



सत्यमेव जयते

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

**Eastern Regional Power Committee**

14, गोल्फ क्लब रोड, टॉलीगंज, कोलकाता-700033  
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NO. ERPC/PROTECTION/2021/ 8215-8256

DATE: 02.02.2021

To,

As per list enclosed,

**Sub: Notice for 99<sup>th</sup> Protection Coordination sub-Committee (PCC) meeting of ERPC**

Sir,

Notice is hereby given that **99<sup>th</sup>PCC meeting** of ERPC will be held on **12.02.2021 (Friday)** from **10:30hrs** through online Microsoft Teams meeting platform. The meeting link will be forwarded through e-mail or message. You are requested to enter the participant name and designation and organisation name while joining the meeting. The following coordinator may be contacted for any assistance:

Kumar Satyam, Asst. Director-II, ERPC, Mob: 7355225072, E-mail: [satyam24365@gmail.com](mailto:satyam24365@gmail.com)

The tentative agenda items for discussion will be as follows:

- 1) Confirmation of the minutes of 98<sup>th</sup> Protection sub-Committee Meeting of ERPC.
- 2) Analysis of following grid disturbances of January 2021:

Sr. No	GD/GI	Date	Time	Affected System	Summary	Load loss (MW)	Gen loss (MW)
1	GD-1	05-01-2021	13:37	HEL,ISTS	400 kV HEL - Subhasgram - 1 was under shutdown since 04-01-2021 for rectification of damaged OPGW. HEL unit 2 was also not in service due to annual overhauling. HEL was connected to rest of the grid through 400 kV HEL - Subhasgram - 2 with only unit 1 in service at HEL. During relay testing of 400 kV HEL Subhasgram -1 at HEL, CT Switching relay malfunctioned and bus bar protection operated at HEL end. As a result, 400 kV HEL - Subhasgram - 2 tripped and total power failure occurred at HEL. DT signal was also sent to Subhasgram. No fault was observed in PMU data at the time of the fault.	0	280

2	GD-1	15-01-2021	05:36	BSPTCL	400 kV Motihari-Gorakhpur D/C and 400 kV Motihari Barh 1 were out of service due to tower collapse. Motihari was connected to rest of the grid through 400 kV Barh Motihari - 2. On 15-01-2021 at 05:36 hrs 400 kV Barh Motihari - 2 tripped due to R and B phase to earth fault resulting in total power failure at Motihari S/S and loss of power supply to nearby areas such as Motihari, Bettiah, Raxaul, Ramnagar, Narkatiaganj, Dhaka and Areraj. All affected loads were shifted to alternate sources of Motipur and Gopalganj by 06:05 Hrs	187	0
3	GD-1	21-01-2021	11:20	BSPTCL	400 kV Motihari-Gorakhpur D/C and 400 kV Motihari Barh 1 were out of service due to tower collapse. Motihari was connected to rest of the grid through 400 kV Barh Motihari - 2. On 21-01-2021 at 11:20 hrs transient Y phase to earth fault occurred at 400 kV Barh Motihari - 2. Successful auto reclose operation occurred at Motihari end. At Barh end, tie breaker was successfully auto reclosed. But main breaker at Barh tripped again after auto-reclose operation. Then 400 kV Barh Motihari - 2 tripped from Motihari end on receipt of DT signal from Barh end. As a result total power failure occurred at Motihari S/S and loss of power supply occurred at nearby areas such as Motihari, Bettiah, Raxaul, Ramnagar, Narkatiaganj, Dhaka and Areraj.	215	0
4	GD-1	29-01-2021	10:44	JUSNL	220 kV Ranchi - Hatia - 1 and 220 kV Hatia - Patratu - 2 were under shutdown. 220 kV Ranchi - Hatia - 3 was being shifted from 220 kV bus 1 to 220 kV bus 2 at Hatia. During changeover, sparking was observed in 220 kV bus 2 isolator at Hatia of Ranchi 3 feeder. Bus bar protection was not in service at Hatia at 220 kV voltage level. All 220 kV feeders tripped from remote ends.	195	54

- 3) Single line tripping incidences of transmission lines for month of January 2021 is enclosed at **Annexure -1.**
- 4) Islanding Schemes of Eastern Region

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 trippings for meaningful analysis during the meeting. You are also requested to upload the details in on-line tripping incident reporting system implemented in Protection Database Management System [www.erpc-protectiondb.in](http://www.erpc-protectiondb.in).

Your participation in the meeting is highly solicited.

Yours faithfully,

  
(D. K. Bauri)

Superintending Engineer(O& PS )

**LIST OF ADDRESSES:**

Chief Engineer, Trans (O&M) Bihar State Power Transmission Limited, Vidyut Bhawan, Bailey Road, Patna-800021	Electrical Superintending Engineer (CRITL) Bihar State Power Transmission Limited, Vidyut Bhawan, Bailey Road, 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 Corp. 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 <sup>th</sup> Floor, Bidhannagar, Sector-I Salt Lake City, Kolkata-700091 (Fax-033-2334-5862)
Dy. Chief Engineer (Testing)/ Sr. Manager (Testing) CESC Ltd., 4, Sasi Sekhar 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, L.A 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 <sup>rd</sup> flr. OLIC Building, Plot no. N 17/2, Nayapalli, Unit-8 Bhubaneswar- 751012 (Fax No. 0674-2540919)
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Executive Director (O&M) NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad, Haryana-121003 (Fax-01292272413)	Electrical Superintending Engineer, TTPS, TenughatVidyut Nigam Ltd.,Lalpania, Dist. Bokaro, Jharkhand-829149
Dy. General Manager (Electrical) IB Thermal Power Station, OPGCL Banhapalli, Dist. Jharsuguda-768234, Orissa	General Manager (OS), 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	Head Construction, ENCIL, Siliguri-7340051
General Manager (OS), ER-II Power Grid Corporation of India Ltd., J-I-15, Block-EP, Sector-V, Salt Lake, Kolkata-91	ShriA.K.Nayak/ShriSumit S Ghosh Maithon Power Limited, Maithon Office, MA 5 Gogna, Dist. Dhanbad, Jhankand State, PIN-828207
General Manager (P&O), PTC Ltd., Kanchanjunga Bldg.,18, Barakhamba Road, New Delhi-110001	Vice President, Vedanta Ltd. 1 <sup>st</sup> Floor, Module C/2, Fortune Tower, C S Pur, Bhubaneswar- 751023
Managing Director, Bhutan Power Corporation Post Box no. 580, Thimpu, Bhutan.	Managing Director, Druk Green Power Corprn. P.O. Box-1351, Thimpu, Bhutan.
General Manager, Darbhanga (Bihar), DarbhangaMotihari Transmission Company Limited (DMTCL)	ShriBrajesh Kumar Pande, Plant Head, JITPL. (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 SewaBhawan, R. K. Puram, New Delhi-110066
Director (NPC), CEA, NRPC Building, KatwariaSarai, 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

## List of important transmission lines in ER which tripped in JANUARY-2021

S.NO	LINE NAME	TRIP DATE	TRIP TIME	Relay Indication LOCAL END	Relay Indication REMOTE END	Reason	Fault Clearance time in	Remarks	DR CON FIGURATION	DR/EL RECEIVED FROM LOCAL	DR/EL RECEIVED FROM REM
1	400KV-BIHARSARIEFF(PG)-MUZAFFARPUR(PG)-	01-01-2021	17:31	B'SARIEFF: R-N,FD 0.02KM,FC 29KA	MZP: R-N,FD 132KM,FC 3.9KA	R-N FAULT.	<100	A/r UNSUCCESSFUL.		YES	YES
2	400KV-BARIPADA-PANDIABILI-1	01-01-2021	11:23	BARIPADA: Z1,152.8KM,FC 2.18KA,FD 152.8KM	PANDIABILI: Z1,R-N,105.6KM,FC 3.2KA	R-N FAULT.	<100			NO	NO
3	400KV-NEW PURNEA-MUZAFFARPUR-1	01-04-2021	07:07	New Purnea: R-Y, 113km, Ir-6kA, Iy-5.8kA;	UTM	R-Y FAULT.	<100			YES	YES
4	400KV-MEERAMUNDALI-MENDHASAL-II	01-05-2021	15:38	Meeramundali: Z-1, R_N, FC-4.14Ka, FD-28.28Km, Tripped from Meeramundali end only.		R-N FAULT.	<100	3 PHASE TRIPPING FROM MERAMUNDALI END AT THE INSTANT OF FAUYLTL .Reason for non operation of A/R		YES	NO
5	400KV-PPSP-BIDHANNAGAR-2	01-05-2021	12:03	PPSP: B_N, Z I, 40.06 KM	Bidhannagar: B_N, Z II, 73.3 KM, 1.94 kA	B-N FAULT.	<100			NO	NO
6	400KV-DSTPS(ANDAL)-RAGHUNATHPUR-1	01-06-2021	11:18	RTPS: Z1,B-ph,8.30 KA, 33.5 km		B-N FAULT.	<100			NO	NO
7	220KV-FSTPP-LALMATIA-1	01-09-2021	18:32	FSTPP: B-N, 85KM, 0.8KA		B-N FAULT.	<100			NO	NO
8	400KV-BARIPADA(PG)-NEW DUBURI-1	01-11-2021	03:56	N Duburi- Z1, Y-N, 10.32ka, 3.9km;	Baripada: Y-N, 150 KM, 2.36kA	Y-N FAULT.	<100	A/r UNSUCCESSFUL.		YES	NO

9	400KV-NEW DUBURI-PANDIABILI-1	01-11-2021	03:56	N Duburi: Z1, Y-N,11.9kA, 3.8KM;	Pandiabili: Y-N, 121.5KM, 2.36kA	Y-N FAULT.	<100	A/R successful but tripped in reclaim time .		YES	NO
10		01-12-2021	03:57	Barh: Z1, B-N, 2kA, 183km		B-N FAULT.	<100	A/R unsuccessful.		YES	NO
11	400KV-MEERAMUNDALI-MENDHASAL-II	01-12-2021	06:25	MEEREMUNDALI: R-N, 3.8KA, 101KM		R-N FAULT.	<100	R phase voltage showing very low value approx 45 kv and current also decreasing slowly for a long duration . Mendhasal end DR laso needed .Kindly explain the reason for		YES	NO
12	400KV-PATNA-BARH-2	01-12-2021	03:41	Patna: B-N, 7.2kA, 71km;	Barh: B-N, Z1, 18.6kA, 21km	B-N FAULT.	<100	A/R unsuccessful.At Barh end Y phase voltage also became very low upto zero almost along with B phase and recoverd fully then at the timew aof A/R also Y phase voltage became zero		NO	YES
13	400 KV BARH- GORAKHPUR -I	01-12-2021	03:57	Barh: Z1, B-N, 2kA, 183km		B-N FAULT.	<100	A/R unsuccessful.		YES	NO
14	400KV-MUZAFFARPUR-GORAKHPUR-1	14/01/2021	00:39	MUZ : Y-N ,125 KM,2.660KA	GORAKHPUR:-50 KM, 16KA. 21	Y-N FAULT.	<100	A/R Unsuccessful.		YES	NO
15	400KV-KISHANGANJ-TEESTA-III-1	14/01/2021	14:03	Kishanganj: B Phase , 3.5 kA, 118 km		B-N FAULT.	<100	At Kishanganj end ,at the instant of B-n fault all 3 Phase TCB opened ,and faulty phase MCB opened rest 2 phase were intact after 2.5 seconds rest 2 phase		YES	YES
16	400KV-MOTIHARI-BARH-2	15/01/2021	05:36	Barh: R_B_N, Ir: 10.15 kA, Ib: 10.37 kA, 46 KM		R-B FAULT	<100			YES	YES
17	400KV-MUZAFFARPUR-GORAKHPUR-1	15/01/2021	02:06	MUZ: B-N, 218.72Km, 2.17kA		B-N FAULT.	<100			YES	NO
18	400KV-KODERMA-BIHARSARIFF(PG)-2	16/01/2021	04:09	Koderma: Y_N, 11.6 KM, 3.28 kA	Biharsharif: Y_N, 5.89 KM, 19.08 kA	Y-N FAULT.	<100	A/R was successful from BSF end .		YES	NO

19	220KV-CHANDIL-STPS(WBPDC)-1	17/01/2021	19:25	Chandil: Z1, BN, 86.9KM, 1.821KA	STPS: Z1, BN, 5.248 KA, 21.3 KM,	B-N FAULT.	<100			NO	NO
20	400KV-BIHARSARIEFF(PG)-VARANASI-1	18/01/2021	07:52	B'sarif- R-N Z1, FD-10.95km FC-17kA		R-N FAULT.	<100	A/R Unsuccessful.		YES	NO
21	400KV-BIHARSARIEFF(PG)-VARANASI-2	18/01/2021	06:31	B'sarif- B-N Z1, FD-91.1km FC-4.52kA,	Varanashi end B-N, Z1 FD-216.7km FC-1.89kA	B-N FAULT.	<100	A/R Unsuccessful.		YES	NO
22	400KV-GAYA-KODERMA-1	18/01/2021	04:42	DT received at Gaya end and	Koderma bus fault reported	Y-N FAULT.	<100	From Gaya A/R unsuccessful .		YES	YES
23	400 KV PATNA BARH-1	19/01/2021	00:24	PATNA: B-N,FC 7.2KA,FD 81 KM	BARH :Z1,B-N, 11.6KA,FD 30.6KM	B-N FAULT.	<100	At Barh end all 3 phase mcb opened and only B phase TCB opened , rest Y and B phase TCB were closed which also got opened after 900 ms.why this occurred ? At patna end A/R was		YES	YES
24	400KV-KHSTPP-BARH-2	19/01/2021	00:05	KHSTPP: Z1,R-N,187KM,FC 2.62KA	BARH : R-N,FD 26.9KM,FC 12.2 KA	R-N FAULT.	<100	A/R unsuccessful .		NO	YES
25	765KV-ANGUL-SRIKAKULAM-1	20/01/2021	17:36	ANGUL: R_B, Fault Distance: 185 Kms, FC: RPh: 4.58kA, BPh:5.77kA		R-B FAULT	<100			NO	NO
26	220KV-DALTONGUNJ-GARWAH (NEW)-2	21/01/2021	14:56	Y-B Fault, Fc=3.679 kA, 15.639 km (Daltonganj) Y_B, Iy: 0.5 kA, Ib: 0.5 kA, 68.3 KM (Garwah)		Y-B	<100			YES	NO
27	400KV-MOTIHARI-BARH-2	21/01/2021	11:20	B_N, 28.5 KM, 0.82 kA (Motihari)	B_N, 175 KM, 2.6 kA (Barh)	B-N FAULT.	<100	A/R was successful from both ends first then after 1 second DT sent from Barh end and line tripped .		YES	YES

28	400KV-PATNA-BARH-1	21/01/2021	05:52	TRIPPED FROM PATNA END y-n,81 km,6.97 KA main 1 ,58.7 km ,3.85 KA in y -n Z1 A/R SUCCESSFUL FROM BARH Z1,Y-N,15.49 KA,22.4 KM		Y-N FAULT.	<100	A/r Successful only from Barh end .AT PATNA end all 3 phase tripped immediately .		YES	YES
29	400KV-NEW PPSP-ARAMBAGH-1	23/01/2021	04:46	Arambagh: R_N, Z-1, FD-48.14 KM, FC-6.38 KA		R-N FAULT.	<100	A/R successfully operated, again line tripped within reclaim time. Charging attempted at 05:14 Hrs but line tripped		NO	NO
30	400KV-PPSP-BIDHANNAGAR-2	23/01/2021	06:20	BIDHANNAGAR: Y_N, Z-1, FD-32.8 KM, FC-8.01 KA		Y-N FAULT.	<100	A/R Unsuccessful.		NO	NO
31	400KV-PUSAULI(PG)-NABINAGAR(BRCL)-1	23/01/2021	02:21	Pusauly: Y-N, 6.207KA, 53.199Km		Y-N FAULT.	<100	Tripped in reclaim time .		YES	NO
32	220KV-PUSAULI-SAHUPURI-1	24/01/2021	00:31	Pusauly: B-N, 3.4kA, 41.34Km	insulator decapping at loc 66 under uppcl jurisdiction	B-N FAULT.	<100			NO	NO
33	220KV-NEW TOWN(AAA-III)-RAJARHAT-2	28/01/2021	20:05	Newtown-B-N Z1 FD-3.265km FC-14.37kA		B-N FAULT.	<100			NO	NO
34	220KV-NEW TOWN(AAA-III)-RAJARHAT-2	28/01/2021	20:05	Newtown-B-N Z1 FD-3.265km FC-14.37kA		B-N FAULT.	<100			NO	NO
35	400KV-PUSAULI(PG)-ALLAHABAD-1	29/01/2021	15:55	Sasaram: R_B, FD-96.3KM, FC-IB-2.21KA, IR-2.215KA,	Allahabad:R_B, FD-118.7KM, FC-4.65KA	R-B FAULT	<100			YES	NO