

### 2nd Third Party Protection Audit Observations of Powergrid Sub-stations in Eastern Region

Sl. No.	Name of Sub-station	Date of Audit	Observations/Remarks	Category	Compliance/Action plan
1	Subhashgram 400 kV - Powergrid	16/07/2015	1. PLCC channel-II (BPL-9505 property of WBPDC) of 400 kV Subhashgram-Sagardighi line is not working	A	
			2. PLCC of 220 kV Subhashgram(PG)-Subhashgram (WBSETCL) for protection is not commissioned. (Property of WBSETCL)	A	
			3. CT burden of 400kV Subashgram-Haldia line needs is to be checked as the line is having additional differential protection.	A	
			4. Autoreclosure feature is to be enabled for all 220kV lines except CESC line	A	
			5. Static relays of Subhashgram-Sagardighi 50 MVAR line reactor are to be replaced with numerical relays.	B	
2	Durgapur 400 kV - Powergrid	10/09/2015	NIL		
3	Angul 765 kV - Powergrid	04/11/2015	Some of the commissioning works are under progress		
4	Malda 400kV	23/02/2016	1. Hath way E/L to be replaced	B	
			2. All Static Relays to be replaced with Numerical Relays	B	
			3. Satic B/B Prot to be replaced	B	
			4. Line diff Prot on Malda-malda line to be provided	B	
			5. ICT 4 capacity to be increased from 50 MVA to 160MVA	B	
5	Behrampur 400kV	25/02/2016	The use of CSD on reactor may be explained	A	
6	Gaya 765kV	01/11/2016	1. Frequent tripping of 11kV auxiliary supply from BSPTCL (35 trippings/month)	A	
			2. Auto reclosing and inter trip features are not in service for 220kV Gaya-Dehri line-I & II and 220kV Gaya-Bodhgaya line-I & II due to non availability of PLCC system at remote end.	A	
			3. Overload alarm for 500 & 315 MVA, 400/220kV ICTs is not available	B	
7	Biharshariff 400kV	03/11/2016	1. Static/Electro mechanical relays of 315 MVA, 400/220kV ICTs and bus reactors may be replaced with numerical relays	B	
			2. Overload alarm for 315 MVA, 400/220kV ICTs is not available	B	

### 2nd Third Party Protection Audit Observations of DVC Sub-stations in Eastern Region

Sl. No.	Name of Sub-station	Date of Audit	Observations/Remarks	Category	Compliance/Action plan
1	Mejia TPS 400 kV - DVC	11/09/2015	1. Stand alone Event Logger is not available	B	
			2. Static relays of main protection in 220kV system may be replaced with numerical relays	B	
			3. LBB not available for 220kV Borjor and Gola lines	A	
2	Durgapur STPS 400 kV - DVC	09/09/2015	Nil		

### 2nd Third Party Protection Audit Observations of NTPC Sub-stations in Eastern Region

Sl. No.	Name of Sub-station	Date of Audit	Observations/Remarks	Category	Compliance/Action plan
1	TSTPS, Kaniha 400 kV - NTPC	03/11/2015	1. PLCC facility for protection is available for 220 kV lines but not service	B	
			2. Auto reclosing feature is not available in all 220 kV lines	B	
			3. Static LBB relays may be replaced with numerical relays	B	
2	Farakka - NTPC	24/02/2016	1. All Aux relays, Transformer, Reactor and LBB prot are static Relays to be replaced	B	
			2. In Sagardighi & Malda Line M1/M2 Not time synchronised	B	
			3. In Fkk-Lalmatia line, Carrier Protection not working	B	
			4. Farakka Islanding scheme not working	B	
			5. Station Event logget not working	A	
			6. Bus Bar protection to be replaced with Num protection	B	
			7. Details of CB to be given	A	
			8. Digital E/L required	B	

### **2nd Third Party Protection Audit Observations of WBSETCL/WBPDCL Sub-stations**

Sl. No.	Name of Sub-station	Date of Audit	Observations/Remarks	Category	Compliance/Action plan
1	Kharagpur 400 kV- WBSETCL	08/08/2015	1. Time Synchronizing Equipment is installed, yet to be commissioned.	A	
			2. Stand alone Event Logger is installed, but not commissioned.	A	
2	Kolaghat 400 kV- WBPDCL	07/08/2015	1. Carrier protection is not available for 220kV lines	B	
			2. PLCC system of 400kV lines are old and needs to be replaced	B	
			3. Static relays may be replaced with numerical relays	B	
3	Jeerat 400 kV -WBSETCL	15/07/2015	1. Event Logger is not available.	B	
			2. Two sets of battery banks are not available for 220 kV and 132 kV protection system	B	
			3. Bus Bar protection is not available at 220 kV and 132 kV levels	B	
			4. Old PXLN 3000 relay and Micromho relay may be replaced with latest numerical relays	B	
			5. Time synchronizing was not done for 400kV Kolaghat, Behrampur and Subashgram lines	B	
			6. Auxilary relays on Subashgram and Behrampore 400kV lines to be replaced	B	
			7. Local Breaker Backup protection is not available at 220 kV and 132 kV levels	B	
4	Bidhannagar 400 kV - WBSETCL	08/09/2015	1. DG set is not available	B	
			2. No PLCC system is available for 220kV DPL line.	B	
			3. No carrier protection is available for 220kV lines	B	
			4. Stand alone EL is not available	B	
5	Sagardighi-WBPDCL	25/02/2016	PSB settings of Farakka, parulia and subashgram lines was not readable during audit. The same to be conveyed to ERPC	A	
			PSB is disabled in behrampore line. The reasons may be given	A	
6	Bakreswar -WBPDCL	26/02/2016	1. O/O Prot not enabled in 400KV lines for want of direction from ERPC	A	
			2. All Old Distance Protection relays to be replaced	B	
			3. Islanding scheme along with U/F relay available but not working	B	
			4. Stn EL and DR available but not working	B	

### **2nd Third Party Protection Audit Observations of OPTCL/OHPC Sub-stations**

Sl. No.	Name of Sub-station	Date of Audit	Observations/Remarks	Category	Compliance/Action plan
1	Mendhasal 400 kV - OPTCL	02/11/2015	1. 2nd stage over voltage protection is not avilable for Meramundali line.	B	
			2. Stand alone EL is not available	B	
			B/B Prot not in service on 220KV side. No B/B Prot in 132KV side	B	
			M-II relays of Dubri and Baripada lines not time synchronised	B	
			3. Carrier protection is not enabled for all 220 kV lines.	B	

## 2nd Third Party Protection Audit Observations of BSPTCL Sub-stations in Eastern Region

Sl. No.	Name of Sub-station	Date of Audit	Observations/Remarks	Category	Compliance/Action plan
1	220kV Biharshariff	03/11/2016	1. Event logger (EL) is not in service	A	
			2. Local breaker backup protection(LBB) is not available	B	
			3. Bus bar protection is not installed	B	
			4. Synchronizing facility is not available	B	
			5. Two sets of 220 V DC sources are available but relays are not electrically and physically segregated into two groups	A	
			6. Time Synchronizing Equipment is not available	B	
			7. Both Main-I & II distance relays of 220kV Fatua-I & II, Bodhgaya-I & II, and Tenughat lines are same make (Micom P442)	B	
			8. Main-II distance protection is not available for 220kV Begusarai line-I.	B	
			9. Backup directional overcurrent earth fault protection in Micom P442 of 220kV Fatua-I & II is enabled with definite time instead of IDMT characteristics	A	
			10. Backup directional overcurrent E/F protection relays (Micom P127) of all the lines are being operated as non-directional instantaneous overcurrent E/F protection. BSPTCL should enable the directional feature and coordinate the relay settings with distance protection.	A	
			11. Static relay of 132kV Baripahari line-I & II (Quadra Mho -21) should be replaced with a numerical relay. Quadra Mho -21 may be kept as Main-II.	B	
			12. PLCC is not available for all the lines	B	
			13. Auto reclosing feature is not available.	B	
			14. Disturbance Recorder in numerical relays is not properly configured. All analog and digital channels are to be properly configured.	A	
			15. Overload alarm for 150MVA, 220/132/33kV ATRs is not available	B	
2	Gaya 765kV-Powergrid	01/11/2016	1. Frequent tripping of 11kV auxiliary supply from BSPTCL (35 trippings/month)	B	
			2. Auto reclosing and inter trip features are not in service for 220kV Gaya-Dehri line-I & II and 220kV Gaya-Bodhgaya line-I & II due to non availability of PLCC system at remote end.	B	

## 2nd Third Party Protection Audit Observations of IPP Sub-stations in Eastern Region

Sl. No.	Name of Sub-station	Date of Audit	Observations/Remarks	Category	Compliance/Action plan
1	GMR 400 kV - GMR	05/11/2015	NIL		
2	JITPL 400 kV - JITPL	05/11/2015	1. RTU is not working	A	

Note: As per CERC order dated 21st Feb 2014 protection deficiencies are categorised as  
**Category-A** : The deficiencies which can be corrected without any procurement.  
**Category-B** : The deficiencies involving procurement of equipments.