Details of Grid Events during the Month of May 2021 in Northern Region

Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event		Antecedent Generation/Load in the Regional Grid*		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
	(GI 1or 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	HIMACHAL PRADESH	04-May-2021 03:49	04-May-2021 08:05	4:16	37	0	0.110	0.000	33631	45599	400 KV Nathpa Jhakri(SJ)-Karcham Wangtoo(JSW) (HBPCL) Ckt-1, 400 KV Nathpa Jhakri(SJ)-Panchkula(PG) (PG) Ckt-1, 400 KV Nathpa Jhakri(SJ)-Rampur HEP(SJ) (PG) Ckt-1 & Ckt-2 and 400 KV Nathpa Jhakri(SJ)-Gumma (HP) (PG) Ckt-2 all tripped on Bus Bar protection operation. Some problem in Bus Bar 2 Ct wiring lead to Bus Bar Protection operation (Bus2). At the same time, 37MW Sawara Kuddu UNIT-1 HPPCL also tripped on SPS operation. As per PMU, Y-N phase to earth fault is observed. In antecedent condition, 00 KV Nathpa Jhakri(SJ)-Karcham Wangtoo(JSW) (HBPCL) Ckt-1, 400 KV Nathpa Jhakri(SJ)-Panchkula(PG) (PG) Ckt-1, 400 KV Nathpa Jhakri(SJ)-Rampur HEP(SJ) (PG) Ckt-1 & Ckt-2 and 400 KV Nathpa Jhakri(SJ)-Gumma (HP) (PG) Ckt-2 carrying 192MW, 10MW, 117MW, 117MW & 37MW respectively.	1) 400KV Bus 2 at Nathpa Jhakri(SJ) 2) 400KV Bus 4 at Nathpa Jhakri(SJ) 3) 400 KV Nathpa Jhakri(SJ)-Karcham Wangtoo(JSW) (HBPCL) Ckt-1 4) 400 KV Nathpa Jhakri(SJ)-Panchkula(PG) (PG) Ckt-1 5) 400 KV Nathpa Jhakri(SJ)-Rampur HEP(SJ) (PG) Ckt-2 6) 400 KV Nathpa Jhakri(SJ)-Rampur HEP(SJ) (PG) Ckt-1 7) 400 KV Nathpa Jhakri(SJ)-Gumma (HP) (PG) Ckt-2 8) 400/22 kV 25 MVA ST 1 at Nathpa Jhakri(SJ)
2	GD-1	J & K	04-May-2021 09:40	04-May-2021 13:32	3:52	0	180	0.000	0.376	38924	47913	220 KV Kishenpur(PG)-Sarna(PS) (PG) Ckt-1 & Ckt-2 both tripped on R-Y-N Double phase to ground fault. Fault distance was 83.92km from Kishenpur(PG) end and fault current was Ir 2.33kA & Iy 1.74kA. As per PMU, R-Y phase to phase fault is observed. As per SCADA, load loss of approx. 180MW is observed. In antecedent condition, 220 KV Kishenpur(PG)-Sarna(PS) (PG) Ckt-1 & Ckt-2 carrying 76MW each.	1) 220 KV Kishenpur(PG)-Sarna(PS) (PG) Ckt-1 2) 220 KV Kishenpur(PG)-Sarna(PS) (PG) Ckt-2
3	GI-2	UTTAR PRADESH	06-May-2021 17:34	06-May-2021 22:10	4:36	0	0	0.000	0.000	31375	38192	400 KV Muradnagar_2-Mathura (UP) Ckt-1 tripped on B-N phase to earth fault. Line successfully autoreclosed from Muradnagar_2 end but tripped from Mathura end. Fault distance was 132.1Km and fault current was 2.591kA from Mathura end. At the same time, 400/220 kV 240 MVA ICT 3 at Muradnagar_2(UP) tripped on over flux protection operation and 125 MVAR Bus Reactor No 1 at 400KV Agra Fatehabad(UP) tripped on backup impedance protection operation. As per PMU, B-N phase to earth fault is observed. In As per SCADA, Bus voltage & frequency at Muradnagar_2(UP) was approx. 430 kV and 50Hz so, V/f would be approx. 1.08. In antecedent condition, 400 KV Muradnagar_2-Mathura (UP) Ckt-1 & 400/220 kV 240 MVA ICT 3 at Muradnagar_2(UP) carrying 15MW & 26MW respectively.	1) 400/220 kV 240 MVA ICT 3 at Muradnagar_2(UP) 2) 125 MVAR Bus Reactor No 1 at 400KV Agra Fatehbad(UP) 3) 400 KV Muradnagar_2-Mathura (UP) Ckt-1
4	GI-2	UTTAR PRADESH	07-May-2021 16:13	07-May-2021 17:29	1:16	0	0	0.000	0.000	35155	40970	400 KV Anpara-Obra_B (UP) Ckt-1 tripped on R-N phase to earth fault. Fault occurred due to damage of R-ph insulator of wave trap. Fault distance was 0.32km from Anpara end. At the same time, 400 KV Anpara-Sarnath (UP) Ckt-1 tripped from both end and 400 KV Singrauli(NT)-Anpara(UP) (PG) Ckt-1 tripped from Anpara end only. As per PMU, R-N phase to earth fault is observed. In antecedent condition, 400 KV Anpara-Obra_B (UP) Ckt-1, 400 KV Anpara-Sarnath (UP) Ckt-1 & 400 KV Singrauli(NT)-Anpara(UP) (PG) Ckt-1 carrying 313MW, 404MW & 308MW respectively.	1) 400 KV Anpara-Obra_B (UP) Ckt-1 2) 400 KV Anpara-Sarnath (UP) Ckt-1 3) 400 KV Singrauli(NT)-Anpara(UP) (PG) Ckt-1
5	GI-2	RAJASTHAN	07-May-2021 19:22	08-May-2021 00:51	5:29	0	0	0.000	0.000	38108	47011	765 KV Phagi(RS)-Gwalior(PG) (PG) Ckt-2 & 765 KV Anta-Phagi (RS) Ckt-2 both tripped on B-N phase to earth fault. Fault occurred due to B-ph CT at 707 Tie bay at 765kV Phagi(RS) blast. As per PMU, B-N phase to earth fault is observed. In antecedent condition, 765 KV Phagi(RS)-Gwalior(PG) (PG) Ckt-2 & 765 KV Anta-Phagi (RS) Ckt-2 carrying 579MW & 820MW respectively.	1) 765 KV Phagi(RS)-Gwalior(PG) (PG) Ckt-2 2) 765 KV Anta-Phagi (RS) Ckt-2
6	GD-1	J & K	09-May-2021 21:10	09-May-2021 22:10	1:00	0	60	0.000	0.132	36058	45401	220 KV Amargarh(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-1 & Ckt-2 both tripped on R-Y phase to phase fault. Fault current was 1.481kA from Zainkote end. As per PMU, no fault is observed. As per SCADA, load loss of approx. 60MW is observed. In antecedent condition, 220 KV Amargarh(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-1 & Ckt-2 carrying approx. 175MW each.	1) 220 KV Amargarh(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-1 2) 220 KV Amargarh(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-2
7	GI-2	UTTAR PRADESH	10-May-2021 21:34	10-May-2021 23:48	2:14	0	0	0.000	0.000	36958	49268	400 KV Orai(PG)-Orai(UP) (PG) Ckt-1 tripped on B-N phase to earth fault. At the same time, 400 KV Orai(PG)-Orai(UP) (PG) Ckt-2 also tripped on R-N phase to earth fault. As per PMU, R-N phase to earth fault followed by B-N phase to earth fault is observed. In antecedent condition, 400 KV Orai(PG)-Orai(UP) (PG) Ckt-1 &400 KV Orai(PG)-Orai(UP) (PG) Ckt-2 carrying approx. 220MW each.	1) 400 KV Orai(PG)-Orai(UP) (PG) Ckt-1 2) 400 KV Orai(PG)-Orai(UP) (PG) Ckt-2
8	GI-2	PUNJAB	11-May-2021 01:58	11-May-2021 02:29	0:31	0	0	0.000	0.000	33063	44558	400 KV Ludhiana-Malerkotla (PG) Ckt-1 tripped on Y-N phase to earth fault during bad weather. Fault distance was 4.34km & fault current was 16.4kA from Malerkotla end. Line successfully autoreclosed from Ludhiana end but tripped from Malerkotla end. At the same time, 400/220 kV 315 MVA ICT 2 at Malerkotla(PG) also tripped due to differential protection operation. As per PMU, Y-N phase to earth fault is observed. In antecedent condition, 400 KV Ludhiana-Malerkotla (PG) Ckt-1 & 400/220 kV 315 MVA ICT 2 at Malerkotla(PG) carrying 104MW & 48MW respectively.	1) 400 KV Ludhiana-Malerkotla (PG) Ckt-1 2) 400/220 kV 315 MVA ICT 2 at Malerkotla(PG)
9	GI-2	UTTAR PRADESH	12-May-2021 18:52	00-Jan-1900 00:00	#VALUE!	0	0	0.000	0.000	30987	38556	400 KV Bareilly-Unnao (UP) Ckt-1 & 400 KV Bareilly-Unnao (UP) Ckt-2 both tripped on R-Y-B-N three phase to earth fault. Fault occurred due to to double circuit tower no 456 & 457 of Unnao Ckt-1 and Ckt-2 collapsed during heavy thunderstorm. As per PMU, R-Y-B-N three phase to earth fault is observed. In antecedent condition, 400 KV Bareilly-Unnao (UP) Ckt-1 & 400 KV Bareilly-Unnao (UP) Ckt-2 carrying 111MW & 109MW respectively.	1) 400 KV Bareilly-Unnao (UP) Ckt-1 2) 400 KV Bareilly-Unnao (UP) Ckt-2
10	GI-2	PUNJAB	14-May-2021 08:40	14-May-2021 09:44	1:04	0	0	0.000	0.000	34976	42277	400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-1 & 400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-2 both tripped on Y-N phase to earth fault. 400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-2 was in under shutdown, during its charging attempt from Muktsar(PG) end Y-N phase to earth fault occurred in 400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-2 and both Ckt-1 & Ckt-2 tripped. 400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-1 tripped in Z-2. As per PMU, Y-N phase to earth fault is observed. In antecedent condition, 400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-1 carrying 199MW.	1) 400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-1 2) 400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-2
11	GD-1	HIMACHAL PRADESH	14-May-2021 19:46	14-May-2021 21:40	1:54	55	0	0.157	0.000	34949	44469	132kV Jasure-Batheri Ckt tripped at 19:46 Hrs. At the same time, 220kV Bus 2 at Pong(BB), 220kV Jessore(HP)-Pong(BB) (PG) Ckt-1, 220kV Jalandhar-Pong (BB) Ckt-2 and 220kV Pong(BB)-Dasuya(PS) (BBMB) Ckt-2 all tripped on LBB operation of 66MW Unit at Pong HEP (BBMB). As per PMU, Y-N phase to earth fault with delayed clearance in 500ms is observed. In antecedent condition, 220kV Jessore(HP)-Pong(BB) (PG) Ckt-1, 220kV Jalandhar-Pong (BB) Ckt-2 and 220kV Pong(BB)-Dasuya(PS) (BBMB) Ckt-2 & 66MW Unit at Pong HEP carrying 13MW, 55MW, 59MW & 55MW respectively.	1) 220 KV Pong(BB)-Dasuya(PS) (BBMB) Ckt-2 2) 220 KV Jalandhar-Pong (BB) Ckt-2 3) 220 KV Jessore(HP)-Pong(BB) (PG) Ckt-1 4) 220KV Bus 2 at Pong(BB)
12	GD-1	HARYANA	17-May-2021 22:35	17-May-2021 23:30	0:55	0	300	0.000	0.590	39548	50880	220 KV Jind(PG)-Narwana (HV) (HVPNL) Ckt-1 & Ckt-2, 220 KV Batta (HR) -NARWANA (HV) (HVPNL) CKT-1 & Ckt-2, 220 KV Bhuna (HR) -NARWANA (HV) (HVPNL) CKT-1, 220/132 kV 160 MVA ICT 1, 20/132 kV 100 MVA ICT 2 & ICT 3 at Narwana(HV) all tripped on bus bar protection of bus 1 & bus 2 at 220/132kV Narwana(HV). Bus bar protection operated due to damage of Y-ph CT of bus coupler. As per PMU, R-Y-B three phase fault with delayed clearance in 400ms is observed. As per SCADA, load loss of approx. 300MW is observed. In antecedent condition, 220/132 kV 160 MVA ICT 1, 20/132 kV 100 MVA ICT 2 & ICT 3 at Narwana(HV) carrying 38MW, 26MW & 26MW respectively.	1) 220 KV Jind(PG)-Narwana (HV) (HVPNL) Ckt-1 2) 220 KV Jind(PG)-Narwana (HV) (HVPNL) Ckt-2
13	GD-1	PUNJAB	19-May-2021 20:40	19-May-2021 22:10	1:30	0	100	0.000	0.331	27234	30166	220 KV Malerkotla(PS)-Malerkotla(PG) (PSTCL) Ckt-2, 400/220 kV 315 MVA ICT 2 & 400/220 kV 500 MVA ICT 3 at Malerkotla(PG) all tripped on bus bar protection operation at Malerkota(PS) end. Bus bar protection operated on B-N phase to earth fault in 220kV Malerkotla(PS)-Ikolaha(PS) ckt. As per PMU, B-N phase to earth fault is observed. As per SCADA, load loss of approx. 100MW is observed. In antecedent condition, 400/220 kV 315 MVA ICT 2 & 400/220 kV 500 MVA ICT 3 at Malerkotla(PG) carrying 63MW & 99MW respectively.	1) 400/220 kV 500 MVA ICT 3 at Malerkotla(PG) 2) 220 KV Malerkotla(PS)-Malerkotla(PG) (PSTCL) Ckt-2

Details of Grid Events during the Month of May 2021 in Northern Region

Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event		Antecedent Generation/Load in the Regional Grid*		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
	(GI 1or 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
14	GD-1	HIMACHAL PRADESH	20-May-2021 23:42	21-May-2021 02:46	3:04	77	0	0.283	0.000	27234	30166	220 KV Chamera_3(NH)-Chamba(PG) (PG) Ckt-2 & 220 KV Chamera_3(NH)-Budhil(LB) (LB) Ckt-1 tripped on Y-N phase to earth fault. Fault distance was 38.98km from Budhil end and 13km from Chamba end. As per PMU, Y-N phase to earth fault is observed. As per SCADA, generation loss of approx. 77MW is observed at Chamera_3(NH). In antecedent condition, 220 KV Chamera_3(NH)-Chamba(PG) (PG) Ckt-2 carrying 20MW.	1) 220 KV Chamera_3(NH)-Chamba(PG) (PG) Ckt-2 2) 220 KV Chamera_3(NH)-Budhil(LB) (LB) Ckt-1
15	GI-2	RAJASTHAN	21-May-2021 22:32	21-May-2021 23:37	1:05	0	0	0.000	0.000	32480	42610	400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 tripped only from Bikaner(RS) end due to problem in autorecloser. At the same time, 400 KV Bikaner(PG)-Bikaner RENEW Solar(RENEW) (Renew Power) Ckt-1 tripped on transient fault. As per PMU, R-N phase to earth fault is observed. In antecedent condition, 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 carrying 200MW.	1) 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 2) 400 KV Bikaner(PG)-Bikaner RENEW Solar(RENEW) (Renew Power) Ckt-1
16	GD-1	UTTAR PRADESH	22-May-2021 05:09	23-May-2021 00:05	18:56	340	0	1.339	0.000	25386	31943	210 MW Anpara TPS - UNIT 1, UNIT 2 & UNIT 3 all tripped on tripping of cooling water pump. As per PMU, no fault is observed. As per SCADA, generation loss of approx. 340MW is observed. In antecedent condition, 210 MW Anpara TPS - UNIT 1, UNIT 2 & UNIT 3 carrying 106MW, 100MW & 108MW respectively.	1) 210 MW Anpara TPS - UNIT 2 2) 210 MW Anpara TPS - UNIT 1 3) 210 MW Anpara TPS - UNIT 3
17	GD-1	J & K	22-May-2021 20:11	22-May-2021 23:53	3:42	0	550	0.000	1.246	33615	44125	220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-1 & Ckt-2 and 220 KV Amargarh(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-1 & Ckt-2 all tripped on R-N phase to earth fault. Fault distance was 28.6km and fault current was 3.51kA from Wagoora(PG) end. As per PMU, R-N phase to earth fault with delayed clearance in 400ms is observed. As per SCADA, load loss of approx. 550MW is observed in J&K control area.	1) 220 KV Amargarh(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-1 2) 220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-1 3) 220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-2 4) 220 KV Amargarh(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-2
18	GI-1	RAJASTHAN	22-May-2021 21:03	22-May-2021 23:01	1:58	0	0	0.000	0.000	32793	44038	220 KV Bhadla(PG)-Bhadla Solar(Adani) (Adani) Ckt-1 & Ckt-2 both tripped on B-N phase to earth fault. As per PMU, B-N phase to earth fault is observed. In antecedent condition, 220 KV Bhadla(PG)-Bhadla Solar(Adani) (Adani) Ckt-1 & Ckt-2 carrying 0MW each.	1) 220 KV Bhadla(PG)-Bhadla Solar(Adani) (Adani) Ckt-2 2) 220 KV Bhadla(PG)-Bhadla Solar(Adani) (Adani) Ckt-1
19	GD-1	HIMACHAL PRADESH	22-May-2021 21:24	22-May-2021 22:20	0:56	230	0	0.712	0.000	32296	43361	400 KV Gumma (HP)-Panchkula(PG) (PG) Ckt-1 & 400 KV Nathpa Jhakri(SJ)-Gumma (HP) (PG) Ckt-2 both tripped on R-N phase to earth fault. Both the lines didn't trip from Gumma end and tripped from Nathpa Jhakri(SJ) & Panchkula(PG) end only in Z-2. Fault distance was 110.6km from Panchkula(PG) end. Delayed clearance of fault is observed due to resistive nature of fault. 250MW Nathpa Jhakri HPS Unit-3 & 68.67MW Rampur HEP UNIT-3 also tripped on SPS operation at Nathpa Jhakri HPS. As per PMU, R-N phase to earth fault with delayed clearance in 1300ms is observed. As per SCADA, generation loss of approx. 190MW of Nathpa Jhakri HPS & 40MW of Rampur HPS is observed. In antecedent condition, 400 KV Gumma (HP)-Panchkula(PG) (PG) Ckt-1 & 400 KV Nathpa Jhakri(SJ)-Gumma (HP) (PG) Ckt-2 carrying 326MW & 289MW respectively.	1) 400 KV Gumma (HP)-Panchkula(PG) (PG) Ckt-1 2) 400 KV Nathpa Jhakri(SJ)-Gumma (HP) (PG) Ckt-2
20	GI-2	RAJASTHAN	23-May-2021 02:06	23-May-2021 07:48	5:42	0	0	0.000	0.000	29162	39758	400 KV Kankani-Jaisalmer (RS) Ckt-2 tripped on Y-N phase to earth fault. Fault distance was 36.9km (Z-1) from Jaisalmer end and 106.5km (Z-1) from Kankani end. Fault current was 2.89kA from Kankani end. At the same time, 400 KV Akal-Kankani (RS) Ckt-1 tripped from Akal end only without any indication. As per PMU, Y-N phase to earth fault is observed. In antecedent condition, 400 KV Kankani-Jaisalmer (RS) Ckt-2 & 400 KV Akal-Kankani (RS) Ckt-1 carrying 147MW & 167MW respectively.	1) 400 KV Akal-Kankani (RS) Ckt-1 2) 400 KV Kankani-Jaisalmer (RS) Ckt-2
21	GD-1	UTTAR PRADESH	24-May-2021 17:20	24-May-2021 18:55	1:35	138	0	0.449	0.000	30714	39176	400 KV Alaknanda GVK(UPC)-Muzaffarnagar (UP) Ckt-1 & 400 KV Alaknanda GVK(UPC) Vishnuprayag(JP) (UP) Ckt-1 both tripped at 17:20 Hrs on Y-N phase to earth fault with delayed clearance in 560ms. At 17:36 Hrs, 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-1 & Ckt-2 and 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCUL) Ckt-1 & Ckt-2 all tripped on DT received at Srinagar end. At the same time, 82.5MW Alaknanda HEP UNIT 2 and 33MW Singoli UNIT 1 & UNIT 2 also tripped. As per PMU, Y-N phase to earth fault is observed at 17:20 Hrs. In antecedent condition, 400 KV Alaknanda GVK(UPC)-Muzaffarnagar (UP) Ckt-1 & 400 KV Alaknanda GVK(UPC) Vishnuprayag(JP) (UP) Ckt-1 carrying 57MW & 117MW respectively.	1) 400 KV Alaknanda GVK(UPC)-Muzaffarnagar (UP) Ckt-1 2) 400 KV Alaknanda GVK(UPC)-Vishnuprayag(JP) (UP) Ckt-1 3) 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCUL) Ckt-2 4) 220 KV Singoli Bhatwari(Singoli(LTUHP))-Srinagar(UK) (PTCUL) Ckt-1 5) 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-2 6) 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-1
22	GD-1	PUNJAB	25-May-2021 12:57	25-May-2021 20:40	7:43	0	125	0.000	0.293	31535	42642	220 KV Ganguwal(BB)-Gobindgarh(PS) (BB) Ckt-2 tripped on R-Y phase to phase fault. Fault was in Z-1 with distance of 41.5km from Gobindgarh end. At the same time, 220 KV Ganguwal(BB)-Bhari(PS) (BB) Ckt-1 tripped on Y-B phase to phase fault, fault distance was 25.1 km from Bhari end. As per PMU, R-Y phase to phase fault followed by Y-B phase to phase fault is observed. As per SCADA, load loss of approx. 125MW is observed. In antecedent condition, 220 KV Ganguwal(BB)-Gobindgarh(PS) (BB) Ckt-2 & 220 KV Ganguwal(BB)-Bhari(PS) (BB) Ckt-1 carrying approx. 57MW each.	1) 220 KV Ganguwal(BB)-Gobindgarh(PS) (BB) Ckt-2 2) 220 KV Ganguwal(BB)-Bhari(PS) (BB) Ckt-1
23	GD-1	J & K	27-May-2021 14:38	27-May-2021 16:54	2:16	0	500	0.000	1.075	33072	46492	220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-1 & Ckt-2 and 220KV Amargarh(NRSS XXIX)-Ziankote(JK) (UNDEF) Ckt-1 & Ckt-2 all tripped on B-N phase to earth fault. Fault distance was 28.6km from Wagoora(PG) end and fault current was 1.11kA. As per PMU, B-N phase to earth fault with delayed clearance in 2300ms is observed. As per SCADA, load loss of approx. 500MW is observed in J&K control area.	1) 220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-1 2) 220 KV Wagoora(PG)-Ziankote(JK) (PDD JK) Ckt-2 3) 220KV Amargarh(NRSS XXIX)-Ziankote(JK) (UNDEF) Ckt-1 4) 220KV Amargarh(NRSS XXIX)-Ziankote(JK) (UNDEF) Ckt-2
24	GI-2	RAJASTHAN	30-May-2021 16:07	30-May-2021 17:05	0:58	0	0	0.000	0.000	35400	44245	765 KV Bhadla-Bikaner (PG) Ckt-2 tripped from Bhadla end only, due to pole discrepancy operated at Bikaner 717 tie bay of Bhadla-2 line and DT sent to Bhadla end. Line remained charged from Bikaner end. At the same time, 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 also tripped on R-N phase to earth fault from Bikaner(RS) end only. Line successfully autoreclosed from Bikaner(PG). Fault distance was 2.21km and fault current was 15.17kA from Bikaner(PG) end. As per PMU, R-N phase to earth fault is observed.	1) 400 KV Bikaner(PG)-Bikaner(RS) (PG) Ckt-1 2) 765 KV Bhadla-Bikaner (PG) Ckt-2
25	GI-2	HARYANA	30-May-2021 16:51	30-May-2021 20:39	3:48	0	0	0.000	0.000	34371	42867	400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-1 & Ckt-2 both tripped in reclaim time after successful A/R operation on B-N phase to earth fault. Fault distance was 4.6km & fault current was 11kA from Daulatabad end. As per PMU, B-N phase to earth fault is observed.	1) 400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-1 2) 400 KV Gurgaon(PG)-Daulatabad(HV) (HV) Ckt-2
26	GI-2	PUNJAB	31-May-2021 18:10	01-Jun-2021 15:26	21:16	0	0	0.000	0.000	34752	44365	400 KV Muktsar-Makhu (PS) Ckt-1 tripped on R-N phase to earth fault during fault reclaim time after successful A/R operation, fault distance was 70.8km (Z-1, 74.2%) & fault current was 3.52kA from Muktsar end. At the same time, 400 KV Muktsar-Makhu (PS) Ckt-2 tripped on B-N phase to earth fault during fault reclaim time after successful A/R operation, fault distance was 62.9km (Z-1,66%) & fault current was 3.57kA from Muktsar end. As per PMU, R-N phase to earth fault followed by B-N phase to earth fault is observed.	1) 400 KV Muktsar-Makhu (PS) Ckt-1 2) 400 KV Muktsar-Makhu (PS) Ckt-2

Details of Grid Events during the Month of May 2021 in Western Region

Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event		Antecedent Generation/Load in the Regional Grid*		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
	(GI 1or 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GI-1	WR	01-May-21 08:51	01-May-21 09:25	0:34	-	-	-	-	60965	49795	At 08:51 Hrs/01-05-21, B phase LA of 220 kV Padghe line blasted at Nashik substation and resulted in tripping of all the elements connected to 220 kV Bus.	Tripping of 1.220 kV Nashik-Navsari 1&2 2.220 kV Nashik-Padghe 3.220 kV Nashik- Raymond 4.220/132 kV Nashik ICTs 3,4&5
2	GD-1	WR	03-May-21 15:45	03-May-21 16:14	0:29	222	279	0.34%	0.52%	64581	53836	At 15:45 Hrs/03-05-21, 220 kV Apta 4 line Y phase insulator flashover occurred at Uran ss and resulted in tripping of all the elements connected to 220 kV Bus 1&2 on Busbar protection operation.	Tripping of 1.220 kV Uran-Apta 1,2,3&4 2.220 kV Uran-Kharghar 1&2 3.220 kV Uran-JNPT 4.220 kV Uran-ONGC 5.Uran Units 5,8& WRPH B0
3	GD-1	WR	07-May-21 17:37	07-May-21 18:58	1:21	135	-	0.23%	-	59498	50986	At 18:58 Hrs/07-05-21, 220 kV Bhuj-Vadva tripped on 86 A&B relay operation at Bhuj end. Due to the loss of evacuation path, there was a generation loss of 135 MW	Tripping of 1.220 kV Bhuj-Vadva
4	GD-1	WR	07-May-21 09:01	07-May-21 09:43	0:42	-	250	-	0.48%	59182	52060	At 09:01 Hrs/07-05-21, 220 kV Amona-Ponda 1,2& 3 tripped on R-E fault resulted in supply failure at 220 kV Ponda Bus 2. While restoring, 220 kV Amona-Ponda 1 at 09:28 Hrs, R phase PT of 220 kV Bus 2 failed and at the same time 220 kV Mapusa-Ponda tripped on Y-B fault. With the tripping of all the 220 kV lines, there was a load loss of 250 MW	Tripping of 1.220 kV Amona-Ponda 1,2&3 2.220 kV Mapusa-Ponda
5	GD-1	WR	08-May-21 16:15	08-May-21 18:46	2:31	180	-	0.29%	-	61481	54760	At 16:15 Hrs/08-05-21, 220 kV Bhuj-Gadhsisa tripped on R-E fault. There was a generation loss of 180 MW due to the loss of evacuation path.	Tripping of 1.220 kV Bhuj-Gadhsisa
6	GD-1	WR	08-May-21 17:44	08-May-21 18:58	1:14	33	-	0.06%	-	58359	50024	At 17:44 Hrs/08-05-21, 220 kV Bhuj-Dayapar 2 tripped on R-E fault. There was a generation loss of 33 MW due to the loss of evacuation path.	Tripping of 1.220 kV Bhuj-Dayapar 2
7	GI-2	WR	09-May-21 03:14	09-May-21 17:05	13:51	-	-	-	-	59179	48744	At 03:14 Hrs/09-05-21, Rph CT of 400 kV Itarsi(PG) 2 failed at Indore(MP) and caught fire. Due to fire spread to nearby area and created R phase fault, 400 kV Indore(MP) Bus 2 and all the connected elements tripped on Bus bar protection operation. At 03:22 Hrs, 400 kV Indore-Itarsi 1 tripped on Reactor PRV trip protection at Indore(MP) end and 400 kV Indore(MP)-Indore(PG) 1 on Over Voltage protection operation.	Tripping of 1.400 kV Indore(MP)- Itarsi 1&2 2.400 kV Indore(MP)- Indore(PG) 1&2 3.400 kV Indore(MP)- Asoj 2 4.400 kV Indore(MP)- Indirasagar 2 5.400/220 kV Indore(MP) ICTs 2&4
8	GD-1	WR	09-May-21 22:03	09-May-21 23:55	1:52	90	-	0.16%	-	57187	46815	At 22:03 Hrs/09-05-21, 220 kV Bhuj-Gadhsisa tripped on B-E fault. There was a generation loss of 90 MW due to the loss of evacuation path.	Tripping of 1.220 kV Bhuj-Gadhsisa
9	GD-1	WR	09-May-21 19:51	09-May-21 21:01	1:10	-	300	-	0.67%	55879	44731	At 19:07 Hrs/09-05-21, 400 kV Raita-Jagdalpur line tripped on R-E fault. 400 kV Kurud-Jagdalpur line was in open condition since 07.05.2021 due to high voltage. Jagdalpur load was being met through 220 kV from Kurud. At 19:51 Hrs, 400 kV Kurud- Raita line auto reclosed on B-E fault through main bay only at Kurud end. Tie bay didn't auto reclose leading to tripping of 315 MVA 400/220 kV ICT-1 & 2 (ICTs were in dia of 400 kV Raita-Kurud line) at Kurud. This led to supply failure at 400 kV Kurud and Jagdalpur.	Tripping of 1.400 kV Raita-Jagdalpur 2.400 kV Raita-Kurud

Details of Grid Events during the Month of May 2021 in Western Region

Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event		Antecedent Generation/Load in the Regional Grid*		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
	(GI 1or 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
10	GD-1	WR	10-May-21 10:45	11-May-21 13:40	2:55	68	-	0.11%	-	59970	51677	At 10:45 Hrs/10-05-21, 220 kV Bhuj-Vadva tripped on 86 A&B relay operation at Bhuj end due to B phase SF6 gas Zone relay Auxillary contact issue in Compartment -07 . Due to the loss of evacuation path, there was a generation loss of 68 MW	Tripping of 1.220 kV Bhuj-Vadva
11	GI-2	WR	12-May-21 23:55	13-May-21 00:28	0:33	-	-	-	-	60664	50364	At 23:55 Hrs/12-05-21, all 400kV elements connected to Bus-1 at Indore MP tripped due to mal-operation of LBB protection of 400kV Indore-ISP line-2. 400kV Indore-Itarsi line-2 and 400kV Indore (PG)-Indore line-2 were already out of service since 09.05.2021. 400kV Bus-2 at Indore(MP) is being out since 03:16hrs/09.05.2021 (Bus bar protection operated due to bursting of R-ph CT of 400 kV Indore-Itarsi PG-2 at Indore MP).	Tripping of 1.400 kV Indore(MP)- Indirasagar 1&2 2.400 kV Indore(MP)- Asoj 1&2 3.400 kV Indore(MP)- Nadga 4.400 kV Indore(MP)- Indore(PG) 1 5.400/220 kV Indore(MP) ICTs 1,3&4
12	GD-1	WR	14-May-21 18:23	14-May-21 19:40	1:17	-	220	-	0.48%	54748	45999	At 18:23 Hrs/14-05-21, Due to heavy wind and rains in Goa 220 kV Amona-Ponda 1&3, 220 kV mapusa-Ponda, 220 kV Ponda-Xeldem and 220 kV Ambewadi-Xeldem tripped on R phase- B phase fault. 220 kV Ponda ss became dark during the event.	Tripping of 1.220 kV Mapusa - Ponda 2.220 kV Amona-Ponda 1&3 3.220 kV Ambewadi-Xeldem 4.220 kV Ponda-Xeldem
13	GI-1	WR	16-May-21 06:48	16-May-21 07:11	0:23	-	80	-	0.17%	56757	45794	At 06:48 Hrs/16.05.21, 220kV Amona-Ponda-1 tripped due to B phase LA failure at Amona (Goa) end. Load loss of around 60 MW occurred in the above event. Prior to the event at 04:18 hrs/16.05.21, 220 KV Amona-Ponda-2, 220 KV Amona-Ponda-3 and 220kV Mahalaxmi-Amona tripped on over voltage. Heavy wind and rain were reported during the event.	Tripping of 1.220 kV Amona-Ponda 1,2&3 2.220 kV Mahalakshmi-Amona
14	GI-1	WR	16-May-21 07:19	16-May-21 07:30	0:11	-	40	-	0.09%	56431	45532	At 07:19 Hrs/16.05.21, During Y-B fault on 110 kV Tivim-Kadamba all three 220/110 kV 100 MVA ICTs at Tivim tripped on Backup Over current protection operation. Heavy wind and rain were reported during the event	Tripping of 1.110 kV Tivim-Kadamba 2.220/110 kV Tivim ICTs 1,2&3
15	GD-1	WR	16-May-21 20:31	16-May-21 21:20	0:49	-	19	-	0.05%	53280	38226	At 20:31 Hrs/16-05-21, R phase PT of 132 kV bus blasted at 220/132 kV Nagda(MP) substation which resulted in tripping of all the 132 kV lines connected at Nagda s/s from remote end. At the same time 220 kV BB protection mal operated for external fault and resulted in tripping of 220 kV elemnts connected to 220 kV Nagda Bus.	Tripping of 1.220 kV Nagda-Nagda I/C 1&2 2.220 kV Nagda Main Bus 3.220/132 kV Nagda ICTs 1,2&3 4.132 kV lines at Nagda s/s
16	GD-1	WR	18-May-21 06:45	18-May-21 07:32	0:47	190	-	0.36%	-	52667	37970	At 06:45 Hrs/18-05-21, 220 kV Bachhau-Bhuvad 1&2 tripped on over frequency protection operation at Bhuvad end. The grid frequency was less than 50.2 Hz, but the relays operated on H/f . The Over frequency protection was enabled temporarily to trip the wind generation in case of high frequency during Tautkae cyclone.The tripping was mainly due to non-introduction of delay for over frequency tripping. Due to the loss of evacuation path, there was a generation loss of 190 MW.	Tripping of 1.220 kV Bachhau-Bhuvad 1&2
17	GD-1	WR	20-May-21 05:09	20-May-21 05:15	0:06	-	130	-	0.33%	45525	38916	At 05:09 Hrs/20-05-21, 220 kV Mapusa-Ponda and 220 kV Mapusa-Amona tripped on Y-E fault. At the same time, 220 kV Amona-Ponda 1&3 tripped at Amona end only without any relay indication. 220 kV Mahalakshmi-Amona also tripped at Amona end only on Over Volatge protection operation. With the tripping of all the incoming lines, Ponda s/s became dark. Prior to the event, 220 kV Amona-Ponda 2 was kept opened from Amona end for Voltage control.	Tripping of 1.220 kV Mapusa-Ponda 2.220 kV Mapusa-Amona 3.220 kV Mahalakshmi-Amona 4.220 kV Amona-Ponda 1&3

Details of Grid Events during the Month of May 2021 in Western Region

Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event		Antecedent Generation/Load in the Regional Grid*		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
	(GI 1or 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
18	GI-2	WR	29-May-21 13:54	29-May-21 15:39	1:45	-	-	-	-	59719	52214	At 13:54 Hrs/29-05-21, 765 kV Indore-Khandwa 1 tripped on Y-B fault. At the same time 765 kV Indore Bus 2 and all the main bays connected tripped on Busbar protection operation. As the 765 kV Indore-Vadodara is in the same dia of 765 kV Indore-Khandwa 1, it also tripped.	Tripping of 1.765 kV Indore Bus 2 2.765 kV Indore-Vadodara 3.765 kV Indore-Khandwa 1
19	GI-1	WR	29-May-21 14:02	29-May-21 14:05	0:03	-	100	-	0.19%	59692	52885	At 14:02 Hrs/29-05-21, 220 kV Ponda-Xeldem tripped on Y-E fault due to the snapping of Earth wire between tower location 244-248. At the same time 220/110 kV Ponda ICTs 1&2 tripped. As reported by Goa, there was a load loss of 100 MW	Tripping of 1.220 kV Ponda-Xeldem 2.220/110 kV Ponda ICTs 1&2

Details of Grid Events during the Month of May 2021 in Eastern Region

Sl No.	Category of Grid Event	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Event		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
	(GI 1 or 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	Dumka	15-05-2021 12:01	15-05-2021 12:50	00:49	0	185	0.00%	1.00%	22080	18465	Due to tower collapse of 220 kV Farakka-Lalmatia S/C in April 2021, local load at 220 kV Dumka and Godda S/S were being radially fed from 400/220 kV Maithon S/S through 220 kV Maithon-Dumka D/C and 220 kV Dumka-Godda D/C. Shutdown of 220 kV Maithon Dumka – 1 was taken by JUSNL at 10:51 hrs to attend rectify red hot at connector of R- phase pole of circuit breaker of the line. Hence load at Dumka was fed through 220 kV Maithon Dumka – 2. At 12:02 hrs 220 kV Maithon Dumka – 2 tripped on R phase to earth fault resulting in total power failure at Goda, Dumka S/S and nearby areas.	220 kV Maithon Dumka - 1
2	GD-1	Bodhgaya	17-05-2021 23:06	17-05-2021 23:46	00:40	0	150	0.00%	0.67%	26406	22404	On 17-05-2021, 220 kV Gaya-Bodhgaya-1 & 2 tripped at 23:06 hrs from Gaya end only. At that moment, all 220/132 KV ICTs at Bodhgaya also tripped, causing load loss of 150 MW at Chandauti, Sherghati, Imamganj, Rafiganj Traction & Bodhgaya. 220 KV Bodhgaya-Khijasarai D/C was hand-tripped from Bodhgaya end.	220 kV Gaya Bodhgaya D/C 220/132 kV ICTs at Bodhgaya
3	GD-1	Sonenagar	20-05-2021 03:41	20-05-2021 04:23	00:42	0	92	0.00%	0.44%	22357	20839	220 kV Chandauti-Sonenagar D/C tripped at 03:41 hrs on 20th May 2021 from Chandauti end. This has led to total power failure at 220/132 kV Sonenagar (BSPTCL) and radially connected 132 kV substations. At the same time 132 kV Sonenagar – Japla S/C also got tripped. The power restored at 04:23 hrs by extending power from 400/220 kV Chandauti through 220KV-Chandauti (PMTL)-Sonenagar-1.	220 kV Chandauti-Sonenagar D/C 132 kV Sonenagar – Japla S/C
4	GD-1	Joda	23-05-2021 10:17	23-05-2021 11:07	00:50	0	100	0.00%	0.54%	20750	18520	On 23-05-2021 at 10:15 Hrs., all 220 kV feeders connected to 220/132 kV Joda S/S got tripped due to operation of bus bar protection. This has resulted in total power failure at 220/132 kV Joda and 220 kV TSIL S/S and loss of 100 MW load. After investigation, it was found that Y-phase CT of 220 kV Joda –TSIL feeder blasted at Joda end. The power at Joda substation was restored at 11:07 Hrs. by extending power from 220 kV JSPL substation through 220 kV Joda-JSPL Line.	220 kV Joda – TTPS - 1 220 kV Ramchandrapur – Joda S/C 220 kV Joda – JSPL S/C 220 kV Joda TSIL S/C 132 kV Joda – Kendposi S/C
5	GD-1	Jasidih	27-05-2021 10:13	27-05-2021 10:32	00:19	0	30	0.00%	0.25%	19999	11979	On 26-05-2021 and 27-05-2021, demand in Jharkhand system was low because of thunderstorm and heavy rainfall caused by Cyclone Yaas and subsequent depression. As a result, high voltage has been observed at various parts of JUSNL network. At 03:22 hrs of 27th may 2021, 220 kV Dumka-Jasidih D/C were hand tripped at Dumka end because of overvoltage. 132 kV Dumka-Dumka D/C and 132 kV Dumka-Deoghar were in service thus avoided power failure. Charging of 220 KV Dumka-Jasidih – 1 was attempted at 03:51 Hrs and 07:01 Hrs however it wasn't successful. Finally, it was charged at 09:50 Hrs. At 10:13 hrs, 220 kV Dumka Jasidih – 1 from Dumka end due to operation of overvoltage stage 1. With this 132 kV Dumka – Dumka D/C and 132 kV Dumka – Deoghar D/C also got tripped. This has led to loss of supply at 220/132 kV Jasidih and 132 kV Dumka substation.	220 kV Dumka-Jasidih-D/C 132 kV Dumka - Dumka D/C 132 kV Dumka - Deoghar D/C 220 kV Dumka-Jasidih-1
6	GD-1	Khagaria	27-05-2021 23:22	28-05-2021 00:50	01:28	0	5	0.00%	0.03%	24880	14900	220 kV Khagaria S/S is radially connected to New Purnea S/S through 220 kV Khagaria-New Purnea-2. On 27-05-2021, demand in Bihar was low because of thunderstorm and heavy rainfall due to depression caused by Cyclone Yaas. At 23: 22 hrs 220 kV Khagaria-New Purnea-2 tripped due to Y-B fault resulting in total power failure at Khagaria S/S. Power supply restored at 00:50 hrs.	220 kV Khagaria-New Purnea-2
7	GD-1	Rengali	28-05-2021 07:45	28-05-2021 13:12	05:27	0	0	0.00%	0.00%	21534	13667	On 28-05-2021 at 07:45 hrs, due to CVT failure of 220 kV Rengali-TSTPP S/C at Rengali end, all 220 kV lines connected to 220 kV Rengali (OPTCL) S/S and 220 kV Rengali PH got tripped. Y phase jumper snapping of 220 kV Rengali-Rengali – 2 at 220 kV Rengali (OPTCL) Bus A was also reported at the same time. The event has led to total power supply failure at 220 kV Rengali Hydropower station and 220 kV Rengali (OPTCL) S/s.	220KV-RENGALI(PG)-RENGALI(GRIDCO)-1 & 2 220KV-RENGALI(PH)-RENGALI(GRIDCO)-1 & 2 220KV-RENGALI(PH)-TSTPP S/C 220KV-BARKOT-RENGALI(GRIDCO) S/C 220KV-CHANDIPOSH-RENGALI(GRIDCO) S/C 220KV-RENGALI(PH) Bus-1 & 2 220KV-RENGALI(GRIDCO) Bus-1 & 2 220KV-RENGALI(PH)-TTPS S/C

Details of Grid Events during the Month of May 2021 in Southern Region

Sl No.	Category of Grid Event (GI 1or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Name of Elements (Tripped/Manually opened)
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	Karnataka	02-May-21 09:23	02-May-21 10:05	42mins	170	0	0.00	0.00	38998	42684	Complete Outage of 220kV/33kV KSPDCL SS no-4 (Pavagada) of KSPDCL on 02-05-2021 : During antecedent conditions, all elements were connected to Bus-1 at 220kV KSPDCL SS no-4 due to prolonged outage of Bus-2 because of Bus PT failure issue. Triggering incident was fault in 33kV cable no.11 (KREDL) of 220kV/33kV KSPDCL SS no-4. Earth fault protection and Over current protection operated and line got tripped. Immediately, 220kV Bus-1 BBP maloperated resulting in the tripping of all the elements connected at 220kV KSPDCL SS no-4. This resulted in complete outage of 220kV KSPDCL SS no-4. It may be noted that 220kV Pavagada KSPDCL SS no-4 line was holding at Pavagada end during this event.	1. 220KV Pavagada - KSPDCL-4 2. 80MVA Transformer 1&2 3.80MVA Transformer 3&4
2	GD-1	Tamil Nadu	04-May-21 11:01	04-May-21 11:26	25 mins	0	180	0.00	0.00	41738	47407	Complete Outage of 230kV SP koil of TANTRANSCO: Triggering incident was B-N fault in Omega-SP Koil line at 10:29hrs. At both the ends, fault was sensed in zone-1. A/R operated and line tripped on persistent fault. This led to increase in flow of 230kV SP Koil-Kanchipuram and 230kV SP Koil-Oragadam. At 11:01hrs, 230kV Oragadam-SP Koil line tripped on R-N fault which led to further increase in flow of 230kV SP Koil-Kanchipuram line, owing to which 230kV SP Koil- Kalpakkam line-1 and 2 were hand tripped at 11:20 Hrs. Also the 110kV lines connected to SP Koil tripped due to over current at remote ends. At 11:20hrs, 230kV Kanchipuram-SP koil tripped on R-N fault. This led to complete outage of 230kV SP Koil SS of TANTRANSCO.	1.230kV Omega-SP Koil line 2.230kV SP Koil-Kanchipuram 3. 230kV SP Koil-Oragadam 4. SP Koil-Kalpakkam line 1 and 2 5.230kV Oragadam - Sriperambadur
3	GD-1	Kerala	06-May-21 16:49	06-May-21 17:20	31 mins	36	82	0.00	0.00	35007	43546	Complete Outage of 220kV Edappon of KSEB: During antecedent conditions, 220kV Edappon Kayamkulam line was under outage form 15-04-2021. Because of this 220kV Edappon SS was radially fed from 220kV Edmon SS. Triggering incident was R-Y-N fault in the 220kV Edamon Edappon line due to heavy rain and lightening. Zone-1 protection operated and line got tripped. Since Edappon SS is radially fed from Edamon SS, this resulted in complete outage of 220kV Edappon SS.	1.220kV Edamon Edappon Line
4	GD-1	Karnataka	07-May-21 09:44	07-May-21 09:48	4min	46	104	0.00	0.00	41333	46225	Complete Outage of 220kV Ambewadi SS of KPTCL and 110kV Supa PH of KPCL: During antecedent conditions, 220kV Ambewadi SS was radially fed from 220kV Naghjeri PH through only one line (220kV Ambewadi Naghjeri line-1). Triggering incident was RBN fault in 220kV Ambewadi Naghjeri line-1 at a distance of 18km from Naghjeri end and 10km from Ambewadi end. Suspected transient fault in the line due to rain. Line tripped on operation of Zone-1 distance protection at both the ends. Due to the tripping of only connected source line, there was complete loss of supply at 220kV Ambewadi SS. It was reported that the running unit (U1) tripped on operation of over frequency protection at 110kV Supa Generating Station.	1. 220kV Ambewadi Naghjeri line-1
5	GD-1	Karnataka	10-May-21 21:09	10-May-21 21:44	35mins	0	496	0.00	0.01	31599	40555	Multiple Tripping in 400kV/ 220kV Nelamangala SS and Complete outage of 220kV Magadi SS, 220kV Anchepalya SS, 220kV Brindavan SS, 220kV NRS, 220kV Peenya SS and 220kV DB Pura: Triggering incident was failure of Y ph CVT of bus-2 at 220kV Nelamangala SS. Bus-2 BBP operated and all the connected elements got tripped. At the same time, Bus-1 BBP also operated due to isolator status problem at Nelamangala end. This resulted in de-energisation of 220kV bus of 400kV/220kV Nelamangala SS and there was complete loss of supply at 220kV Magadi SS, 220kV Anchepalya SS, 220kV Brindavan SS, 220kV NRS, 220kV Peenya SS and 220kV DB Pura ss that were radially fed from Nelamangala SS	1. 220 kV Anchepalya Nelamangala 2.220 kV Magadi Nelamangala 3.220 kV Peenya Nelemangala-4 4.220 kV Peenya Nelamangala-3 5.220 kV Peenya Nelamangala-2 6.220 kV Puttenahalli Nelamangala 7.220 kV DB pura Nelamangala-1 8.220 kV DB Pura Nelamangala-2 9.220 kV Nittur Nelamangala 10.220 kV Dabuspete Nelamangala 11.220 kV KB Cross Nelamangala 12.400 /220 kV ICT 1 13.400 /220 kV ICT 2 14.400 /220 kV ICT 3
6	GD-1	Karnataka	10-May-21 13:01	10-May-21 13:18	17mins	620	117	0.02	0.00	40598	44974	Complete outage of 220kV Nagjheri PH and 110kV Supa PH of KPCL and 220kv Ambewadi SS of KPTCL: During antecedent conditions, Nagjheri Kodsalli Line-1,2,Nagjheri Hubli Line-1, Nagjheri Ambewadi Line-2 were under outage. Triggering incident was tripping of Nagjheri Hubli Line-3 due to line to ground fault at 13:01hrs. At 13:02hrs Nagjheri Hubli Line-2 tripped on line to ground fault. Because of this, Nagjheri Bidnal line got overloaded & tripped on Over-current protection at Nagjheri Power House end. This resulted in loss of evacuation at 220kV Naghjeri PH. Running Units 1,2,3 and 6 got tripped on operation of over frequency 4th stage. Since 220kV Ambewadi SS was radially fed from 220kV Naghjeri PH during antecedent conditions, this further resulted in complete loss of supply at 220kV Ambewadi. Futher there was complete outage of 110kV Supa PH during this event.	1.220kV Nagjheri Hubli ine-2 2.220kV Nagjheri Hubli ine-3 3.220kV Nagjheri Bidnal 4. 220kV Nagjheri Ambewadi Line-1 5. Unit 1,2,3&6
7	GD-1	Tamil Nadu	13-May-21 17:04	13-May-21 18:45	1hr 41mins	20	0	0.00	0.00	29939	36579	Complete outage of 230kV Mytrah Wind Station: As per the report submitted, triggering incident was R phase jumper cut in 230kV Mytrah-TTGS line- 2 near TTSG. At TTGS end, fault was sensed in Zone-1, Autoreclose (A/R) operated and line tripped due to persistent fault. Due to tripping of the only connected line, there was complete outage of 230kV Mytrah Wind Station and loss in wind generation of around 20MW was reported during this event. At the same time, 400/230kV TTGS ICT-1 got tripped on operation of Bucholz protection and the same needs review.	1.230kV Mytrah-TTGS 2 2. 400/230kV TTGS ICT-1
8	GD-1	Kerala	15-May-21 19:13	15-May-21 19:24	11mins	50	283	0.00	0.01	28394	34903	Complete Outage of 220kV Ambalathara, 220kV Orkattery SS, 220kV Kanhirode, 220kV Mylatty SS, and 220kV Taliparamba SS: During antecedent conditions, 220kV Thaliparamba SS, 220kV Ambalathara SS and 220kV Mylatty SS were fed from 220kV Kanhirode SS. Triggering incident was B phase jumper opening in 220kV Areakode Orkattery line near Areakode SS. 220kV Areakode Orkattery line tripped only at Areakode end on operation of DEF protection. Due to non-operation of protection at Orkattery end, fault was cleared by tripping of 220kV Kanhirode Areakode line at Kanhirode end on operation of DEF protection. Due to tripping of both incoming lines, there was complete loss of supply at 220kV Kanhirode SS and 220kV Orkattery SS. Since 220kV Thaliparamba, 220kV Mylatty and 220kV Ambalathara were fed from 220kV Kanhirode SS. This further resulted in complete loss of supply at 220kV Thaliparamba SS, 220kV Mylatty SS and 220kV Ambalathara SS.	1.220KV Kanhirode Ambalathara 2.220KV Areacode Kanhirode 3.220KV Orkkatery Kanhirode 4.220KV Kanhirode Thalipparamba 5.220kV Ambalathara Mylatty
9	GD-1	Telangana	15-05-2021 15:46	15-May-21 18:31	2hrs 45mins	0	0	0.00	0.00	33419	34725	Complete Outage of 400kV/220kV Sundila SS of TSTRANSCO: Triggering incident was B-N fault in 400kV Sundila Singareni Line-1. At the same time, 400kV Nirmal Sundila Line-1 tripped on operation of over voltage at Sundila end adnd DT was received at Nirmal end. Simultaneouly, 400/220kV Sundila ICT-3 got tripped on suspected maloperation. Since other lines and ICTs were out during antecedent, this resulted complete outage of 400kV/220kV Sundila SS.	1.400kV Sundila Singareni Line-1 2.Nirmal Sundila Line-1 3.400/220kV Sundila ICT-3
10	GD-1	Telangana	15-05-2021 18:44	15-May-21 21:04	2hr 20mins	0	0	0.00	0.00	28314	33728	Complete Outage of 400kV/220kV Sundila SS of TSTRANSCO: Triggering incident was tripping of 400kV Nirmal Sundila Line-1 on operation of over voltage at Sundila end and DT was received from Nirmal end . Since other lines and ICTs were out during antecedent, this resulted complete outage of 400kV/220kV Sundila SS.	1.400kV Nirmal Sundila Line-1
11	GD-1	Andhra Pradesh	28-May-21 00:06	28-May-21 00:21	15mins	0	95	0.00	0.00	33863	34789	Complete Outage of 220kV Sulurpet SS of APTRANSCO: Triggering incident was failure of Y-phase CT of 220kV Nellore Sulurpet Line-2 at Sulurpet end resulting in Bus-1 fault at 220kV Sulurpet SS. At Sulurpet end, 220kV bus bar protection was out of service and hence fault was cleared by the tripping of all the connected lines at remote end. This resulted in complete outage of 220kV Sulurpet SS. It may be noted that 220kV Sulurpet SS has single bus configuration.	1.220 kV Gummudipundi Sulurpet 2. 220kV Sulurpet Nellore-1 3.220kV Sulurpet Nellore-2 4.220kV Sulurpet Nellore-3

Details of Grid Events during the Month of May 2021 in Southern Region

Sl No.	Category of Grid Event (GI 1or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Name of Elements (Tripped/Manually opened)
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
12	GD-1	Andhra Pradesh	28-May-21 06:10	28-May-21 07:20	1hr 10mins	0	0	0.00	0.00	29803	34547	Complete Outage of 220kV Lower Sileru PH of APGENCO: As per the report submitted, triggering incident was suspected LBB maloperation of U#2 resulting in the tripping of 220kV bus-2 connected elements at 220kV Lower Sileru PH . At the same time, 220kV Bus-1 connected elements also got tripped. This resulted in the complete outage of 220kV Lower Sileru PH of APGENCO. There was no generarion at Lower Sileru during this event. Details are awaited.	1.220kV KTPS V- Lower Sileru-2 2.220kV Asupaka - Lower Sileru-1 3. 220kV Bommuru- Lower Sileru line.
13	GI-2	Karnataka	01-May-21 16:54	01-May-21 20:35	4hrs 21min	0	0	0.00	0.00	31622	39209	Tripping of 400kV Bus-2 of 400kV/220kV Guttur SS of KPTCL: Triggering incident was operation of Bus-2 BBP at 400kV Guttur end due to suspected failure of HV side Isolator of 400kV/220kV Guttur ICT-2. This resulted in the tripping of all the elements connected to 400kV Bus-2 at 400kV/220kV Guttur SS.	1.400/220 kV ICT-2 AT Guttur 2.400 kV Guttur - Narendra 2 3.400 kV Guttur - Hiriyur 2
14	GI-1	Telangana	04-May-21 17:08	04-May-21 18:06	58mins	0	0	0.00	0.00	34190	41609	Tripping of 220kV Bus-1 of 400kV/220kV Gajwel SS of TSTRANSCO: LBB protection of 220kV Gajwel – Minpur line-1 operated at 220kV Gajwel end resulting in the tripping of all the elements connected to Bus-1 during YN fault in 132kV Energon solar feeder.	1.400/220kV ICT-1 2.400/220kV ICT-3 3.100MVA PTR-1 4.160MVA PTR-2 5.220kV Gajwel Minpur-1 6.220kV Gajwel Kondapaka 7.220kV Gajwel Medchal-2 8.220kV Gajwel Akkaram-1
15	GI-1	Tamil Nadu	28-May-21 09:47	28-May-21 10:56	1hr 9mins	0	452	0.00	0.01	36450	37881	Tripping of 110kV Bus of 400/220/110kV Kanarpatty SS of TANTRANSCO: Triggering incident was failure of support insulator on LV side isolator of 400/110kV ICT-5. This resulted in earth fault and led to tripping of LV side breaker of ICT-5. Subsequently, 400/110kV ICT-3 and 400/110kV ICT-4 got tripped due to overload protection. This resulted in deengerisation of 110kV bus of 400/220/110kV Kanarpatty SS.	1.400/110kV ICT-3 2.400/110kV ICT-4 3.400/110kV ICT-5

Details of Grid Events during the Month of May 2021 in North Eastern Region

Sl No.	Category of Grid Event (GI 1or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM:SS)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-I	Rokhia area of Tripura Power System	01-May-21 02:42	01/May/21 03:01	0:19:00	85	16	0.0	0.0	1914	1993	Rokhia area of Tripura Power System was connected with the rest of NER Grid through 132 kV Agartala - Rokhia D/C Lines and 132 kV Monarchak - Rokhia Line At 02:42 Hrs on 01.05.2021, 132 kV Agartala - Rokhia D/C Lines and 132 kV Monarchak - Rokhia Line tripped. Due to tripping of these elements, Rokhia area of Tripura Power System was separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	132 kV Agartala - Rokhia D/C Lines 132 kV Monarchak - Rokhia Line Rokhia Unit 7 Rokhia Unit 8 Rokhia Unit 9 Monarchak STG
2	GD-I	Along area of Arunachal Pradesh Power System	01/May/21 19:43	01/May/21 20:41	0:58:00	0	19	0.0	0.0	2309	2115	Along area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Daporijo-Along line . At 19:43 Hrs on 01.05.2021, 132 kV Daporijo-Along line tripped. Due to tripping of this element, Along area of Arunachal Pradesh Power System was separated from the rest of NER Grid and subsequently collapsed due to no source available in this area.	132 kV Daporijo-Along line
3	GD-I	Mustem & Mawlyndep area of Meghalaya Power System	02/May/21 14:30	02/May/21 15:09	0:39:00	0	23	0.0	0.0	1493	2047	Mustem & Mawlyndep area of Meghalaya Power System were connected with the rest of NER Grid through 132 kV Khleihriat-Mustem line & 132 kV Mawlyndep-NEHU line. 132 kV Mustem-Khleihriat line tripped at 14:03 hrs on 02.05.2021. At 14:30 Hrs on 02.05.2021, 132 kV Mawlyndep-Mustem line tripped causing blackout at Mustem S/S. Again, at 14:37 Hrs, 132 kV Mawlyndep-NEHU line tripped leading to blackout at Mawlyndep S/S. Due to tripping of these elements, Mustem & Mawlyndep area of Meghalaya Power System was separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas.	132 kv Mustem-Khleihriat line 132 kv Mawlyndep-Mustem line 132 kv Mawlyndep-NEHU line
4	GD-I	Dhaligaon, , Gossaigaon and part of Bornagar area of Assam Power System	04/May/21 01:51	04/May/21 02:07	0:16:00	0	24	0.0	0.0	1746	1245	Dhaligaon, , Gossaigaon and part of Bornagar area of Assam Power System were connected with the rest of NER Grid through 132 kV BTPS Dhaligaon D/C line. 132 kV Dhaligaon-Nalbari line and 132 kV Gaossaigan-Gauripur line was kept open due to system constraint by AEGCL. Also, at 132 kV Barnagar SS, bus was in splitting condition(40 & 25 MVA ICT feeding power from Dhaligaon side and 25 MVA ICT was feeding power from Rangia side) At 01:51 Hrs on 04-05-2021, 132 kV BTPS(AS)-Dhaligaon D/C line tripped. Due to tripping of these elements Dhaligaon, Gossaigaon and Bornagar(partial) areas of Assam Power System were seperated from the rest of the NER grid and subsequently collapsed due to no source available in these areas.	132 kV BTPS-Dhaligaon D/C lines
5	GD-I	Lumshnong Area of Meghalaya Power System	06/May/21 04:41	06/May/21 05:06	0:25:00	0	26	0.0	0.0	1493	1228	Lumshnong Area of Meghalaya Power System was connected to the rest of NER grid through 132 kV Lumshnong - Panchgram line & 132 kV Khliehriat(MePTCL) - Lumshnong line. At 04:41 hrs of 06.05.2021, 132 kV Lumshnong - Panchgram line &132 kV Khliehriat(MePTCL) - Lumshnong line tripped. Due to tripping of these elements, Lumshnong Area of Meghalaya Power System was separated from the rest of NER Grid and subsequently collapsed due to no source available in this area.	132 kV Lumshnong - Panchgram line 132 kV Khliehriat(MePTCL) - Lumshnong line
6	GD-I	Lumshnong Area of Meghalaya Power System	12/May/21 05:21	12/May/21 05:32	0:11:00	0	18	0.0	0.0	1839	1587	Lumshnong Area of Meghalaya Power System was connected to the rest of NER grid through 132 kV Lumshnong - Panchgram line & 132 kV Khliehriat(MePTCL) - Lumshnong line. At 05:21 hrs of 12.05.2021, 132 kV Lumshnong - Panchgram line &132 kV Khliehriat(MePTCL) - Lumshnong line tripped. Due to tripping of these elements, Lumshnong Area of Meghalaya Power System was separated from the rest of NER Grid and subsequently collapsed due to no source available in this area.	132 kV Lumshnong - Panchgram line 132 kV Khliehriat(MePTCL) - Lumshnong line
7	GD-I	Mustem and Mawlyndep areas of Meghalaya Power System	12/May/21 13:56	12/May/21 14:07	0:11:00	0	26	0.0	0.0	1793	1853	Mustem and Mawlyndep areas of Meghalaya Power System was connected with the rest of NER Grid through132 kV Mawlyndep - NEHU line and 132 kV Khleiriat (MePTCL) - Mustem line. At 13:56 Hrs on 12.05.2021, 132 kV Mawlyndep - NEHU line and 132 kV Khleiriat (MePTCL) - Mustem line tripped. Due to tripping of these elements, Mustem and Mawlyndep area of Meghalaya Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas.	132 kV Mawlyndep - Nehu 132 kV Khleiriat - Mustem lines
8	GD-I	Capital area of Arunachal Pradesh Power System	12/May/21 18:57	12/May/21 19:28	0:31:00	0	49	0.0	0.0	2436	2442	Capital area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Itanagar (Chimpu)-Lekhi line,132 kV Pare-Lekhi line,132 kV Itanagar (Chimpu)-Pare line,132 kV Itanagar (Chimpu)-Ranganadi line and 132 kV BNC(PG) - Itanagar (Chimpu) I &II lines.(132 kV Nirjuli - Gohpur line was kept open to control loading of 132 kV Lekhi - Pare Line). At 18:57 Hrs on 12.05.2021, 132 kV Itanagar (Chimpu)-Lekhi line,132 kV Pare - Lekhi line,132 kV Itanagar (Chimpu)-Pare line,132 kV Itanagar (Chimpu)-Ranganadi line ,132 kV BNC(PG) - Itanagar (Chimpu) I & II lines tripped. Due to tripping of these elements , Capital area of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in this area.	132 kV Itanagar (Chimpu)-Lekhi line 132 kV Pare - Lekhi line 132 kV Itanagar(Chimpu)-Pare line 132 kV Itanagar(Chimpu)-Ranganadi line 132 kV BNC(PG) - Itanagar (Chimpu) I & II

Details of Grid Events during the Month of May 2021 in North Eastern Region

Sl No.	Category of Grid Event (GI 1or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM:SS)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
9	GD-I	Mawlai and Mawngap areas of Meghalaya Power System and UMIAM I & UMIAM II Generating Stations	15/May/21 13:39	15/May/21 13:50	0:11:00	18	80	0.0	0.0	1088	1845	Mawlai and Mawngap areas of Meghalaya Power System and UMIAM I & UMIAM II Generating Stations were connected with the rest of NER Grid through 132 kV Umiam III-Umiam I D/C lines, 132kV Umiam I-Umiam line, 132 kV Mawlai-NEHU line and 132 kV Nongstoin-Mawngap line. At 13:39 Hrs, 132 kV Umiam III-Umiam I D/C lines, 132kV Umiam I-Umiam line, 132 kV Mawlai-NEHU line and 132 kV Nongstoin-Mawngap line tripped. Due to tripping of these elements, Mawlai and Mawngap areas of Meghalaya Power System and UMIAM I & UMIAM II Generating Stations were separated from the rest of NER Grid and subsequently collapsed due to load generatiom mismatch in these areas.	132 kV Umiam III-Umiam I D/C lines 132 kV Mawlai-NEHU line 132kV Umiam I-Umiam line 132 kV Nongstoin-Mawngap line 132 kV Umiam IV-Umiam III D/C lines 132 kV Neigrihms-Khleihriat line New UMTRU U#1
10	GD-I	Leshka Generating Station of Meghalaya Power System	20/May/21 15:04	20/May/21 15:31	0:27:00	41	0	0.0	0.0	1932	1550	Leshka Generating Station of Meghalaya Power System was connected with the rest of NER Grid through 132 kV Leshka-Khliehriat(MePTCL) D/C lines. At 15:04 Hrs, Myndtu Leshka - UNIT 1 & 2 and 132 kV Leshka-Khliehriat(MePTCL) D/C lines tripped. Due to tripping of these elements, Leshka Generating Station of Meghalaya Power System was separated from the rest of NER Grid and subsequently collapsed due to load generatiom mismatch in this area.	Myndtu Leshka - UNIT 1 & 2 132 kV Leshka-Khliehriat(MePTCL) D/C lines
11	GD-I	Rokhia area of Tripura Power System	23/May/21 02:02	23/May/21 02:30	0:28:00	36	14	0.0	0.0	1914	1993	Rokhia area of Tripura Power System was connected with the rest of NER Grid through 132 kV Agartala - Rokhia 1 Line and 132 kV Monarchak - Rokhia Line. 132 kV Agartala - Rokhia 2 Line was under shutdown due to damage in cross arm structure since 02/05/2021. At 02:02 Hrs on 23.05.2021, 132 kV Agartala - Rokhia 1 Line and 132 kV Monarchak - Rokhia Line tripped. Due to tripping of these elements,Rokhia area of Tripura Power System was separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	132 kV Agartala - Rokhia 1 Lines 132 kV Monarchak - Rokhia Line Rokhia Unit 8 Rokhia Unit 9
12	GD-I	Gohpur, North Lakhimpur, Dhemaji and Majuli areas of Assam Power System and Nirjuli area of Arunachal Pradesh Power System	26/May/21 10:25	26/May/21 10:33	0:08:00	0	73	0.0	0.0	1574	2025	Gohpur, North Lakhimpur, Dhemaji and Majuli areas of Assam Power System and Nirjuli area of Arunachal Pradesh Power System were connected with the rest of NER Grid through 132 kV Gophur-Pavoi(AS) II line and 132 kV Lekhi-Nirjuli line. 132 kV Gophur-Pavoi(AS) I line Line was under shutdown due to Tower Dismantling works. At 10:25 Hrs on 26.05.2021, 132 kV Gophur-Pavoi(AS) II line and 132 kV Lekhi-Nirjuli line tripped. Due to tripping of these elements,Gohpur, North Lakhimpur, Dhemaji and Majuli areas of Assam Power System and Nirjuli area of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas.	132 kV Gophur-Pavoi(AS) II line 132 kV Lekhi-Nirjuli line
13	GD-I	North Lakhimpur, Dhemaji and Majuli areas of Assam Power System	26-May-21 21:34	26/May/21 21:38	0:04:00	0	60	0.0	0.0	2288	2504	North Lakhimpur, Dhemaji and Majuli areas of Assam Power System were connected with the rest of NER Grid through 132 kV Gohpur-North Lakhimpur I & II lines. At 21:34 Hrs on 26.05.2021, 132 kV Gohpur-North Lakhimpur I & II lines tripped. Due to tripping of these elements, North Lakhimpur, Dhemaji and Majuli areas of Assam Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas.	132 kV Gohpur-North Lakhimpur I & II lines
14	GD-I	North Lakhimpur, Dhemaji and Majuli areas of Assam Power System	26/May/21 21:48	26/May/21 21:52	0:04:00	0	48	0.0	0.0	2265	2455	North Lakhimpur, Dhemaji and Majuli areas of Assam Power System were connected with the rest of NER Grid through 132 kV Gohpur-North Lakhimpur I & II lines. At 21:48 Hrs on 26.05.2021, 132 kV Gohpur-North Lakhimpur I & II lines tripped. Due to tripping of these elements, North Lakhimpur, Dhemaji and Majuli areas of Assam Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas.	132 kV Gohpur-North Lakhimpur I & II lines
15	GD-I	Along,Pasighat,Roing, Tezu & Namsai Areas of Arunachal Power System	27/May/21 07:12	27/May/21 08:01	0:49:00	0	13	0.0	0.0	1991	1988	Along,Pasighat,Roing,Tezu & Namsai Areas of Arunachal Power System was connected with the rest of NER Grid through 132 kV Daporijo-Along line. At 07:12 Hrs on 27.05.2021, 132 kV Daporijo-Along line tripped. Due to tripping of this element, Along and radially connnected Pasighat, Roing, Tezu & Namsai area of Arunachal Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas.	132 kV Daporijo-Along line
16	GD-I	Along,Pasighat,Roing, Tezu & Namsai Areas of Arunachal Power System	28/May/21 12:23	28/May/21 12:53	0:30:00	0	27	0.0	0.0	1975	2201	Along,Pasighat,Roing,Tezu & Namsai Areas of Arunachal Power System was connected with the rest of NER Grid through 132 kV Daporijo-Along line. At 12:23 Hrs on 28.05.2021, 132 kV Daporijo-Along line tripped. Due to tripping of this element, Along and the radially connnected Pasighat, Roing, Tezu & Namsai areas of Arunachal Power System were separated from the rest of NER Grid and subsequently collapsed due to no source available in these areas.	132 kV Daporijo-Along line
17	GD-I	Rokhia Area of Tripura Power System	28/May/21 14:22	28/May/21 14:40	0:18:00	55	8	0.0	0.0	2160	2263	Rokhia Area of Tripura Power System was connected with the rest of NER Grid through 132 kV Rokhia-Agrtalla Line 1 and 132 kV Rokhia- Monarchak Line. 132 kV Agartala - Rokhia 2 line was under S/D due to damage to crossarm structure since 02.05.2021 At 14:22 Hrs on 28.05.2021, 132 kV Rokhia - Monarchak line, 132 kV Rokhia- Agartala 1 line tripped. Due to tripping of these elements, Rokhia Area of Tripura system was separated from the rest of NER Grid	132 kV Rokhia - Monarchak line 132 kV Rokhia- Agartala 1 line Rokhia Unit 8 Rokhia Unit 9
18	GD-I	Khupi area of Arunachal Pradesh Power System	29/May/21 12:19	29/May/21 12:33	0:14:00	6	15	0.0	0.0	1771	2183	Khupi area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Balipara - Tenga line. At 12:19 Hrs on 29.05.2021, 132 kV Balipara - Tenga Line, 132 kV Tenga- Khupi Line and Unit 3 of Dikshi HEP tripped. Due to tripping of this element, Khupi area of Arunachal Pradesh Power System were separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.	132 kV Balipara - Tenga line 132 kV Tenga- Khupi T/L Dikshi HEP Unit 3

Details of Grid Events during the Month of May 2021 in North Eastern Region

Sl No.	Category of Grid Event (GI 1or 2/ GD-1 to GD-5)	Affected Area	Time and Date of occurrence of Grid Event	Time and Date of Restoration	Duration (HH:MM:SS)	Loss of generation / loss of load during the Grid Event		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the		Antecedent Generation/Load in the Regional Grid		Brief details of the event (pre fault and post fault system conditions)	Elements Tripped
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
19	GD-I	Khupi area of Arunachal Pradesh Power System	30/May/21 13:36	30/May/21 13:58	0:22:00	5	14	0.0	0.0	1201	1548	Khupi area of Arunachal Pradesh Power System was connected with the rest of NER Grid through 132 kV Balipara - Tenga line. At 13:36 Hrs on 30.05.2021, 132 kV Balipara - Tenga Line, 132 kV Tenga- Khupi Line and Unit 2 of Dikshi HEP tripped. Due to tripping of this element, Khupi area of Arunachal Pradesh Power System was separated from the rest of NER Grid and subsequently collapsed due to load generation mismatch in these areas.	132 kV Balipara - Tenga line, 132 kV Tenga- Khupi T/L Dikshi HEP Unit 2
20	GD-I	Yiangangpokpi area of Manipur Power System	31/May/21 19:48	31/May/21 20:14	0:26:00	0	24	0.0	0.0	1689	2482	Yiangangpokpi area of Manipur Power System was connected with the rest of NER Grid through 132 kV Imphal(MSPCL) - Yiangangpokpi 1 line (132 kV Imphal(MSPCL) - Yiangangpokpi 2 line was under outage from 19:46 hrs of 31-05-2021and 132 kV Thoubal-Kakching Line was under shutdown). At 19:48 Hrs on 31.05.2021, Imphal(MSPCL) - Yiangangpokpi line 1 tripped. Due to tripping of this	132 kV Imphal(MSPCL) - Yiangangpokpi D/C lines
21	GD-I	Yiangangpokpi area of Manipur Power System	31/May/21 20:41	31/May/21 20:50	0:09:00	0	12	0.0	0.0	1670	2344	Yiangangpokpi area of Manipur Power System was connected with the rest of NER Grid through 132 kV Imphal(MSPCL) - Yiangangpokpi 1 line. (132 kV Imphal(MSPCL) - Yiangangpokpi 2 line was under outage from 20:36 hrs of 31-05-2021 and 132 kV Thoubal-Kakching Line was under shutdown). At 20:41 Hrs on 31.05.2021, Imphal(MSPCL) - Yiangangpokpi line 1 tripped. Due to tripping of this element Yiangangpokpi area of Manipur Power System was separated from the rest of NER Grid and	132 kV Imphal(MSPCL) - Yiangangpokpi D/C lines
22	GI 2	Tripura	04-May-21 12:40	04-May-21 14:00	1 hrs 20 mins	317	0	0.3	0.0	972	1815	Palatana Unit STG-2 & Palatana Unit GTG-2 tripped at 12:40 Hours on 04-05-21 due to tripping of GBC. Revision done from Block No. 57 on 04-05-21.	Palatana Unit GTG 2 and Palatana Unit STG 2
23	GI 2	Assam	14-May-21 04:13	14-May-21 06:00	1 hrs 47 mins	30	0	0.0	0.0	1252	1434	AGBPP Unit 5 tripped at 04:13 Hours on 14-05-21 due to low control oil presure. Revision done from Block No. 25 on 14-05-21.	AGBPP Unit 5
24	GI 2	Assam	15-May-21 04:34	15-May-21 06:00	1 hrs 26 mins	30	0	0.0	0.0	1261	1360	AGBPP Unit 5 tripped at 04:34 Hours on 15-05-21 due to low control oil presure. Revision done from Block No. 25 on 15-05-21.	AGBPP Unit 5
25	GI 2	Tripura	19-May-21 12:59	19-May-21 14:30	1 hrs 31 mins	312	0	0.2	0.0	1328	2073	Palatana Unit GTG2 and Palatana Unit STG 2 tripped at 12:59 Hours on 19-05-21 due to SPS-2 operation. Revision done from Block No. 59 on 19-05-21.	Palatana Unit GTG 2 and Palatana Unit STG 2
26	GI 2	Arunachal Pradesh	28-May-21 09:38	28-May-21 11:30	1 hrs 52 mins	154	0	0.1	0.0	1832	2276	Kameng unit 1 tripped due to GT overhead line differential protection at 09:38 Hours on 28-05-21 . Revision done from Block No. 47 on 28-05-21.	Kameng Unit 1
27	GI 2	Assam	31-May-21 04:18	31-May-21 06:00	1 hrs 42 mins	22	0	0.0	0.0	1316	1788	AGBPP Unit 8 tripped due to tripping of condenser extraction pump at 04:18 Hours on 31-05-21 . Revision done from Block No. 25 on 31-05-21.	AGBPP Unit 8
28	GI 2	Tripura	31-May-21 16:38	31-May-21 18:30	1 hrs 52 mins	323	0	0.2	0.0	1787	1732	Palatana GTG 2 & Palatana STG 2 tripped due to tripping of GBC 2 and high exhaust temperature at 16:38 Hours on 31-05-21 . Revision done from Block No. 75 on 31-05-21.	Palatana Unit GTG 2 and Palatana Unit STG 2