

Details of Grid Events during the Month of June 2024 in Northern Region



Sl No.	Category of Grid Event (GI for GI-2/GD-1 to GD-5)	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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	Delhi	01-06-2024 15:40	01-06-2024 18:05	02:25	0	98	0.000	0.131	64982	74546	<p>i) 220/66kV DSDC(DV) has double main Bus arrangement at 220kV side.</p> <p>ii) During antecedent condition, incoming power at DSDC(DV) through 220 kV DSDC-Bawana (DV) ckt-1 & ckt-2 was approx. 44MW & 58MW respectively (as per SCADA). 220 kV DSDC-Bawana (DV) ckt-1, 220/66kV 150MVA ICT-1 & 100MVA ICT-2 at DSDC(DV) were on 220kV Bus-1 at DSDC(DV) and 220 kV DSDC-Bawana (DV) ckt-2, 220/66kV 100MVA ICT-3 & 150MVA ICT-4 at DSDC(DV) were on 220kV Bus-2 at DSDC(DV). Bus coupler of 220kV Bus-1 & Bus-2 was in open condition. 220kV DSDC-Narela(DV) ckt-1 & ckt-2 were not in service.</p> <p>iii) J&K reported, at 15:40 hrs, 220 kV DSDC-Bawana (DV) ckt-1 & ckt-2 tripped on R-Y phase to phase fault and 3-phase fault respectively. For both the faults, fault distance was 3.9 km from Bawana(DV) and zone-1 distance protection operated at Bawana(DV).</p> <p>iv) But, as per PMU and SCADA SOE, at 15:40 hrs, 220 kV DSDC-Bawana (DV) ckt-2 tripped on Y-B phase to phase fault. Further at 15:41 hrs, 220 kV DSDC-Bawana (DV) ckt-1 tripped on R-Y phase to phase fault.</p> <p>v) J&K 220kV DSDC-Narela(DV) ckt-1 & ckt-2 were not in service and 220 kV DSDC-Bawana (DV) ckt-1 & ckt-2 also tripped, complete blackout occurred at 220/66kV DSDC(DV).</p> <p>vi) J&K per PMU at Abdullahpur(PG), Y-B followed by R-Y phase to phase fault is observed with fault clearing time of 160ms & 120msc respectively.</p> <p>vii) As per SCADA, change in demand of approx. 308MW is observed in Delhi control area. But as reported, by SLDC-Delhi, load loss of approx. 98 MW occurred.</p> <p>viii) J&K reported, at 18:05hrs, power supply restored at 220/66kV DSDC(DV) using 66kV Bawana-1 sector ckt-1 & 2 from TPDDL.</p>	<p>1) 220 kV DSDC-Bawana (DV) ckt-1</p> <p>2) 220 kV DSDC-Bawana (DV) ckt-2</p>
2	GI-2	Haryana, Punjab, Uttar Pradesh and Rajasthan	01-06-2024 13:26	01-06-2024 13:52	00:26	1835	545	2.627	0.664	69862	82023	<p>i) J&K reported, at 13:26 hrs, 765 kV Meerut-Bhiwani (PG) Ckt-1 tripped from Bhiwani(PG) end only on R-N phase to earth fault with fault current of 4.679 kA and fault distance of 148.715 km from Bhiwani(PG) end. Line was successfully auto-reclosed from Meerut(PG) end.</p> <p>ii) J&K per PMU at Bhiwani(PG), R-N phase to earth fault with fault clearing time of 80ms is observed. Voltage dipped upto 0.779 p.u. at Bhiwani(PG).</p> <p>iii) As per SCADA, change in NR total solar generation of approx. 1695 MW (STS Solar: ~1695 MW) was observed which almost revived within 05 minutes. Change in Rajasthan wind generation of approx. 140 MW is also observed.</p> <p>iv) Due to a significant dip in RE generation, frequency dropped by 0.121 Hz (from 49.976 Hz to 49.855 Hz).</p> <p>v) As per SCADA, total change in Northern region demand of approx. 545 MW (Punjab: ~445 MW, UP: ~100 MW) is observed. Demand dipped in Punjab area due to df/dt operation as informed by Punjab SLDC. As reported by SLDC Punjab, load loss of ~427 MW occurred due to df/dt operation in Punjab.</p>	<p>1) 765 kV Meerut-Bhiwani (PG) Ckt-1</p>
3	GI-2	Delhi, Haryana, Punjab, Uttar Pradesh and Rajasthan	01-06-2024 13:43	01-06-2024 14:35	00:52	3180	1300	4.567	1.570	69630	82782	<p>i) J&K reported, at 13:43 hrs, 400 kV Bawana-Munka (DV) Ckt-1 & 2 tripped from Munka(DV) end only on R-B phase to phase fault (phase sequence issue observed) (exact reason, nature and location of fault yet to be shared); no tripping reported at Bawana(DV) end. Fault was sensed in zone-4 at Bawana(DV), but zone-4 got reset as fault got cleared before zone-4 time delay.</p> <p>ii) J&K per PMU at Abdullahpur(PG), R-Y phase to phase fault with fault clearing time of 80ms is observed. Voltage dipped upto 0.859 p.u. at Abdullahpur(PG).</p> <p>iii) As per SCADA, change in NR total solar generation of approx. 3120 MW (STS Solar: ~2710 MW, Rajasthan Solar: ~410 MW) was observed which almost revived within 05 minutes. Change in Rajasthan wind generation of approx. 60 MW is also observed.</p> <p>iv) Due to a significant dip in RE generation, frequency dropped by 0.171 Hz (from 49.948 Hz to 49.777 Hz).</p> <p>v) As per SCADA, total change in Northern region demand of approx. 1300 MW (Delhi: ~270 MW, Haryana: ~225 MW, Punjab: ~585 MW, UP: ~220 MW) is observed. Demand dipped in UP and Punjab area due to df/dt operation as informed by UP and Punjab SLDC. As reported by SLDC Punjab, load loss of ~533 MW occurred due to df/dt operation in Punjab.</p>	<p>1) 400 kV Bawana-Munka (DV) Ckt-1</p> <p>2) 400 kV Bawana-Munka (DV) Ckt-2</p>
4	GD-1	Rajasthan	02-06-2024 01:04	02-06-2024 02:18	01:14	0	247	0.000	0.335	53813	73790	<p>i) 220/132kV Kushkhera(RS) has double main Bus arrangement at 220kV side.</p> <p>ii) During antecedent condition, incoming power at Kushkhera(RS) S/s through 220 KV Neemrana(PG)-Kushkhera(RS) (RS) Ckt & 220 KV Bhiwadi(PG)-Kushkhera(RS) (RS) Ckt was approx. 91MW & 142MW respectively (as per SCADA). 220kV lines from Kushkhera to Alwar(RS), Kishangarh(RS) were not in service. Two buses are connected only through isolator.</p> <p>iii) J&K reported, at 01:04hrs, Y-phase CT of 220 KV Neemrana(PG)-Kushkhera(RS) (RS) Ckt at Kushkhera(RS) S/s blasted which resulted in Bus bar fault and bus bar protection operated.</p> <p>iv) As the two buses are connected only through isolator, all the 220kV lines from Kushkhera(RS) and 220/132kV 160MVA ICT-1 & 2 at Kushkhera(RS) tripped which led to total blackout at 220/132kV Kushkhera(RS) S/s.</p> <p>v) J&K further reported, 220 KV Neemrana(PG)-Kushkhera(RS) (RS) Ckt tripped from both ends, but 220 KV Bhiwadi(PG)-Kushkhera(RS) (RS) Ckt tripped only from Kushkhera(RS) end.</p> <p>vi) J&K per PMU at Bhiwadi(PG), at 01:04 hrs, Y-N followed by B-N phase to earth fault is observed with fault clearing time of 120ms.</p> <p>vii) As per SCADA, change in demand of approx. 247MW in Rajasthan control area is observed.</p> <p>viii) J&K reported, at 02:18 hrs, 220kV Kushkhera-Alwar(RS) line charged and at the same time 220/132kV 160MVA ICT-1 at Kushkhera(RS) also charged.</p>	<p>1) 220 KV Neemrana(PG)-Kushkhera(RS) (RS) Ckt</p> <p>2) 220 KV Bhiwadi(PG)-Kushkhera(RS) (RS) Ckt</p> <p>3) 220/132kV 160MVA ICT-1 at Kushkhera(RS)</p> <p>4) 220/132kV 160MVA ICT-2 at Kushkhera(RS)</p>
5	GD-1	Jammu and Kashmir	03-06-2024 17:33	03-06-2024 20:20	02:47	0	120	0.000	0.163	57513	73807	<p>i) J&K reported, at 17:33hrs, 220 kV Barni(JK)-Kishenpur(PG) Ckt-1 tripped on R-N phase to earth fault with fault current of 5.094kA from Kishenpur(PG) end (as per DR). As per DR, zone-1 distance protection operated at Kishenpur(PG) end (exact reason and location of fault yet to be shared).</p> <p>ii) During the same time, 220 kV Barni(JK)-Kishenpur(PG) Ckt-2 also tripped from Barni(JK) end only on R-N phase to earth fault with fault current of 3.9kA from Kishenpur(PG) end (as per DR). As per DR, fault sensed in zone-2 at Kishenpur(PG) and line remained charged from Kishenpur (PG) end.</p> <p>iii) Due to tripping of both 220 kV Barni(JK)-Kishenpur(PG) Ckt-1 & 2, complete blackout occurred at 220/132kV Barni(J&K) S/s.</p> <p>iv) J&K per PMU at Kishenpur(PG), R-N phase to earth fault with fault clearing time of 120ms is observed.</p> <p>v) As per SCADA, load loss of approx. 120MW occurred in J&K control area.</p>	<p>1) 220 kV Barni(JK) Kishenpur(PG) Ckt-1</p> <p>2) 220 kV Barni(JK) Kishenpur(PG) Ckt-2</p>

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
6	GI-1	Haryana	03-06-2024 00:38	03-06-2024 01:26	00:48	0	565	0.000	0.763	53147	74075	<p>i)J&K reported, at 00:38 hrs, bursting of B-ph CT of 220kV bus coupler-2 at Panipat(BB) end occurred which created B-N phase to earth fault in busbar differential zone. The reason of bursting of the B-ph CT was observed to be some internal fault in Heptacare make CT installed on the bay on 29th November 2018.</p> <p>ii)The Numerical low Impedance type MiCom P741 Bus-Bar Differential Protection Scheme (ALSTOM make) sensed the fault and operated tripping all the elements on either side of bus coupler i.e. 220kV Bus-4 & Bus-2 at Panipat(BB).</p> <p>iii)J&K per PMU at Panipat(BBMB), Y-N phase to earth fault is observed with fault clearing time of 120ms. (phase sequence issue observed)</p> <p>iv)J&K per SCADA, load loss of approx. 565 MW (~445 MW in Haryana and ~120 MW in Delhi control area) is observed.</p> <p>v)J&K reported by BBMB, 220kV Bus-1 at Panipat(BB) was charged by closing A-17 Breaker of 220 KV Panipat-Dhulkote (BB) Ckt-1 at 01:26 hrs and 220kV Bus-2 at Panipat(BB) was charged by closing A-18 Breaker of 220 KV Panipat-Dhulkote (BB) Ckt-2 at 01:36 hrs.</p> <p>vi)J&K remedial action taken, on 03rd June 2024 an old and used Rahe Koncar make CT of same ratio i.e. 1200/1-1-1-1-1A was tested thoroughly and installed in place of bursted CT and bus coupler-2 was charged at 17:38 hrs on 03rd June 2024.</p>	<p>1)220 KV Panipat(HV) Panipat(BB) (HVPNL) Ckt-1</p> <p>2)220 KV Panipat(HV) Panipat(BB) (HVPNL) Ckt-2</p> <p>3)220 KV Panipat(HV) Panipat(BB) (HVPNL) Ckt-3</p> <p>4)220 KV Panipat(HV) Panipat(BB) (HVPNL) Ckt-4</p> <p>5)220 KV Panipat(BB) Narela(DV) (BBMB) Ckt-1</p> <p>6)220 KV Panipat(BB) Narela(DV) (BBMB) Ckt-2</p> <p>7)220 KV Panipat(BB) Narela(DV) (BBMB) Ckt-3</p> <p>8)220 KV Panipat(BB) Chajpur(HV) (HVPNL) Ckt-1</p> <p>9)220 KV Panipat(BB) Chajpur(HV) (HVPNL) Ckt-2</p> <p>10)220 KV Panipat-Dhulkote (BB) Ckt-1</p> <p>11)220 KV Panipat-Dhulkote (BB) Ckt-2</p> <p>12)220 KV Panipat-Chahki Dadr (BB) Ckt</p> <p>13)220 KV Panipat(BB) Pipli Ckt</p> <p>14)220KV/450 MVA ICT-1 at Panipat(BB)</p> <p>15)220KV/500 MVA ICT-2 at Panipat(BB)</p> <p>16)220/132KV 100 MVA ICT-1 at Panipat(BB)</p> <p>17)220/132KV 100 MVA ICT-2 at Panipat(BB)</p> <p>18)220/132KV 60 MVA ICT-1 at Panipat(BB)</p> <p>19)220/132KV 60 MVA ICT-2 at Panipat(BB)</p>
7	GD-1	Himachal Pradesh	03-06-2024 22:47	04-06-2024 00:14	01:27	238	0	0.430	0.000	55406	71913	<p>i)During antecedent condition, 66MW Unit-1, 2, 3 & 6 at Pong HEP were running and generating approx. 58MW, 60MW, 60MW and 60MW respectively (as per SCADA), 66MW Unit-4 & 5 at Pong HEP were not in service.</p> <p>ii)J&K reported, at 22:47 hrs, while stopping 66MW Unit-1 at Pong(BB) B-ph limb failed to open due to failure of operating mechanism of CB. Generator Circuit Breaker did not open. Abnormal sound was observed from TG Unit 1 and smoke was also observed from Field Discharge Cubicle of Excitation System of Unit 1. LBB protection didn't operate in this case in CB failure condition.</p> <p>iii)During the same time, all other running units, i.e., 66MW Unit-2, 3 & 6 at Pong HEP tripped Generator Transformer Back up Earth Fault Protection operation due to system imbalance.</p> <p>iv)Further, at 22:58 hrs, 220kV Bus 1 & 2 at Pong(BB) were de-energized manually by opening all CBs of 220kV feeders to save Unit 1 as the B-ph limb of machine CB was stuck in closed position.</p> <p>v)J&K per PMU at Jalandhar(PG), no fault is observed in the system. However, fluctuation in voltage is observed.</p> <p>vi)J&K per SCADA, generation loss of approx. 238 MW at Pong HEP (BB) and no load loss is observed in HP control area.</p>	<p>1)66 MW Pong HPS - UNIT 2</p> <p>2)66 MW Pong HPS - UNIT 3</p> <p>3)66 MW Pong HPS - UNIT 6</p> <p>4)220 KV Jessore(HV) Pong(BB) (PG) Ckt</p> <p>5)220 KV Pong(BB)-Dasuya(PS) (BBMB) Ckt-1</p> <p>6)220 KV Pong(BB)-Dasuya(PS) (BBMB) Ckt-2</p> <p>7)220 KV Jalandhar-Pong (BB) Ckt-1</p> <p>8)220 KV Jalandhar-Pong (BB) Ckt-2</p> <p>9)220 KV Barasua(HV) Pong(BB) (PG) Ckt</p>
8	GD-1	Jammu and Kashmir	04-06-2024 19:31	04-06-2024 20:26	00:55	61	0	0.111	0.000	54929	71784	<p>i)Power flows from Alusteng(PG) to Drass(PG) to Kargil to Khalasi to Leh (radial connection). Generation of Chutak is connected to Kargil and generation of Nimoo bago is connected to Leh.</p> <p>ii)J&K reported, at 19:31 hrs, 220 KV Alusteng-Drass (PG) Ckt tripped on B-N phase to earth fault with fault distance of 115km from Alusteng(PG).</p> <p>iii)With the tripping of 220 KV Alusteng-Drass (PG) Ckt, complete blackout occurred at 220/66KV Drass(PG) and supply to Kargil, Khalasi and Leh also failed.</p> <p>iv)Generation of Chutak and Nimoo Bago tripped due to loss of evacuation path resulting in generation loss of approx. 37MW & 24MW at Chutak and Nimoo Bago respectively (as per SCADA).</p> <p>v)J&K per PMU at Anargah(INDIGRID), B-N phase to earth fault is observed with fault clearing time of 80ms.</p> <p>vi)J&K per SCADA, no change in demand is observed in J&K control area.</p>	<p>1) 220 KV Alusteng-Drass (PG) Ckt</p>
9	GI-2	Jammu and Kashmir	04-06-2024 13:05	04-06-2024 13:25	00:20	230	0	0.324	0.000	70947	82825	<p>i)During antecedent condition, 130MW Unit-1, 2 & 3 at Dulhasti HEP were running and generating 127MW, 121MW and 126MW respectively (as per SCADA). Total generated power of 374MW was evacuating through 400 KV Dulhasti(NH)-Kishenpur(PG) (PG) Ckt-1 & 2.</p> <p>ii)J&K reported, at 13:05hrs, 400 KV Dulhasti(NH)-Kishenpur(PG) (PG) Ckt-1 tripped on R-Y phase to phase fault (exact reason and location of fault yet to be shared). As per DR at Dulhasti(NH), fault current was approx. I_r=2.506KA and I_y=2.539KA from Dulhasti(NH) and voltage dipped upto ~0.54 p.u. As per PMU at Kishenpur(PG), fault current was approx. 5.5KA from Kishenpur(PG) and voltage dipped upto ~0.779 p.u.</p> <p>iii)At Dulhasti HEP(NHPC), there is a scheme which identifies a dead bus situation and issues trip command to running units connected to that bus to minimize the over-speed of unit due to a load throw off.</p> <p>iv)Due to this fault, undervoltage was sensed which was identified as dead bus condition by this scheme and it sent command to unit-controller to trip the connected units, i.e. unit-1 & 2.</p> <p>v)Due to this, 130MW Unit-1 and 2 at Dulhasti HEP tripped.</p> <p>vi)J&K per PMU at Kishenpur (PG), R-Y phase to phase fault is observed with fault clearing time of 80ms.</p> <p>vii)J&K per SCADA, generation loss of approx. 230MW is observed at Dulhasti HEP.</p>	<p>1)400 KV Dulhasti(NH)-Kishenpur(PG) (PG) Ckt-1</p> <p>2)130MW Unit-1 at Dulhasti HEP</p> <p>3)130MW Unit-2 at Dulhasti HEP</p>
10	GI-1	Jammu and Kashmir	07-06-2024 16:29	07-06-2024 16:45	00:16	0	363	0.000	0.479	60503	75810	<p>i)J&K reported, at 16:29hrs, 220/132KV 160MVA ICT 2 at Barni(J&K) tripped on over current earth fault protection operation (exact reason, location and type of fault yet to be shared).</p> <p>ii)Due to shifting of loading of 220/132KV 160MVA ICT 2 to 220/132KV 160MVA ICT 1 & 3, both ICTs also tripped on overloading.</p> <p>iii)J&K per PMU at Kishenpur(PG), R-B phase to phase fault with delayed fault clearing time of 2160 ms is observed.</p> <p>iv)J&K per SCADA, load loss of approx. 363MW occurred in J&K control area.</p>	<p>1)220/132KV 160MVA ICT 2 at Barni(J&K)</p> <p>2)220/132KV 160MVA ICT 1 at Barni(J&K)</p> <p>3)220/132KV 160MVA ICT 3 at Barni(J&K)</p>

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
11	GI-1	Punjab	07-06-2024 08:56	07-06-2024 09:12	00:16	0	168	0.000	0.248	58735	67824	<p>i) During antecedent condition, 220 kV lines from Jalandhar(BB) to Alawalpur, Pong ckt-2, Jamsheer ckt-1, 220/66kV 100MVA ICT-2, 220/132kV 100MVA ICT-4 & 220/132kV 90MVA ICT-2 were connected to 220kV Bus-2 and Butari, Pong ckt-1, Jamsheer ckt-1, Jamsheer ckt-2, 220/66kV 100MVA ICT-1 and 220/132kV 100MVA ICT-1 & 3 were connected to 220kV Bus-1 at Jalandhar(BB) S/S. 220/132kV 50MVA ICT-2 was not in service.</p> <p>ii) J&S reported, at 08:56 hrs, R-N phase to earth fault occurred on 220 kV Jalandhar(BB)-Jamsheer(PS) (BB) Ckt-1 with fault distance of 1.039km from Jalandhar(BB) end. As per DR, fault current was ~16.2kA from Jalandhar(BB) end and fault was sensed in zone-1 at Jalandhar(BB) end.</p> <p>iii) During fault clearance from Jalandhar(BB) end, CB did not open due to air leakage in its tripping block assembly.</p> <p>iv) Due to failure of CB opening of 220 kV Jalandhar(BB)-Jamsheer(PS) (BB) Ckt-1 from Jalandhar(BB) end, LBB protection operated which led to tripping of all 220 kV lines (Alawalpur, Pong ckt-2, Jamsheer ckt-2 & Jamsheer ckt-1), 220/66kV 100MVA ICT-2, 220/132kV 100MVA ICT-1 & Bus coupler between 220kV Bus-1 & Bus-2 connected to 220kV Bus-2 and 220kV Bus-2 became dead at Jalandhar(BB).</p> <p>v) J&S further reported, during the same time, 220/66kV 100MVA ICT-1 at Jalandhar(BB) (connected to Bus-1) also tripped on backup protection due to overloading as the load of 220/66kV 100MVA ICT-2 shifted on ICT-1.</p> <p>vi) J&S per PMU at Jalandhar(PG), R-N phase to earth fault is observed with delayed fault clearing time of 240ms.</p> <p>vii) J&S per SCADA, change in demand of approx. 168 MW is observed in Punjab control area.</p>	<p>1) 220 kV Jalandhar-Pong (BB) Ckt-2</p> <p>2) 220 kV Jalandhar-Jamsheer (BB) Ckt-1</p> <p>3) 220 kV Jalandhar-Jamsheer(PS) (BB) Ckt-1</p> <p>4) 220kV Bus 2 at Jalandhar(BB)</p> <p>5) 220 kV Jalandhar(BB)-Alawalpur(PS) (PS) Ckt</p> <p>6) 220/132kV 100MVA ICT-1 at Jalandhar(BB)</p> <p>7) 220/66kV 100MVA ICT-1 at Jalandhar(BB)</p> <p>8) 220/66kV 100MVA ICT-1 at Jalandhar(BB)</p>
12	GD-1	Rajasthan	08-06-2024 21:03	08-06-2024 21:41	00:38	125	0	0.225	0.000	55520	75925	<p>i) Generation of 220kV AHEIAL PSS4(IP) station evacuates through 220 kV Adani RenewPark_SL_FGARH_FBTL (AREPRL)-AHEIAL PSS 4 HB_FGARH_FBTL (AHEIAL) (AREPRL) Ckt. During antecedent condition, AHEIAL PSS4(IP) station was generating approx. 125MW (as per PMU).</p> <p>ii) J&S reported, at 21:03hrs, 220 kV Adani RenewPark_SL_FGARH_FBTL (AREPRL)-AHEIAL PSS 4 HB_FGARH_FBTL (AHEIAL) (AREPRL) Ckt tripped due to R-N phase to earth fault (exact reason, location and nature of protection operated yet to be shared).</p> <p>iii) Due to tripping of 220 kV Adani RenewPark_SL_FGARH_FBTL (AREPRL)-AHEIAL PSS 4 HB_FGARH_FBTL (AHEIAL) (AREPRL) Ckt, AHEIAL PSS4(IP) S/S lost its connectivity from grid and blackout occurred at 220kV AHEIAL PSS4(IP) S/S.</p> <p>iv) J&S per PMU at Adani Fatehgarh Solar Park(IP), R-N phase to earth fault is observed with fault clearing time of 80ms.</p> <p>v) J&S per PMU, wind generation loss of approx. 125 MW is observed at AHEIAL PSS4(IP).</p>	<p>1) 220 kV Adani RenewPark_SL_FGARH_FBTL (AREPRL)-AHEIAL PSS 4 HB_FGARH_FBTL (AHEIAL) (AREPRL) Ckt</p>
13	GI-2	Rajasthan	08-06-2024 19:53	08-06-2024 23:29	03:36	168	0	0.310	0.000	54212	72136	<p>i) J&S reported, at 19:53hrs, due to heavy thunderstorm weather conditions, "w-jump" or flash-over between 220 kV Adani Lala (RS) line got initiated at distance of 46.77 meter from Akal(RS) S/S which caused B-N phase to earth fault on 220 kV Akal-Lala (RS) ckt with fault current of Ib=25kA is observed (phase sequence issue).</p> <p>ii) As per DR at Akal(RS) end of 220 kV Akal-Lala (RS) ckt, R-N phase to earth fault in zone-1 with fault current of Ir=25.4kA is observed (phase sequence issue).</p> <p>iii) J&S reported, during the same time, due to very high fault current, 400/220 kV 315 MVA ICT-3 and 400/220 kV 500 MVA ICT-4 tripped instantaneously on High Set over-current protection operation at Akal (RS) S/S. 400 kV Akal-Jodhpur (RS) Ckt also tripped from Akal(RS) end on zone-5 (reverse) distance protection operation (not tripped from the remote end). Tie Ckt of 400/220kV 315MVA ICT-3 also opened along with tripping of 400/220kV 315MVA ICT-3 which separated 400kV Bus-1 & Bus-2.</p> <p>iv) J&S reported, at the same time, Bus coupler of 220kV Bus-1 & Bus-2 and all 220kV lines (Mulana, Rajgarh, Amarsagar, Giral, Bhensara(RS) ckt-1, Dangri ckt-1 & ckt-2) connected to 220kV Bus-2 at Akal(RS) S/S also tripped (exact reason of tripping yet to be shared). Due to tripping of Bus coupler, 220kV Bus-1 and Bus-2 separated at Akal(RS).</p> <p>v) J&S reported, further at 19:55 hrs, due to bad weather conditions, Y-N phase to earth fault occurred on 400 kV Akal-Kankani (RS) ckt & 400 kV Akal-Jaisalmer-2(Bhainsra) (RS) ckt (D/C lines on same tower) at a distance of approx. 3km from Akal(RS) S/S which led to tripping of both the mentioned lines (exact operation of protection yet to be shared).</p> <p>vi) J&S reported, due to tripping of 400 kV Akal-Kankani (RS) ckt & 400 kV Akal-Jaisalmer-2(Bhainsra) (RS) ckt, high voltage was observed on the 400 kV Akal-Barmer (RS) Ckt and line voltage reached up to 438kV on the same line and 400 kV Akal-Barmer (RS) Ckt tripped from Barmer(RS) end on over-voltage protection operation and also from Akal(RS) end on receiving DT from Barmer(RS) end.</p> <p>vii) Due to tripping of 400 kV Akal-Barmer (RS) Ckt, 400kV Bus-1 lost its connectivity from grid and 400kV Bus-1 and elements connected to 400kV Bus-1 (400/220 kV 500 MVA ICT-1 & 2, 220kV Bus-1 and 220kV lines connected to 220kV Bus-1) became dead at Akal(RS) S/S.</p> <p>viii) After all the above mentioned tripping events, only 400kV Bus-2 remain charged through 400kV Akal-Rangarh (RS) D/C.</p>	<p>1) 400 kV Akal-Jodhpur (RS) Ckt</p> <p>2) 400/220 kV 315 MVA ICT 3 at Akal(RS)</p> <p>3) 400/220 kV 500 MVA ICT 4 at Akal(RS)</p> <p>4) 220kV Akal-Lala (RS) ckt</p> <p>5) 220kV Akal-Mulana (RS) ckt</p> <p>6) 220kV Akal-Rajgarh (RS) ckt</p> <p>7) 220kV Akal-Amarsagar (RS) ckt</p> <p>8) 220kV Akal-Giral (RS) ckt</p> <p>9) 220kV Akal-Bhensara(RS) ckt-1</p> <p>10) 220kV Akal-Dangri (RS) ckt-1</p> <p>11) 220kV Akal-Dangri (RS) ckt-2</p> <p>12) 400 kV Akal-Kankani (RS) ckt</p> <p>13) 400 kV Akal-Jaisalmer-2(Bhainsra) (RS) Ckt</p> <p>14) 400 kV Akal-Barmer (RS) Ckt</p>
14	GI-2	Rajasthan	09-06-2024 11:21	09-06-2024 13:05	01:44	2625	435	4.177	0.603	62838	72177	<p>i) J&S reported, at 11:21 hrs, R-phase conductor of 400 kV Akal-Jaisalmer-2(Bhainsra) (RS) Ckt broke at location no. 134 which caused R-B phase to phase fault on 400 kV Akal-Jaisalmer-2(Bhainsra) (RS) Ckt. Line tripped from Akal(RS) end on zone-1 distance protection operation with fault current of Ir=5.52kA & Ib=5.57kA and fault distance of 44.85km from Akal(RS) end. Line tripped from Jaisalmer-2(Bhainsra)(RS) end on zone-1 distance protection operation with fault distance of 9.6km from Jaisalmer-2(Bhainsra)(RS) end.</p> <p>ii) Again, broken conductor of 400 kV Akal-Jaisalmer-2(Bhainsra) (RS) Ckt fell on Suzlon 33kV feeder which is emanating from 220kV Bhensara (M/S Suzlon) S/S, which caused R-B phase to phase fault on the same feeder. On this fault, 220kV Akal-Bhensara(Suzlon) ckt tripped on zone-1 distance protection operation from Akal(RS) end.</p> <p>iii) During the same time, 400 kV Barmer(RS)-Rajwast(RW) (RS) Ckt tripped on R-B phase to phase fault (Ir=2.0kA & Ib=2.4kA) at a distance of 127.6 meters from Barmer(RS) end on zone-1 distance protection operation. Line didn't open from Rajwast(RS) end (Reason and location of fault yet to be shared).</p> <p>iv) During the same time, 400 kV Barmer(RS)-Jaisalmer-2(Bhainsra) (RS) Ckt tripped on R-B phase to phase fault (Ir=1.3kA & Ib=1.1kA) from Barmer(RS) end on distance protection operation. As per DR, fault sensed in zone-3 from Barmer end. Line didn't open from Jaisalmer-2(Bhainsra)(RS) end (Reason and location of fault yet to be shared).</p> <p>v) J&S per PMU at Jodhpur(RS), R-B phase to phase fault with fault clearing time of 80ms is observed. Voltage dipped upto 0.777 p.u. at Jodhpur(RS).</p> <p>vi) J&S per SCADA, change in total RE generation of approx. 2625 MW (STS Solar: ~1910 MW, Rajasthan Solar: ~715 MW) among which almost 97% generation revived within 3.5 minutes.</p> <p>vii) Due to a significant dip in RE generation, frequency dropped by 0.203 Hz (from 49.879 Hz to 49.676 Hz).</p> <p>viii) J&S per SCADA, change in Punjab demand of approx. 435 MW is observed (load loss details due to df/dt operation in Punjab yet to be shared by Punjab SLDC).</p>	<p>1) 400 kV Barmer(RS)-Jaisalmer-2(Bhainsra) (RS) Ckt</p> <p>2) 400 kV Barmer(RS)-Rajwast(RW) (RS) Ckt</p> <p>3) 400 kV Akal-Jaisalmer-2 (Bhainsra) (RS) Ckt</p> <p>4) 220kV Akal-Bhensara(Suzlon) ckt</p>
15	GD-1	Delhi	11-06-2024 14:10	11-06-2024 14:50	00:40	279	1601	0.400	1.951	69737	82920	<p>i) J&S reported, at 14:10 hrs, fire was observed in isolator (transfer bus side) of 400/220 kV 500 MVA ICT-3 at Mandaula(PG). As per DR, it is reduced upto ~17.2kA while by and by increased upto ~1.092kA and 1.107kA respectively and imbalance occurred in the system.</p> <p>ii) J&S reported by CPCL, Power Grid, the sequence of the event is as follows:</p> <p>a. At 14:10:24hrs: 400/220 kV 500 MVA ICT 2 at Mandaula(PG) tripped on back-up earth fault protection operation due to system imbalance. As per DR, Ir=15.8kA, Ib=488.8kA and Ib=498.3kA before tripping of ICT-2.</p> <p>b. Due to tripping of ICT-2, loading of 400/220kV 500MVA ICT-1, 3 and 4 at Mandaula(PG) were increased to 457MW each.</p> <p>c. At 14:10:27hrs: 400/220 kV 500 MVA ICT 1 at Mandaula(PG) also tripped on back-up earth fault protection operation due to system imbalance. As per DR, Ir=1.668kA, Ib=1.214kA and Ib=1.237kA before tripping of ICT-1.</p> <p>d. Due to tripping of both ICT-1 & 2, loading of 400/220kV 500MVA ICT-3 and 4 at Mandaula(PG) were increased to 696MW each.</p> <p>e. At 14:10:29hrs: 400/220 kV 500 MVA ICT 3 at Mandaula(PG) hand-tripped due to melting of isolator which led to heavy sparking.</p> <p>f. Due to unavailability of ICT-1, 2 & 3, loading of 400/220kV 500MVA ICT-4 at Mandaula(PG) was increased to 1454MW.</p> <p>g. At 14:10:30hrs: 400/220 kV 500 MVA ICT 4 at Mandaula(PG) tripped on back-up over-current protection operation due to excess over-loading. As per DR, maximum current recorded was Ir=2.09kA, Ib=2.136kA and Ib=2.124kA (max MW loading of approx. 1480MW as per DR).</p> <p>iii) J&S per PMU at Mandaula(PG), B-N phase to earth fault converted to F-B-N double phase to earth fault with delayed fault clearing time of 2320ms is observed.</p>	<p>1) 400 kV Barmer(RS)-Jaisalmer-2(Bhainsra) (RS) Ckt</p> <p>2) 400/220 kV 500 MVA ICT 2 at Mandaula(PG)</p> <p>3) 400/220 kV 500 MVA ICT 3 at Mandaula(PG)</p> <p>4) 400/220 kV 500 MVA ICT 4 at Mandaula(PG)</p>

Details of Grid Events during the Month of June 2024 in Northern Region



Sl No.	Category of Grid Event (GI for GI-2/GD-1 to GD-5)	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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
16	GI-1	Jammu and Kashmir	13-06-2024 06:48	14-06-2024 08:59	26:11	0	100	0.000	0.136	55820	73692	<p>i)220/132kV Hiranagar(J&K) has double main Bus arrangement at 220kV voltage side.</p> <p>ii)As reported, at 06:28hrs, 220 KV Samba(PG)-Hiranagar(PDD) (PG) Ckt-1 tripped on Y-N phase to earth fault. Fault sensed in zone-1, fault current Iy=4.9KA and fault distance was 0.8km from Hiranagar end (Exact reason of fault yet to be received).</p> <p>iii)At the same time, 220 KV Samba(PG)-Hiranagar(PDD) (PDD JK) Ckt-2 also tripped from Hiranagar(J&K) end on overcurrent protection operation.</p> <p>iv)220 KV Samba(PG)-Hiranagar(PDD) (PG) Ckt-1 tripped from both ends(Samba and Hiranagar) and 220 KV Samba(PG)-Hiranagar(PDD) (PDD JK) Ckt-2 tripped from Hiranagar end only.</p> <p>v)As per PMU at Samba(PG), Y-N phase to earth followed by R-B phase to phase fault with fault clearing time of 80 msec is observed.</p> <p>vi)As per SCADA, load loss of approx. 360MW in J&K control area is observed. However, as per SLDC J&K, approx. 100MW load loss is observed in J&K control area.</p>	<p>1)220 KV Samba(PG)-Hiranagar(PDD) (PG) Ckt-1</p> <p>2)220 KV Samba(PG)-Hiranagar(PDD) (PDD JK) Ckt-2</p>
17	GI-1	Himachal Pradesh	14-06-2024 23:16	14-06-2024 23:32	00:16	0	296	0.000	0.370	58888	80098	<p>i)220/132kV Kunihar(HP) S/S has double main Bus arrangement at 220kV side.</p> <p>ii)During antecedent condition, incoming power at Kunihar S/S was 365 MW through 220kV Kunihar-leori (HP) ckt (~152 MW) and 220kV Kunihar-Bhaba (HP) ckt (~173 MW). Outgoing power from Kunihar(HP) was 110MW through 220kV Kunihar-Baddi (HP) D/C and loading on 220/132kV 200MVA transformer bank-1 & 2 at Kunihar(HP) was 272MW (as reported). 220/132kV 100MVA transformer bank-3 was not in service.</p> <p>iii)As reported, at 23:16 hrs, 220/132kV 200MVA transformer bank-1 at Kunihar(HP) tripped on R-N phase to earth fault. Fault occurred due to burst of R-phase Ckt (Type of protection operated yet to be received).</p> <p>iv)As per PMU, R-N phase to earth fault is observed with fault clearing time of 80ms.</p> <p>v)At the same time, due to tripping of 220/132kV 200MVA transformer bank-1, the complete load shifted to 220/132kV 200MVA transformer bank-2 and the transformer-2 tripped due to overloading.</p> <p>vi)As reported, at the same time, 220kV Kunihar-leori (HP) ckt tripped on overvoltage protection operation (line voltage shoot up to 270kV). (HP has been communicated to share the voltage protection settings at Kunihar(HP) S/S).</p> <p>vii)During the same time, 220 KV Baddi-Upper Nangal(HP) Ckt also tripped (exact reason of tripping yet to be received).</p> <p>viii)As per SCADA, total change in demand of approx. 296MW in HP control area is observed.</p>	<p>1)220/132kV 200MVA ICT-1 at Kunihar(HP)</p> <p>2)220/132kV 200MVA ICT-2 at Kunihar(HP)</p> <p>3)220kV Kunihar-leori (HP) ckt</p> <p>4)220 KV Baddi-Upper Nangal(HP) Ckt</p>
18	GI-1	Himachal Pradesh	16-06-2024 15:56	16-06-2024 16:15	00:19	0	240	0.000	0.285	65955	84229	<p>i)220/66kV Baddi(HP) has double main bus arrangement at 220kV side.</p> <p>ii)As reported, at 15:56 hrs, R-Y phase to phase fault occurred on 220kV Baddi(HP)-Pinjore(HV) (HPPTCL) Ckt-2 at a distance of 1.4km from Baddi(HP) end with fault current Iy=13.5KA & Iy= 13.9KA (As per DR). 220kV Baddi(HP)-Pinjore(HV) (HPPTCL) Ckt-2 tripped on zone-1 distance protection operation from Baddi(HP) end (As per DR). (Relay flags not received from Pinjore end).</p> <p>iii)As per PMU at Panchkula(PG), R-Y phase to phase fault with fault clearance time of 120msec is observed.</p> <p>iv)At the same time, 220kV Baddi(HP)-Pinjore(HV) (HPPTCL) Ckt-1, 220 KV Baddi-Upper Nangal(HP) Ckt & 220kV Baddi-Kunihar (HP) ckt also tripped. As per DRs from Baddi(HP) end, 220kV Baddi(HP)-Pinjore(HV) (HPPTCL) Ckt-1 & 220 KV Baddi-Upper Nangal(HP) Ckt tripped on master trip relay operation (exact details of protection operated in these lines yet to be received).</p> <p>v)As per SCADA, change in demand of approx. 240MW in HP control area is observed.</p>	<p>1)220kV Baddi(HP)-Pinjore(HV) (HPPTCL) Ckt-1</p> <p>2)220kV Baddi(HP)-Pinjore(HV) (HPPTCL) Ckt-2</p> <p>3)220 KV Baddi-Upper Nangal(HP) Ckt</p> <p>4)220kV Baddi-Kunihar (HP) ckt-2</p>
19	GI-2	Rajasthan	16-06-2024 18:20	16-06-2024 19:38	01:18	0	319	0.000	0.433	54344	73690	<p>i)400/220kV Kankani(RS) has one and half breaker bus arrangement at 400kV side.</p> <p>ii)During antecedent condition, the loading of 400/220 kv 315 MVA ICT-1 and 400/220 kv 500 MVA ICT-2 at Kankani(RS) was approx. 223 MW and 341 MW respectively (As per SCADA).</p> <p>iii)As reported, at 18:20hrs, 400/220 kv 500 MVA ICT-2 at Kankani(RS) tripped on master trip relay maloperation due to issue in control cables (exact reason of tripping yet to be received).</p> <p>iv)Due to tripping of 400/220 kv 500 MVA ICT-2, complete load of ICT-2 shifted to 400/220 kv 315 MVA ICT-1 at Kankani(RS) which led to tripping of 400/220 kv 315 MVA ICT-1 on overloading.</p> <p>v)As per PMU at Jodhpur(RS), voltage fluctuation is observed in the system and no fault is observed.</p> <p>vi)As per SCADA, change in demand of approx. 319 MW in Rajasthan control area is observed.</p>	<p>1)400/220 kv 315 MVA ICT-1 at Kankani(RS)</p> <p>2)400/220 kv 500 MVA ICT-2 at Kankani(RS)</p>
20	GD-1	Himachal Pradesh	17-06-2024 18:25	17-06-2024 18:57	00:32	208	0	0.357	0.000	58300	79666	<p>i)During antecedent condition, 96 MW Unit-1 & 2 at ADHPL(HP) were generating approx. 105 MW and 104 MW respectively as per SCADA.</p> <p>ii)As reported, at 18:25 hrs, due to inclement weather condition, 220kV Phozal(HP)-Nallagar(HP) (ADHPL) Ckt tripped on Y-B-N double phase to earth fault with fault distance of 86.4km from Nallagar(HP) end. As per DR, fault sensed in zone-1 with fault current of Iy=2.26A & Iy=3.46A at Nallagar(HP) end.</p> <p>iii)As reported, at the same time, due to inclement weather condition, 220kV AD hydro(AD)-Nallagar(HP) (ADHPL) Ckt tripped on Y-N phase to earth fault with fault distance of 176km and 75.5km from Nallagar(HP) and AD hydro(IP) end respectively. As per DR, zone-1 distance protection operated from both ends with fault current of Iy=1.76A & Iy=1.6kA at Nallagar(HP) and AD hydro(IP) end. From Nallagar(HP) end, line successfully reclosed which shows the transient nature of the fault. A/R didn't operate at AD hydro(IP) end (Proper functioning of A/R at AD hydro(IP) end need to ensure).</p> <p>iv)As per PMU at Nallagar(HP), Y-B phase to phase fault with fault clearing time of 80ms is observed.</p> <p>v)Due to tripping of 220 kv Phozal(HP)-Nallagar(HP) (ADHPL) Ckt and 220 kv AD hydro(AD)-Nallagar(HP) (ADHPL) Ckt, island formed with 96MW Unit-1 & 2 at AD hydro(AD) and 220 kv AD hydro(AD)-Phozal(HP) (ADHPL) Ckt and generation-load imbalance occurred. After this, 96MW Unit-1 & 2 at AD hydro(AD) tripped due to over-speeding.</p> <p>vi)After tripping of 96MW Unit-1 & 2 at AD hydro(AD), 220 kv AD hydro(AD)-Phozal(HP) (ADHPL) Ckt got de-energized and complete blackout occurred at 220kV ADHPL(IP).</p> <p>vii)As per SCADA, no change in demand in Himachal Pradesh control area and generation loss of approx. 208 MW during the event at ADHPL(IP).</p>	<p>1)220 kv Phozal(HP)-Nallagar(HP) (ADHPL) Ckt</p> <p>2)220 kv AD hydro(AD)-Nallagar(HP) (ADHPL) Ckt</p> <p>3)96MW Unit-1 at AD hydro(AD)</p> <p>4)96MW Unit-2 at AD hydro(AD)</p>
21	GD-2	Haryana, Punjab, UP, Delhi, J&K, HP, Chandigarh, Uttarakhand & Rajasthan	17-06-2024 13:53	17-06-2024 14:32	00:39	5240	16500	7.089	18.454	73922	89410	<p>i)At 13:53 Hrs Northern Region demand experienced a dip of around ~16,500 MW. The incident occurred immediately after tripping of 4 poles of HVDC Champa – Kurukshetra which was carrying ~45500MW from the Western Region to Northern Region. Further 765/400kV Aligarh (PGCL) station faced major outage and 5 Nos. of 765 kv lines from Aligarh PG tripped.</p> <p>ii)The frequency post event rose to 50.68 Hz from 50.03 Hz.</p> <p>iii)Loads were restored progressively starting 14:30 hrs. Loads were gradually restored considering low voltages and high loading on 765 kv Agra-Gwalior lines. System load was restored to normal levels by 15:00 hrs.</p> <p>iv)In the Northern Region hydro generating units tripped at Bhakra, Karcham, Saini, RSD (Total-1237 MW). Thermal generating units tripped at Lalpur, Rajewal, Uncharhar, Panipat (Total-1250 MW).</p> <p>v)Northern Region Renewable Generation (Solar) of 2800 MW approx. was also affected, however 1500 MW was generation was restored with 04 minutes.</p> <p>vi)Apart from above, there was no load loss reported from other regions of the country; however, tripping of 02 generation units in the Western Region (Mahesh Engen – 24600 MW) and 02 modules of OLT Palatana (approx. 700 MW) in the North Eastern Region were reported, all of which has since been re-energized.</p>	<p>1)765 kv Hapur(UP), Rampur_PRSTL (UP) (GTL) Ckt-1</p> <p>2)765 kv Aligarh(PG)-SIKAR_2 (PSTL) Ckt-1 & 2</p> <p>3)765 kv HVDC Kurukshetra(PG) Pole-1, 2, 3 & 4</p> <p>4)1320 KV Mahendra Nagar(PG)-Tanapuri(NH) (PG) Ckt-1</p> <p>5)1020 MW Karcham Wangtoo HPS - UNIT 2 & 4</p> <p>6)765 kv Jharkana Aligarh (PG) Ckt-1</p> <p>7)765 kv Koteshwar Meerut (PG) Ckt-2</p> <p>8)765 kv Dera Aligarh (PG) Ckt-1 & 2</p> <p>9)765 kv Mahindergarh(APL)-Dhanbad(HV) (ATL) Ckt-1 & 2</p> <p>10)800 KV Mahindergarh(APL)-Bhawan(PG) (PG) Ckt-3</p> <p>11)765 kv Agra-Aligarh (PG) Ckt-1</p> <p>12)765 kv Rampur_PRSTL_Ghatampur_TPS (UP) Ckt-1</p> <p>13)765 MW Panipat TPS - UNIT 8</p> <p>14)800 kv Koteshwar(TH) Koteshwar(HP) (PG) Ckt-1</p> <p>15)765 kv Koteshwar Meerut (PG) Ckt-1</p> <p>16)800 kv Kshempur-Moga (PG) Ckt-1 & 2</p> <p>17)765 kv Kanpur_GIS-Aligarh (PG) Ckt-1</p> <p>18)765 MW Rawats (HP) LPS - UNIT 1</p> <p>19)220 kv Baddi(HP)-Pinjore (HV) (HPPTCL) Ckt-2</p>

Details of Grid Events during the Month of June 2024 in Northern Region



Sl No.	Category of Grid Event (GI for GI-2/GD-1 to GD-5)	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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
22	GI-1	Uttar Pradesh	18-06-2024 01:04	18-06-2024 01:40	00:36	0	146	0.000	0.178	59894	81806	<p>i) 220kV Agra2(UP) (220kV Sikandra, Agra(UP)) has double main and transfer bus scheme at 220kV level and main and transfer bus scheme at 132kV level.</p> <p>ii) During antecedent condition, loading of 220/132kV 160MVA ICT-1 & 2 and 220/132kV 100MVA ICT-3 at Agra2(UP) were 83 MW, 83 MW and 47 MW respectively.</p> <p>iii) Reported, at 01:04 hrs, 132kV Agra2-railway TSS (patholi) Ckt 1 tripped on B-N phase to earth fault from Agra2(UP) end. Fault distance was 0.4km and zone-1 distance protection operated from Agra2(UP) end.</p> <p>iv) As per PMU at Agra(PG), Y-N phase to earth fault with delayed fault clearing time of 640ms is observed (phase sequence issue).</p> <p>v) As reported, at the same time, due to delayed fault clearance, 220/132kV 160MVA ICT-1 & 2 and 220/132kV 100MVA ICT-3 also tripped on overcurrent protection operation.</p> <p>vi) During the same time 220kV Agra2-Agra1 (UP) ckt also tripped from 400kV Agra1(UP) end (exact reason of tripping yet to be received).</p> <p>vii) Due to tripping of 220/132kV 160MVA ICT-1 & 2 and 220/132kV 100MVA ICT-3, other 132kV feeders and 132/33kV 63MVA ICT-4 & 5 became dead.</p> <p>viii) As per SCADA, change in demand of approx. 196 MW in UP control area. However, SLDC-UP reported 146MW load loss.</p>	<p>220kV Agra2-Agra1 (UP) Ckt 1</p> <p>132kV Agra2-railway TSS (patholi) Ckt 1</p> <p>220/132kV 160MVA ICT-1 at Agra2(UP)</p> <p>220/132kV 160MVA ICT-2 at Agra2(UP)</p> <p>220/132kV 100MVA ICT-3 at Agra2(UP)</p>
23	GD-1	Rajasthan	18-06-2024 23:03	19-06-2024 10:09	11:06	0	180	0.000	0.219	61172	82109	<p>i) 400/220kV Kalsindh(RS) has one and half breaker scheme at 400kV level and double main transfer bus scheme at 220kV level.</p> <p>ii) During antecedent condition, generation of 600 MW Kalsindh TPS - UNIT-1 & 2 were 551 MW & 568 MW respectively. This total power was evacuating through 400 KV Anta-Kalsindh (RS) Ckt-2 ("869MW) and 400/220kV 315 MVA ICT ("180MW). 220kV Jhalawar D/C was connected from 400/220kV 315 MVA ICT. 400 KV Anta-Kalsindh (RS) Ckt-1 was not in service (forced outage on R-N phase to earth fault from 18:16 hrs (18/06/2024)).</p> <p>iii) As reported, at 23:03hrs, due to heavy rain and stormy weather condition, 400 KV Anta-Kalsindh (RS) Ckt-2 tripped on R-Y phase to phase fault with fault distance of 19.98km and 52.87km from Anta and Kalsindh end respectively. From both ends zone-1 distance protection operated. Faults currents were I_r=124kA & I_y=15.33kA (I_a per D/C) and I_r=4.38kA & I_y=2.38kA from Anta and Kalsindh end respectively.</p> <p>iv) As per PMU at Ajmer(PG), R-Y phase to phase fault with fault clearing time of 120msec is observed.</p> <p>v) Due to tripping of 400 KV Anta-Kalsindh (RS) Ckt-2, island formed with 600 MW Unit-1 & 2 at Kalsindh TPS(RS) and 220 KV Kalsindh-Jhalawar D/C and generation-load imbalance occurred. After this, 600 MW Unit-1 & 2 at Kalsindh TPS(RS) tripped due to over-speeding.</p> <p>vi) After tripping of 600 MW Unit-1 & 2 at Kalsindh TPS(RS), 400/220kV 315 MVA ICT and 220 KV Kalsindh-Jhalawar D/C got de-energized and complete blackout occurred at 400/220kV Kalsindh(RS).</p> <p>vii) As per SCADA, no change in demand is observed in Rajasthan control area. However, approx. 180 MW load loss is reported by SLDC- Rajasthan.</p> <p>viii) As per SCADA, loss in generation of approx. 1057 MW at Kalsindh TPS is observed. However, SLDC- Rajasthan reported approx. 1119 MW generation loss at Kalsindh TPS(RS).</p>	<p>1800 KV Anta-Kalsindh (RS) Ckt-2</p> <p>600 MW Kalsindh TPS - UNIT-1</p> <p>3600 MW Kalsindh TPS - UNIT-2</p>
24	GI-2	Rajasthan, Uttar Pradesh & Punjab	19-06-2024 12:42	19-06-2024 14:20	01:38	5530	1050	7.440	1.167	74323	89938	<p>i) During antecedent condition, low voltage scenario was prevailing in mainly Rajasthan, Delhi and UP control area. As per SCADA, voltage at 400kV Bikaner(RS), Bhadla(RS), Bhiswal(RS) and Kanti(RS) were 377kV, 382kV, 379kV and 375kV respectively.</p> <p>ii) As per PMU at Bhadla(PG), at 12:42:03:760 hrs, 3-phase to ground fault (a) observed with fault clearing time of (exact location of the fault yet to be shared). Voltage dipped upto 0.835 p.u. at Bhadla(PG).</p> <p>iii) As per SCADA, total NR RE generation drop/loss was approx. 4930MW (STS Solar: ~3490 MW, Rajasthan Solar: ~843 MW, Rajasthan Wind: ~597 MW).</p> <p>iv) As per SCADA, total change in demand of approx. 1215 MW (Punjab: ~720 MW, UP: ~180 MW, Rajasthan: ~305 MW) is observed in NR control area.</p> <p>v) As per PMU at Bassi(PG), frequency dropped by 0.409Hz (from 50.062 Hz to 49.653 Hz) due to significant dip in RE generation. Frequency recovered upto 49.865 Hz within 1 minute.</p> <p>vi) As per details received from SLDCs, total load relief of approx. 1050 MW observed in NR region (Punjab: ~723 MW, UP: ~220MW, Rajasthan: ~107 MW) on 15/16 operation.</p> <p>vii) Due to significant dip in RE generation (as RE generation failed to recover 90% of pre-fault active power within 1 sec and further inverters tripping on OV, LVRT/HVRT Non-compliant), over voltage (1.075pu at 400kV Bhadla(PG)) scenario occurred immediately after the fault.</p> <p>viii) At the same time, 135 MW Rajwest (PP) LTPS - UNIT 2, 4, 5, 6 and 8 also tripped due to "sudden change in speed protection" in turbine operated (protection logic: If 2 out of 3 sensors in turbine senses change in speed more than 20 rpm within 10ms then it sends tripping signal to turbine), as reported (further details yet to be received).</p> <p>ix) As per SCADA, generation loss of approx. 600 MW occurred at Rajwest(RS) LTPS.</p>	<p>1.855 MW Rajwest (PP) LTPS - UNIT 2</p> <p>2.855 MW Rajwest (PP) LTPS - UNIT 4</p> <p>3.855 MW Rajwest (PP) LTPS - UNIT 5</p> <p>4.855 MW Rajwest (PP) LTPS - UNIT 6</p> <p>5.855 MW Rajwest (PP) LTPS - UNIT 8</p>
25	GI-1	Haryana	19-06-2024 22:05	19-06-2024 22:35	00:30	0	86	0.000	0.112	58638	76643	<p>i) 220/132kV Safidon(HV) has double main bus scheme at 220kV side.</p> <p>ii) During antecedent condition, 220kV lines from Safidon(HV) to Jind(HV) ckt-1 & 2, PTPS(HV) ckt-1 & 220/132kV 100MVA ICT-2 connected to 220kV Bus-1 and 220kV lines from Safidon(HV) to Jind(HV) ckt-2, PTPS(HV) ckt-2 & 3 and 220kV 160MVA ICT-1 & 3 were connected to 220kV Bus-2 at Safidon(HV).</p> <p>iii) As reported, at 22:05 hrs, due to inclement weather, 220kV Safidon-Mund (HV) ckt-1 & 2 tripped on B-N phase to earth fault (I_r=4.5kA) and R-Y-B three phase fault (I_r=4.7kA, I_y=2.3kA, I_b=4.5kA) with fault distance of 24.5km and 36.3km respectively from Safidon(HV) end. Zone-2 distance protection operated for the lines from Safidon(HV) end.</p> <p>iv) As per PMU at Jind(PG), R-B phase to phase fault converted into R-Y-B three phase fault with fault clearing time of 680msec is observed.</p> <p>v) At the same time, due to high fault current, sparking occurred in bay (isolator) of 220kV Safidon-Mund (HV) ckt-1 & 2 at Safidon(HV) end and due to which bus bar protection operated and all elements connected to 220kV Bus-1 (220kV lines to PTPS ckt-1, Jind ckt-1 and 220/132kV 100MVA ICT-2) tripped at Safidon(HV) S/S.</p> <p>vi) At the same time, due to inclement weather condition, 220 KV Jind(PG)-Mund (HV) (HVPNL) Ckt-1 & 2 also tripped. 220 KV Jind(PG)-Mund (HV) (HVPNL) Ckt-2 tripped on B-N phase earth fault with fault current of 1.9kA from Mund(HV) end. (type of protection operated and reason for tripping of 220 KV Jind(PG)-Mund (HV) (HVPNL) Ckt-1 yet to be received).</p> <p>vii) As per SCADA, 447 MW load loss is observed in Haryana control area. However, 86MW load loss is reported by SLDC-Haryana</p>	<p>1020 KV Safidon-Jind (HV) Ckt-1</p> <p>2020 KV Safidon-Mund (HV) Ckt-1</p> <p>1020 KV Safidon-Mund (HV) Ckt-2</p> <p>1020 KV Safidon-PTPS (HV) Ckt-1</p> <p>5020/132kV 100MVA ICT-2 at Safidon(HV)</p> <p>1020 KV Jind(PG)-Mund (HV) (HVPNL) Ckt-1</p> <p>1020 KV Jind(PG)-Mund (HV) (HVPNL) Ckt-2</p> <p>8020 KV Mund-IOCL (HV) Ckt-1</p>
26	GD-1	Rajasthan	20-06-2024 22:59	21-06-2024 05:54	06:55	0	0	0.000	0.000	57173	77776	<p>i) 400/220kV Bikaner-2(PG) one and half breaker bus arrangement at 400kV side and double main & transfer bus arrangement at 220kV side.</p> <p>ii) During antecedent condition, no power generation at 220kV sub-stations connected from 400/220 KV 500 MVA ICT-1 & 2 at Bikaner-2(PG) (Grain Energy, Prerak Green & TP Saurya Banderwala). So loading of ICT-1 & 2 was approx. 0 MW at Bikaner-2(PG). 400/220kV 500 MVA ICT-3 and 220kV line to Serentika at Bikaner-2(PG) were not in service.</p> <p>iii) As reported, at 22:59hrs, due to inclement weather condition, 220 KV BTPSL_SL_BIK2_PG-Bikaner_2 (BPTSU) (BANDERWALA_TPSU) Ckt tripped on Y-N phase to earth fault. Fault distance was 5km and fault current was I_y=16kA from Bikaner-2(PG) end. Zone-1 distance protection operated from Bikaner-2(PG) end.</p> <p>iv) As per PMU at Bikaner-2(PG), Y-N phase to earth fault is observed with fault clearing time of 80ms.</p> <p>v) As per SCADA SOE, during the dead time period of tripping of 220 KV BTPSL_SL_BIK2_PG-Bikaner_2 (BPTSU) (BANDERWALA_TPSU) Ckt, 400/220 KV 500 MVA ICT-1 & 2 at Bikaner-2(PG) also tripped due to Restricted earth fault protection operation. Through fault current of magnitude ~8kA fed by both the ICTs. Spill current of magnitude ~100mA was observed during the event while REF pickup current setting is 50mA for both the ICTs at Bikaner-2(PG) (As reported).</p> <p>vi) As 400/220 KV 500 MVA ICT-1 & 2 at Bikaner-2(PG) tripped, 220kV lines from Bikaner-2(PG) to Grain Energy, Prerak Green & TP Saurya Banderwala became dead and the respective sub-stations got blackout.</p> <p>vii) As per SCADA, no change in demand in Rajasthan control area and no generation loss is observed.</p> <p>viii) As per remedial action, stabilizing resistor value revised from 600 ohms to 915 ohms.</p>	<p>1020 KV BTPSL_SL_BIK2_PG-Bikaner_2 (BPTSU) (BANDERWALA_TPSU) Ckt</p> <p>2000/220 KV 500 MVA ICT-1 at Bikaner_2 (BPTSU)</p> <p>3000/220 KV 500 MVA ICT-2 at Bikaner_2 (BPTSU)</p>

Details of Grid Events during the Month of June 2024 in Northern Region



Sl No.	Category of Grid Event (GI for GI-2/GD-1 to GD-5)	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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
27	GI-1	Delhi	20-06-2024 12:29	21-06-2024 14:06	25:37	0	219	0.000	0.265	71717	82570	<p>i) 220/66kV Park Street(DTL) has double main bus arrangement at 220kV side.</p> <p>ii) i)Rs reported, at 12:29 hrs, 33kV Park Street-dkt-2 tripped on fault on the same line (nature, reason and location of fault yet to be received).</p> <p>iii) i)Rs per PMU at Maharani Bagh(PG), R-Y-B three phase fault is observed with fault clearing time of 120msec respectively.</p> <p>iv) i)Rs reported, at the same time, 220/33kV 100MVA ICT-3 & 4 also tripped at Park Street(DTL). ICT-3 tripped on Buchholz relay operation and ICT-4 tripped on opening of incomer due to damage in B-phase pole of ICT-4 CB (exact reason of tripping of both ICTs yet to be received).</p> <p>v) i)Rs per SCADA, change in demand of approx. 219 MW is observed in Delhi control area.</p>	<p>1)220/33kV 100MVA ICT-3 at Park Street(DTL)</p> <p>2)220/33kV 100MVA ICT-4 at Park Street(DTL)</p>
28	GI-1	Rajasthan	21-06-2024 11:37	21-06-2024 13:29	01:52	0	744	0.000	0.912	66360	81554	<p>i) 220kV Kotas has double main bus arrangement at 220kV side.</p> <p>ii) During antecedent condition, power generation of 110 MW Unit-1 & 2, 210 MW Unit-3, 4 & 5 and 195 MW Unit-6 & 7 were 81MW, 95MW, 174MW, 150MW, 157MW, 171MW & 172MW respectively. 210 MW Unit-5, 220 KV KSTPS-Kota Sakalputra (RS) Ckt-3 & station transformer (ST)-3 were connected to 220kV Bus-3 and 195 MW Unit-7 and 220 KV Kota(PG)-KTPS(RVUN) (RS) Ckt-1 were connected to 220kV Bus-5 at KTPS(RS). 220kV Bus-3 and Bus-5 were coupled through isolator only.</p> <p>iii) i)Rs reported, at 11:37hrs, due to inclement weather conditions, 220 KV KSTPS-Ranpur (RS) Ckt tripped on R-Y phase to phase fault at a distance of 12.49km from KTPS(RS) end. Zone-1 distance protection operated from both ends. As per PMU, R-N followed by Y-N phase to earth fault is observed with fault clearing time of 120ms and 120ms.</p> <p>iv) i)Rs reported, at 11:39hrs, due to inclement weather conditions, 220 KV Kota(PG)-KTPS(RVUN) (RS) Ckt-1 tripped on B-N phase to earth fault (Ib= 14.13A & Ib=11.71A from Kota(PG) and KTPS(RS) ends respectively) at a distance of 2.96km from Kota(PG) end. Zone-1 distance protection operated from Kota(PG) end. However, B-phase CB pole lagged in opening while clearing the fault from KTPS(RS) end which led to LBB protection operation at KTPS(RS). As per PMU, B-N phase to earth fault with delayed fault clearing time of 320msec is observed.</p> <p>v) Line 220kV bus-3 & bus-5 were coupled through isolator only, due to LBB operation all elements connected to 220kV bus-3 & bus-5 tripped (210 MW Unit-5, 220 KV KSTPS-Kota Sakalputra (RS) Ckt-3, ST-3, 195 MW Unit-7 and 220 KV Kota(PG)-KTPS(RVUN) (RS) Ckt-1).</p> <p>vi) Due to tripping of ST-3, auxiliary supply of 110 MW Unit-3 and 210 MW Unit-3 & 4 disrupted which led to tripping of Unit-1, 3 & 4 at KTPS(RS)</p> <p>vii) At the same time, 220 KV Duni(RS)-Kota(PG) (RS) Ckt also tripped on R-N phase to earth fault (I=213A & Ib=1.33A from Kota(PG) and Duni(RS) end respectively) with fault distance of 75.2km from Kota(PG) end. Fault sensed in zone-1 from both ends. As per PMU, multiple R-N phase to earth fault with fault clearing time of 120ms, 120ms and 80ms.</p> <p>viii) i)Rs per SCADA, no change in demand in Rajasthan control area is observed.</p>	<p>1)220 KV KSTPS-Ranpur (RS) Ckt</p> <p>2)220 KV Kota(PG)-KTPS(RVUN) (RS) Ckt-1</p> <p>3)220 KV KSTPS-Kota Sakalputra (RS) Ckt-3</p> <p>4)210 MW Unit-1 at KTPS(RS)</p> <p>5)210 MW Unit-3 at KTPS(RS)</p> <p>6)210 MW Unit-4 at KTPS(RS)</p> <p>7)210 MW Unit-5 at KTPS(RS)</p> <p>8)195 MW Unit-7 at KTPS(RS)</p> <p>9)220 KV Duni(RS)-Kota(PG) (RS) Ckt</p>
29	GD-1	Punjab	21-06-2024 10:38	21-06-2024 11:24	00:46	0	320	0.000	0.400	63575	80089	<p>i) 220/66kV Mohali(PS) and 220/66kV Majra(PS) S/s have double main bus arrangement at 220kV side.</p> <p>ii) During antecedent condition, 220kV lines from Mohali(PS) to Nallagarh(PG) D/C, Majra(PS), Mohali2(PS), 220/66kV 160 MVA ICT-1 & 220/66kV 100 MVA ICT-2 were connected to 220kV Bus-1 and 220kV lines from Mohali(PS) to Rajpura D/C, GSSTP, Khark, Derab, Gangwal & 220/66kV 160MVA ICT-3 were connected to 220kV Bus-2 at 220kV Mohali(PS) S/s. 220kV bus coupler was in open condition at Mohali(PS) S/s. Incoming power at 220kV Bus-1 Mohali(PS) was only through 220 KV Nallagarh(PG)-Mohali(PS) (PS) D/C and 220kV Mohali-Majra (PS) Ckt and incoming power at Majra(PS) was only through 220 KV Gangwal(BB)-Majra(PS) (PS) Ckt.</p> <p>iii) i)Rs reported, at 10:38 hrs, 220 KV Nallagarh(PG)-Mohali(PS) (PS) D/C tripped only from Nallagarh(PG) end on receiving DT from Mohali(PS) end (exact reason for DT received at Nallagarh(PG) end yet to be received).</p> <p>iv) i)Rs per PMU at Nallagarh(PG), fluctuation in voltage, no fault is observed in the system.</p> <p>v) i)Rs 220 KV Nallagarh(PG)-Mohali(PS) (PS) D/C tripped, the complete load which connected to 220kV Bus-1 Mohali(PS) shifted to 220kV Mohali-Majra (PS) Ckt due to which 220 KV Gangwal(BB)-Majra(PS) (PS) Ckt tripped on overcurrent protection operation due to overloading.</p> <p>vi) Due to tripping of 220 KV Nallagarh(PG)-Mohali(PS) (PS) D/C and 220 KV Gangwal(BB)-Majra(PS) (PS) Ckt, all elements connected to 220kV Bus-1 at Mohali(PS) S/s (220kV lines from Mohali(PS) to Majra(PS), Mohali2(PS), 220/66kV 160 MVA ICT-1 & 220/66kV 100 MVA ICT-2) and complete 220kV Majra(PS) S/s became dead. This resulted into blackout of 220/66kV Majra(PS) S/s.</p> <p>vii) i)Rs per SCADA, load loss of approx. 320 MW in Punjab Control area.</p>	<p>1)220 KV Nallagarh(PG)-Mohali(PS) (PS) Ckt-1</p> <p>2)220 KV Nallagarh(PG)-Mohali(PS) (PS) Ckt-2</p> <p>3)220 KV Gangwal(BB)-Majra(PS) (PS) Ckt</p>
30	GD-1	Delhi	21-06-2024 00:54	21-06-2024 01:34	00:40	0	173	0.000	0.227	56253	76070	<p>i) 220/66kV Naraina(DTL) has double main bus arrangement at 220kV side.</p> <p>ii) i)Rs reported, at 00:54 hrs, 220/33kV 100MVA ICT-1, 2 and 3 at Naraina(DTL) tripped on O/C protection operation due to B-Ph cable end terminal of 33kV Bus-2 damaged at Naraina(DTL).</p> <p>iii) Due to tripping of all the three ICTs at Naraina(DTL), complete blackout occurred at 220/33kV Naraina(DTL) S/s.</p> <p>iv) i)Rs per PMU at Dwarka(PG), B-N phase to earth fault converted to 3-phase to earth fault is observed with delayed fault clearing time of 600 ms.</p> <p>v) i)Rs per SCADA, change in demand of approx. 360 MW is observed in Delhi control area. As reported by SLDC-Delhi, load loss of approx. 173 MW occurred.</p>	<p>1)220/33kV 100MVA ICT-1 at Naraina(DTL)</p> <p>2)220/33kV 100MVA ICT-2 at Naraina(DTL)</p> <p>3)220/33kV 100MVA ICT-3 at Naraina(DTL)</p>
31	GI-2	Haryana and Punjab	23-06-2024 09:11	23-06-2024 10:24	01:13	0	880	0.000	1.208	58647	72828	<p>i) During antecedent condition, 800KV HVDC Champa-Kurukshetra was carrying total 5687 MW (approx. 1415 MW, 1425 MW, 1426 MW and 1421 MW by Pole 1, 2, 3 and 4 respectively).</p> <p>ii) i)Rs reported at 09:11 hrs, 800 KV HVDC Kurukshetra (PG) Pole-01 blocked on T-zone protection operation at Kurukshetra end. Noise in Ith current of Pole-1 Lane-1 led to latching of T-zone protection.</p> <p>iii) During the same time, 800 KV HVDC Kurukshetra (PG) Pole-03 also blocked on CAT-B sequence initiated by parallel Pole-01 due to latching of T-zone protection.</p> <p>iv) i)Rs further reported, sequence of event is as follows: a) 09:11:46:724 hrs - Pole-1 Lane 1 Main 1 & 2 T-zone Latched. b) 09:11:46:727 hrs- CAT-B latched in Pole-1 due to T-zone Protection. c) 09:11:46:728 hrs- CAT-B latched in Pole-3 due to T-zone Protection in Pole-1. v) Due to tripping of two poles (Pole-01 and Pole-03), power order reduced from 5687 MW to 2683 MW.</p> <p>vi) i)Rs per PMU, no fault is observed in the system. However, fluctuation in voltage was observed.</p> <p>vii) At the same time, d/dt protection operated in Punjab which led to load throw-off of approx. 880 MW (details of d/dt operation at Punjab is attached in Annexure).</p> <p>viii) i)Rs per SCADA, change in demand of approx. 610MW is observed in Punjab control area.</p>	<p>1)800 KV HVDC Kurukshetra(PG) Pole-01</p> <p>2)800 KV HVDC Kurukshetra(PG) Pole-03</p>
32	GI-1	Delhi	23-06-2024 15:35	23-06-2024 16:15	00:40	0	312	0.000	0.395	63584	79056	<p>i) 220/220/66kV Tughlakabad(DTL) has one and half bus arrangement at 400kV side and double main bus arrangement at 220kV side. 220kV Tughlakabad-BTFS (DTL) D/C and 220kV Tughlakabad-Ohla (DTL) D/C have common towers up to some distance.</p> <p>ii) i)Rs reported, at 15:35 hrs, 220kV Tughlakabad- BTFS (DTL) D/C and 220kV Tughlakabad-Ohla (DTL) D/C tripped on R-Y-B three phase fault. Optical ground wire (OPGW) broke down and fell on the mentioned lines which caused multiple R-Y-B three phase faults (type of protection operated and location of fault yet to be received).</p> <p>iii) i)Rs per PMU at Maharani Bagh(PG), multiple R-Y-B three phase faults are observed with delayed fault clearance time of 400msec.</p> <p>iv) At the same time 220kV Tughlakabad-Masjid Moth (DTL) Ckt-1 also tripped from Masjid Moth(DTL) end (exact reason of tripping and type of protection operated yet to be received).</p> <p>v) i)Rs per SCADA, change in demand of approx. 312 MW is observed in Delhi control area.</p>	<p>1)220kV Tughlakabad- BTFS (DTL) Ckt-1</p> <p>2)220kV Tughlakabad- BTFS (DTL) Ckt-2</p> <p>3)220kV Tughlakabad-Ohla (DTL) Ckt-1</p> <p>4)220kV Tughlakabad-Ohla (DTL) Ckt-2</p> <p>5)220kV Tughlakabad-Masjid Moth (DTL) Ckt-1</p>

Details of Grid Events during the Month of June 2024 in Northern Region



Sl No.	Category of Grid Event (GI for GI-2/GD-1 to GD-5)	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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
33	GD-1	Delhi	27-06-2024 09:48	27-06-2024 10:39	00:51	0	214	0.000	0.333	57905	64327	<p>i) 220kV Gopalpur(DTL) has double main bus arrangement at 220kV side.</p> <p>ii) During antecedent condition, 220kV lines from Gopalpur(DTL) to Mandaula(PG) ckt-1, South Wairabad ckt-2, Subzimandi ckt-2 and 220/66kV 100MVA ICT-2 & 220/66kV 100MVA ICT-4 were connected to 220kV Bus-1 and 220kV lines from Gopalpur(DTL) to Mandaula(PG) ckt-2, South Wairabad ckt-1, Subzimandi ckt-1 and 220/33kV 100MVA ICT-1 & 3 were connected to 220kV Bus-2 at Gopalpur(DTL) S/s. 220kV lines from Gopalpur(DTL) to South Wairabad D/C and Subzimandi ckt-2 were not in service. 220kV Gopalpur-Mandaula Ckt-1 & 2 were feeding the load of 220kV Gopalpur(DTL) S/s and further connected to 220kV Subzimandi(DTL) S/s through 220kV Gopalpur-Subzimandi ckt-1 & 2.</p> <p>iii) As reported, at 09:48 hrs, B-N phase to earth fault occurred on 220kV Bus-2 with fault current of approx. 7kA which caused bus bar protection operation at 220 kV Bus-1 & 2 at Gopalpur(DTL) (exact reason of fault and reason for bus bar protection on 220kV Bus-1 yet to be shared).</p> <p>iv) Due to this, all the elements connected to 220kV Bus-1 and Bus-2 tripped along with the 220kV bus coupler at Gopalpur(DTL). But 220 kV Mandola(PG)-Gopalpur(DTL) DTL Ckt-2 didn't trip from Gopalpur(DTL) end, it tripped from Mandaula(PG) end only.</p> <p>v) As reported, Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-2 didn't trip from Gopalpur end due to non-availability of bus isolator status in bus bar protection relay.</p> <p>vi) As per DR at Mandaula(PG) end, 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-1 tripped from Gopalpur(DTL) end only with fault current of ~5.9kA from Mandaula(PG) end; fault sensed in zone-3 from Mandaula(PG).</p> <p>vii) As per DR at Mandaula(PG) end, 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-2 tripped from Mandaula(PG) end only with fault current of ~7.4kA and fault distance of 27.5 km from Mandaula(PG) end (as reported); fault sensed in zone-2 from Mandaula(PG).</p> <p>viii) As 220kV Mandola(PG)-Gopalpur(DTL) (DTL) D/C tripped, Gopalpur(DTL) and Subzimandi(DTL) lost their connectivity from grid which led to blackout of 220kV Gopalpur(DTL) S/s and 220kV Subzimandi(DTL) S/s.</p> <p>ix) As per PMU at Mandaula(PG), B-N phase to earth fault is observed with delayed fault clearing time of 280msec respectively.</p> <p>x) As per SCADA, change in demand of approx. 123 MW is observed in Delhi control area. However, 214 MW load loss is reported by SLDC-Delhi.</p>	<p>1) 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-1</p> <p>2) 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-2</p> <p>3) 220 kV Subzimandi-Gopalpur(DTL) Ckt-1</p> <p>4) 220 kV Subzimandi-Gopalpur(DTL) Ckt-2</p> <p>5) 220/33kV 100MVA ICT-1 at Gopalpur(DTL)</p> <p>6) 220/66kV 100MVA ICT-2 at Gopalpur(DTL)</p> <p>7) 220/33kV 100MVA ICT-3 at Gopalpur(DTL)</p> <p>8) 220/66kV 100MVA ICT-4 at Gopalpur(DTL)</p>
34	GI-2	Haryana	27-06-2024 21:17	27-06-2024 21:54	00:37	0	625	0.000	0.800	54726	78141	<p>i) During antecedent condition, 800 kV HVDC Kurukshetra(PG) Pole-1, 2, 3 & 4 were carrying 1125 MW each and hence total 4500 MW power was flowing from Champa to Kurukshetra.</p> <p>ii) As reported at 21:17 hrs, 800 kV HVDC Kurukshetra (PG) Pole-2 & 4 blocked on CLD HV Cable Protection and Pole-1 & 3 blocked on latching of SYS Fail in Pole-3.</p> <p>iii) Pole-4 Lane-2 (M1 & M2) went into fault due to latching of major fault without reporting any further alarms. DC Line Fault restart sequence operated once in Pole-4 along with activation of CAT-D Alarm. Simultaneously, CLD Minor Fail alarm latched in Pole-4 Lane-1. As Pole-4 Lane-2 was faulty, the Lane changeover was not successful & controls generated for blocking of Pole-4 along with generation of CAT-B alarm which subsequently blocked its parallel Pole i.e. Pole-2.</p> <p>iv) During the same time, SYS Fail latched onto Pole-3 and as both the Lanes became unavailable, Pole-3 got blocked and generated CAT-B Alarm which subsequently blocked its parallel Pole i.e. Pole-1.</p> <p>v) Due to tripping of all four poles, power order reduced from 4500 MW to 0 MW.</p> <p>vi) As per PMU, no fault is observed in the system. However, fluctuation in voltage was observed.</p> <p>vii) As per SCADA, change in demand of approx. 400 MW and 225 MW in Rajasthan and UP control area are observed. However, Rajasthan and UP reported no df/dt operation during the event.</p>	<p>1) 800 kV HVDC Kurukshetra(PG) Pole-01</p> <p>2) 800 kV HVDC Kurukshetra(PG) Pole-02</p> <p>3) 800 kV HVDC Kurukshetra(PG) Pole-03</p> <p>4) 800 kV HVDC Kurukshetra(PG) Pole-04</p>
35	GI-2	Rajasthan	30-06-2024 11:14	30-06-2024 14:10	02:56	328	177	0.528	0.260	62115	67952	<p>i) 400/220kV Bhadra(RS) has double main and transfer bus arrangement at 220kV side.</p> <p>ii) During antecedent condition, loading of 400/220 kV 500 MVA ICT-1, 2 & 3 were approx. 380 MW, 373 MW & 379 MW respectively. 220 kV Bhadra-Adani REPRIL D/C 220 kV Bhadra-Saurya Urja-2 Ckt were carrying approx. 215 MW & 260 MW respectively (reported data).</p> <p>iii) As reported, at 11:14hrs, R-phase jumper of LV bushing of 400/220 kV 500 MVA ICT-1 at Bhadra(RS) snapped which led to tripping of ICT-1 on directional overcurrent earth fault protection operation.</p> <p>iv) As per "SPS for Transformers at 400kV Bhadra (RVFN) substation", overloading of remaining ICTs after tripping of any of the three 400/220kV 500MVA ICTs on fault/protection operation will lead to operation of SPS as per logic described in schematic diagram for SPS at Bhadra(RS) (attached in Annexure).</p> <p>v) As per logic, tripping commands for 220kV lines and/or 220kV Bus-sectionalizer-II are to be taken from overload relay/over-current back up relay of 400kV and/or 220kV side of ICTs considering 100% loading of the ICTs (500MVA) with appropriate time delay (ICT-1: 4.5 sec, ICT-2: 3.75 sec and ICT-3: 3 sec).</p> <p>vi) As ICT-1 tripped, the load of ICT-1 shifted to ICT-2 & 3 which led to overloading (more than 100%) of ICT-2 & 3 at Bhadra(RS). Due to less time grading of ICT-3 (3 sec), as per SPS logic, group 3 & 4, i.e., 220 kV Bhadra-Adani REPRIL Ckt-1 & 2 and 220 kV Bus sectionalizer-II to evacuate power of Saurya Urja-II (300 MW) tripped on 86 master trip relay operation (correct operation of SPS).</p> <p>vii) As per PMU at Bhadra(PG), no fault in system, however fluctuation in voltage is observed.</p> <p>viii) As per SCADA, change in demand of approx. 177MW in Rajasthan control area and loss in NR solar generation of approx. 328MW is observed.</p>	<p>1) 400/220 kV 500 MVA ICT-1 at Bhadra(RS)</p> <p>2) 220 kV Bhadra-Adani REPRIL Ckt-1</p> <p>3) 220 kV Bhadra-Adani REPRIL Ckt-2</p> <p>4) 220 kV Bus sectionalizer-II to evacuate power of Saurya Urja-II (300 MW)</p>
36	GD-1	Delhi	30-06-2024 10:12	30-06-2024 10:22	00:10	0	177	0.000	0.271	59280	65322	<p>i) 220kV Gopalpur(DTL) has double main Bus arrangement at 220kV side.</p> <p>ii) During antecedent condition, 220kV lines from Gopalpur(DTL) to Mandaula(PG) ckt-1, South Wairabad ckt-2, Subzimandi ckt-2 and 220/66kV 100MVA ICT-2 & 220/66kV 100MVA ICT-4 were connected to 220kV Bus-1 and 220kV lines from Gopalpur(DTL) to Mandaula(PG) ckt-2, South Wairabad ckt-1, Subzimandi ckt-1 and 220/33kV 100MVA ICT-1 & 3 were connected to 220kV Bus-2 at Gopalpur(DTL) S/s. 220kV lines from Gopalpur(DTL) to South Wairabad D/C and Subzimandi ckt-2 were not in service. 220kV Gopalpur-Mandaula Ckt-1 & 2 were feeding the load of 220kV Gopalpur(DTL) S/s and further connected to 220kV Subzimandi(DTL) S/s through 220kV Gopalpur-Subzimandi ckt-1 & 2.</p> <p>iii) As reported, at 10:12 hrs, R-N phase to earth fault occurred at Gopalpur(DTL) (exact location and reason of fault yet to be received). As per PMU at Mandaula(PG), R-N phase to earth fault is observed with delayed fault clearing time of 800msec respectively.</p> <p>iv) As reported, bus bar protection kept off with time delay setting of 160msec for zone-4 distance protection at Gopalpur(DTL) to avoid any maloperation of bus bar protection relay. On R-N phase to earth fault, 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) D/C didn't trip from Gopalpur end (Reason for not tripping of 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) D/C yet to be received).</p> <p>v) As per DR, 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) D/C tripped from Mandaula(PG) end only Ckt-1 tripped on zone-3 distance protection operation and ckt-2 tripped on overcurrent earth fault protection.</p> <p>vi) As further reported, 220/33kV 100MVA ICT-1 & 3, 220/66kV 100MVA ICT-2 & 220/66kV 100MVA ICT-4 at Gopalpur(DTL) tripped on overcurrent protection operation and 220/33kV 100MVA ICT-1 & 2 tripped at Subzimandi(DTL) on restricted earth fault protection operation.</p> <p>vii) As 220kV Mandola(PG)-Gopalpur(DTL) (DTL) D/C tripped, Gopalpur(DTL) and Subzimandi(DTL) lost their connectivity from grid which led to blackout of 220kV Gopalpur(DTL) S/s and 220kV Subzimandi(DTL) S/s.</p> <p>viii) As per SCADA, change in demand of approx. 171 MW in Delhi control area (as per SCADA). However, 177 MW load loss is reported by SLDC-Delhi.</p>	<p>1) 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-1</p> <p>2) 220 kV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-2</p> <p>3) 220/33kV 100MVA ICT-1 at Gopalpur(DTL)</p> <p>4) 220/66kV 100MVA ICT-2 at Gopalpur(DTL)</p> <p>5) 220/33kV 100MVA ICT-3 at Gopalpur(DTL)</p> <p>6) 220/66kV 100MVA ICT-4 at Gopalpur(DTL)</p> <p>7) 220/33kV 100MVA ICT-1 at Subzimandi(DTL)</p> <p>8) 220/33kV 100MVA ICT-2 at Subzimandi(DTL)</p>

Details of Grid Events during the Month of June 2024 in Western Region



Sl No.	Category of Grid Event (GI for GI 2/GD-1 to GD-5)	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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
1	GD-1	WR	01-06-2024 00:26	01-06-2024 01:07	00:41	341	-	0.37%	-	91677	69201	At 00:26 Hrs / 01-06-2024, 220 kV Bhuj-Baranda-1 tripped on 3 phase to ground fault due to falling of spare conductor of 220 kV Bhuj-Kotda Madh on 220 kV Bhuj-Baranda-1 near Bhuj gantry. Simultaneously 220 kV Bhuj-Gadhisa-1 tripped due to maloperation of relay. Generation loss of 196 MW and 145 MW occurred at Gadhisa (Renew Power) and Baranda (Avlikran) respectively due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj-Baranda 2. 220 kV Bhuj-Gadhisa
2	GD-1	WR	05-06-2024 01:28	05-06-2024 03:07	01:39	-	-	-	-	85001	64030	At 01:28 Hrs / 05-06-2024, 220 kV Raipur-Serisha tripped from Serisha end only due to relay maloperation at Serisha end. Maloperation of relay is under investigation by Serisha. No generation loss occurred at Serisha Solar Power plant (due to night hours) during above tripping.	Tripping of following Elements: 1. 220 kV Raipur-Serisha 2. 220/33 kV Serisha-ICT-1 3. 220 kV Serisha-Main Bus
3	GD-1	WR	05-06-2024 23:07	06-06-2024 19:51	20:44	149.25	-	0.18%	-	84323	67866	At 23:07 Hrs / 05-06-2024, 220 kV Bhuj-Baranda-1 tripped on 3 phase to ground fault due to falling of spare conductor of 220 kV Bhuj-Kotda Madh on 220 kV Bhuj-Baranda-1 near Bhuj gantry. 3 phase sweepstop of 220 kV Bhuj-Baranda blasted at Bhuj end. Simultaneously, 220 kV Bhuj-Gadhisa-1 tripped due to relay maloperation. Fault was in 22 but 22 didn't pickup and line tripped. Generation loss of 99 MW and 50 MW occurred at Gadhisa (Renew Power) and Baranda (Avlikran) respectively due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj-Baranda 2. 220kV Bhuj-Gadhisa
4	GD-1	WR	09-06-2024 06:03	09-06-2024 06:38	00:35	-	75	-	0.13%	73050	59391	At 06:03 Hrs / 09-06-2024, 220 kV Vasal(TP)-Nalopara (220 kV Padghe-Nalopara TAP at Vasal) tripped on B-E fault. Prior to the tripping, 220 kV Bolair(PG)-Panchali was under planned shutdown. 220 kV Nalopara is being fed through two links, Padghe-Vasal(TP)-Nalopara and Bolair(PG)-Panchali-Palghar-Nalopara. With the tripping of 220 kV Vasal(TP)-Nalopara, Nalopara substation became dark. Heavy rains and thunderstorms were reported at the time of tripping. Load loss of 75 MW occurred at Nalopara during the event.	Tripping of following Elements: 1. 220 kV Vasal(TP)-Nalopara
5	GD-1	WR	12-06-2024 13:10	12-06-2024 15:31	02:21	143	-	0.18%	-	77613	62443	At 13:10 Hrs / 12-06-2024, 220 kV Nakhatrana-Dedhiya tripped on earthfault (as informed in real time by Nakhatrana (Adani). However as seen from relay and PMU no fault indication is present the tripping was due to maloperation. Generation loss of 143 MW occurred at Dedhiya (Adani) wind power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Nakhatrana-Dedhiya
6	GD-1	WR	13-06-2024 18:16	13-06-2024 18:27	00:11	1095	350	1.37%	0.57%	79926	61493	At 18:16 Hrs / 13-06-2024, 400 kV JPL Stage-1-Tanner tripped on 2-1 protection operation due to flashover occurred in the breaker of 400 kV JPL Stage-1-Tanner and 400 kV JPL Stage-1-Rajpur-1&2 due to lightning strike. At the same time 400 kV JPL Stage-1-Rajpur-1&2 tripped, no fault signature was present as seen from disturbance recorder. All four units at JPL stage-1 (250MW) tripped on over frequency protection operation. Generation loss of 1095 MW occurred at JPL (Indira) Stage-1 and 250MW. Load loss of 350 MW occurred in Gerwani of Chhattisgarh control area.	Tripping of following Elements: 1. 400 kV JPL Stage-1-Rajpur-1&2 2. 400 kV JPL Stage-1-Tanner 3. 400 kV JPL Stage-1-JPL Stage-2 4. 400 kV JPL Stage-1-Gerwani 5. 220 kV JPL Stage-1-DC9P 6. JPL Stage-1 Unit-1,2,3&4 (250 MW) 7. RDC9P Unit 3&4 (135 MW)
7	GD-1	WR	17-06-2024 11:32	17-06-2024 14:46	03:14	1076	250	1.37%	0.38%	78604	65399	At 11:32 Hrs / 17-06-2024, 400/33kV Korba NTPC Tie Transformer-1 tripped on directional Earth fault protection operation. This led to the tripping of 33 kV Bus-A at Korba(NTPC), which was feeding the auxiliaries of Korba(NTPC)-Unit-1,2&3 (210 MW). Prior to the tripping 220 Korba(W) Bus-1 was under planned shutdown and 220 Korba(W) Bus-2 tripped while shifting of feeders on 220 Korba(W) Bus-2. As per PMU plot fault persisted for 440 msec due to which 400/33kV Korba NTPC Tie Transformer-1 tripped on directional Earth fault. As informed by NTPC Korba no indication in relays of 400 kV Korba(NTPC) Korba(W) was present. 220 Korba(W) substation became dark. Simultaneously, 220 kV Amarkantak-Anupur-2 tripped on overcurrent protection operation. Prior to the tripping, 220 kV Amarkantak-Anupur-1 was under planned shutdown. Due to tripping of units at Korba(NTPC), Korba(E), DSPM and 220 kV Korba-Churni-2, the load of Kotmikala was fed through 220 kV Anupur, resulting in overloading of 220 kV Amarkantak-Anupur-2. With these Anupur and Kotmikala became dark (Elements handtripped due to no load). 220 kV Kotmikala-Churni-1&2 were out to central loading on 220 kV Anupur-Amarkantak-2. Generation loss of 500 MW at Korba(NTPC), 136 MW at Korba(W) and 440 MW at DSPM(Korba East Extension) occurred due to the event. Load loss of 250 MW occurred at Kotmikala, Churni.	Tripping of following Elements: 1. 220 kV Anupur-Amarkantak-2 2. 200/33 kV Korba(NTPC) Tie Transformer-1 3. Korba(NTPC) Unit-1,2&3 (210 MW) 4. 220 kV Korba(W) Bus-2 5. 400/220 kV Korba(W)-ICT-1 6. 220 kV Churni-Korba(W) 1&2 7. 220 kV Korba(W)-Mopla-1 8. 220 kV Korba(E)-Korba(W)-1&2 9. 220 kV DSPM-Korba(W) 10. 220 kV Churni-Kotmikala-1&2
8	GD-1	WR	17-06-2024 13:54	17-06-2024 14:45	00:51	1117	-	1.41%	-	79451	65856	At 13:54 Hrs / 17-06-2024, Mahan Energen-Unit-1&2 (600 MW) tripped on overfrequency operation. At the time of tripping grid frequency was around 50.63 Hz. At 13:53 Hrs / 17-06-2024, net load loss of 9725 MW occurred in the Grid. The incident occurred immediately after tripping of both bipoles of HVDC Champa-Kurukshetra which was carrying 4,500 MW from the WR to NR. After tripping of the HVDC link, low voltages were observed across the Northern region and multiple lines and generation tripping occurred. Generation loss of 1117 MW occurred at Mahan Energen (Adani) Thermal Plant during the event. No load loss occurred in Western Region.	Tripping of following Elements: 1. Mahan Energen Unit-1&2 (600 MW) 2. HVDC Champa-Kurukshetra Pole-1,2,3&4
9	GI-2	WR	18-06-2024 03:15	18-06-2024 19:01	15:46	200	-	0.25%	-	79655	58460	At 03:15 Hrs / 18-06-2024, Y phase CT failure of Main bay of 400 kV RGPLL Dabhol-Nagthane-2 at RGPLL Dabhol resulted in Bus bar protection operation of 400 kV RGPLL Dabhol-Bus-1, 400 kV RGPLL Dabhol-Nagthane-2 and Main bays connected to 400 kV RGPLL Dabhol-Bus-1 tripped. RGPLL Dabhol-GT-3A tripped as both Main and Tie bay of RGPLL Dabhol-Unit-3B which was in Dia of RGPLL Dabhol-GT-3A were open due to unit outage. As the Module-3 was running in half module mode RGPLL-Dabhol-Unit-3A also tripped. Generation loss of 200 MW occurred at RGPLL Dabhol Gas Power Plant during the event.	Tripping of following Elements: 1. 400 kV RGPLL Dabhol-Nagthane-2 2. 400 kV RGPLL Dabhol-Bus-1 3. RGPLL Dabhol-GT-3A 4. RGPLL Dabhol-Unit-3A
10	GI-2	WR	22-06-2024 08:11	22-06-2024 10:05	01:54	-	-	-	-	72416	57541	At 08:11 Hrs / 22-06-2024, 765 kV Padghe-Bus-1 tripped due to DC earth fault in the system. 765/400 kV Padghe-ICT-1 which was in die with 765 kV Padghe-Bus Reactor tripped. 765/400 kV Padghe-ICT-2 tripped due to CSO relay malfunctioning due to DC earth fault. No generation or load loss occurred during the event.	Tripping of following Elements: 1. 765 kV Padghe-Bus-1 2. 765/400 kV Padghe-ICT-1&2 3. 765 kV Padghe-Bus Reactor
11	GD-1	WR	22-06-2024 22:52	23-06-2024 04:38	05:46	59	-	0.07%	-	80553	61757	At 22:52 Hrs / 22-06-2024, 220 kV Bhuj-Gadhisa tripped on R-E fault due to falling of spare conductor of 220 kV Bhuj-Kotda Madh on 220 kV Bhuj-Gadhisa between location 4&5. Generation loss of 59 MW occurred at Gadhisa (Renew Power) Wind Power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj-Gadhisa
12	GD-1	WR	23-06-2024 21:01	24-06-2024 00:44	03:43	91	-	0.12%	-	76659	57086	At 21:01 Hrs / 23-06-2024, 220 kV Jamkhambalya-Khakharda tripped due to Gas density cable got damaged at Jamkhambalya end. Generation loss of 91 MW occurred at Khakharda (Aprava) Wind Power Plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Jamkhambalya-Khakharda
13	GD-1	WR	24-06-2024 16:36	24-06-2024 18:30	01:54	57	-	0.07%	-	76659	57086	At 16:36 Hrs / 24-06-2024, 765 kV Khavda-PS-Bus-1 tripped on persisting Y-E fault (Auto recloser not attempted at Khavda end). Prior to the event 765 kV Khavda-PS-Bus-2 tripped on persisting Y-E fault. With these tripping no evacuation path was present for generation at Khavda-PS-1 and Khavda-PS-2. Generation loss of 27 MW occurred at Khavda-PS connected plants due to loss of evacuation path.	Tripping of following Elements: 1. 765 kV Khavda-PS-Bus-1&2
14	GD-1	WR	28-06-2024 15:09	28-06-2024 23:12	08:03	66	-	0.09%	-	72391	58806	At 15:09 Hrs / 28-06-2024, 220 kV Bhuj-Gadhisa tripped on B-E fault due to falling of CT connector at Bhuj End. Generation loss of 66 MW occurred at Gadhisa (Renew Power) Wind Power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj-Gadhisa
15	GD-1	WR	28-06-2024 17:56	28-06-2024 19:20	01:24	113	-	0.15%	-	73850	57233	At 17:56 Hrs / 28-06-2024, 220 kV Bhuj-Kotda Madh tripped on B-E fault. As informed by Kotda Madh, the tripping was done by some miscreants. Generation loss of 113 MW occurred at Kotda Madh (Alfanar) Wind Power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj-Kotda Madh
16	GD-1	WR	30-06-2024 23:37	01-07-2024 02:16	02:39	28.5	-	0.04%	-	72774	57776	At 15:09 Hrs / 28-06-2024, 220 kV Bhuj-Gadhisa on B-E fault. During patrolling no abnormalities were found. Generation loss of 28.5 MW occurred at Gadhisa (Renew Power) Wind Power plant due to loss of evacuation path.	Tripping of following Elements: 1. 220 kV Bhuj-Gadhisa

Details of Grid Events during the Month of June 2024 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 (HHEMM)	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 for GI 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	Budhipadar, IB-TPS	05.06.2024 04:11	05.06.2024 04:54	00:43	350	0	1.17%	0.00%	30020	25838	At 04:11 Hrs on 05.06.2024 , R-ph CT of 220KV IBTPS-Budhipadar #3 burnt at Budhipadar end and all emanating lines from Budhipadar tripped. Both units of IB TPS tripped due to loss of evacuation path, leading to generation loss of 350MW. Power was restored via charging of 220KV Budhipadar-Lapanga ckt#2 at 04:54 Hrs.	220KV Budhipadar IB 1,2,3,4 220KV Budhipadar-Korba 1,2 220KV Budhipada-Raigarh-1 220KV Budhipadar-Tarkera 1,2 Bhama-Kaurnunda 220KV Budhipadar-Aditya Alumina 1,2 220KV Budhipadar-Lapanga 1,2 220KV Budhipadar-Vedanta 1,2 220KV Budhipadar-BPSS 1,2 220KV Budhipadar-CONCAST 1,2 210 MW IBTPS 1,2
2	GD-1	Tenughat, Govindpur	13.06.2024 16:55	13.06.2024 17:08	00:13	00:00	140	0.50%	0.49%	28515	28582	At 16:55 hrs on 13.06.2024, 220KV Dumka-Govindpur D/C tripped on R_N Fault . 220 kv Tenughat-Bharsharif was already under breakdown. Consequently, Tenughat unit-2 tripped (as unit -1 was under forced shutdown) due to loss of evacuation path and around 142 MW generation loss occurred. Around 140 MW load loss in Govindpur, Chandankyan, Jainamad area reported.	220 kv Tenughat- Govindpur-1 220 kv Tenughat- Govindpur-2 220KV Bus #1,2 at Tenughat 220KV Bus #1,2 at Govindpur 210 MW UR2 at Tenughat
3	GD-1	Budhipadar , IB-TPS	13.06.2024 19:11	13.06.2024 20:46	01:35	320	0	1.07%	0.00%	29775	29345	At 19:11 hrs on 13.06.2024, 220 kv Bus-2 at Budhipadar tripped due to operation of bus bar protection after failure of R_ph CB of 220 kv Budhipadar-Raigarh-1 at Budhipadar. As associated feeders connected to Bus-2 tripped. At the same time, 320 MW generation loss occurred at IB TPS due to tripping of both running units leading to generation loss of 320 MW.	220KV Budhipadar IB 1,2,3,4 220KV Budhipadar-Korba 2 220KV Budhipada-Raigarh-1 220KV Budhipada-Kaurnunda-1 220KV Budhipadar-Lapanga-2 220KV Budhipadar-Vedanta 1,2 220KV Budhipadar-BPSS 1,2 210 MW IBTPS 1,2 220KV Bus-2 at Budhipadar
4	GD-1	Baruipur	14.06.2024 14:35	14.06.2024 14:41	00:06	0	138	0.00%	0.46%	29864	29839	At 14:35 Hrs on 14.06.2024, 220 kv Newtown-Subhasgram (PG)- Baruipur tripped due to fault in R-ph , 220 kv Baruipur-Subhasgram (WB) was already in opened condition. To control loading of ICTs at Subhasgram (PG) which led to a total load loss of 138 MW at Baruipur SS; (Bema, Bethala, Sirakol & Baruipur Area). Power to the downstream network was made available through 132 kv Lakhikantapur- Sirakol at 14:41 Hrs. 220 kv Bus was charged at 14:48 Hrs through 220 kv Baruipur- Subhasgram (WB)	220 kv Baruipur-Subhasgram (PG)- Newtown
5	GD-1	New Melli , Jorethang & Tashiding	19.06.2024 06:38	19.06.2024 09:56	03:18	200	0	0.65%	0.00%	30782	30582	At 06:38 hrs on 19.06.2024, 220 kv Rangoo- New Melli-1 tripped due to phase to phase fault (Y-B Ph) , 220 kv Rangoo- New Melli-2 was under planned shutdown since 21/05/2024 .Consequently due to loss of evacuation path, Tashiding unit #1 & unit #2 and Jorethang unit #1 & unit #2, tripped causing Generation Loss around 200 MW (Tashiding-105 MW, Jorethang- 95 MW).	220 kv Rangoo- New Melli-1
6	GD-1	GMR (STU), Meramundali-B	20.06.2024 19:18	20.06.2024 21:15	01:57	252	0	0.81%	0.00%	30964	26743	At 19:18 Hrs on 20.06.2024, 400KV-GMR-MERAMUNDALI-B tripped due to R_N fault which led to tripping of GMR Unit #3 (350 MW) due to loss of evacuation path (GMR Unit #3 connected to Meramundali-B bus only through single line, Bus Split at 400KV-GMR S/S). Total generation loss of around 252 MW occurred.	400 KV GMR-Meramundali B-1 350 MW UR3 at GMR

Details of Grid Events during the Month of June 2024 in North 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 for GI 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 I	Rengpang area of Manipur Power System	03-06-2024 13:09	03-06-2024 16:24	03:15	0	1	0.00%	0.05%	2947	2099	Rengpang area of Manipur power system is connected to the rest of the grid via 132 kV Loktak-Rengpang line and 132 kV Jiribam-Rengpang line. 132 kV Jiribam-Rengpang line is under outage since 18:18 Hrs of 17.11.2023. At 13:09 Hrs of 03-06-2024, 132 kV Loktak-Rengpang line tripped. Due to tripping of this element, Rengpang area of Manipur power system got separated from rest of the grid due to no source available in this area. Power was extended to Rengpang area of Manipur power system by charging 132 kV Loktak-Rengpang Line at 16:24 Hrs of 03-06-2024.	132 kV Loktak-Rengpang line
2	GD I	Churachandpur and Thanlon area of Manipur Power system	03-06-2024 13:59	03-06-2024 14:50	00:51	0	40	0.00%	1.94%	3271	2063	Churachandpur and Thanlon areas of Manipur power system is connected to the rest of the grid via 132 kV Ningthoukhong-Churachandpur I & II lines. Prior to the event, 132 kV Ningthoukhong-Churachandpur I line is under outage since 18:18 Hrs of 17.11.2023. At 13:59 Hrs of 03-06-2024, 132 kV Loktak-Ningthoukhong & 132 kV Ningthoukhong-Churachandpur II lines tripped. Due to tripping of these elements, Churachandpur and Thanlon areas of Manipur power system got separated from rest of the grid due to no source available in these areas. Power supply was extended to Churachandpur and Thanlon area of Manipur Power System by first charging 132kV-Loktak-Ningthoukhong line at 14:23 Hrs of 03.06.2024 and then charging 132kV-Ningthoukhong-Churachandpur II line at 14:50 Hrs of 03.06.2024.	132 kV Loktak-Ningthoukhong & 132 kV Ningthoukhong-Churachandpur II lines
3	GD I	Part load of Bormagar area of Assam Power system	05-06-2024 01:07	05-06-2024 01:15	00:08	0	27	0.00%	1.16%	2908	2326	Bormagar area of Lower Assam Power System was connected with rest of NER Grid through 132 kV Dhaligaon- Bormagar line and 132 kV Bormagar – Nathkuchi line. Due to bus split at Bormagar, half load of Bormagar is feeding through 132 kV Dhaligaon- Bormagar line and half load is feeding through 132 kV Bormagar – Nathkuchi line. At 01:07 Hrs of 05-06-2024, 132 kV Bormagar- Nathkuchi line tripped. Due to tripping of this element, partial load loss occurred at Bormagar area of Assam Power System. Power supply was extended to Bormagar area of Assam Power System by charging 132 kV Bormagar-Nathkuchi line at 01:15 Hrs of 05.06.2024.	132 kV Bormagar- Nathkuchi line
4	GD I	Ningthoukhong area of Manipur Power System	06-06-2024 16:13	06-06-2024 16:49	00:36	0	36	0.00%	1.28%	2661	2808	Ningthoukhong area of Manipur Power System was connected with rest of NER Grid via 132kV Loktak-Ningthoukhong line, 132kV-Ningthoukhong-Churachandpur D/C and 132kV-Ningthoukhong-Imphal lines. 132kV-Ningthoukhong-Churachandpur-1 was under outage since 21:14 Hrs of 29-04-2024. PSD was taken for 132kV-Ningthoukhong Churachandpur-2 for Replacement of disc insulators for 132 kV Ningthoukhong-Churachandpur-1 line. At 16:13 Hrs of 06-06-2024, while returning from shutdown after rectification work, while charging the line 132kV-Loktak-Ningthoukhong and 132kV Imphal-Ningthoukhong line tripped resulting in blackout of Ningthoukhong Area of Manipur Power System. Power supply was extended to Ningthoukhong area of Manipur Power System by charging 132 kV Loktak-Ningthoukhong line at 16:49 Hrs of 06.06.2024.	132 kV Loktak-Ningthoukhong & 132 kV Imphal-Ningthoukhong lines
5	GD I	Blackout in Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New and Kongba area of Manipur Power System and Tamu load of Myanmar power system	08-06-2024 18:40	08-06-2024 19:18	00:38	0	120	0.00%	3.74%	3231	3205	Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New and Kongba area of Manipur Power System and Tamu load of Myanmar power system were connected with rest of NER Grid through 132 kV Loktak Ningthoukhong line, 132 kV Ningthoukhong –Churachandpur D/C lines, 132 kV Yangangpokpi -Kongba D/C lines, 400kV-Imphal(PG)-Thoubal-1 line was under outage since 13:32 Hrs of 18.10.2021, 400kV-Imphal(PG)-Thoubal-2 line was under outage since 15:05 Hrs of 24.04.2024. At 18:32 Hrs of 08-06-2024, 132 kV Loktak-Ningthoukhong line, 132 kV Ningthoukhong – Churachandpur D/C lines, 132 kV Yangangpokpi -Kongba D/C lines tripped. Due to tripping of these elements, Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New and Kongba area of Manipur Power System and Tamu load of Myanmar power system were isolated from NER Grid and collapsed due to no source available in these areas Power was extended to Manipur power system at 19:18 Hrs of 08.06.2024.	132 kV Loktak-Ningthoukhong line, 132 kV Ningthoukhong – Churachandpur D/C lines, 132 kV Yangangpokpi -Kongba D/C lines
6	GD I	Blackout in Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New, Yangangpokpi, Hundung, Yurembam, Rengpang and Kongba areas of Manipur Power System, Loktak Generating S/S and Tamu load of Myanmar power	09-06-2024 13:53	09-06-2024 14:39	00:46	70	60	2.75%	2.71%	2545	2213	Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New, Yangangpokpi, Hundung, Yurembam, Rengpang and Kongba areas of Manipur Power System, Loktak Generating S/S and Tamu load of Myanmar power system were connected with rest of NER Grid through 132 kV Loktak-Jiribam & 132 kV Loktak Ningthoukhong line. 132 kV Imphal-Ningthoukhong went under planned shutdown at 10:17 Hrs & 132 kV Imphal-Loktak Line went under planned shutdown at 10:31 Hrs, 132 kV Jiribam(MA)-Rengpang line and 132 kV Imphal(Yurembam) - Karong line were under outage. At 13:53 Hrs of 09-06-2024, 132 kV Loktak-Jiribam & 132 kV Loktak-Ningthoukhong line tripped. Due to tripping of these elements, Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New, Yangangpokpi, Hundung, Yurembam, Rengpang and Kongba areas of Manipur Power System, Loktak Generating S/S and Tamu load of Myanmar power system isolated from NER Grid and collapsed due to load generation mismatch in these areas. Power was extended to Manipur power system at 14:39 Hrs of 09.06.2024.	132 kV Loktak-Jiribam & 132 kV Loktak-Ningthoukhong line

Details of Grid Events during the Month of June 2024 in North Eastern Region



Sl No.	Category of Grid Event (GI for GI 2/ GD-1 to GD-5)	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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
7	GD I	Zhadima, Chiephbozou & Wokha areas of Nagaland Power System	10-06-2024 22:31	11-06-2024 10:52	12:21	0	1	0.00%	0.03%	2915	3245	Zhadima, Chiephbozou & Wokha areas of Nagaland Power System is connected with rest of NER Grid through 132 kV Sanis-Wokha and 132 kV Kohima-Zhadima lines. Prior to the event, 132 kV Sanis-Wokha line was under planned shutdown since 08:03 Hrs of 10.06.2024. At 22:31 Hrs of 10-06-2024, 132 kV Kohima-Zadima line tripped. Due to tripping of this element, Zadima, Chiephbozou and Wokha areas of Nagaland power system got separated from rest of the grid due to no source available in these areas. Power was extended to Zadima, Chiephbozou and Wokha areas of Nagaland power system by charging 132 kV Kohima-Zadima line at 10:52 Hrs of 11-06-2024.	132 kV Kohima-Zadima line
8	GD I	Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New and Kongba area of Manipur Power System and Tamu load of Myanmar power system	12-06-2024 10:33	12-06-2024 10:57	00:24	0	45	0.00%	1.69%	2518	2657	Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New and Kongba area of Manipur Power System and Tamu load of Myanmar power system are connected with rest of NER Grid through 132 kV Ningthoukhong – Churachandpur D/C lines & 132 kV Yangangpokpi - Kongba D/C lines. 400kV-Imphal(PG)-Thoubal-1 line was under outage since 13:32 Hrs of 18.10.2021, 400kV-Imphal(PG)-Thoubal-2 line was under outage since 15:05 Hrs of 24.04.2024. 132 kV Ningthoukhong –Churachandpur 1 line was under tripped condition since 08.06.2024. At 10:33 Hrs of 12-06-2024, 132 kV Loktak-Ningthoukhong line, 132 kV Ningthoukhong – Churachandpur 2 line, 132 kV Yangangpokpi -Kongba D/C lines tripped. Due to tripping of these elements, Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New and Kongba area of Manipur Power System and Tamu load of Myanmar power system were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was restored to Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh, Thoubal old, Thoubal New and Kongba area of Manipur Power System and Tamu load of Myanmar power system by charging 132 kV Yangangpokpi -Kongba D/C lines at 10:57 Hrs of 12-06-2024.	132 kV Loktak-Ningthoukhong line, 132 kV Ningthoukhong – Churachandpur 2 line, 132 kV Yangangpokpi -Kongba D/C lines
9	GD I	Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh areas of Manipur Power System and Tamu load of Myanmar power system	13-06-2024 08:08	13-06-2024 08:54	00:46	0	40	0.00%	2.18%	2273	1838	Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh areas of Manipur Power System and Tamu load of Myanmar power system are connected with rest of NER Grid through 132 kV Ningthoukhong – Churachandpur D/C lines. 400kV-Imphal(PG)-Thoubal-1 line was under outage since 13:32 Hrs of 18.10.2021, 400kV-Imphal(PG)-Thoubal-2 line was under outage since 15:05 Hrs of 24.04.2024. 132 kV Ningthoukhong – Churachandpur 1 line was under tripped condition since 08.06.2024. 132 kV New Thoubal – Kakching & 132 kV Old Thoubal – Kakching were under outage condition prior to event. At 08:08 Hrs of 13-06-2024, 132 kV Ningthoukhong – Churachandpur 2 line tripped. Due to tripping of these elements, Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh areas of Manipur Power System and Tamu load of Myanmar power system were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was restored to Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Moreh area of Manipur Power System and Tamu load of Myanmar power system by charging 132 kV Ningthoukhong – Churachandpur 2 line at 08:54 Hrs of 13-06-2024.	132 kV Ningthoukhong – Churachandpur 2 line
10	GD I	Leshka generating station of Meghalaya Power System	13-06-2024 01:10	13-06-2024 01:19	00:09	0	36	0.00%	1.30%	2392	2771	Leshka HEP of Meghalaya Power System was connected with rest of NER Grid via 132 kV Leshka - Khleihriat D/C lines. At 01:10 Hrs of 13-06-2024, 132 kV Leshka - Khleihriat D/C lines tripped. Due to tripping of these lines, Leshka HEP of Meghalaya Power System was isolated from NER Grid and collapsed due to loss of evacuation path. Power supply was extended to Leshka HEP of Meghalaya Power System by charging 132 kV Myntdu Leshka - Khleihriat 1 line at 01:19 Hrs. Subsequently, 132 kV Myntdu Leshka - Khleihriat 2 line was charged at 01:21 Hrs.	132 kV Leshka - Khleihriat D/C lines
11	GD I	Bilasipara and Gauripur areas of Assam Power System	13-06-2024 05:02	13-06-2024 05:18	00:16	0	120	0.00%	7.01%	2248	1711	Bilasipara and Gauripur areas of Assam Power System are connected to NER Power system via 132 kV Bilasipara – Kokrajhar D/C lines. 132 kV Gauripur – Gosaigaon line is kept opened for load segregation purpose. At 05:02 Hrs of 13-06-2024, 132 kV Bilasipara – Kokrajhar D/C lines tripped. Due to tripping of these lines, Bilasipara and Gauripur areas of Assam Power System were isolated from NER Grid and collapsed due to no source available in these areas. Power was extended to Bilasipara and Gauripur areas of Assam Power System by charging 132 kV Bilasipara – Kokrajhar D/C lines at 05:18 Hrs of 13-06-2024.	132 kV Bilasipara – Kokrajhar D/C lines

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
						12	GD II	BTPS, Kokrajhar, Bilaspura, Gauripur, Gossaigaon, Dhaligaon, APM, Barpeta, Nalbari, Barnagar, Nathkuchi, Kamalpur, Sipajhar, BGR, Railway TSS areas of Assam Power System	14-06-2024 22:32	14-06-2024 22:36	00:04		
13	GD I	Churachandpur Thanlon, Elangkangpokpi, Kakching, Chandel, Thoubal Old, New Thoubal and Kongba area of Manipur Power System	15-06-2024 06:11	15-06-2024 07:03	00:52	0	45	0.00%	2.19%	2432	2059	Churachandpur Thanlon, Elangkangpokpi, Kakching, Chandel, Thoubal Old, New Thoubal and Kongba area of Manipur Power System were connected with rest of NER Grid via 132kV Ningthoukhong-Churachandpur-1 & 2 and 132kV Kongba – Yanganpokpi 1 & 2 lines. At 06:11 Hrs of 15-06-2024, 132 kV Loktak-Ningthoukhong line, 132 kV Ningthoukhong-Churachandpur-1 & 2 and 132 kV Kongba – Yanganpokpi 1 & 2 lines tripped. Due to tripping of these elements, Churachandpur, Thanlon, Elangkangpokpi, Kakching, Chandel, Thoubal Old, New Thoubal and Kongba areas of Manipur Power System were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended to Churachandpur and Thanlon area of Manipur Power System by first charging 132kV-Loktak-Ningthoukhong line at 06:43 Hrs of 15.06.2024 and then charging 132 kV Ningthoukhong-Churachandpur-2 line at 07:03Hrs of 15.06.2024.	132 kV Loktak-Ningthoukhong line, 132 kV Ningthoukhong-Churachandpur-1 & 2 and 132 kV Kongba – Yanganpokpi 1 & 2 lines
14	GD I	Nangalbibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System	15-06-2024 04:52	15-06-2024 05:14	00:22	22	30	0.86%	1.47%	2564	2040	Nangalbibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System are connected to NER Power system via 132 kV Agia-Nangalbibra, 132 kV Mendipathar-Nangalbibra & 132 kV Nangalbibra-Nongstoin lines. Prior to the event, 132 kV Agia Nangalbibra was under tripped condition since 03:32 Hrs of 15-06-2024 and 132 kV Mendipathar – Nangalbibra line was under tripped condition since 03:48 Hrs of 15-06-2024. At 04:52 Hrs of 15-06-2024, 132 kV Nangalbibra-Nongstoin line tripped. Due to tripping of this element, Nangalbibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System were isolated from NER Grid and collapsed due to load generation mismatch in these areas. Power was extended to Nangalbibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System by charging 132 kV Nangalbibra-Mendipathar line at 05:14 Hrs of 15.06.2024.	132 kV Nangalbibra-Nongstoin line
15	GD I	Serchhip area of Mizoram Power System	15-06-2024 13:46	15-06-2024 14:13	00:27	0	17	0.00%	0.73%	2602	2331	Serchhip area of Mizoram Power System was connected to NER Power system via 132 kV Zuangtui – Serchhip line. 132 kV Serchhip – Lunglei was kept open on system requirement. At 13:46 Hrs of 15-06-2024, 132 kV Zuangtui – Serchhip line tripped. Due to tripping of the element, Serchhip area of Mizoram Power System was isolated from NER Grid and collapsed due to no source available in this area. Power supply was extended to Serchhip area of Mizoram power system by charging 132 kV Zuangtui – Serchhip line at 14:13 Hrs of 15-06-2024.	132 kV Zuangtui – Serchhip line
16	GD I	Dhaligaon, Barnagar, Barpeta, APM, Gossaigaon areas of Assam Power System	16-06-2024 22:40	16-06-2024 23:06	00:26	0	110	0.00%	4.31%	3457	2553	Dhaligaon, Part load of Barnagar, Barpeta, APM, Gossaigaon areas of Assam Power System were connected to NER Power system via 132 kV Dhaligaon-BTPS D/C lines. At 22:40 Hrs of 16-06-2024, 132 kV Dhaligaon-BTPS D/C lines tripped. Due to tripping of these lines, Dhaligaon, Part load of Barnagar, Barpeta, APM, Gossaigaon areas of Assam Power System were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended to Dhaligaon, Part load of Barnagar, Barpeta, APM, Gossaigaon areas of Assam Power System by charging 132kV BTPS-Dhaligaon D/C lines at 23:06 Hrs of 16.06.2024.	132 kV Dhaligaon-BTPS D/C lines
17	GD I	Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System	16-06-2024 04:51	16-06-2024 07:38	02:47	7.5	7	0.29%	0.37%	2600	1896	Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System were connected to NER Power system via 132kV Rongkhon - Nangalbibra line. At 04:51 Hrs of 16-06-2024, 132 kV Rongkhon - Nangalbibra line tripped. Due to tripping of this element, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System were isolated from NER Grid and collapsed due to load generation mismatch in these areas. Power supply was extended to Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System by charging 132 kV Rongkhon-Nangalbibra line at 07:38 Hrs of 16.06.2024.	132 kV Rongkhon - Nangalbibra line
18	GD I	Rangia(220), Tangla, Sipajhar, Kamalpur, Nalbari, Nathkuchi and Barnagar areas of Assam Power system	17-06-2024 06:52	17-06-2024 07:26	00:34	0	53	0.00%	2.70%	2764	1960	Nalbari, Nathkuchi & part of Barnagar radially connected to 220kV Rangia SS, Kamalpur, Sipajhar & Tangla radially connected to 132 kV Rangia SS, 220 kV Rangia SS radially connected via 220 kV BTPS-Rangia D/C only. At 06:52 Hrs of 17-06-2024 due to heavy downpour, 220kV BTPS- Rangia D/C lines tripped resulting in successful operation of SPS of the same. Due to which, 220kV Rangia S/S was isolated from 132kV Rangia S/S as well as Barnagar, Sipajhar, Kamalpur, Nathkuchi, Tangla Substations were isolated from	220 kV BTPS- Rangia I&II

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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
19	GD I	Nangalibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power system	17-06-2024 07:03	17-06-2024 07:56	00:53	0	15	0.00%	0.78%	2767	1920	Nangalibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya are connected with the rest of the grid through 132 kV Nangalibra-Mendipathar line, 132 kV Agia-Nangalibra line & 132 kV Nangalibra-Nongstoin line. Prior to the event, 132 kV Nangalibra-Nongstoin and 132kV Agia-Nangalibra lines tripped at 07:02 hrs of 17-06-2024. At 07:03 Hrs of 17-06-2024, 132kV Agia-Nangalibra line tripped. Due to tripping of this line, Nangalibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System were isolated from NER Grid and Leshka HEP of Meghalaya Power System was connected with rest of NER Grid via 132 kV Myntdu Leshka - Khleihriat D/C lines. At 20:30 Hrs of 17-06-2024, 132 kV Myntdu Leshka - Khleihriat D/C lines tripped. Due to tripping of these lines, Leshka HEP of Meghalaya Power System was isolated from NER Grid and collapsed due to loss of evacuation path. Power supply was extended to Leshka HEP of Meghalaya Power System by charging 132 kV Myntdu Leshka - Khleihriat 1 and 2 at 21:39 hrs and 20:46 hrs respectively of 17.06.2024.	132kV Agia-Nangalibra line
20	GD I	Leshka HEP of Meghalaya Power system	17-06-2024 20:30	17-06-2024 20:46	00:16	119	0	3.44%	0.00%	3457	2828	Nalabari, Nathkuchi & part of Barnagar radially connected to 220 kV Rangia SS. Kamalpur, Sipajhar & Tangla radially connected to 132 kV Rangia SS. 220 kV Rangia SS radially connected via 220 kV BTPS-Rangia D/C only. At 21:17 Hrs of 17-06-2024 due to heavy downpour, 220kV BTPS- Rangia D/C lines tripped resulting in successful operation of SPS of the same. Due to which, 220kV Rangia S/S was isolated from 132kV Rangia S/S as well as 132kV Dhalgaon, Barnagar, Sipajhar, Kamalpur, Nathkuchi, Tangla Substations were isolated from Rangia System resulting in blackout of Nalbari, part load of Barnagar, Sipajhar, Kamalpur, Nathkuchi, Tangla areas of Assam Power System. Power supply was extended to the affected areas of Assam Power System by first charging 220kV BTPS-Rangia line I and II at 21:31 Hrs and 21:34 Hrs respectively of 17.06.2024	132 kV Myntdu Leshka - Khleihriat D/C lines
21	GD I	Rangia(220), Tangla, Sipajhar, Kamalpur, Nalbari, Nathkuchi and Barnagar areas of Assam Power system	17-06-2024 21:17	17-06-2024 21:31	00:14	0	130	0.00%	4.68%	3269	2777	Leshka HEP of Meghalaya Power System was connected with rest of NER Grid via 132 kV Myntdu Leshka - Khleihriat D/C lines. At 23:37 Hrs of 17-06-2024, 132 kV Myntdu Leshka - Khleihriat D/C lines tripped. Due to tripping of these lines, Leshka HEP of Meghalaya Power System was isolated from NER Grid and collapsed due to loss of evacuation path. Power supply was extended to Leshka HEP of Meghalaya Power System by charging 132 kV Myntdu Leshka - Khleihriat 1 and 2 at 00:33 hrs and 00:36 hrs respectively of 18.06.2024.	220 kV BTPS- Rangia D/C lines
22	GD I	Leshka HEP of Meghalaya Power system	17-06-2024 23:37	18-06-2024 00:33	00:56	42	0	1.42%	0.00%	2952	1923	Nangalibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya are connected with the rest of the grid through 132 kV Nangalibra-Mendipathar line, 132 kV Agia-Nangalibra line & 132 kV Nangalibra-Nongstoin line. Prior to the event, 132 kV Nangalibra-Nongstoin and 132kV Agia-Nangalibra lines tripped at 05:01 hrs of 18-06-2024. At 05:07 Hrs of 18-06-2024, 132kV Mendipathar – Nangalibra line tripped. Due to tripping of this line, Nangalibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power System were isolated from NER Grid and collapsed due to load generation mismatch in these areas. Power supply was extended to the affected areas of Meghalaya Power System by first charging 132kV Mendipathar - Nangalibra line at 05:41 Hrs of 18.06.2024 and subsequently charged 132 kV Agia-Nangalibra at 05:49 Hrs of 18.06.2024	132kV Mendipathar – Nangalibra line
23	GD I	Nangalibra, Rongkhon, Ampati areas and Ganol HEP of Meghalaya Power system	18-06-2024 05:07	18-06-2024 05:41	00:34	0	15	0.00%	0.78%	2767	1920	Rengpang area of Manipur Power System was connected with rest of NER Grid through 132 kV Loktak – Rengpang line. 132 kV Jiribam-Rengpang line was under outage since 18:18 Hrs of 17.11.2023. At 19:52 Hrs of 19-04-2024, 132 kV Loktak – Rengpang line tripped. Due to tripping of this element, Rengpang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area. At 10:54 Hrs of 20-06-2024, 132kV Loktak-Rengpang line tripped. Power supply was extended to Rengpang area of Manipur Power System by charging 132 kV Loktak – Rengpang line at 15:23 Hrs on 20-06-2024	132kV Loktak – Rengpang line
24	GD I	Rengpang area of Manipur Power system	20-06-2024 10:54	20-06-2024 15:23	04:29			0.00%	0.00%	2567	2128	Sarupathar area of Assam Power System was connected with connected to NER Power system via 132kV Golaghat-Sarupathar-Bokajan link. At 14:41 Hrs, 132 kV Golaghat-Sarupathar and 132 kV Sarupathar-Bokajan lines tripped due to which Sarupathar area of Assam Power System was isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended by charging 132kV Golaghat – Sarupathar line at 14:55 Hrs of 20.06.2024	132 kV Golaghat- Sarupathar & 132 kV Sarupathar- Bokajan
25	GD I	Sarupathar Area of Assam Power system	20-06-2024 14:41	20-06-2024 14:55	00:14	0	3	0.00%	0.13%	2836	2285		

Details of Grid Events during the Month of June 2024 in North Eastern Region



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						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
26	GD I	Gossaigaon and Gauripur area of Assam Power system	22-06-2024 11:58	22-06-2024 12:09	00:11	0	60	0.00%	2.34%	2675	2568	Gossaigaon and Gauripur areas of Assam Power System were connected with connected to NER Power system via 132 kV Dhaligaon-Gossaigaon-Gauripur link (132 kV Gauripur-Bilasipara was under S/D for SF6 gas leakage issue at Bilasipara end). At 11:58 Hrs, 132kV Dhaligaon-Gossaigaon line tripped due to which Gossaigaon and Gauripur areas of Assam Power System were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended by charging 132kV Dhaligaon-Gossaigaon line at 12:09 Hrs and then charging 132kV Gossaigaon-Gauripur at 12:15 Hrs of 22.06.2024	132kV Dhaligaon-Gossaigaon lin
27	GD I	Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh power system and Chapakhowa area of Assam Power system	22-06-2024 12:03	22-06-2024 13:09	01:06	0	19	0.00%	0.72%	2573	2640	Pasighat, Roing, Tezu and Namsai areas of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System was connected with rest of NER Grid by 132 kV Along -Pasighat line. (After tripping of 132kV Rupai - Chapakhowa line at 11:59 Hrs of 22-06-2024) At 12:03 Hrs of 22-06-2024, 132 kV Along - Pasighat tripped. Due to tripping of this element, Pasighat-Roing-Tezu-Namsai area of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System was isolated from NER Grid and collapsed due to no source available in these areas. Power was extended to Chapakhowa area of Assam Power System, by charging 132 kV Chapakhowa - Rupai line at 12:23 Hrs. Subsequently, Power was extended to Arunachal Pradesh power system by charging 132 kV Roing - Chapakhowa - I & II at 12:42 Hrs of 22-06-2024. Power was extended to Pasighat and Along areas by charging 132kV Roing - Pasighat at 12:59 Hrs and 132kV Pasighat - Along line at 13:09 Hrs respectively. Also, 132kV Roing - Tezu was charged at 12:45 Hrs and 132kV Tezu - Namsai was charged at 12:48 Hrs	132 kV Along - Pasighat
28	GD I	Ganol area of Meghalaya Power system	22-06-2024 12:03	22-06-2024 13:09	01:06	15	0	0.56%	0.00%	2677	2778	Ganol HEP of Meghalaya Power was connected with rest of NER Grid by 132 kV Rongkhon-Ganol line. At 14:03 Hrs of 22-06-2024, 132 kV Rongkhon-Ganol line tripped. Due to tripping of this element, Ganol HEP of Meghalaya Power System isolated from NER Grid and collapsed due to no evacuation path. Power supply was extended to Ganol HEP of Meghalaya Power System by charging 132 kV Rongkhon-Ganol line at 14:21 Hrs.	132 kV Rongkhon-Ganol line
29	GD I	Leshka HEP of Meghalaya Power system	23-06-2024 16:00	23-06-2024 16:09	00:09	119	0	4.51%	0.00%	2640	2721	Leshka HEP of Meghalaya Power System was connected with rest of NER Grid via 132 kV Myntdu Leshka - Khleihriat D/C lines. At 16:00 Hrs of 23-06-2024, 132 kV Myntdu Leshka - Khleihriat D/C lines tripped. Due to tripping of these lines, Leshka HEP of Meghalaya Power System was isolated from NER Grid and collapsed due to loss of evacuation path. Power supply was extended to Leshka HEP of Meghalaya Power System by charging 132 kV Myntdu Leshka - Khleihriat 1 at 16:09 hrs	132 kV Myntdu Leshka - Khleihriat D/C lines
30	GD I	Umiam area of Meghalaya Power system	24-06-2024 13:38	24-06-2024 14:30	00:52	0	10	0.00%	0.38%	3052	2601	Umiam area of Meghalaya Power System was connected with rest of NER Grid via 132 kV Umiam Stage I-Umiam and 132 kV Nehu-Umiam lines. At 13:38 Hrs of 24-06-2024, 132kV Umiam Stage I-Umiam and 132 kV Nehu-Umiam lines tripped. Due to tripping of these lines, Umiam S/S of Meghalaya Power System was isolated from NER Grid. Power supply was extended to Umiam area of Meghalaya Power System by charging 132kV NEHU-Umiam line at 14:30 hrs of 24-06-2024.	132kV Umiam Stage I-Umiam and 132 kV Nehu-Umiam lines
31	GD I	Gossaigaon area of Assam power system	25-06-2024 07:05	25-06-2024 07:10	00:05	0	2	0.00%	0.08%	3020	2580	Gossaigaon area of Assam Power System is connected with connected to NER Power system via 132 kV Dhaligaon Gossaigaon-Gauripur line (132 kV Gauripur- Gossaigaon was kept open due to system requirement) At 07:05 Hrs of 25.06.2024, 132 kV Dhaligaon-Gossaigaon line tripped due to which Gossaigaon area of Assam Power System was isolated from NER Grid and collapsed due to no source available in the area. Power supply was extended by charging 132 kV Dhaligaon-Gossaigaon line at 07:10 Hrs of 25.06.2024.	132 kV Dhaligaon-Gossaigaon line
32	GD I	Kohima, Doyang, Sanis, Wokha, Chiephobozou, Zhadima and Karong areas	25-06-2024 13:15	25-06-2024 14:28	01:13	0	29	0.00%	1.00%	2946	2739	Kohima substation was connected with the rest of the grid via 132 kV Doyang-Sanis-Wokha-Chiephobozou-Zhadima link while Doyang SS was connected with rest of the grid via 132 kV Doyang-Mokokchung and 132 kV Doyang-Sanis link while Karong was fed from 132 kV Kohima-Karong line. Prior to the event, 132 kV Dimapur-Kohima was under Planned shutdown, 132 kV Imphal-Karong line tripped at 13:02 Hrs of 25.06.2024, 132 kV Doyang-Dimapur D/C lines were under outage and 132 kV Meluri-Kohima line was under outage since 27-09-2023. At 13:15 Hrs of 25-06-2024, 132 kV Doyang-Mokokchung line tripped. Due to tripping of this element, Kohima, Sanis, Wokha, Chiephobozou, Zhadima areas of Nagaland, Karong area of Mizoram and Doyang	132 kV Doyang-Mokokchung line

Details of Grid Events during the Month of June 2024 in North Eastern Region



Sl No.	Category of Grid Event (GI for GI 2/ GD-1 to GD-5)	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
						Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
33	GD I	Dhemaji and Silapathar areas of Assam Power System	26-06-2024 13:15	26-06-2024 13:26	00:11	0	37	0.00%	1.29%	3132	2869	Dhemaji and Silapathar areas of Assam Power System were connected with connected to NER Power system via 132 kV North Lakhimpur-Dhemaji line. At 13:15 Hrs of 26.06.2024, 132 kV North Lakhimpur-Dhemaji line tripped due to which Dhemaji and Silapathar areas of Assam Power System was isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended to Dhemaji and Silapathar areas of Assam Power System by charging 132 kV North Lakhimpur-Dhemaji line at 13:26 Hrs of 26.06.2024.	132 kV North Lakhimpur-Dhemaji line
34	GD I	Haflong area of Assam Power System	26-06-2024 16:59	26-06-2024 17:16	00:17	0	5	0.00%	0.18%	3126	2822	Haflong(PG) S/S and Haflong area of Assam Power System were connected with connected to NER Power system via 132 kV Haflong(PG)-Umranangshu line. 132 kV Haflong(PG)-Jiribant(PG) line was under outage since 20.06.2024. At 16:59 Hrs of 26.06.2024, 132 kV Haflong(PG)-Umranangshu line tripped due to which Haflong(PG) S/S and Haflong area of Assam Power System were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended to Haflong(PG) S/S and Haflong area of Assam Power System by charging 132 kV Haflong(PG)-Umranangshu line at 17:16 Hrs of 26.06.2024.	132 kV Haflong(PG)-Umranangshu line
35	GD I	Leshka Generating Station of Meghalaya Power System	26-06-2024 12:01	26-06-2024 12:44	00:43	84	0	2.72%	0.00%	3088	2838	Leshka Generating Station of Meghalaya Power System was connected with connected to NER Power system via 132 kV Myntdu Leshka - Khleihriat D/C Lines. At 12:01 Hrs of 26.06.2024, 132 kV Myntdu Leshka - Khleihriat D/C Lines tripped due to which Myntdu Leshka Generating Station of Meghalaya Power System was isolated from NER Grid and collapsed due to loss of evacuation path. Power supply was extended to Myntdu Leshka Generating Station of Meghalaya Power System by charging 132 kV Myntdu Leshka -Khleihriat 1 Line at 12:44 Hrs of 26.06.2024.	132 kV Myntdu Leshka - Khleihriat D/C Lines
36	GD I	Lungmaal, Melriat and Lunglei area of Mizoram Power System	26-06-2024 15:44	26-06-2024 21:45	06:01	0	22	0.00%	0.75%	3082	2941	Lungmaal, Melriat and Lunglei areas of Mizoram Power System were connected with connected to NER Power system via 132 kV Aizawl - Luangmaal Line. At 15:44 Hrs of 26.06.2024, 132 kV Aizawl - Luangmaal Line tripped due to which Lungmaal, Melriat and Lunglei areas of Mizoram Power System were isolated from NER Grid and collapsed due to no source available in these areas. Power supply was extended to Lungmaal, Melriat and Lunglei areas of Mizoram Power System by charging 132 kV Aizawl-Luangmaal Line at 21:45 Hrs of 26.06.2024.	132 kV Aizawl - Luangmaal Line
37	GD I	Mustem area of Meghalaya Power System	26-06-2024 12:28	26-06-2024 12:40	00:12	0	7	0.00%	0.24%	2987	2900	Mustem area of Meghalaya Power System is connected with connected to NER Power system via 132 kV Mawlyndep-Mustem line & 132 kV Khliehriat-Mustem line. Prior to the event, 132 kV Khliehriat-Mustem line tripped at 12:12 Hrs of 26.06.2024. At 12:28 Hrs of 26.06.2024, 132 kV Mawlyndep-Mustem line tripped due to which Mustem area of Meghalaya Power System was isolated from NER Grid and collapsed due to no source available in these area. Power supply was extended to Mustem area of Meghalaya Power System by charging 132kV Khliehriat-Mustem line at 12:40 Hrs of 26.06.2024.	132 kV Mawlyndep-Mustem line
38	GD I	Tuirial HEP of Mizoram Power System	26-06-2024 13:51	26-06-2024 14:05	00:14	45	0	1.42%	0.00%	3176	2883	Tuirial HEP of Mizoram Power System was connected NER Power system via 132kV Tuirial - Kolasib line. At 13:51 Hrs of 26.06.2024, 132 kV Tuirial - Kolasib line tripped due to which Tuirial HEP of Mizoram Power System was isolated from NER Grid and collapsed due to loss of evacuation path. Power supply was extended to Tuirial HEP of Mizoram Power System by charging 132kV Tuirial - Kolasib line at 14:05 Hrs of 26.06.2024.	132 kV Tuirial - Kolasib line
39	GD I	Wokha area of Nagaland Power System	26-06-2024 09:31	26-06-2024 10:08	00:37	0	5	0.00%	0.18%	3034	2768	Wokha area of Nagaland Power System was connected with connected to NER Power system via 132kV Wokha-Chiephobozou and 132 kV Sanis-Wokha lines. At 09:31 Hrs of 26.06.2024, 132 kV Wokha-Chiephobozou and 132 kV Sanis-Wokha lines tripped due to which Wokha area of Nagaland Power System was isolated from NER Grid and collapsed due to no source available in these area. Power supply was extended to Wokha area of Nagaland Power System by charging 132 kV Sanis-Wokha line at 10:08 Hrs of 26.06.2024.	132 kV Wokha-Chiephobozou and 132 kV Sanis-Wokha lines
40	GD I	Sanis area of Nagaland Power System	27-06-2024 03:54	27-06-2024 04:23	00:29	0	1	0.00%	0.04%	3177	2640	Sanis area of Nagaland Power System was connected with rest of NER Power system via 132 kV Doyang-Sanis and 132 kV Sanis Wokha lines. At 03:54 Hrs of 27.06.2024, 132 kV Doyang-Sanis and 132 kV Sanis-Wokha lines tripped due to which Sanis area of Nagaland Power System was isolated from NER Grid and collapsed due to no source available in these area. Power supply was extended to Sanis area of Nagaland Power System by charging 132 kV Doyang-Sanis line at 04:23 Hrs of 27.06.2024.	132 kV Doyang-Sanis and 132 kV Sanis-Wokha lines

Details of Grid Events during the Month of June 2024 in North 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 for GI 2/ GD-1 to GD-5)					Generation Loss(MW)	Load Loss (MW)	% Generation Loss (MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		
41	GD I	Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System	28-06-2024 13:23	28-06-2024 13:46	00:23	0	24	0.00%	0.94%	2772	2564	<p>Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System was connected with rest of NER Power system via 132 kV Along - Basar Line & 132 kV Rupai-Chapakhowa line. Prior to the event, 132 kV Rupai - Chapakhowa line was under outage condition to facilitate shutdown of 132 kV Rupai-Tinsukia line.</p> <p>At 13:23 Hrs of 28.06.2024, 132 kV Along - Pasighat Line and 132 kV Along - Basar Line tripped due to which Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System were isolated from NER Grid and collapsed due to no source available in these areas.</p> <p>Power supply was extended to Along, Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System by charging 132 kV Rupai - Chapakhowa line at 13:46 Hrs of 28.06.2024.</p>	132 kV Along - Pasighat Line and 132 kV Along - Basar Line
42	GD I	Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System	29-06-2024 09:25	29-06-2024 10:47	01:22	0	14	0.00%	0.60%	2873	2337	<p>Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System are connected with rest of NER Power system via 132 kV Along - Pasighat Line and 132 kV Rupai - Chapakhowa line.</p> <p>At 09:25 Hrs of 29.06.2024, 132 kV Along - Pasighat Line, 132 kV Roing - Pasighat Line and 132 kV Rupai - Chapakhowa line tripped due to which Pasighat, Roing, Tezu, Namsai areas of Arunachal Pradesh Power System and Chapakhowa area of Assam Power System were isolated from NER Grid and collapsed due to no source available in these areas.</p> <p>Power supply was extended to Chapakhowa area of Assam Power System by charging 132 kV Rupai - Chapakhowa line at 09:42 Hrs of 29.06.2024. Subsequently power supply was extended to Roing, Tezu and Namsai areas of Arunachal Pradesh Power System by charging 132 kV Roing Chapakhowa D/C lines at 10:01 Hrs of 29.06.2024. Power supply was extended to Pasighat area of Arunachal Pradesh Power System by charging 132 kV Roing - Pasighat Line at 10:47 Hrs of 29.06.2024.</p>	132 kV Along - Pasighat Line, 132 kV Roing - Pasighat Line and 132 kV Rupai - Chapakhowa line
43	GI 1	Loktak	09-06-2024 10:32	09-06-2024 10:32	00:00	105	0	4.24%	0.00%	2476	2181	<p>Loktak Unit-1,2,3 tripped at 10:32 Hrs on 09.06.2024 due to loss of evacuation path due to tripping of 132 kV Loktak-Jiribun line on Overcurrent from Loktak end.</p>	Loktak Unit-1,2,3