Andal Jamshedpur D/C	DVC	28-Jul-18	21:07	28-Jul-18	22:46	01:39	400 kV Andal – Jamshedpur D/C tripped at 21:07 hrs on R-N fault. At same time, unit II at Andal tripped on stator E/F protection.	360	0	GI-II	0.0000
10	ERLDC	400 KV Binaguri-Rangpo II 400 KV Teesta III-Rangpo S/C 400 KV Teesta III Dikchu S/C	ISTS	30-Jul-18	20:48	30-Jul-18	21:08	00:20	At 20:48 Hrs, 400 KV Binaguri-Rangpo II tripped on Y-B-N fault. Inspite of operation of SPS -I, SPS II operated and 400 KV Teesta III-Rangpo tripped. At the same time, breaker of 400 KV Teesta III Dikchu S/C opened from Dikchu end.	878	0	GD-I	0.0000

Grid Disturbances in NER Grid for July 2018

Sl. No.	Region	Name of Element	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
				Date	Time	Date	Time							
1	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	01-Jul-2018	12:54:00	01-Jul-2018	13:10:00	00:16	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) line. 132 kV Karong - Kohima line kept idle charged from Kohima end (For Overloading of 132 kV Dimapur (PG) - Kohima Line), 132 kV Wokha - Kohima line was kept open (Cause : improper relay co-ordination of 132 kV Dimapur - Kohima - Wokha link) and 66 kV Tuensang - Likhimro line kept open (Cause : construction activities). At 12:54 Hrs on 01.07.2018, 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) 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	0.000	0.005	GD-I
2	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, AP	02-Jul-2018	16:12:00	02-Jul-2018	16:28:00	00:16	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara - Khupi line. At 16:12 Hrs on 02.07.2018, 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	18	0.000	0.012	GD-I
3	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	05-Jul-2018	10:00:00	05-Jul-2018	10:11:00	00:11	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) line. 132 kV Karong - Kohima line kept idle charged from Kohima, 132 kV Wokha - Kohima line was kept open (Cause : improper relay co-ordination of 132 kV Dimapur - Kohima - Wokha link) and 66 kV Tuensang - Likhimro line kept open (Cause : construction activities). At 10:00 Hrs on 05.07.2018, 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) 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.	10	17	0.002	0.003	GD-I
4	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, AP	06-Jul-2018	08:48:00	06-Jul-2018	09:03:00	00:15	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 08:48 Hrs on 06.07.2018, 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	24	0.000	0.014	GD-I
5	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, AP	07-Jul-2018	11:28:00	07-Jul-2018	11:42:00	00:14	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara - Khupi line. At 11:28 Hrs on 07.07.2018, 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	0.000	0.008	GD-I
6	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	11-Jul-2018	11:26:00	11-Jul-2018	11:38:00	00:12	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) line. 132 kV Karong - Kohima line kept idle charged from Kohima, 132 kV Wokha - Kohima line was kept open (Cause : improper relay co-ordination of 132 kV Dimapur - Kohima - Wokha link) and 66 kV Tuensang - Likhimro line kept open (Cause : construction activities). At 11:26 Hrs on 11.07.2018, 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) 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	0.000	0.004	GD-I
7	NER	132 kV Loktak - Ningthoukhong Line	MSPCL	11-Jul-2018	11:38:00	11-Jul-2018	11:54:00	00:16	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 and 132 kV Kakching - Kongba line kept open to control overloading of 132 kV Loktak - Ningthoukhong line). At 11:38 Hrs on 11.07.2018, 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	45	0.000	0.012	GD-I
8	NER	132 kV Imphal (MSPCL) - Imphal (PG) 1&2 Lines	POWERGRID & MSPCL	11-Jul-2018	10:55:00	11-Jul-2018	11:09	00:14	Capital - Karong area of Manipur Power System were connected with rest of NER Grid through 132 kV Imphal(MSPCL) - Imphal(PG) I & II lines. 132 kV Kakching -Kongba line kept open to control overloading of 132 kV Loktak - Ningthoukhong 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. At 10:55 Hrs on 11.07.2018, 132 kV Imphal(MSPCL) - Imphal(PG) I &II lines tripped. Due to tripping of these elements, Capital - Karong area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	62	0.000	0.032	GD-I
9	NER	132 kV Aizawl - Melriat Line	POWERGRID	12-Jul-2018	13:53:00	12-Jul-2018	14:17:00	00:24	Melriat area of Mizoram Power System was connected with rest of NER Grid through 132 kV Aizawl - Melriat line. At 13:53 Hrs on 12.07.2018, 132 kV Aizawl - Melriat Line tripped. Due to tripping of this element, Melriat area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.	0	42	0.000	0.017	GD-I

Sl. No.	Region	Name of Element	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
				Date	Time	Date	Time							
10	NER	132 kV Badarpur - Kolasib Line, 132 kV Aizawl - Kumarghat Line & 132 kV Aizawl - Tipaimukh Line	POWERGRID	12-Jul-2018	16:16:00	12-Jul-2018	16:48:00	00:32	Mizoram Power System was connected with rest of NER Grid through 132 kV Kolasib - Badarpur line, 132 kV Aizawl- Kumarghat line and 132 kV Aizawl - Tipaimukh line . At 16:16 Hrs on 12.07.2018, 132 kV Kolasib -Badarpur line, 132 kV Aizawl - Kumarghat line and 132 kV Aizawl - Tipaimukh line tripped. Due to tripping of these elements, Mizoram Power System was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	44	84	0.023	0.045	GD-I
11	NER	132 kV Doyang - Sanis Line	DoP, Nagaland	13-Jul-2018	12:00:00	13-Jul-2018	13:27:00	01:27	Wokha area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang - Sanis line. 132 kV Wokha - Kohima line was kept open (Cause : improper relay co-ordination of 132 kV Dimapur - Kohima - Wokha link). At 12:00 Hrs on 13.07.2018, 132 kV Doyang - Sanis line tripped. Due to tripping of this element, Wokha area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	16	2	0.023	0.003	GD-I
12	NER	132 kV Doyang - Sanis Line	DoP, Nagaland	15-Jul-2018	04:35:00	15-Jul-2018	04:50:00	00:15	Wokha area of Nagaland Power System was connected with rest of NER Grid through 132 kV Doyang - Sanis line. 132 kV Wokha - Kohima line was kept open (Cause : improper relay co-ordination of 132 kV Dimapur - Kohima - Wokha link). At 04:35 Hrs on 15.07.2018, 132 kV Doyang - Sanis line tripped. Due to tripping of this element, Wokha area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	45	3	0.011	0.001	GD-I
13	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, AP	16-Jul-2018	11:52:00	16-Jul-2018	12:10:00	00:18	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara - Khupi line. At 11:52 Hrs on 16.07.18, 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	0.000	0.006	GD-I
14	NER	132 kV Monarchak - Udaipur Line & 132 kV Monarchak - Rokhia Line	TSECL	19-Jul-18	10:40:00	19-Jul-18	11:05:00	00:25	Monarchak Power Station and Rabindranagar area of Tripura Power System were connected with rest of NER Grid through 132 kV Monarchak - Udaipur Line & 132 kV Monarchak - Rokhia Line. At 10:40 Hrs on 19.07.2018, 132 kV Monarchak - Udaipur Line & 132 kV Monarchak - Rokhia Lines tripped. Due to tripping of these elements, Monarchak Power Station and Rabindranagar area were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	86	8	0.036	0.003	GD-I
15	NER	132 kV Lekhi - Nirjuli Line	DoP, AP & POWERGRID	21-Jul-2018	00:53:00	21-Jul-2018	02:30:00	01:37	Nirjuli area of Arunachal Pradesh Power System & Gohpur area of Assam Power System were connected with rest of NER Grid through 132 kV Lekhi - Nirjuli Line. 132 kV Bus Coupler at Gohpur was kept opened for overloading of 132 kV Lekhi - Nirjuli Line. At 00:53 Hrs on 21.07.2018, 132 kV Lekhi - Nirjuli Line tripped. Due to tripping of this element, Nirjuli area of Arunahcal Pradesh Power System & Gohpur area of Assam Power System were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.	0	25	0.000	0.040	GD-I
16	NER	132 kV Loktak - Ningthoukhong Line	MSPCL	21-Jul-2018	12:40:00	21-Jul-2018	13:20:00	00:40	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 and 132 kV Kakching - Kongba line kept open to control overloading of 132 kV Loktak - Ningthoukhong line). At 12:40 Hrs on 21.07.2018, 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	19	0.000	0.013	GD-I
17	NER	132 kV Balipara - Khupi Line	NEEPCO & DoP, AP	27-Jul-2018	18:38:00	27-Jul-2018	19:20:00	00:42	Khupi area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Balipara - Khupi line. At 18:38 Hrs on 27.07.18, 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	18	0.000	0.019	GD-I
18	NER	132 kV Kohima - Wokha Line	DoP, Nagaland	31-Jul-2018	12:30:00	31-Jul-2018	12:45:00	00:15	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Kohima (DoP, Nagaland) - Wokha line. 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) line was under OCC approved shutdown since 05:15 Hrs on 18.07.2018, 132 kV Karong - Kohima line kept idle charged from Kohima and 66 kV Tuensang - Likhimro line kept open (Cause : construction activities). At 12:30 Hrs on 31.07.2018, 132 kV Kohima (DoP, Nagaland) - Wokha 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	0.000	0.006	GD-I

Sl. No.	Region	Name of Element	Owner / Agency	Outage		Revival		Outage Duration	Event	Generation Loss (MW)	Load Loss (MW)	Generation Loss in MU	Load Loss in MU	Category as per CEA Grid Standards
				Date	Time	Date	Time							
19	NER	132 kV Dimapur (PG) - Kohima Line	POWERGRID & DoP, Nagaland	31-Jul-2018	16:20	31-Jul-2018	16:30:00	00:10	Capital area of Nagaland Power System was connected with rest of NER Grid through 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) line. 132 kV Karong - Kohima line kept idle charged from Kohima end (for Overloading of 132 kV Dimapur (PG) - Kohima Line), 132 kV Wokha - Kohima line was under outage since 12:30 Hrs on 31.07.2018 and 66 kV Tuensang - Likhimro line kept open (Cause : construction activities). At 16:20 Hrs on 31.07.2018, 132 kV Dimapur(PG) - Kohima (DoP, Nagaland) 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 in this area.	14	23	0.002	0.004	GD-I

Grid Incidents in NER during July 2018

S.No.	Region	State(s) Involved	Name of Elements	Owner / Agency	Outage		Revival		Outage Duration	Event (Brief Details)	Generation Loss (MW)	Energy Unserved (MU)	Category as per CEA Grid Standards
					Date	Time	Date	Time					
1	NER	Palatana	Palatana GTG-1 & STG-1	OTPCL	01-Jul-2018	04:41:00	01-Jul-2018	05:30:00	00:49:00	Palatana GTG 1 & STG 1 tripped at 04:41 Hrs on 01.07.2018 due to ASV stopped. (Revision of schedule from Block No.23 on 01.07.2018)	232	0.189	GI-II
2	NER	BgTPP	BgTPP Unit 1	NTPC	03-Jul-2018	03:36:00	03-Jul-2018	04:30:00	00:54:00	BgTPP Unit 1 tripped at 03:36 Hrs on 03.07.2018 due to Boiler flame failure. (Revision of schedule from Block No.19 on 03.07.2018).	141	0.127	GI-II
3	NER	Khandong	Khandong Unit 2	NEEPCO	08-Jul-2018	12:07:00	08-Jul-2018	16:30:00	04:23:00	Khandong Unit 2 tripped at 12:07 Hrs on 08.07.2018 due to turbine thrust bearing temp high. (Revision of schedule from Block No.67 on 08.07.2018).	23	0.101	GI-I
4	NER	Khandong	Khandong Unit 2	NEEPCO	08-Jul-2018	19:30:00	08-Jul-2018	20:15:00	00:45:00	Khandong Unit 2 tripped at 19:30 Hrs on 08.07.2018 due to rotor earth fault. (Revision of schedule from Block No.82 on 08.07.2018).	22	0.017	GI-I
5	NER	DHEP	DHEP Unit 2	NEEPCO	14-Jul-2018	23:26:00	15-Jul-18	01:00:00	01:34:00	DHEP Unit 2 tripped at 23:26 Hrs on 14.07.2018 due to Interphase protection relay 86I optd. (Revision of schedule from Block No.5 on 15.07.2018).	22	0.012	GI-I
6	NER	DHEP	DHEP Unit 1 & Unit 3	NEEPCO	15-Jul-2018	04:36:00	15-Jul-2018	08:00:00	03:24:00	DHEP Unit 1 and Unit 3 tripped at 04:36 Hrs on 15.07.2018 due to Interphase protection relay 86I optd. (Revision of schedule from Block No.33 on 15.07.2018).	45	0.153	GI-I
7	NER	Kopili	Kopili Unit 2	NEEPCO	16-Jul-2018	10:50:00	16-Jul-2018	11:30:00	00:40:00	Kopili Unit 2 tripped at 10:50 Hrs on 16.07.2018 due to Differential protection operated. (Revision of schedule from Block No.47 on 16.07.2018).	49	0.033	GI-II
8	NER	Kopili	Kopili Unit 3	NEEPCO	17-Jul-2018	14:57:00	17-Jul-2018	16:45:00	01:48:00	Kopili Unit 3 tripped at 14:57 Hrs on 17.07.2018 due to thrust bearing temperature high. (Revision of schedule from Block No.68 on 17.07.2018).	49	0.088	GI-II
9	NER	BgTPP	BgTPP Unit 1	NTPC	19-Jul-2018	08:05:00	19-Jul-2018	08:45:00	00:40:00	BgTPP Unit 1 tripped at 08:05 Hrs on 19.07.2018 due to failure of Auxiliary DC supply . (Revision of schedule from Block No.36 on 19.07.2018).	230	0.153	GI-II

S.No.	Region	State(s) Involved	Name of Elements	Owner / Agency	Outage		Revival		Outage Duration	Event (Brief Details)	Generation Loss (MW)	Energy Unserved (MU)	Category as per CEA Grid Standards
					Date	Time	Date	Time					
10	NER	Kopili	Kopili Unit 3	NEEPCO	19-Jul-2018	11:44:00	19-Jul-2018	12:30:00	00:46:00	Kopili Unit 3 tripped at 11:44 Hrs on 19.07.2018 due to thrust bearing temperature high. (Revision of schedule from Block No.51 on 19.07.2018).	49	0.038	GI-II
11	NER	AGTCCPP	AGTCCPP STG-2	NEEPCO	21-Jul-2018	22:52:00	22-Jul-18	00:00:00	01:08:00	AGTCCPP STG 2 tripped at 22:52 Hrs on 21.07.2018 due to exhaust pressure high. (Revision of schedule from Block No.1 on 22.07.2018).	6	0.007	GI-I
12	NER	Pare	Pare Unit 2	NEEPCO	23-Jul-2018	11:38:00	23-Jul-18	13:45:00	02:07:00	Pare Unit 2 tripped at 11:38 Hrs on 23.07.2018 due to Excitation Problem. (Revision of schedule from Block No.56 on 23.07.2018).	55	0.116	GI-I
13	NER	BgTPP	BgTPP Unit 2	NTPC	26-Jul-2018	15:50:00	26-Jul-2018	16:30:00	00:40:00	BgTPP Unit 2 tripped at 15:50 Hrs on 26.07.2018 due to GT Differential Relay operated. (Revision of schedule from Block No.67 on 26.07.2018).	138	0.092	GI-II
14	NER	AGBPP	AGBPP Unit 2	NEEPCO	30-Jul-2018	11:40:00	30-Jul-2018	12:30:00	00:50:00	AGBPP Unit 2 tripped at 11:40 Hrs on 30.07.2018 due to tripping of gas compressor 2. (Revision of schedule from Block No.51 on 30.07.2018).	30	0.025	GI-II