







Root Cause and Remedial Measures for the Date 01-March-2022 to 31-March-2022

Sl. No.	Element Name	Owner Name	Tripping Date and Time	RESTORATION Date and Time	OUTAGE DURATION	SENDOWNER	REINFORMATION_A	AR_A	SEND_R	SEND_S	SEND_T	SEND_U	SEND_V	SEND_W	SEND_X	SEND_Y	SEND_Z	SEND_OTHER	SPS_OPERATION	DR Analysis	Root Cause	Remedial Measures
78	132 KV Inghat (MGCL) - Kering Line	MGCL	24-03-2022 18:23	24-03-2022 18:47	00:25:00	MGCL	Over Current	NA	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line not protected. Fault could not be analyzed from the submitted DR outputs. As per submitted EI, output Tripped on Over current.	Root cause not concluded	Root cause and action report may be submitted by MGCL
79	132 KV Laksh - Bhangang Line	MGCL	25-03-2022 04:05	25-03-2022 04:31	00:46:00	MNFC	DP_2, R-Y, FO 29.83 km	NA	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	Submitted DR does not open	Root cause not concluded	Root cause and action report may be submitted by MGCL
80	AIDQPP Line 2	NEPCO	25-03-2022 17:14	25-03-2022 17:30	00:07:00	NEPCO	Tripped due to UnderVoltage	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	No DR & EI outputs submitted	Root cause not concluded	Root cause and action report may be submitted by NEPCO
81	132KV Khairabad- Lumsung Line	MNPTCL	25-03-2022 17:45	25-03-2022 17:56	00:11:00	MNPTCL	DP_2, B-E, FO 10.32	NA	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 17:54:44.48; CB Opening Time(msec): 70; Fault Characteristics: Relay Indication Min: DP_2, B-E, FO 10.32 km; Fault Current(kA): 41.03; W: 0.6; Fault Voltage(kV): 845; R: 1.2; Angle between(=degree): -43; AutoReclose Status: NA; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Line Vegetation Fault	Root Cause given by NERCDC: Liney Lighting Fault	It is requested to ensure that patrolling-related activities are undertaken in Line with Closure No. 2302, 2022 and 2302/CFCA (Site Standard) Regulations, 2002 on regular basis and also request that the patrolling report and remedial measures taken may be shared with NERC & NERCDC
82	132KV Khairabad- Lumsung Line	MNPTCL	25-03-2022 18:00	25-03-2022 18:28	00:28:00	MNPTCL	DP_2, B-E, FO 20.25 km	Not Furnished	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 18:02:26.48; CB Opening Time(msec): 70; Fault Characteristics: Relay Indication Min: DP_2, B-E, FO 20.25 km; Fault Current(kA): 40.52; W: 0.6; Fault Voltage(kV): 846; R: 1.2; Angle between(=degree): -43; AutoReclose Status: NA; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Line Vegetation Fault	Root Cause given by NERCDC: Liney Lighting Fault	Details of EI/DR submitted from DR Output submitted from Meter/MSI side. MNPTCL to submit it
83	220 KV Agri - Baku Line	ASGCL	25-03-2022 19:12	25-03-2022 19:38	00:27:00	ASGCL	DP_2, Y-E, FO 31.5 km	NA	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 19:15:58.88; CB Opening Time(msec): 63; Fault Characteristics: Relay Indication Min: DP_2, Y-E, FO 31.5 km; Fault Current(kA): 114.36; W: 0.6; Fault Voltage(kV): 194.47; Angle between(=degree): -37; AutoReclose Status: NA; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Liney Solid Fault	Root Cause given by NERCDC: Liney Solid Fault	DR output from Baku not submitted. ASGCL to submit the same for proper analysis purposes
84	132 KV Balaram - Traga Line	DSP, Anantnag Pradesh	26-03-2022 01:08	26-03-2022 01:48	00:42:00	DSP, Anantnag Pradesh	DP_2, R-Y, FO 30.3 km	NA	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	No DR & EI outputs submitted	Root cause not concluded	Root cause and action report may be submitted by DSP, Anantnag Pradesh
85	132 KV Bhangang - Lumsung Line	ASGCL & MNPTCL	26-03-2022 02:16	26-03-2022 02:30	00:20:00	ASGCL	DP_2, R-Y, E, FO 17.3 km	NA	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	No DR & EI outputs submitted	Root cause not concluded	Root cause and action report may be submitted by DSP, DSP, Aggildand
86	132KV Khairabad- Lumsung Line	MNPTCL	26-03-2022 02:40	26-03-2022 03:15	00:05:00	MNPTCL	DP_2, Y-E, FO 12.84 km	NA	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 1:02:15.47; CB Opening Time(msec): 67; Fault Characteristics: Relay Indication Min: DP_2, Y-E, FO 12.84 km; Fault Current(kA): 110.88; W: 0.6; Fault Voltage(kV): 179.9; Angle between(=degree): -30; AutoReclose Status: NA; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Liney Vegetation Fault	Root Cause given by NERCDC: Liney Vegetation Fault	It is requested to ensure that patrolling-related activities are undertaken in Line with Closure No. 2302, 2022 and 2302/CFCA (Site Standard) Regulations, 2002 on regular basis and also request that the patrolling report and remedial measures taken may be shared with NERC & NERCDC
87	132 KV Sani - Washa Line	DSP, Nagaland	26-03-2022 03:24	26-03-2022 03:50	00:24:00	DSP, Nagaland	No Tripping	NA	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	No DR & EI outputs submitted	Root cause not concluded	Root cause and action report may be submitted by DSP, ASGCL & MNPTCL
88	132 KV Sani - Washa Line	DSP, Nagaland	26-03-2022 03:34	26-03-2022 03:31	00:03:00	DSP, Nagaland	Over Current	NA	YES	NA	NA	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 1:35:46.59; CB Opening Time(msec): 80; Fault Characteristics: Relay Indication Min: DP_2, Y-E, FO 12.84 km; Fault Current(kA): 115.03; W: 0.6; Fault Voltage(kV): 179.9; Angle between(=degree): -37; AutoReclose Status: NA; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Liney Solid Fault	Root Cause given by NERCDC: Liney Solid Fault	Root cause and action report may be submitted by DSP, Nagaland
89	400 KV Patana - Siker 1 Line	NETC	26-03-2022 11:20	26-03-2022 11:57	00:32:00	DTFC	DP_2, Y-E	Not Operated	YES	YES	YES	POWER	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: As per DR Output supplied submitted by NETC, Relay Indication Min: DP_2, B-E, FO 24.87 km; Fault Current(kA): 81.25; Fault Voltage(kV): 81.02; Angle between(=degree): -78; AutoReclose Status: Not Operated; CARRIER SENT: No; Carrier Received: Yes; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Caused due to Short Fe	As per outage report shared by NETC. During the patrolling, inspection for the Short-circuitation was observed at the tower span 402-403	Change due to force majeure events
90	400 KV Bhangang - Synthra Line	NETC & MNPTCL	26-03-2022 13:40	26-03-2022 14:11	00:31:00	POWERGRID	DP_2, B-E, FO 108.3 km	Not Operated	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 13:39:29.89; CB Opening Time(msec): 60; Fault Characteristics: Relay Indication Min: DP_2, Y-E, FO 108.3 km; Fault Current(kA): 14.37; W: 0.6; Fault Voltage(kV): 1725; R: 10; Angle between(=degree): -27; AutoReclose Status: Not Operated; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Caused due to Short Fe	As per outage report shared by NETC. During patrolling of tower span two micro-arcs was observed at Air Way 61 between tower span between locations: 108A-108B No Short observed	Change due to force majeure events
91	220 KV Agri - Baku Line	ASGCL	26-03-2022 14:47	26-03-2022 14:50	00:15:00	ASGCL	DP_2, B-E, FO 44.6 km	Not Operated	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 14:46:53.04; CB Opening Time(msec): 63; Fault Characteristics: Relay Indication Min: DP_2, B-E, FO 44.6 km; Fault Current(kA): 81.25; W: 0.6; Fault Voltage(kV): 81.02; Angle between(=degree): -38; AutoReclose Status: Not Operated; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Liney Vegetation Fault	Root Cause given by NERCDC: Liney Vegetation Fault	DR output from Baku not submitted. ASGCL to submit the same for proper analysis purposes
92	400 KV Patana - Siker 1 Line	NETC	26-03-2022 15:58	26-03-2022 16:16	00:18:00	DTFC	DP_2, B-E, FO 248.7 km	Not Operated	YES	YES	YES	POWER	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: As per DR Output supplied submitted by NETC, Relay Indication Min: DP_2, B-E, FO 248.7 km; Fault Current(kA): 81.25; Fault Voltage(kV): 81.02; Angle between(=degree): -78; AutoReclose Status: Not Operated; CARRIER SENT: No; Carrier Received: Yes; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Liney Fault caused due to lightning	As per outage report shared by NETC. Even with thunderstorm was experienced from the moment of tripping. DR analysis also indicated the fault caused by lightning.	Through patrolling has been carried out in the respective portion as well as 10 to 15 km away from the location to see the line Fe. There was a tree from vegetation. Pruning further, no such foreign materials etc. are also found. However, the tree with thunderstorm was experienced from the moment of tripping. DR analysis also indicated the fault caused by lightning. DR Analysis, Patrolling report enclosed. Tower Top patrolling to track any fault mark in the conductor or any other part of the tower to be continued.
93	400 KV Patana - Siker 2 Line	NETC	26-03-2022 15:58	26-03-2022 16:49	00:51:00	DTFC	DP_2, B-E	Not Operated	YES	YES	YES	POWER	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 15:58:11.01; CB Opening Time(msec): 305; Fault Characteristics: Relay Indication Min: DP_2, B-E, FO 248.7 km; Fault Current(kA): 41.22; W: 0.6; Fault Voltage(kV): 81.02; Angle between(=degree): -38; AutoReclose Status: Not Operated; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Ph to E Fault: Liney Fault caused due to lightning	Root Cause given by NERCDC: Man operation	As per outage report shared by NETC. At Patana and Siker the breaker was captured as indicated in the video. The breaker was in closed condition with full voltage on the three phases of the line. Additionally, as indicated by Patana there was no any protection recorded in the video.
94	132 KV Haldabad - Pachangam Line	ASGCL	26-03-2022 15:13	27-03-2022 12:30	22:17:00	ASGCL	DP_2, B-E, FO 20.5 km	NA	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 15:12:24.07; CB Opening Time(msec): 60; Fault Characteristics: Relay Indication Min: DP_2, B-E, FO 20.5 km; Fault Current(kA): 84.58; W: 0.6; Fault Voltage(kV): 81.02; Angle between(=degree): -33; AutoReclose Status: NA; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Line the distance between 1200 Haldabad - Pachangam Line and 1200 Haldabad - Sibir(PQ) line (M). Tripped on incorrect fault due to line clearance. Maintenance was carried out by PSCCL and the line was restored.	Root Cause given by NERCDC: Line Defects/ Equipment or Human Error	Line Fe clearance between 1200 Haldabad - Pachangam Line and 1200 Haldabad - Sibir(PQ) line (M). Tripped on incorrect fault due to line clearance. Maintenance was carried out by PSCCL and the line was restored.
95	132KV Khairabad- Lumsung Line	MNPTCL	26-03-2022 15:51	26-03-2022 18:36	02:44:00	MNPTCL	DP_2, B-E, FO 14.76 km	NA	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	DR Analysis: Line Protection: Fault Initiation Time Min: 14:47:24.04; CB Opening Time(msec): 63; Fault Characteristics: Relay Indication Min: DP_2, B-E, FO 14.76 km; Fault Current(kA): 81.02; W: 0.6; Fault Voltage(kV): 81.02; Angle between(=degree): -38; AutoReclose Status: NA; CARRIER SENT: No; Carrier Received: No; DT Sent: No; DT Received: No Other Relevant Information: Time after 1 hr it started in submitted DR. The line was cleared fully due to tripping of 6 phase conductor on the communication cable at location 246	Root Cause given by NERCDC: Line Defects/ Equipment or Human Error	Time after 1 hr it started in submitted DR from Meter/MSI side. MNPTCL to link it and study the same

**Root Cause and Remedial Measures for the Date 01-March-2023 to 31-March-2023**

S/N	Element Name	Owner Name	Tripping Date and Time	RESTORATION Date and Time	OUTPUT CHARACTERISTICS	SENDOWNER	RELAYINDICATION_A	AR_A	SENSE_A	ENDR_A	SENDR_A	ARNDR_A	SENDRNDR_A	ENDRNDR_A	SENDRNDRNDR_A	SFS_OPERATION	DR_Analysis	Root Cause	Remedial Measures			
95	132 KV Inghal (MS/CL) - Kwong Line	MS/CL	26-03-2023 16:01	26-03-2023 16:18	00:17:00	MS/CL	Earth Fault	NA	NO	YES	YES	NO	MS/CL	No Tripping	NA	NO	YES	NA	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.		
97	132 KV Kwang - Ashina Line	MS/CL & Dufr. Negaland	26-03-2023 16:01	26-03-2023 16:37	00:36:00	MS/CL	No Tripping	NA	NO	YES	NA	NA	Dufr. Negaland	Earth Fault	NA	YES	YES	YES	NO	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
98	132 KV Inghal - Pahang Line	AGCL	26-03-2023 20:30	26-03-2023 20:48	00:18:00	POWERGRID	DP_3, R, F, IO, 1.48 kVa	NA	YES	YES	YES	NO	AGCL	DP_3, R, F, IO, 1.24 kVa	NA	YES	YES	YES	NO	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
99	132 KV Inghal - Tapaiah Line	POWERGRID & MS/CL	27-03-2023 02:01	27-03-2023 02:01	00:59:00	POWERGRID	Backup OF	NA	YES	YES	YES	NO	MS/CL	No Tripping	NA	YES	NA	NA	NA	NA	As per outage report shared by POWERGRID - Tripping during fault clear and fault current disappeared after 937 msec, which protection reset command was not clear from the DC source.	
100	132 KV Inghal - Latah Line	POWERGRID	27-03-2023 02:01	27-03-2023 02:56	00:54:00	POWERGRID	No Tripping	NA	YES	NA	NA	NO	MS/CL	No Tripping	NA	NO	YES	NO	NA	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
101	132 KV Inghal (MS/CL) - Inghal Line	MS/CL	27-03-2023 02:02	27-03-2023 02:40	02:38:00	POWERGRID	Earth Fault	NA	YES	NA	NA	NO	MS/CL	No Tripping	NA	YES	NO	NO	NO	NO	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
102	132 KV Inghal - Tapaiah Line	POWERGRID & MS/CL	27-03-2023 02:01	27-03-2023 02:00	00:58:00	POWERGRID	Backup OF	NA	YES	YES	YES	NO	MS/CL	No Tripping	NA	NO	NO	NO	NA	NA	As per outage report shared by POWERGRID - Tripping during fault clear and fault current disappeared after 937 msec, which protection reset command was not clear from the DC source.	
103	132 KV Inghal - Pahang Line	AGCL	27-03-2023 02:01	27-03-2023 02:35	00:33:00	POWERGRID	No Tripping	NA	YES	NA	NA	NO	AGCL	Backup OF	NA	NO	NO	NO	NO	NO	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
104	132 KV Kwang - Ashina Line	MS/CL & Dufr. Negaland	27-03-2023 02:01	27-03-2023 02:54	00:52:00	MS/CL	No Tripping	NA	YES	YES	NO	NO	Dufr. Negaland	Earth Fault	NA	YES	YES	YES	NO	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
105	132 KV Kwang - Ashina Line	MS/CL & Dufr. Negaland	27-03-2023 02:01	27-03-2023 02:40	00:42:00	MS/CL	No Tripping	NA	YES	YES	NO	NO	Dufr. Negaland	Earth Fault	NA	YES	YES	YES	NO	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
106	132 KV Ashai - Kemuning Line	POWERGRID	27-03-2023 16:59	27-03-2023 17:22	00:23:00	POWERGRID	DP_3, R, F, IO, 17.79 kVa	Not Operated	YES	YES	YES	NO	POWERGRID	DP_3, R, F, IO, 23.79 kVa	Not Operated	YES	YES	YES	NO	NA	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.
107	132 KV Dimpang (SC) - Ashina Line	POWERGRID & Dufr. Negaland	27-03-2023 17:04	27-03-2023 17:58	00:53:00	POWERGRID	DP_3, R, F, IO, 35.11 kVa	Not Operated	YES	YES	YES	NO	Dufr. Negaland	Not Operated	NA	YES	YES	YES	NO	NA	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.
108	132 KV Aganis - Basah Line	TSCC	29-03-2023 16:58	29-03-2023 17:46	00:50:00	TSCC	DP_3, R, F, IO, 3.5 kVa	NA	NO	NO	NO	NO	TSCC	DP_3, R, F, IO, 22.3 kVa	NA	NO	NO	NO	NO	NO	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.
109	AGSPP Line 4	NERC/CD	30-03-2023 09:14	30-03-2023 09:19	00:05:00	NERC/CD	Gas connection 2 line	NA	NO	NO	NO	NO	N/A	Not Applicable	NA	NA	NO	NA	NA	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
110	400 KV Badanj - Bangunan 3 Line	POWERGRID	30-03-2023 14:14	30-03-2023 14:43	00:29:00	POWERGRID	DP_3, R, F, IO, 47.77 kVa	Operated Unsuccessfully	YES	YES	YES	NO	POWERGRID	DP_3, R, F, IO, 238 kVa	Operated Unsuccessfully	YES	YES	YES	NO	NA	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.
111	132 KV Lokah - Rangang Line	MS/CL	30-03-2023 17:01	30-03-2023 17:44	00:42:00	MS/CL	No Tripping	NA	NO	NO	YES	NO	MS/CL	Earth Fault	NA	NO	NO	NO	NO	NO	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
112	132 KV Inghal - Latah Line	POWERGRID	30-03-2023 17:04	30-03-2023 17:35	00:29:00	POWERGRID	DP_3, R, F, IO	NA	YES	YES	YES	NO	MS/CL	DP_3, R, F, IO, 93.16 kVa	NA	NO	YES	NO	NO	NO	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.
113	LAMBAN 1	NSRC	30-03-2023 17:04	30-03-2023 18:38	01:32:00	NSRC	Over Current	NA	NO	YES	YES	NO	N/A	Not Applicable	NA	NA	NA	NA	NA	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
114	LAMBAN 2	NSRC	30-03-2023 17:04	30-03-2023 18:16	01:10:00	NSRC	1st Trip	NA	NO	YES	YES	NO	N/A	Not Applicable	NA	NA	NA	NA	NA	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	
115	132 KV Lokah - Rangang Line	MS/CL	30-03-2023 17:04	30-03-2023 18:14	01:09:00	MS/CL	No Tripping	NA	NO	NA	YES	NA	MS/CL	DP_3, R, F, IO, 11.3 kVa	NA	YES	YES	NO	NO	NA	As per relay indication, phase fault is indicated in Line with Cause no 2502, 2602 and 2306 of CEA (Grid Saturated Regulation, 2000 kg-regain base and also require that the paralling report and remedial measures taken may be shared with NSRC & NERC.	

Root Cause and Remedial Measures for the Date 01-March-2022 to 01-March-2022

S/N	Element Name	Owner Name	Tripping Date and Time	RESTORATION Date and Time	OUTAGE DURATION	SENDOWNER	RELAINDICATION_A	AR_A	SENDF	SEND_R	SEND_S	SEND_T	SEND_Y	SEND_Z	SEND_OTHER	RESDOWNER	RELAINDICATION_B	AR_B	RENO_R	RENO_S	RENO_T	RENO_Z	RENO_OTHER	SPS_OPERATION	DR Analysis	Root Cause	Remedial Measures
102	132 KV Ingham (G) - LARSA Line	POWERGRID	30-03-2022 17:04	30-03-2022 17:28	00:23:00	POWERGRID	DP_2V_8_A_FD 38.25 km	NA	YES	YES	YES	NO				NMPC	No Tripping	NA	NO	YES	YES	NA	No SPS	<p><b>DR Analysis from relay (MPC):</b> Fault Initiation Time Main : 17:05:00.00, CB Opening Time(msec): 400, Fault Characteristics : (Relay Indication Main)- DP_2V_8_A_FD 38.25 km Fault Characteristics (M): I=1.65E+07, Fault Voltage(kV): I=36.8E+01, Angle between(Degrees) : 179, Autorecover Status : NA, CASCADE SENT: No, OT Sent: No, OT Received: No</p> <p><b>Other Relevant Information:</b> There was a Backlash of LARSA NMPC due to tripping of all lines connected to LARSA resulting Gen loss of around 69 MW</p>	Root Cause given by NERC/DC: Mis operation	As per relay indication, primary fault F1 was observed that F1 to F0 fault was in 132 KV Ingham-Kinghooking Line and it was cleared from Kinghooking on operation of 2 protection. Due to non-operation of protection system at LARSA, Fault was cleared from remote end of health's protection on tripping on remote ends B.S.S. of in-sourcing busbar which is a remote location. The only event the fault took at 17:05:00.00 was and occurred before clearing the three phases as evident from relay. CB functionality of DC earth fault is being done. Some delay for some-4 setting is being received to SDMS for all fault.	
107	400 KV Byrthor - Silver Line	NETC & MNPCL	31-03-2022 06:41	31-03-2022 07:15	00:33:00	MNPCL	DP_2V_4_B_FD 131.6 km	NA	NO	YES	YES	NO				POWERGRID	DP_2V_4_B_FD 131.6 km	NA	YES	YES	YES	NO	No SPS	<p><b>DR Analysis from Breaker:</b> Fault Initiation Time Main : 06:42:04.716, CB Opening Time(msec): 50, Fault Characteristics : Relay Indication Main:- DP_2V_4_B_FD 131.6 km, Fault Characteristics (M): I=2.02E+07, Fault Voltage(kV): I=135.8E+01, Angle between(Degrees) : 177, Autorecover Status : NA, CASCADE SENT: No, OT Sent: No, OT Received: No</p> <p><b>Other Relevant Information:</b> Ph to Ph Fault. Fault has been caused due to infringement of the broken PF rope with the 'A-B' phase</p> <p><b>DR Analysis from Relay:</b> Fault Initiation Time Main : 06:42:05.746, CB Opening Time(msec): 50, Fault Characteristics : (Relay Indication Main)-DP_2V_4_B_FD 131.6 km, Fault Characteristics (M): I=2.04E+07, Fault Voltage(kV): I=135.8E+01, Angle between(Degrees) : 176, Autorecover Status : NA, CASCADE SENT: No, OT Sent: No, OT Received: No</p> <p><b>Other Relevant Information:</b> Ph to Ph Fault. Fault has been caused due to infringement of the broken PF rope with the 'A-B' phase</p>	As per outage report shared by NETC: The fault has been caused due to infringement of the broken PF rope with the 'A-B' phase which is causing string to come with string and DP/GG string got at lower location no. 206-205.	NETC submit action taken report with NERC/DC and NMPC.	