



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत समिति

75
Azadi Ka
Amrit Mahotsav



Eastern Regional Power Committee

14, गोल्फ क्लब रोड, टॉलीगंज, कोलकाता-700033

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सं./NO. पू.क्षे.वि.स./PROTECTION/2022/460

दिनांक /DATE: 06.07.2022

सेवा में / To,

संलग्न सूची के अनुसार / As per list enclosed.

विषय : पू.क्षे.वि.स. की 116 वीं संरक्षण समन्वय उप-समिति (पीसीसी) की बैठक हेतु सूचना I

Sub: Notice for 116th Protection Coordination sub-Committee (PCC) meeting of ERPC.

Sir/Madam,

Notice is hereby given that **116th PCC meeting** of ERPC will be held **in physical mode on 18th July, 2022 (Monday) at 11:00 hrs at ERPC Conference Hall, Kolkata.**

The tentative agenda items for discussion will be as follows:

- 1) Confirmation of the minutes of 115th Protection sub-Committee Meeting of ERPC
- 2) Analysis of following grid disturbances of June 2022:
 - Total Power failure at 220 kV Atri(OPTCL) S/s on 14.06.2022 at 14:57 Hrs.
 - Total Power failure at 220 kV Chatra(JUSNL) S/s on 17.06.2022 at 11:36 Hrs and on 18.06.2022 at 09:05 Hrs
 - Disturbance at 400/220 kV Meramundali(OPTCL) S/S on 20.06.2022 at 16:31 Hrs
 - Disturbance at 220kV Daltongunj (JUSNL)S/s on 22.06.2022 at 15:25 Hrs
- 3) Discussion of Protection Code as proposed in Draft IEGC Regulation, 2022.
- 4) Follow up of decision of previous Protection Coordination sub-Committee Meetings.
- 5) Single line tripping incidences of transmission elements for June 2022 as enclosed at **Annexure-1.**

You are requested to kindly furnish the detail report along with all records (SLD, SOE, DR, Relay and schematic diagram of auxiliary supply, wherever applicable) related to above tripping well in advance for meaningful analysis. You are also requested to upload the details in on-line tripping incident reporting system implemented in Protection Database Management System(www.erpcc-protectiondb.in.)

Your participation in the meeting is highly solicited.

Yours faithfully,

P.P. Jena
06.07.2022

(P.P. Jena)
Executive Engineer (PS)

LIST OF ADDRESSES:

Chief Engineer, Trans (O&M) Bihar State Power Transmission Limited, VidyutBhawan, Bailey Road, Patna-800021	Electrical Supeerintending Engineer (CRITL) Bihar State Power Transmission Limited, VidyutBhawan, Bailey Road, Patna-800021
Chief Engineer(System Operation), SLDC , BSPTCL, Patna-800021	
Chief Engineer (SLDC) Damodar Valley Corporation, GOMD-I Premises, P.O.- DaneshSeikh Lane, Howrah- 711109	Chief Engineer (CTC) Damodar Valley Corporation, P.O. Maithon Dam, Dist. Dhanbad, Jharkhand-828207
Chief Engineer, (CRITL) Jharkhand UrjaSancharan Nigam Limited Kusai Colony, Doranda, Ranchi-834002	Electrical Superintending Engineer (CLD) Jharkhand UrjaSancharan Nigam Limited, Kusai Colony, Doranda, Ranchi-834002
Chief General Manager (O&M), OPTCL, Janpath, Bhubaneswar, Odisha – 751 022. FAX: 0674-2542932 cgm.onm@optcl.co.in	Sr. General Manager (PPA), Technical Wing, OHPCL, Orissa State Police Housing & Welfare Corpn. Bldg. Vanivihar Chowk, Janpath, Bhubaneswar-752022
Chief Load Dispatcher, SLDC OPTCL, P.O. Mancheswar Rly. Colony Bhubaneswar-751017	Chief Engineer (Testing), WBSETCL Central Testing Laboratory, Abhikshan, Salt Lake, Kolkata-700091 (Fax no. 2367-3578/1235)
Chief Engineer (CLD) WBSETCL, P.O.Danesh Sheikh Lane, Andul Road, Howrah-711109	Addl. Chief Engineer (ALDC) West Bengal Electricity Distribution Company Ltd Vidyut Bhavan, 7 th Floor, Bidhannagar, Sector-I Salt Lake City, Kolkata-700091 (Fax-033-2334-5862)
Dy. Chief Engineer (Testing)/ Sr. Manager (Testing) CESC Ltd., 4, SasiSekhar Bose Road, Kolkata-700025	General Manager (O&M) KhSTPS, NTPC Ltd., P.O. Deepti Nagar, Dist. Bhagalpur, Bihar-813203
General Manager(O&M) FSTPS, NTPC Ltd., P.O. Nabarun, Dist. Murshidabad, West Bengal-742236	Dy. General Manager (Engineering), WBPDC, OS Dept. Corporate Office, 3/C, LA Block, Salt Lake-III, Kolkata-700098 (Fax-033-23350516)
General Manager (O&M) Barh STPS, NTPC Ltd., P.O. NTPC Barh, Dist. Patna, Bihar-803213	General Manager (OS), ERHQ-II, NTPC Ltd., 3 rd flr. OLIC Building, Plot no. N 17/2, Nayapalli, Unit-8 Bhubaneswar- 751012 (Fax No. 0674-2540919)
General Manager(O&M), TSTPS, NTPC Ltd., P.O.Kaniha, Dist. Angul, Orissa-759117	General Manager (AM), POWERGRID, Odisha Projects, Sahid Nagar, Bhubaneswar – 751 007
General Manager (OS), ERHQ-I, NTPC Ltd., Loknaya Jaiprakash Bhawan, (2 nd Floor), DakBunglow Chawk, Patna-800001	Manager (Electrical), Adhunik Power & Natural Resources Ltd. “Lansdowne Towers, Kolkata-700020 (Fax No. 033-2289 0285)
Executive Director (O&M) NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad, Haryana-121003 (Fax-01292272413)	Electrical Superintending Engineer, TTPS, Tenughat Vidyut Nigam Ltd., Lalpania, Dist. Bokaro, Jharkhand-829149
Dy. General Manager (Electrical) IB Thermal Power Station, OPGCL Banhapalli, Dist. Jharsuguda-768234, Orissa	General Manager (AM), ER-I Power Grid Corporation of India Ltd., Alankar Place, Boring Road, Patna-800001
Chief Engineer (Trans.) Power Deptt., Govt. of Sikkim, Gangtok-731010	Sr. Manager (CTMC) Durgapur Projects Limited, Durgapur-713201
Executive Director, ERLDC, POSOCO, Tollygunge, Kolkata-700033	The Head Maithon Power Limited, Maithon Office, MA 5 Gogna, Dist. Dhanbad, Jharkhand State, PIN-828207
General Manager (AM), ER-II Power Grid Corporation of India Ltd., J-I-15, Block-EP, Sector-V, Salt Lake, Kolkata-91	Head –Regulatory and contracts, IndiGrid Limited , 247 Embassy, Office No 107, ‘B’ Wing, Hindustan Co. Bus Stop, Gandhi Nagar, L.B.S. Road, Vikhroli West, Mumbai – 400 079. Ph : +91 845509 96408
General Manager (P&O), PTC Ltd., Kanchanjunga Bldg., 18, Barakhamba Road, New Delhi-110001	
Managing Director, Bhutan Power Corporation Post Box no. 580, Thimpu, Bhutan.	Managing Director, Druk Green Power Corprn. P.O. Box-1351, Thimpu, Bhutan.

Associate Director (Commercial and Regulatory) Darbhanga-Motihari Transmission Company Limited (DMTCL),503, Windsor, Off CST Road, Kalina, Santacruz(E), Mumbai-400098	The Plant Head, JITPL, Angul, Odisha (FAX:011- 26139256-65)
Shri D. P. Bhagava, Chief Consultant (O&M), TeestaUrja Limited, New Delhi (FAX:011- 46529744)	Director (GM Division), Central Electricity Authority Sewa Bhawan, R. K. Puram, New Delhi-110066
Director (NPC), CEA, NRPC Building, Katwaria Sarai, New Delhi- 110016	President, Dans Energy Pvt. Ltd, 5th Floor, DLF Building No. 8, Tower-C, Gurgaon - 722002
Director, Shiga Energy Pw. Ltd., 5th Floor, DLF Building No. 8, Tower-C, Gurgaon - 722002	DGM (E&I), HALDIA ENERGY LIMITED, BARIK BHAWAN, KOKATA-700072, FAX: 033-22360955
President , TPTL, Bhikaji Cama Place, New Delhi , 110066	

List of important transmission lines in ER which tripped in June-2022

Sl. No.	LINE NAME	TRIP DATE	TRIP TIME	RESTORATION DATE	RESTORATION TIME	Relay Indication LOCAL END	Relay Indication REMOTE END	Reason	Fault Clearance time in msec	Remarks	DR Configuration Discrepancy	DR/EL RECEIVED FROM LOCAL END	DR/EL RECEIVED FROM REMOTE END	UTILITY RESPONSE
1	400 KV MERAMUNDALI-LAPANGA-1	06-01-2022	10:36	06-01-2022	19:02	Meramundali: B_N, Zone-2, 155.6 km, 1.7 kA	Lapanga: B_N, Zone-1, 22.76 km, 10.27 kA	B-Earth	100	A/r failed after 1 sec		Yes	Yes	

2	220 KV TTPS-TSTPP-1	06-01-2022	17:15	06-01-2022	23:14		TSTPP: R_N, Zone-1, 5.8 km, 11.9 kA	R-Earth	100	Three phase tripping for single phase fault	DR channels not configured at TSTPP	No	Yes
3	220 KV RENGALI(PH)-TSTPP-1	06-01-2022	17:19	06-01-2022	22:42		TSTPP: Y_B, Zone-1, 9.3 km, 10.6 kA	Y-B-Earth	100	Phase-to-phase fault		No	No
4	220 KV TSTPP-MERAMUNDALI-1	06-01-2022	17:35	06-03-2022	19:35	TSTPP: Y_N, 25 km, 4.8 kA	Meramundali: R_Y_N, Zone-1, 17.11 km, Ir: 7.7 kA, Iy: 3.634 kA	Y-Earth	100	A/r failed after 1 sec. Phase-to-phase fault developed during A/r attempt		No	Yes
5	400 KV BINAGURI-MALBASE-1	06-02-2022	00:28	06-02-2022	00:46	A/r successful at Binaguri	Malbase: Y_N, Zone-1, 93.7 km	Y-Earth	100	A/r successful from Binaguri. Three phase tripping at Malbase		Yes	NA
6	400 KV MERAMUNDALI-LAPANGA-1	06-02-2022	13:34	06-02-2022	19:03	Meramundali: B_N, 40.4 km, 2.27 kA, A/r unsuccessful	Lapanga: B_N, 9 km, 8.78 kA	B-Earth	100	A/r failed after 1 sec. Tie bay A/r attempt after failure of A/r of main bay at Lapanga		Yes	Yes
7	400 KV TEESTA 3-RANGPO-1	06-02-2022	13:45	06-02-2022	15:05	Teesta 3: R_N, 8.38 kA	Rangpo: R_N, Zone-2, 43.503 km, 7.08 kA	R-Earth	100	A/r kept in non-auto mode for OPGW installation work		Yes	Yes

8	400 KV BIHARSHARIF- BANKA-1	06-02-2022	15:56	06-03-2022	01:09	Biharsharif: B_N, 36.29 km, 12.28 kA	Banka: B_N, 145.9 km, 2.13 kA	B- Earth	100	Other two phase of tie bay at Banka tripped after 500 msec. A/r failed after 1 sec. DT received/Teed protection operated at Biharsharif. PG may explain.		Yes	Yes
9	400 KV BARIPADA- JAMSHEDPUR-1	06-02-2022	18:35	06-03-2022	03:55		Jamshedpur: B_N, 96 km, 3.58 kA	B- Earth	100	A/r failed after 1 sec		No	Yes
10	220 KV JODA- RAMCHANDRAP UR-1	06-03-2022	14:36	06-03-2022	15:40	Joda: Y_N, 72.2 km, 1.48 kA	Ramchandrapur: Y_N, 81.1 km, 2.14 kA	Y- Earth	100	Three phase tripping for single phase fault		No	Yes
11	220 KV BIRPARA- MALBASE-1	06-03-2022	23:19	06-03-2022	23:45	Birpara: R_Y_N, IR: 6.98 kA, Iy: 9.01 kA		R-Y- Earth	100	Phase-to-phase fault		Yes	NA
12	400 KV BINAGURI- MALBASE-1	06-03-2022	23:55	06-04-2022	00:35	Binaguri: B_N, 2.51 kA		B- Earth	2800	DEF operated. Resistive fault		Yes	No
13	400 KV MERAMUNDALI- LAPANGA-1	06-04-2022	19:10	06-04-2022	21:07	Meramundali: R_N, Zone-1, 17.5 km, 9.93 kA	Lapanga: R_N, 149 km, 2.27 kA	R- Earth	100	A/r failed after 1 sec. Tie bay A/r attempt after failure of A/r of main bay at Lapanga		Yes	Yes

14	220 KV BUDHIPADAR- KORBA-1	06-05-2022	19:26	06-05-2022	21:56	Budhipadar: R_N, Zone-1, 1.5 km, 24.8 kA			100	Three phase tripping for single phase fault		Yes	NA	
15	220 KV SILIGURI- KISHANGANJ-1	06-06-2022	00:25	06-06-2022	01:03	Siliguri: Y_N, 96.66 km, 1.5 kA	Kishanganj: A/r successful	Y- Earth	100	At 00:22 Hrs, Rfault in R_ph A/r successful from both ends. At 00:37 Hrs fault struck B_ph. PG may share details of the incident.		Yes	Yes	
16	220 KV JODA- RAMCHANDRAP UR-1	06-06-2022	12:58	06-06-2022	13:32		Ramchandrapur: O/c, E/f	B- Earth	2000	As per EL file, DEF operated at Ramchandrapur		No	Yes	
17	220 KV TTPS- TSTPP-1	06-07-2022	11:53	06-07-2022	13:02	TTPS: R_N, Zone-1, 7.59 km, 8.8 kA	TSTPP: R_N, Zone-2, 22.7 km, 5.59 kA	R- Earth	400	Tripped in Zone-2 time from TSTPP		No	Yes	

18	220 KV JODA-JINDAL-JAMSHEDPUR	06-07-2022	11:57	06-07-2022	13:18	Joda: O/c E/F		R_Y_B	20000	Highly resistive fault. Gradual decrease in voltage in all three phase. Details maybe shared by OPTCL		No	No
19	220 KV JODA-RAMCHANDRAPUR-1	06-07-2022	11:57	06-07-2022	12:37	Joda: O/c E/F	Ramchandrapur: PSB	R_Y_B	20000	Highly resistive fault. Gradual decrease in voltage in all three phase. Details maybe shared by OPTCL		No	Yes
20	400 KV NEW PPSP-NEW RANCHI-2	06-07-2022	14:12	06-07-2022	16:52	New PPSP: Y_B, Zone-1, 57.7 km, Iy:5.25 kA, Ib: 5.44 kA	New Ranchi: Y_B, 48.5 km, Iy: 8.8 kA, Ib: 8.6 kA	Y-B	100	Phase-to-phase fault		Yes	Yes
21	400 KV RANCHI-RAGHUNATHPUR-2	06-07-2022	14:57	06-07-2022	20:27	Ranchi: R_B, 80.5 km, Ir: 7.16 kA, Ib: 7.12 kA	Raghunathpur: R_B, 72.56 km, Ir:6.762 kA, Ib: 7.576 kA	R-B-Earth	100	Phase-to-phase fault		Yes	Yes

22	220 KV RAJARHAT- BARASAT-1	06-07-2022	15:06	06-08-2022	03:42	Rajarhat: R_Y_N, 10.7 km, Ir:16.49kA, Iy: 6.9 kA	Barasat: R_N, Zone-1, 5.8 km, 10.7 kA	R-Y-Earth	100	Phase-to-phase fault. Conductor of R_ph of ckt-2 snapped and fell on three phases of ckt-1. Voltage appeared in all three phase during A/r attempt which were in phase.	Yes	No
23	220 KV RAJARHAT- BARASAT-2	06-07-2022	15:06	06-08-2022	03:44	Rajarhat: R_N, 0.4 km, 14.6 kA	Barasat: R_N, Zone-1, 19.9 km, 5.5 kA	R-Earth	100	DT received at Rajarhat. WBSETCL may explain	Yes	No
24	220 KV KEONJHOR (PG)- KEONJHOR-1	06-08-2022	17:16	06-08-2022	19:59	Keonjhor (PG): A/r successful	Keonjhor: R_N, Zone-1, 1.38 kA	R-Earth	100	As per PMU, no A/r observed	No	No
25	220 KV DALKHOLA- GAZOLE-2	06-09-2022	00:10	06-09-2022	12:01	Dalkhola: R_N, 98.5 km, 2.412 kA	Gazole: R_N, Zone-1, 13 kA	R-Earth	100	A/r failed after 1 sec	Yes	Yes
26	220 KV DARBHANGA (DMTCL)- MOTIPUR-2	06-09-2022	01:15	06-09-2022	01:36	Darbhanga: B_N, 130.9 km, 1.267 kA		B-Earth	100	A/r successful from Motipur	No	Yes

27	220 KV SAHARSA-KHAGARIA-1	06-09-2022	04:24	06-09-2022	07:18		Khagaria: Master Trip	No fault	NA	Fault in Ckt-2. LBB operated at Khagaria		Yes	Yes	
28	220 KV SAHARSA-KHAGARIA-2	06-09-2022	04:24	06-09-2022	06:49	Saharsa: Y_N, 16.2 km, 6.146 kA		Y-Earth	100	DT received at Saharsa. LBB at Khagaria at operated. BSPTCL may explain		Yes	Yes	
29	220 KV NEW PURNEA-KHAGARIA-1	06-09-2022	04:24	06-09-2022	06:44	New Purnea: Didn't trip	Khagaria: Master Trip	No fault	NA	Fault in Saharsa-Khagaria-2. LBB operated at Khagaria		Yes	Yes	
30	220 KV NEW PURNEA-KHAGARIA-2	06-09-2022	04:24	06-09-2022	07:24	New Purnea: Didn't trip	Khagaria: Master Trip	No fault	NA	Fault in Saharsa-Khagaria-2. LBB operated at Khagaria		Yes	Yes	
31	220 KV JODA-RAMCHANDRAPUR-1	06-09-2022	16:24	06-09-2022	16:50	Joda: Y_N, 58.17 km, 3.39 kA	Ramchandrapur: Y_N, 80.3 km, 1.64 kA	Y-Earth	350	As per PMU, tripped in Zone-2 time from Ramchandrapur		No	No	

32	400 KV PPSP-BIDHANNAGAR-2	06-09-2022	17:26	06-09-2022	17:49	PPSP: Y_N, 143 km	Bidhannagar: Y_N, Zone-1, 30 km, 4.18 kA	Y-Earth	100	Three phase tripping for single phase fault. A/r not in service as per OEM advice	No	Yes
33	400 KV RANCHI-SIPAT-2	06-10-2022	13:52	06-12-2022	23:47	Ranchi: Y_N, 108 km, 2.84 kA		Y-Earth	100	Other two phase at Ranchi tripped after 200 msec	Yes	NA
34	765 KV NEW RANCHI-MEDINIPUR-1	06-10-2022	14:27	06-10-2022	17:25	New Ranchi: R_Y, 16.6 km, Ir:14.8 kA, Iy: 13.05 kA	Medinipur: R_Y, Zone-2, 248.4 km, Ir:4.078 kA, Iy: 2.877 kA	R-Y-Earth	100	Phase to phase fault	Yes	Yes
35	765 KV NEW RANCHI-DHARAMJAIGAR H-2	06-10-2022	15:04	06-10-2022	16:25	New Ranchi: B_N, 112 km, 3.71 kA	Dharamjaigarh: B_N, 233 km, 2.9 kA	B-Earth	100	Single phase tripping. O/V St-2 operated after 1 second	Yes	NA
36	400 KV PPSP-BIDHANNAGAR-1	06-10-2022	17:37	06-10-2022	17:46	PPSP: B_N, 103 km	Bidhannagar: B_N, 76 km	B-Earth	100	Three phase tripping for single phase fault. A/r not in service as per OEM advice	No	No

37	400 KV PPSP-BIDHANNAGAR-2	06-10-2022	17:53	06-10-2022	18:21	PPSP: Y_N, 143.2 km	Bidhannagar: Y_N, Zone-1, 29.8 km	Y-Earth	100	Three phase tripping for single phase fault. A/r not in service as per OEM advice	No	No
38	220 KV ALIPURDUAR-SALAKATI-2	06-11-2022	17:22	06-11-2022	19:25	Alipurduar: Y_B, 21.5 km, Iy: 3.23 kA, Ib: 2.88 kA		Y-B-Earth	100	Phase-to-phase fault	Yes	NA
39	400 KV BIDHANNAGAR-DURGAPUR-1	06-11-2022	17:58	06-11-2022	18:04	Bidhannagar: DT received		No fault	NA	No fault in line. WBSETCL may explain	Yes	No
40	400 KV RANCHI-RAGHUNATHPUR-2	06-11-2022	18:52	06-11-2022	19:49	Ranchi: Y_N, 89.389 km, 4.384 km	Raghunathpur: A/r successful	Y-Earth	100	DT received at Ranchi after 100 msec of fault clearance	Yes	No
41	400 KV ARAMBAGH-NEW PPSP-2	06-11-2022	19:25	06-11-2022	19:51	Arambagh: B_N, Zone-1, 132.7 km, 2.801 kA	New PPSP: B_N, 50 km, 4.92 kA	B-Earth	100	A/r failed after 1 sec	Yes	Yes
42	400 KV BINAGURI-MALBASE-1	06-12-2022	01:33	06-12-2022	01:45		Malbase: R_N, Zone-2, 122 km	R-Earth	100	A/r successful at Binaguri. Three phase tripping at Malbase	Yes	NA

43	400 KV PPSP-BIDHANNAGAR-1	06-12-2022	04:02	06-12-2022	16:14		Bidhannagar: B_N, 23.39 km, 10.71 kA	B-Earth	100	Three phase tripping for single phase fault. A/r not in service as per OEM advice		No	Yes
44	400 KV ARAMBAGH-NEW PPSP-1	06-12-2022	15:01	06-12-2022	15:28	Arambagh: B_N, Zone-2, 197.8 km, 2.185 kA	New PPSP: B_N, 2.2 km, 11.59 kA	B-Earth	350	Highly resistive fault. Later came in Zone-1, A/r successful. Tripped again within reclaim time		Yes	Yes
45	400 KV NEW PPSP-NEW RANCHI-2	06-12-2022	15:02	06-12-2022	16:26	New PPSP: Y_N, 0.753 km, 11.85 kA	New Ranchi: Y_N, Zone-2, 111 km, 4.837 kA	Y-Earth	100	Another fault struck in B_ph after 700 msec. All three phase tripped		Yes	Yes
46	400 KV FSTPP-BAHARAMPUR-2	06-12-2022	21:39	13/6/2022	03:59	FSTPP: Y_N, 82 km	Baharampur: Y_N, 5.47 km, 17.2 kA, A/r unsuccessful	Y-Earth	100	A/r failed after 1 sec		No	Yes
47	400 KV GOKARNA-NEW CHANDITALA-1	06-12-2022	21:41	06-12-2022	22:02	Gokarna: DT received	Chanditala: O/C E/f	Y-Earth	100	DEF operated instantaneously. Antitheft settings not revised before charging from both ends		Yes	Yes

48	400 KV GOKARNA-NEW CHANDITALA-2	06-12-2022	21:41	06-12-2022	22:04	Gokarna: DT received		Y- Earth	100	DEF operated instantaneously. Anti theft settings not revised before charging from both ends		Yes	Yes
49	400 KV BAHARAMPUR- BHERAMRA-3	06-12-2022	22:05	06-12-2022	23:06	Baharampur: R_N, 6.8 kA, 37.8 km, DT received		R- Earth	100	DT received at Baharampur		Yes	NA
50	400 KV BARH- PATNA-4	13/6/2022	15:09	13/6/2022	21:59		Patna: R_Y_N, Zone-1, 6.7 kA	R- Earth	100	Phase-to-phase fault		No	Yes
51	400 KV GAYA- MAITHON-2	14/06/2022	16:22	14/6/2022	17:51	Gaya: R_N, Zone-2, 275 km, 1.56 kA	Maithon: R_N, 1.2 km, 16.18 kA	R- Earth	100	A/r failed after 1 sec		Yes	Yes
52	400 KV RANCHI- RAGHUNATHPUR- 2	14/06/2022	16:49	14/6/2022	18:12	Ranchi: R_N, 125 km, 3.22 kA	Raghunathpur: R_N, 50.94 km, 7.05 kA	R- Earth	100	A/r successful. Tripped again within reclaim time		Yes	Yes
53	400 KV PPSP- BIDHANNAGAR-1	14/06/2022	17:26	14/6/2022	17:51	PPSP: B_N, 149.4 km	Bidhannagar: B_N, 24.84 km, 9.682 kA	B- Earth	100	Three phase tripping for single phase fault. A/r not in service as per OEM advice		No	Yes

54	400 KV PPSP-BIDHANNAGAR-2	14/06/2022	17:26	14/6/2022	17:52	PPSP: Y_N, Zone-1, 152.5 km	Bidhannagar: Y_N, 25.6 km, 9.5 kA	Y-Earth	100	Three phase tripping for single phase fault. A/r not in service as per OEM advice	No	Yes
55	400 KV DHANBAD-RANCHI-2	14/06/2022	18:29	15/6/2022	01:14	Dhanbad: R_N, Zone-1, 4.866 km, 11.37 kA	Ranchi: R_N, Zone-1, 189.8 km, 3.06 kA	R-Earth	100	Initially fault in Y_ph. Another fault struck R_ph after 200 msec	No	Yes
56	765 KV ANGUL-JHARSUGUDA-2	14/6/2022	10:57	14/6/2022	16:33	Angul: R_N, 231.5 km, 2.18 kA	Jharsuguda: R_N, 40.5 km, 11.34 kA	R-Earth	100	A/r failed after 1 sec	No	No
57	400 KV MAITHON-MEJIA-3	14/6/2022	16:22	14/6/2022	17:26	Maithon: Didn't trip	Mejia: R_N, Zone-1, 67.39 km, 2.095 kA	R-Earth	100	Carrier channel was unhealthy, however, single phase tripped and other two phase tripped on PD after 1.5 seconds.	No	Yes
58	400 KV MAITHON-MAITHON RB-2	14/6/2022	16:25	15/6/2022	13:56	Maithon: B_N, 13.42 km, 7.79 kA	Maithon RB: LA burst	Y-B-Earth	100	A/r failed after 1 sec. Only B_ph tripped during first instance at Maithon	Yes	No

59	400 KV PPSP-BIDHANNAGAR-2	15/6/2022	07:03	15/6/2022	07:54	PPSP: R_N, Zone-1, 45.7 km	Bidhannagar: R_N, Zone-1, 144.6 km, 2.564 kA	R-Earth	100	Three phase tripping for single phase fault. A/r not in service as per OEM advice	No	Yes
60	220 KV NEWTOWN AA 3 - RAJARHAT-1	15/6/2022	13:03	15/6/2022	23:24	NewTown: B_N, Zone-1, 1.7 km	Rajarhat: B_N, 4.6 km, 13.81 kA	B-Earth	100	A/r failed after 1 sec. Tripping instance different for two ends. Fault observed by Rajarhat after 500 msec wrt other end	Yes	Yes
61	400 KV BARH-MOTIHARI-1	15/6/2022	15:27	15/6/2022	16:30	Barh: B_N, Zone-1, 11.2 km, 14.89 kA	Motihari: B_N, 203.4 km, 1.73 kA	B-Earth	100	A/r successful. Tripped again within reclaim time	No	Yes
62	400 KV MERAMUNDALI-MENDHASAL-1	15/6/2022	15:27	15/6/2022	15:48	Meramundali: R_N, 23.36 km, 6.46 kA, A/r successful	Mendhasal: R_N, 4.26 kA	R-Earth	100	A/r successful at Meramundali. Three phase tripping at Mendhasal	Yes	Yes
63	220 KV BUDHIPADAR-KORBA-1	15/6/2022	17:39	15/6/2022	20:04		Korba: R_N, Zone-1, 19.47 km, 6.73 kA	R-Earth	100	Three phase tripping for single phase fault. A/r not ready as per EL data.	No	NA

64	220 KV ALIPURDUAR- SALAKATI-1	15/6/2022	19:52	15/6/2022	20:54	Alipurduar: Y_B, Zone-1, Iy: 2.5 kA, Ib: 1.1 kA	Salakati: A/r successful	Y-B-Earth	100	Phase to phase fault		Yes	NA	
65	220 KV ALIPURDUAR- SALAKATI-2	15/6/2022	19:52	15/6/2022	20:54	Alipurduar: Y_B, Zone-1	Salakati: A/r successful	Y-B-Earth	100	Phase to phase fault		Yes	NA	
66	220 KV ALIPURDUAR- ALIPURDUAR-1	15/6/2022	21:21	15/6/2022	21:42	Alipurduar (PG): R_N, 1.4 km, 14.9 kA	Alipurduar: R_N, 15.549 km, 3.293 kA	R-Earth	100	Three phase tripping for single phase fault		Yes	Yes	
67	765 KV JHARSUGUDA- DHARAMJAIGAR H-1	15/6/2022	23:23	16/6/2022	01:08	Bus-4 tripped at Dharamjaigarh. DT received		R-Earth	300	207 kV dip in R_ph voltage at Jharsuguda. PG Odisha may share event details		No	NA	
68	400 KV BINAGURI- MALBASE-1	16/6/2022	06:33	16/6/2022	19:00	Binaguri: Y_B, 35.88 km, Iy: 9.60 kA, Ib: 10.47 kA		Y-B	100	Phase to phase fault		Yes	NA	
69	220 KV MAITHON- DUMKA-1	17/6/2022	11:34	17/6/2022	12:35	Maithon: R_N, 41.98 km, 3.39 kA	Dumka: R_N, Zone-1, 23.31 km, 3.25 kA	R-Earth	100	Carrier unhealthy. Other two phase tripped after 1.5 seconds		Yes	No	
70	220 KV DALTONGANJ- CHATRA-1	17/6/2022	13:12	17/6/2022	14:36		Trip coil issue at Chatra	No fault	NA	As per PMU, no fault observed		Yes	No	
71	400 KV KHSTPP- BARH-2	17/6/2022	13:26	17/6/2022	15:33	KHSTPP: B_N, 36.7 km, A/r unsuccessful	Barh: B_N, Zone-2, 201 km, 2.59 kA	B-Earth	100	A/r failed after 1.2 sec		No	Yes	

72	220 KV NEW PURNEA-MADHEPURA-2	17/6/2022	14:20	17/6/2022	15:09	New Purnea: R_N, 37.4 km, 3.5 kA	Madhepura: R_N, 57.9 km	B-Earth	100	Carrier channel not healthy. Three phase tripping for single phase fault		Yes	Yes
73	400 KV FSTPP-KHSTPP-1	18/6/2022	18:30	19/6/2022	11:49	FSTPP: B_N, Zone-1, 75.41 km, 3.9 kA		B-Earth	100	Initially R_ph fault occurred. After 300 msec fault appeared in B_ph and three phase tripped.		No	No
74	400 KV KHSTPP-BANKA-2	18/6/2022	18:40	18/6/2022	20:54	KHSTPP: B_N, Zone-1, 3.7 km, 26.1 kA	Banka: B_N, 52.596 km, 4.998 kA	B-Earth	100	A/r successful. Tripped again within reclaim time		No	Yes
75	400 KV BINAGURI-BONGAIGAON-2	18/6/2022	21:27	18/6/2022	22:04	Binaguri: R_B, 72.87 km, Ir: 7.04 kA, Ib: 7.80 kA	Bongaigaon: R_B, 150 km, Ir=Ib=3.5 kA	R-B-Earth	100	Phase to phase fault		Yes	NA

76	220 KV SUBHASHGRAM (PG)-NEW TOWN-1	19/6/2022	06:07	19/6/2022	07:03	Subhashgram: Didn't trip	New Town: SOTF, VT Fuse fail	No fault	NA	1 kV dip in all three phase voltage at Subhshgram PMU. WBSETCL may explain		NA	No
77	400 KV HALDIA-SUBHASHGRAM-2	19/6/2022	17:06	19/6/2022	17:55	Haldia: R_N, Zone-1, 96.24 km, 1.588 kA	Subhashgram: R_N, 40 km, 14.9 kA, A/r successful. Tripped again within Y_B fault	R-Earth	100	A/r successful. Phase to phase fault during reclaim time		No	Yes
78	400 KV NEW PURNEA-MUZAFFARPUR-2	19/6/2022	18:36	19/6/2022	20:04	New Purnea: R_N, 9.3 km, 13.42 kA	Muzaffarpur: R_N, 180.3 km, 1.352 kA	R-Earth	100	Three phase tripping at Muzaffarpur		Yes	Yes
79	400 KV JAMSHEDPUR-MEJIA-1	20/6/2022	16:34	20/6/2022	17:22	Jamshedpur: Y_B, 119.1 km, Iy: 4.67 kA, Ib: 4.3 kA	Mejia: Y_B, Iy:6.9 kA, Ib: 5.8 kA	Y_B-Earth	100	Phase to phase fault		Yes	Yes
80	220 KV BARIPADA-BALASORE-2	20/6/2022	17:15	20/6/2022	17:41	Baripada: B_N, 76 km, 2.31 kA		B-Earth	100	As per PMU, no A/r observed		No	No

81	400 KV MALDA-NEW PURNEA-1	20/6/2022	23:12	20/6/2022	23:54	Malda: Y_N, 127.9 km, 2.32 kA	New Purnea: Y_N, 23.76 km, 8.6 kA	Y-Earth	100	A/r failed after 1 sec		Yes	Yes
82	400 KV PPSP-BIDHANNAGAR-2	21/6/2022	15:59	21/6/2022	17:33	PPSP: R_N, Zone-1	Bidhannagar: R_N, Zone-2, 150.7 km, 2.290 kA	R-Earth	100	Three phase tripping for single phase fault. A/r not in service as per OEM advice		No	Yes
83	220 KV RANCHI-HATIA-2	22/6/2022	18:03	22/6/2022	18:31	Ranchi: A/r successful	Hatia: R_N, Zone-2, 29.16 km, 3.36 kA	R-Earth	100	A/r successful from Ranchi only		Yes	No
84	400 KV JHARSUGUDA-RAIGARH-2	22/6/2022	14:37	23/6/2022	03:29	Jharsuguda: B_N, 109 km, 3.18 kA		B-Earth	100	A/r failed after 1 sec		No	No
85	220 KV KATAPALLI-BOLANGIR-1	24/6/2022	17:53	24/6/2022	18:32	Katapalli: R_N, 4.84 kA, 27.6 km	Bolangir: R_N, Zone-1, 79.9 km, 1.79 kA	R-Earth	100	A/r successful from Katapalli only. Carrier protection not healthy		Yes	No
86	220 KV BIHARSHARIF-TENUGHAT-1	27/6/2022	13:13	27/6/2022	13:40	Biharsharif: R_N, 122.6 km, 1.208 kA	Tenughat: DEF, 57.25 km	R-Earth	100	Three phase tripping for single phase fault		No	No

87	400 KV JEYPORE-BOLANGIR-1	27/6/2022	13:22	27/6/2022	14:03	During TAN Delta testing of line reactor at Jeypore end, the line tripped due to mal operation of Differential relay		No fault	NA	No fault observed in PMU.		No	No
88	400 KV MEDINIPUR-KHARAGPUR-1	27/6/2022	14:09	27/6/2022		Medinipur: R_N, 49.5 km, 4.86 kA	Kharagpur: R_N, 53.27 km, 5.03 kA	R-Earth	100	A/r failed after 1 sec		No	No
89	220 KV SAHARSA-KHAGARIA-1	28/6/2022	11:51	28/6/2022	12:30	Saharsa: A/r successful	Khagaria: R_N, Zone-1, 3.5 kA	R-Earth	100	Three phase tripping at Khagaria		No	Yes
90	400 KV MERAMUNDALI-MENDHASAL-1	29/6/2022	21:38	30/6/2022	12:48	Meramundali: R_N, 67.2 km, 2.47 kA	Mendhasal: R_N, 17.8 km, 8.87 kA	R-Earth	100	A/r failed after 1 sec		Yes	No
91	765 KV GAYA-VARANASI-2	30/6/2022	03:18	30/6/2022	04:31	Gaya: Y_N, 153.1 km, 4.36 kA		Y-Earth	100	DT received after 500 msec. Phase voltage in Y_ph shot up to 800 kV		Yes	NA
92	200 KV TASHIDING-NEW MELLI-2	30/6/2022	10:19	30/6/2022	10:46	Tashiding: Master trip	New Melli: DEF	B-Earth	1000	Resistive fault. DEF operated		Yes	Yes

93	220 KV TASHIDING-NEW MELLI-2	30/6/2022	10:55			Tashiding: Master trip	New Melli: DEF	B- Earth	1000	Resistive fault. DEF operated		Yes	Yes	
94	400 KV NEW PPSP- NEW RANCHI-2	30/6/2022	19:56	30/6/2022	20:31	New PPSP : DT received	New Ranchi: Didn't trip	No fault	NA	No fault observed from PMU		No	NA	