

## Details of Existing Equipment

Name of Circle: Patna

Name of GSS: 132/33 kV Bihta

SL. NO.	NAME OF BAY	EQUIPMENT NAME	QUANTITY	MAKE	DATE OF COMMISSIONING
1	132 KV LINE 01	Relay panel	1	ABB	2005
		Relay	1	MICOM	2016
		3-Ph Circuit Breaker	1	ABB	2005
		1-Ph CVT	3	CGL	2005
		LA	3	NA	2005
		1-Ph CT	3	CGL	2005
		3-Ph Isolator with E/S	1 set	Elpro	2005
		3-Ph Isolator with outE/S	2 set	Elpro	2005
		3-Ph Isolator with outE/S	2 set	Elpro	2005
2	132 KV LINE 02	DO	DO	DO	DO
3	132 KV Bihta new LINE 01	Relay panel	1	ALSTOM	2018
		Relay	1	MICOM	2018
		3-Ph Circuit Breaker	1	ALSTOM	2018
		1-Ph CVT	3	ALSTOM	2018
		LA	3	Lamco industries ltd.	2018
		1-Ph CT	3	MEHRU Ele. & mech. Ltd	2018
		3-Ph Isolator with E/S	1set	Siemens	2018
		3-Ph Isolator with outE/S	2set	Siemens	2018
	132 KV Bihta new LINE 01	DO	DO	DO	DO
3	132/33KV Tr.No.01(HV)	Relay panel	1	ABB	2005
		Relay	1	MICOM	
		3-PhCircuit Breaker	1	ABB	2005
		1-Ph CT	3	CGL	2005
		LA	3	Elpro	2005
		3-Ph Isolator with out E/S	3 set	Elpro	2005
4	132/33 kv Tr No 1 (LV)	Relay panel	1	ABB	2005
		Relay	1	ABB	
		3-Ph Circuit Breaker	1	ABB	2005
		LA	3	Elpro	2005
		3-Ph isolator with out E/S	3 set	Elpro	2005
		CT	3	CGL	2005
5	132/33 KV Tr.No 2 (HV)	same as Tr No.01			
6	132/33 kv Tr.No. 2 (LV)	same as Tr.No. 01			

7	132/33 KV Tr.No. 3 (HV)	Relay panel	1	ALSTOM	2014
		Defferential Relay	1	ALSTOM	2014
		3-Circuit Breaker	1	ALSTOM	2014
		LA	3	ELECTROLITE	2014
		1-Ph CT	3	SCT	2014
		3-isolator	3 set	NA	2014
8	132/33 kv Tr. No.3 (LV)	Relay panel	1	ALSTOM	2014
		Defferential Relay	1	ALSTOM	2014
		3-Ph Circuit Breaker	1	CGL	2014
		LA	3	ELECTROLITE	2014
		1-Ph CT	3	SCT	2014
		3-Ph isolator	3set	NA	2014
	132/33 kv Tr. No.4 (HV)	Relay panel	1	Venson Electric	2018
		Defferential Relay	1	GE Multilin T60	2018
		3-Ph Circuit Breaker	1	CGL	2018
		LA	3	LAMCO	2018
		1-Ph CT	3	Hapta Care Power ind. Ltd.	2018
		3-Ph isolator	3 Set	Siemens	2018
	132/33 kv Tr. No.4 (LV)	Relay panel	1	Venson Electric	2018
		Defferential Relay	1	GE Multilin T60	2018
		3-Ph Circuit Breaker	1	CGL	2018
		LA	3	LAMCO	2018
		1-Ph CT	3	Hapta Care Power ind. Ltd.	2018
		3-Ph isolator	3 Set	Siemens	2018
9	132 kv Bus Couplor	Relay panel	ABB	1	2005
		Relay	ABB		2005
		1-Ph PT	CGL	3	2005
		LA	ELPRO	3	2005
		1-Ph C T	CGL	3	2005
		3-Ph isolator	ELPRO	3	2005
10	33 KV Coupler	Relay Panel	ABB	1	2005
		1-Ph PT	VCS	3	2005
		LA	ELPRO	3	2005
		1-Ph CT	DRAL ELECTIC	3	2005
		3-Ph isolator	ELPRO	3	2005

11	33KV BIHTA 01	Relay panel	1	VENSON	2007
		Relay	1	JVS ELECTRONICS	2007
		3-Circuit Breaker	1	MEGAWIN	2013
		LA	3	NA	2007
		1-Ph C T	1,2	FLORAL ELECTRICAL,SCT	2007
		3-Ph isolator with E/S	1	Elpro	2007
		3-Ph isolator with out E/S	2	Elpro	2007
12	33 KV BIHTA 02	Relay panel	1	ABB	2005
		Relay	1	MICOM	
		3-Ph Circuit Breaker	1	Megawin	2013
		LA	3	ELPRO	2005
		1-PH CT	3	ADVENT ENGR.	2013
		3-Ph isolator with E/S	1	ELPRO	2005
		3-Ph isolator with out E/S	2	ELPRO	2005
13	33 KV BIHTA 03	Relay panel	1	ABB	2005
		Relay	1	MICOM	2017
		3 PH Circuit Breaker	1	ABB	2005
		LA	3	NA	2005
		1-PH CT	3	SCT	NA
		3-Ph isolator with E/S	1	ELPRO	2005
		3-Ph isolator with out E/S	2	ELPRO	2005
14	33 KV BIHTA 04	Relay panel	1	VENSON	2007
		Relay	1	JVS ELECTRONICS	2007
		3 PH Circuit Breaker	1	ALOSTOM	2007
		LA	3	ELPRO	2007
		1-PH CT	2,1	FLORAL ELECTRICAL,SCT	2007
		3-Ph isolator with E/S	1	ELPRO	2007
		3-Ph isolator with out E/S	2	ELPRO	2007
15	33 KV BIHTA 05	Relay panel	1	AREVA	2008
		Relay	1	MICOM	2017
		3 PH Circuit Breaker	1	AREVA	2008
		LA	3	NA	2008
		1-PH CT	3	FLORAL ELECTRICAL	2008
		3-Ph isolator with E/S	1	ELPRO	2008
		3-Ph isolator with out E/S	2	ELPRO	2008
16	33 KV BIHTA 06	Relay panel	1	AREVA	2009
		Relay	1	MICOM	2017
		3 PH Circuit Breaker	1	AREVA	2009
		LA	3	RIICO INDUSTRIAL EXTN	2017
		1-PH CT	3	FLORAL ELECTRICAL	2009
		3-Ph isolator with E/S	1	ELPRO	2009
		3-Ph isolator with out E/S	2	ELPRO	2009

17	33 KV BIHTA 07	Relay panel	1	MEGAWIN	2014
		Relay	1	MEGAWIN	2014
		3 PH Circuit Breaker	1	MEGAWIN	2014
		LA	3	NA	2014
		1-PH CT	3	modern electric	2014
		3-Ph isolator with E/S	1	NA	2014
		3-Ph isolator with out E/S	2	NA	2014
18	33 KV BIHTA 08	Relay panel	1	MEGAWIN	2014
		Relay	1	MEGAWIN	2014
		3 PH Circuit Breaker	1	MEGAWIN	2014
		LA	3	NA	2014
		1-PH CT	3	modern electric	2014
		3-Ph isolator with E/S	1	NA	2014
		3-Ph isolator with out E/S	2	NA	2014
19	33 KV BIHTA 09	Relay panel	1	NA	2014
		Relay	1	ALOSTOM	2014
		3 PH Circuit Breaker	1	Schneider	2017
		LA	3	NA	2014
		1-PH CT	3	CHOUDHRY ELECTRICALS	2014
		3-Ph isolator with E/S	1	NA	2014
		3-Ph isolator with out E/S	2	NA	2014
OTHER SUB-STATION EQUIPMENTS					
20	BATTERY CHARGER	1	HBL LIFE POWER SYSTEM	HBL LIFE POWER SYSTEM	2005
		2	HBL LIFE POWER SYSTEM	HBL LIFE POWER SYSTEM	2005
21		ACDB	AKTEL SYSTEM	MAKTEL SYSTEM	2005
		DCDB	AKTEL SYSTEM	MAKTEL SYSTEM	2005
22	BATTERY BANK	1	EXIDE	EXIDE	2016
		2	EXIDE	EXIDE	2016
23	DG SET	SUDHIR GEN.SET		SUDHIR GEN.SET	
24	PLCC Equipment	Isolator			
		Battery charger	IFE POWER SY	HBL LIFE POWER SYSTEM	
		panel	ABB	2	
		telephone	NA	1	

25	Hydrant system with pipe arrangement	NA			
26	Fire fighting equipment		05 KG DCP - 02,FOAM TYPE 9KG-02,DCP 25 KG -04 NOS,FOAM TYPE 50 KG-02 nos,Foam type 22.5 kg-04 no		Rifilled-2018
27	Earthing rod		AGNI FIBER	3	
28	Tools Tackles		WRENCH 02 SET,BOLT CUTTER -01 N0,TUBULAR WRENCH SET -01 N0, BENCH VICE 01 NO,pipe wrench,slide wrench-02 n0 each,plier 02 n0,Allen key 02 set,		
29	Testing Equipments				
30	Safety gear		HEMLET-06,SAFETY BELT -03 N0,BOOT-02,RAIN COAT -02 NOS		
31	SST	1	TESLA TRANSFORMER	1	2005
		2	TBEA	1	2017
32	SPARE HARDWARE FITTING		Hardware fitting-01 set,palm connector,T connector,PG connector etc.		

## Details of Existing Equipment

Name of Circle: Patna

Name of GSS: Hathidah

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning	
132 KV Line Bay	Biharsharif CKT - 1 bay	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom T&D India Ltd.	03.06.2016	
		3 Phase Circuit Breaker	1	Alstom T&D India Ltd.	28.07.2015	
		1-Ph CVT	0	N/A	N/A	
		LA	3	LAMCO Industries Ltd	12.09.2016	
		1-Ph Current Transformer	3	ASEA	N/A	
		3 Phase Isolator with/without Earth switch	3	Faraday Electricals	16.04.2015	
	Biharsharif CKT - 2 bay	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom T&D India Ltd.	04.03.2016	
		3 Phase Circuit Breaker	1	SIEMENS	N/A	
		1-Ph CVT	2	Alstom T&D India Ltd.	04.10.2016	
		LA	3	LAMCO Industries Ltd	14.09.2016	
		1-Ph Current Transformer	3	ASEA	N/A	
		3 Phase Isolator with/without Earth switch	3	Faraday Electricals	12.06.2016	
	Seikhpura Line	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom T&D India Ltd.	26.02.2016	
		3 Phase Circuit Breaker	1	Alstom T&D India Ltd.	01.03.2015	
		1-Ph CVT	2	Alstom T&D India Ltd.	28.09.2016	
		LA	3	LAMCO Industries Ltd.	15.09.2016	
		1-Ph Current Transformer	3	Heavy Electricals (I) Ltd.	N/A	
		3 Phase Isolator with/without Earth switch	3	Faraday Electricals	16.06.2016	
	Lakhisarai Line	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom T&D India Ltd.	19.02.2016	
		3 Phase Circuit Breaker	1	Alstom T&D India Ltd.	03.04.2015	
		1-Ph CVT	2	Alstom T&D India Ltd.	19.06.2016	
		LA	3	LAMCO Industries Ltd.	18.09.2016	
1-Ph Current Transformer		3	BHEL Jhansi	Nov-85		
3 Phase Isolator with/without Earth switch		3	Faraday Electricals	17.06.2015		

132/33 KV Transformer No.1 bay (HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Alstom T&D India Ltd.	03.06.2016
	3 Phase Circuit Breaker	1	CGL	29.05.2013
	LA	3	LAMCO Industries Ltd.	14.05.2015
	1-Ph Current Transformer	3	ASEA	N/A
	3 Phase Isolator with/without Earth switch	3	Faraday Electricals	12.06.2015
132/33 KV Transformer No 1 bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Alstom T&D India Ltd.	03.06.2016
	3 Phase Circuit Breaker	1	Megawin Switchgear Pvt. Ltd	2013
	LA	3	LAMCO Industries Ltd.	11.07.2015
	1-Ph Current Transformer	3	Name plate not available	N/A
	3 Phase Isolator with/without Earth switch	2	Faraday Electricals	11.07.2017
132/33 KV Transformer No 2 bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Alstom T&D India Ltd.	17.05.2016
	3 Phase Circuit Breaker	1	Alstom T&D India Ltd.	29.02.2015
	LA	3	LAMCO Industries Ltd.	28.05.2015
	1-Ph Current Transformer	3	SCT Ltd. / Ghaziabad	N/A
	3 Phase Isolator with/without Earth switch	3	Faraday Electricals	28.05.2016
132/33 KV Transformer No 2bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Alstom T&D India Ltd.	17.05.2016
	3 Phase Circuit Breaker	1	Schnider Electric	12.02.2016
	LA	3	LAMCO Industries Ltd.	12.07.2016
	1-Ph Current Transformer	3	SCT Ltd. / Ghaziabad	N/A
	3 Phase Isolator with/without Earth switch	2	Faraday Electricals	12.07.2016

132/33 KV Transformer No 3 bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	SIEMENS	24.04.2010
	3 Phase Circuit Breaker	1	SIEMENS	24.04.2010
	LA	3	SIEMENS	24.04.2010
	1-Ph Current Transformer	3	CGL	24.04.2010
	3 Phase Isolator with/without Earth switch	3	SIEMENS	24.04.2010
132/33 KV Transformer No-3 bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	SIEMENS	24.04.2010
	3 Phase Circuit Breaker	1	SIEMENS	24.04.2010
	LA	3	SIEMENS	24.04.2010
	1-Ph Current Transformer	3	Vidhyut control system (P) Ltd.	24.04.2010
	3 Phase Isolator with/without Earth switch	3	SIEMENS	24.10.2010
132 KV Buscoupler 1 bay	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom T&D India Ltd.	14.05.2016
	3 Phase Circuit Breaker	1	Alstom T&D India Ltd.	14.05.2016
	1 Ph PT	3		
	LA	0		
	1-Ph Current Transformer	3	ASEA	N/A
	3 Phase Isolator with/without Earth switch	3	Faraday Electricals	03.09.2016
132 KV Bus Coupler 2 bay	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom T&D India Ltd.	2016
	3 Phase Circuit Breaker	1	Alstom T&D India Ltd.	08.05.2015
	LA	0		
	1-Ph Current Transformer	3	SCT Ltd. / Ghaziabad	N/A
	3 Phase Isolator with/without Earth switch	3	Faraday Electricals	18.04.2015
33 KV Feeder	Line control & relay panel with O/C E/F protection			
	3 Phase Circuit Breaker		No 33KV FEEDER	
	LA			
	1-Ph Current Transformer			
	3 Phase Isolator with/without Earth switch			
33 KV Buscoupler	Line control & relay panel with Distance protection & O/C E/F protection			
	3 Phase Circuit Breaker			
	1 Ph PT			
	LA		N/A	
	1-Ph Current Transformer			
	3 Phase Isolator with/without Earth switch			



**Other Substation Equipments -**

Battery Charger	1	Old	1	Power Electronic Engineers Ltd	N/A
	2	New	1	Chloride Power System Ltd.	12.02.2016
ACDB			1	SIEMENS	N/A
DCDB(250V/48V)			1	SIEMENS	N/A
Battery bank	1	Old	1	HBL Power System Ltd.	N/A
	2	New	1	Exide Industries	12.02.2016
DG set			N/A		
PLCC Equipment	1.Isolator		N/A		
	2. Battery Charger		N/A		
	3. Panel		4	Alstom T&D India Ltd.	N/A
	4.telephone		N/A		
Hydrant system with Pipe arrangement			N/A		
Fire Fighting Equipment			16	Chawla Engineering ,BC Drive	N/A
Earthing Rods			9		
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)			52		
Testing Equipments			5		
Safety Gear(Helmet,Gloves,Boot, etc.)			23		
SST			2	East India Udyog Ltd. & Associated Electricals Pvt. Ltd.	N/A
Spare Hardware Fitting.					Available

## Details of Existing Equipment

Name of Circle: **PATNA**

Name of GSS: **132/33 kV GAIGHAT**

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioni	
	220 KV Line Bay	1st bay	Line control & relay panel with Distance protection & O/C E/F protection	NA		
			3 Phase Circuit Breaker	NA		
			1-Ph CVT	NA		
			LA	NA		
			1-Ph Current Transformer	NA		
			3 Phase Isolator with/without Earth switch	NA		
		2nd bay..	Line control & relay panel with Distance protection & O/C E/F protection	NA		
			3 Phase Circuit Breaker	NA		
			1-Ph CVT	NA		
			LA	NA		
			1-Ph Current Transformer	NA		
			3 Phase Isolator with/without Earth switch	NA		
220/132 KV Transformer bay(HV)	1st bay..	Transformer control & relay panel with Differential protection & O/C E/F protection	NA			
		3 Phase Circuit Breaker	NA			
		LA	NA			
		1-Ph Current Transformer	NA			
220/132 KV Transformer bay(LV)		Transformer control & relay panel with Differential protection & O/C E/F protection	NA			
		3 Phase Circuit Breaker	NA			
		LA	NA			
		1-Ph Current Transformer	NA			
220 KV Buscoupler bay		Line control & relay panel with Distance protection & O/C E/F protection	NA			
		3 Phase Circuit Breaker	NA			
		1 Ph PT	NA			
		LA	NA			
		1-Ph Current Transformer	NA			
		3 Phase Isolator with/without Earth switch	NA			

132 KV Line bay	Line control & relay panel with Distance protection & O/C E/F protection	2	SEL	2015
	3 Phase Circuit Breaker	2	SIEMENS	2015
	1 Ph CVT	6	SCT	2015
	LA	6	LAMCO	2015
	1-Ph Current Transformer	6	SCT	2015
	3 Phase Isolator with/without Earth switch	2&2	FARADAY ELECTRICAL	2015
132/33 KV Transformer bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	3	SEL-2, System controls-1	2017
	3 Phase Circuit Breaker	2, Hybrid	SIEMENS, ABB	2017
	LA	9	LAMCO	2017
	1-Ph Current Transformer	6, Hybrid	SCT, ABB	2015
	3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICAL	2017
132/33 KV Transformer bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	In built HV panel	SEL-2, System controls-1	2017
	3 Phase Circuit Breaker	3	ALSTOM, SIE MENS, CGL	2000/2012/20 17
	LA	18	LAMCO	2017
	1-Ph Current Transformer	9	SCT	2015
	3 Phase Isolator with/without Earth switch	NA	FARADAY ELECTRICAL	2015
132 KV Buscoupler bay	Line control & relay panel with Distance protection & O/C E/F protection	NA		
	3 Phase Circuit Breaker	NA		
	1 Ph PT	NA		
	LA	NA		
	1-Ph Current Transformer	NA		
	3 Phase Isolator with/without Earth switch	NA		
33 KV Feeder	Line control & relay panel with O/C E/F protection	4	SEL	2016
	3 Phase Circuit Breaker	4	CG/SCHNEIDE R	2016
	LA	12	ELPRO , LAMCO	2000, 2017
	1-Ph Current Transformer	12	SCT	2015-2016
	3 Phase Isolator with/without Earth switch	4BY4	FARADAY ELECTRICAL	2016
33 KV Buscoupler	Line control & relay panel with Distance protection & O/C E/F protection	1	SEL	2016
	3 Phase Circuit Breaker	1	SCHNEIDER	2016
	1 Ph PT	3	SCT	2016
	LA	NA	NA	NA
	1-Ph Current Transformer	3		2015
	3 Phase Isolator with/without Earth switch	0/2	FARADAY ELECTRICAL	2015

**Other Substation Equipments -**

Battery Charger	1	1	CHLORIDE	26.10.16
	2	1	PEE	23.09.17
ACDB		1	ASIAN SWITCH GEAR	24.11.16
DCDB(110V/48V)		01-Jan	ASIAN	26.10.16
Battery bank	1	1	EXIDE	26.10.16
	2	1	EXIDE	16.10.17
DG set		1	KIRLOSKAR	29.12.16
PLCC Equipment	1.Isolator	NA		
	2. Battery Charger	1	CHLORIDE	NA
	3. Panel	4	ABB	15.02.2007
	4.telephone	1	BPL	15.02.2007
Hydrant system with Pipe arrangement		NA		
Fire Fighting Equipment		8	NITIN FIRE PROTECTION	2016
Earthing Rods		20	NA	NA
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		01SET	TAPARIA	NA
Testing Equipments		MEGGAR,OFFLINE FAULT LOCATOR,EARTH RESISTANCE TESTER, BDV TEST KIT,		
Safety Gear(Helmet,Gloves,Boot, etc.)		10,4,4		
SST		2	TBEA/ASSOCIATED ELECTRICALS	23.9.17/22.9.12
Spare Hardware Fitting.		AVAILABLE		

### Details of Existing Equipment

Name of Circle: Patna

Name of GSS: Digha

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
220 KV Line Bay	1st bay	Line control & relay panel with Distance protection & O/C E/F protection	NA		
		3 Phase Circuit Breaker	NA		
		1-Ph CVT	NA		
		LA	NA		
		1-Ph Current Transformer	NA		
	3 Phase Isolator with/without Earth switch	NA			
	2nd bay..	Line control & relay panel with Distance protection & O/C E/F protection	NA		
		3 Phase Circuit Breaker	NA		
		1-Ph CVT	NA		
		LA	NA		
1-Ph Current Transformer		NA			
220/132 KV Transformer bay(HV)	1st bay..	Transformer control & relay panel with Differential protection & O/C E/F protection	NA		
		3 Phase Circuit Breaker	NA		
		LA	NA		
		1-Ph Current Transformer	NA		
220/132 KV Transformer bay(LV)		Transformer control & relay panel with Differential protection & O/C E/F protection	NA		
		3 Phase Circuit Breaker	NA		
		LA	NA		
		1-Ph Current Transformer	NA		
220 KV Buscoupler bay		Line control & relay panel with Distance protection & O/C E/F protection	NA		
		3 Phase Circuit Breaker	NA		
		1 Ph PT	NA		
		LA	NA		
		1-Ph Current Transformer	NA		
132 KV Line bay		Line control & relay panel with Distance protection & O/C E/F protection	2	Easun Reyrolle	132 KV Khagaul-Digha Line 1 charged on load on dated 02.04.2012 whereas 132 KV Khagaul-Digha Line 2 charged on load on dated 10.07.2012
		3 Phase Circuit Breaker	2	Crompton Greaves	
		1 Ph CVT	6	Crompton Greaves	
		LA	6	Crompton Greaves	
		1-Ph Current Transformer	6	Mehru Electricals	
		3 Phase Isolator with/without Earth switch	6	Switchgear & structural (India) pvt. Ltd.	

132/33 KV Transformer bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	3	Transformer 1 and Transformer 2 Panel make:- Easun Reyrolle Transformer 3 Panel make:- System Control & Automation Pvt. Ltd.	132 KV T1 charged on dated 02.04.2012, 132KV T2 charged on date 24.05.2018 whereas 132 KV T3 charged on dated 01.10.2015
	3 Phase Circuit Breaker	3	Crompton Greaves	
	LA	9	Crompton Greaves	
	1-Ph Current Transformer	9	Mehru Electricals	
	3 Phase Isolator with/without Earth switch	9	Main bus and Line isolator of T1,T2 and T3 are Switchgear & structural (India) pvt. Ltd. make whereas Tandem isolator of T1 and T2 are Switchgear & structural (India) pvt. Ltd. And that of T3 is J.D. Electricals make.	
132/33 KV Transformer bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	3	Transformer 1 and Transformer 2 Panel make:- Easun Reyrolle Transformer 3 Panel make:- System Control & Automation Pvt. Ltd.	33 KV T1 and 33 KV T2 charged on dated 02.04.2012 whereas 33 KV T3 charged on dated 02.10.2015
	3 Phase Circuit Breaker	3	Crompton Greaves	
	LA	9	Crompton Greaves	
	1-Ph Current Transformer	9	CT of Trans. 1 Mehru Electricals, Trans 2 and 3 are SCT Ltd make.	
	3 Phase Isolator with/without Earth switch	9	Switchgear & structural (India) pvt. Ltd and Faraday Electricals.	
132 KV Buscoupler bay	Line control & relay panel with Distance protection & O/C E/F protection	1	Easun Reyrolle	Not Done
	3 Phase Circuit Breaker	1	Crompton Greaves	
	1 Ph PT	Not available		
	LA	Not available		
	1-Ph Current Transformer	3	SCT Ltd.	
	3 Phase Isolator with/without Earth switch	2	J.D. Electricals	

33 KV Feeder	Line control & relay panel with O/C E/F protection	6	Easun Reyrolle	Date of commissioning of all 33 kv feeders are 02.04.2012 except 1 no. of 33 kv spare bay.
	3 Phase Circuit Breaker	6	Crompton Greaves	
	LA	18	Crompton Greaves	
	1-Ph Current Transformer	18	Mehru Electricals	
	3 Phase Isolator with/without Earth switch	18	Out of 18, 15nos. are of Switchgear & structural pvt. Ltd make whereas 3 nos. are J.D. Electricals make	
33 KV Buscoupler	Line control & relay panel with Distance protection & O/C E/F protection	1	Easun Reyrolle	02.04.2012
	3 Phase Circuit Breaker	1	Crompton Greaves	
	1 Ph PT	3	Mehru Electricals & Mechanical pvt. Ltd.	
	LA	Not available		
	1-Ph Current Transformer	3	Mehru Electricals	
	3 Phase Isolator with/without Earth switch	2	Switchgear & structural (India) pvt. Ltd.	

**Other Substation Equipments -**

Battery Charger	1	1	HBL Power Systems Limited	Record not available
	2	1	HBL Power Systems Limited	Record not available
		1	Amara Raja	03.08.2018
	ACDB	17	Unilec Engineers Limited	Record not available
	DCDB(110V/48V)	6	Unilec Engineers Limited	Record not available
Battery bank	1	1	HBL Power Systems Limited	13.04.2010
	2	2	HBL Power Systems Limited	13.04.2010
		3	Exide	03.08.2018
	DG set	1	Jackson	Record not available
PLCC Equipment	1.Isolator	NA		
	2. Battery Charger	2	HBL Power Systems Limited	Record not available
	3. Panel	3	BPL, PunCom	Record not available
	4.telephone	1	BPL	Record not available
	Hydrant system with Pipe arrangement	Not available		

	Fire Fighting Equipment	32	Out of 32, 24 nos. are of Fireshield engineering equipment make whereas 08 nos. are of Kanadia FYR Fyter pvt. Ltd.	
	Earthing Rods	6		
	Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)	Spanner:-02 nos., Wrench:02 set, Hammer:-01 no, Pliar:-01 no., Screw Driver set:-01 no., Conductor cutter:- 02 no., Tubular wrench set:01 set etc.		
	Testing Equipments	(1) BDV Test kit: 01 no. (2) Digital Insulation Tester: 01 no. (3) Digital Multimeter: 02 no. (4) Digital Clamp meter:01 no. (5) Hand operating meggar:01 no.	(1)Beacon Energy Solutions Pvt. LTD. (2) Megabras Industria Electronica Ltda. (3) Out of 02, 01 is Kusam-Meco make whereas 2nd is of WACO make. (4) Metrix (5) WACO	
	Safety Gear(Helmet,Gloves,Boot, etc.)	Helmet:- 08 nos, Gloves:-02 nos, Boot:-03 pair, safety belt:-02 no.		
	SST	2	One is EMCO make whereas second is TBEA make	EMCO make SST has been commissioned in 2012 whereas TBEA make has been commissioned on dated 08.11.1017.
	Spare Hardware Fitting.	Not available		



### Details of Existing Equipment

Name of Circle: Patna

Name of GSS: 220/132/33 kV Fatuha

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
220 KV Line Bay	220kV Biharsharif ckt 1	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom	06-07-2017
		3 Phase Circuit Breaker	1	Siemens	2005
		1-Ph CVT	3	mehru	2018
		LA	3	Lamco	2017
		1-Ph Current Transformer	3	Mehru	2017
		3 Phase Isolator with/without Earth switch	4	Faraday Electricals	
	220kV Biharsharif ckt-2	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom	01-07-2017
		3 Phase Circuit Breaker	1	Alstom	2018
		1-Ph CVT	3	mehru	2018
		LA	3	Lamco	2017
1-Ph Current Transformer		3	Hepta care		
3 Phase Isolator with/without Earth switch		4	Faraday Electricals		
220kV Gaurichak	220kV Gaurichak	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom	23-03-2017
		3 Phase Circuit Breaker	1	Areva	2011
		1-Ph CVT	3	mehru	2017
		LA	3	Lamco	2017
		1-Ph Current Transformer	3	Mehru	2017
		3 Phase Isolator with/without Earth switch	4	Faraday Electricals	
	220kV PGCIL	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom	11-04-2017
		3 Phase Circuit Breaker	1	Siemens	2005
		1-Ph CVT	3	mehru	2018
		LA	3	Lamco	2017
1-Ph Current Transformer		3	mehru	2017	
3 Phase Isolator with/without Earth switch		4	Faraday and Switch gear		
220/132 KV Transformer bay(HV)	100MVA T1	Transformer control & relay panel with Differential protection & O/C E/F protection	1	alstom	29-03-2017
		3 Phase Circuit Breaker	1	Areva	2012
		LA	3	Lamco	2017
		1-Ph Current Transformer	3	Mehru	2017
		3 Phase Isolator with/without Earth switch	4	Swithgear	
220/132 KV Transformer bay(LV)	100MVA T1	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Alstom	29-03-2017
		3 Phase Circuit Breaker	1	Areva	2013
		LA	3	Lamco	2017
		1-Ph Current Transformer	3	Mehru	2017
		3 Phase Isolator with/without Earth switch	3	Faraday	

220/132 KV  
Transformer  
bay(HV)

100MVA T2	Transformer control & relay panel with Differential protection & O/C E/F protection	1	English electric	
	3 Phase Circuit Breaker	1	Areva	2012
	LA	3	Elpro international Y, Lamco-R&B phase	
	1-Ph Current Transformer	3	Mehru	2017
	3 Phase Isolator with/without Earth switch	4	Switchgear and faraday	
	Transformer control & relay panel with Differential protection & O/C E/F protection	1	English electric	
	3 Phase Circuit Breaker	1	CGL	1990
	LA	3	lamco, Elpro	
	1-Ph Current Transformer	3	SCT	
	3 Phase Isolator with/without Earth switch	3	Switchgear and faraday	
100 MVA T2 (LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	GEC ALSTHOM	NA
	3 Phase Circuit Breaker	1	Siemens	2008
	LA	3	Lamco	2016
	1-Ph Current Transformer	3	Hepta care	
	3 Phase Isolator with/without Earth switch	4	Switchgear and faraday	
100 MVA T3 (HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	GEC ALSTHOM	NA
	3 Phase Circuit Breaker	1	cgl	
	LA	3	Lamco	
	1-Ph Current Transformer	3	y-phase:-SCT R&B -Vishal	
	3 Phase Isolator with/without Earth switch	3	Faraday	
100 MVA T3 (IV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	
	3 Phase Circuit Breaker	1	ALSTOM	2018
	LA	3	Lamco	2018
	1-Ph Current Transformer	3	Mehru	2017
	3 Phase Isolator with/without Earth switch	4	Switchgear and faraday and Siemens	
100 MVA T4 (HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	NA
	3 Phase Circuit Breaker	1	alstom	2017
	LA	3	lamco	
	1-Ph Current Transformer	3	ABB	
	3 Phase Isolator with/without Earth switch	3	Faraday	
100 MVA T4(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	NA
	3 Phase Circuit Breaker	1	alstom	2017
	LA	3	lamco	
	1-Ph Current Transformer	3	ABB	
	3 Phase Isolator with/without Earth switch	3	Faraday	

	100 MVA T5 (HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Vension Electric pvt ltd	2015
		3 Phase Circuit Breaker	1	ABB	
		LA	3	Lamco	2016
		1-Ph Current Transformer	3	ABB	
		3 Phase Isolator with/without Earth switch	4	siemens	
	100MVA T5 (Lv)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Vension Electric pvt ltd	2015
		3 Phase Circuit Breaker	1	Areva	
		LA	3	elpro international	
		1-Ph Current Transformer	3	Hepta care	
		3 Phase Isolator with/without Earth switch	3	Faraday ,Siemens	
220 KV Buscoupler bay		Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom	2017
		3 Phase Circuit Breaker	1	CGL	2015
		1 Ph PT	6	R-Mehru,y& B-Bhel-MAIN BUS-1/BHEL make -Main Bus -2	
		LA		-	
		1-Ph Current Transformer	3	Hepta care	2016
		3 Phase Isolator with/without Earth switch	3	Siemens	
132 KV Line bay	132kV Harnaut	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom	31-05-2017
		3 Phase Circuit Breaker	1	areva	
		1 Ph CVT	1	W.S India ltd.	
		LA	3	Elpro international	
		1-Ph Current Transformer	3	Mehru	2017
		3 Phase Isolator with/without Earth switch	3	switchgear	
132kV Sipara	132kV Sipara	Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom	14-06-2017
		3 Phase Circuit Breaker	1	Alstom	
		1 Ph CVT	1	W.S India ltd.	
		LA	3	Elpro international	
		1-Ph Current Transformer	3	Victrans Engg. Ltd	
		3 Phase Isolator with/without Earth switch	3	faraday	

	132kV Gaihat	Line control & relay panel with Distance protection & O/C E/F protection	1	Easun Reyold ltd.	2010
		3 Phase Circuit Breaker	1	CGL	2009
		1 Ph CVT		-	
		LA	3	CGL	
		1-Ph Current Transformer	3	SCT	2009
		3 Phase Isolator with/without Earth switch	3	switchgear	
	132kV Katra	Line control & relay panel with Distance protection & O/C E/F protection	1	Easun Reyold ltd.	2010
		3 Phase Circuit Breaker	1	CGL	
		1 Ph CVT		-	
		LA	3	CGL	
		1-Ph Current Transformer	3	SCT	2009
		3 Phase Isolator with/without Earth switch	3	Switchgear	
	132kv Railway	Line control & relay panel with Distance protection & O/C E/F protection	1	IMP	
		3 Phase Circuit Breaker	1	Areva	
		1 Ph CVT		-	
		LA	3	Elpro international.	
		1-Ph Current Transformer	3	SCT	
		3 Phase Isolator with/without Earth switch	3	Switchgear	
132/33 KV Transformer bay(HV)	50 MVA T1(hV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Alstom	2017
		3 Phase Circuit Breaker	1	areva	
		LA	3	-	
		1-Ph Current Transformer	3	mehru	2017
		3 Phase Isolator with/without Earth switch	3	Switchgear	
	50 MVA T1 (LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	alstom	2017
		3 Phase Circuit Breaker	1	siemens	2018
		LA		lamco	
		1-Ph Current Transformer	3	Mehru	2017
		3 Phase Isolator with/without Earth switch	3	Switchgear	
	50 MVA T2(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	alstom	2017
		3 Phase Circuit Breaker	1	CCL	
		LA	3	Elpro electrics	
		1-Ph Current Transformer	3	Mehru	
		3 Phase Isolator with/without Earth switch	3	switchgear	
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	alstom	2017

	50 MVA T2 (LV)	3 Phase Circuit Breaker	1	Siemens	2017
		LA	1	LAMCO	2017
		1-Ph Current Transformer	3	Mehru	2017
		3 Phase Isolator with/without Earth switch	3	Switchgear	
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	alstom	2017
	50 MVA T3(HV)	3 Phase Circuit Breaker	1	CGL	
		LA	3	Elpro international	
		1-Ph Current Transformer	3	Mehru	
		3 Phase Isolator with/without Earth switch	3	fraday	
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	alstom	2017
132/33 KV Transformer bay(LV)	50 MVA T3 (LV)	3 Phase Circuit Breaker	1	Allind	
		LA	3	Lamco	
		1-Ph Current Transformer	3	Mehru	2017
		3 Phase Isolator with/without Earth switch	3	Switchgear	
132 KV Buscoupler bay		Line control & relay panel with Distance protection & O/C E/F protection	1	Alstom	26-05-2017
		3 Phase Circuit Breaker	1	CGL	NA
		1 Ph PT	3	BHEL R BHEL Y SCT B	NA
		LA		-	
		1-Ph Current Transformer	3	Victrans	NA
		3 Phase Isolator with/without Earth switch	3	Siemens	NA
33 KV Feeder	33kV fatuha	Line control & relay panel with O/C E/F protection	1	Scheinder Electric	2013
		3 Phase Circuit Breaker	1	Alstom	NA
		LA	3	Lamco	NA
		1-Ph Current Transformer	3	R-Modern Electronics Y-Floral electrics B- Floral electrics	NA
		3 Phase Isolator with/without Earth switch	3	Faraday electricals	NA

	33kV Katra	Line control & relay panel with O/C E/F protection	1	Scheinder Electric	2013
		3 Phase Circuit Breaker	1	Alstom	NA
		LA	3	Lamco	NA
		1-Ph Current Transformer	3	R-SCT,Y-Floral,B-SCT	NA
		3 Phase Isolator with/without Earth switch	3	Faraday electricals	NA
	33kV Meena bazar	Line control & relay panel with O/C E/F protection	1	Scheinder Electric	2013
		3 Phase Circuit Breaker	1	siemens	2018
		LA	3	Elpro international	NA
		1-Ph Current Transformer	3	R- Modern Electronics Y- Modern Electronics B-Floral electricis.	NA
		3 Phase Isolator with/without Earth switch	3	Faraday Electricals	NA
	33kV Ulta tech	Line control & relay panel with O/C E/F protection	1	ABB	NA
		3 Phase Circuit Breaker	1	siemens	2018
		LA	3	lamco	2018
		1-Ph Current Transformer	3	Kapco electricis	2009
		3 Phase Isolator with/without Earth switch	3	Siemens	2009
	33kV khusrupur	Line control & relay panel with O/C E/F protection	1	ABB	NA
		3 Phase Circuit Breaker	1	ABB	NA
		LA	3	Olum electricis	NA
		1-Ph Current Transformer	3	Kapco Electric	NA
		3 Phase Isolator with/without Earth switch	3	siemens	2009
					NA
				NA	
	33 KV Buscoupler	Line control & relay panel with Distance protection & O/C E/F protection	1	Scheinder Electric	2013
		3 Phase Circuit Breaker	1	Alstom	2008
1 Ph PT		3	CGL R CGL Y SCT B	NA	
LA		3	-	NA	
1-Ph Current Transformer		3	Alstom	NA	
3 Phase Isolator with/without Earth switch		3	Faradays Electric ltd.	2013	
33 KV dina IRON	Line control & relay panel with Distance protection & O/C E/F protection	1	Scheinder Electric	2013	
	3 Phase Circuit Breaker	1	SIEMENS	2018	
	LA	3	LAMCO	2017	
	1-Ph Current Transformer	3	ME	2009	
	3 Phase Isolator with/without Earth switch	3	Faradays Electric ltd.	2013	

**Other Substation Equipments -**

Battery Charger	1		Shiva electronics	
	2		Amara raja power system	
	3		AMARA RAJA POWER SYSTEM	
ACDB			Maktel System	
DCDB(110V/48V)			Maktel System	
Battery bank	1	112	Taurus	
		124	Exide	
	2	113	Amara raja power system	
DG set		1	STERLIN	
PLCC Equipment	1.Isolator		None	
	2. Battery Charger		3 nos.	
	3. Panel		15 nos.	
	4.telephone		2 nos.	
Hydrant system with Pipe arrangement			On progress	
Fire Fighting Equipment			fire Extinguisher	
Earthing Rods		21		
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		2 set	Stanley	
Testing Equipments		10	Taurus , scope	
Safety Gear(Helmet,Gloves,Boot, etc.)			available	
SST		2	Alfa transformer,TBEA	
Spare Hardware Fitting.			available	

**Details of Existing Equipment**

Name of Circle: Patna

Name of GSS:220/132/33 kV Khagaul

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning	Remarks	
220 KV Line Bay	SIPARA-KHAGAUL bay	Line control & relay panel with Distance protection & O/C E/F protection	2	EASUN REYROLE	2006		
		3 Phase Circuit Breaker	3	CGL	2006		
		1-Ph CVT					
		LA	3	ELPRO			
		1-Ph Current Transformer	3	ABB			
	3 Phase Isolator with/without Earth switch	3	Wigman electricals enginners				
	SAMPATCHAK PGCIL-KHAGAUL bay..	Line control & relay panel with Distance protection & O/C E/F protection	2	EASUN REYROLE	2006		
		3 Phase Circuit Breaker	3	CGL			
		1-Ph CVT					
		LA	3	ELPRO	2006		
		1-Ph Current Transformer	3	ABB			
	3 Phase Isolator with/without Earth switch	3	Wigman electricals enginners				
	ARA PG-KHAGAUL BAY-1	Line control & relay panel with Distance protection & O/C E/F protection	4	ER	10-01-2004		
		3 Phase Circuit Breaker	3	ABB	DO		
		1-Ph CVT					
		LA	3	ELPRO	DO		
		1-Ph Current Transformer	3	ABB	DO		
	3 Phase Isolator with/without Earth switch	3	ELPRO	DO			
	ARA PG-KHAGAUL BAY-2	Line control & relay panel with Distance protection & O/C E/F protection	4	ER	01-11-2005		
		3 Phase Circuit Breaker	3	ABB	DO		
1-Ph CVT							
LA		3	ELPRO	DO			
1-Ph Current Transformer		3	ABB	DO			
3 Phase Isolator with/without Earth switch	3	ELPRO	DO				
220/132 KV Transformer bay(HV)	100 MVA TR-1	Transformer control & relay panel with Differential protection & O/C E/F protection	2	EASUN REYROLE	2005	HV CONTROL & Lv CONTROL PANEL IN SAME PANEL, HV & LV RELAY PANEL ARE IN SAME PANEL	
		3 Phase Circuit Breaker	3	CGL	DO		
		LA	1	ELPRO	DO		
		1-Ph Current Transformer	3	ABB	DO		
		3 Phase Isolator with/without Earth switch	3	Wigman electricals enginners			
	100 MVA TR-2	Transformer control & relay panel with Differential protection & O/C E/F protection	2	ER	15/02/2005	HV CONTROL & Lv CONTROL PANEL IN SAME PANEL, HV & LV RELAY PANEL ARE IN SAME PANEL	
		3 Phase Circuit Breaker	3	CGL	DO		
		LA	3	ELPRO	DO		
		1-Ph Current Transformer	3	ABB	DO		
		3 Phase Isolator with/without Earth switch	3	Wigman electricals enginners	DO		
	100 MVA TR-3	Transformer control & relay panel with Differential protection & O/C E/F protection	3	ER	2010		
		3 Phase Circuit Breaker	3	CGL	DO		
		LA	3	CGL	DO		
		1-Ph Current Transformer	3	ABB	DO		
		3 Phase Isolator with/without Earth switch	3	S&S	DO		
	100 MVA TR-4	Transformer control & relay panel with Differential protection & O/C E/F protection	1	SYSTEM CONTROL & AUTOMATION	2016		
		3 Phase Circuit Breaker	3	CGL	DO		
		LA	3	CGL	DO		
		1-Ph Current Transformer	3	SCT	DO		
		3 Phase Isolator with/without Earth switch	3	JD ELECTRICALS	DO		



220/132 KV Transformer bay(LV)	100 MVA TR-1	Transformer control & relay panel with Differential protection & O/C E/F protection	2	ER	2005	
		3 Phase Circuit Breaker	1	CGL	2005	
		LA	3	ELPRO	DO	
		1-Ph Current Transformer	3	ABB	DO	
		3 Phase Isolator with/without Earth switch	3	Wigman electricals enginners		
	100 MVA TR-2	Transformer control & relay panel with Differential protection & O/C E/F protection	2	ER	15/02/2005	
		3 Phase Circuit Breaker	1	CGL	DO	
		LA	3	ELPRO	DO	
		1-Ph Current Transformer	3	ABB	DO	
		3 Phase Isolator with/without Earth switch	3	Wigman electricals enginners	DO	
	100 MVA TR-3	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ER	2010	
		3 Phase Circuit Breaker	3	CGL	DO	
		LA	3	CGL	DO	
		1-Ph Current Transformer	3	SCT	2015	
		3 Phase Isolator with/without Earth switch	3	S&S	2010	
	100 MVA TR-4	Transformer control & relay panel with Differential protection & O/C E/F protection	1	SYSTEM CONTROL & AUTOMATION	2016	
		3 Phase Circuit Breaker	3	CGL	DO	
		LA	3	CGL	DO	
		1-Ph Current Transformer	3	SCT	DO	
		3 Phase Isolator with/without Earth switch	3	JD ELECTRICALS	DO	
220 KV Buscoupler bay	Line control & relay panel with Distance protection & O/C E/F protection	2	EASUN REYROLE	NOT COMMISSIONED		
	3 Phase Circuit Breaker	3	GE	2017		
	1 Ph PT	3	TRANSFORMER & ELECTRICAL KERLA LTD.			
	LA	3	NA			
	3 Phase Isolator with/without Earth switch	3	Wigman electricals enginners			
132 KV Line bay	DIGHA-KHAGAUL LINE-1	Line control & relay panel with Distance protection & O/C E/F protection	1	ER	2012	
		3 Phase Circuit Breaker	1	CGL	DO	
		1 Ph CVT	3	CGL	DO	
		LA	3	CGL	DO	
		3 Phase Isolator with/without Earth switch	3	S&S	DO	
	DIGHA-KHAGAUL LINE-2	Line control & relay panel with Distance protection & O/C E/F protection	1	ER	2012	
		3 Phase Circuit Breaker	1	CGL	DO	
		1 Ph CVT	3	CGL	DO	
		LA	3	CGL	DO	
		3 Phase Isolator with/without Earth switch	3	S&S	DO	
	BIHTA-1	Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	2013	
		3 Phase Circuit Breaker	1	ABB	DO	
		1 Ph CVT	3	CGL	DO	
		LA	3	CGL	DO	
		3 Phase Isolator with/without Earth switch	3	ELPRO	DO	
	BIHTA-2	Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	2013	
		3 Phase Circuit Breaker	1	ABB	DO	
		1 Ph CVT	3	CGL	DO	
		LA	3	CGL	DO	
		3 Phase Isolator with/without Earth switch	3	ELPRO	DO	

DNR RAILWAY	Line control & relay panel with Distance protection & O/C E/F protection	1	GE	2017		
	3 Phase Circuit Breaker	1	GE	DO		
	1 Ph CVT					
	LA	2	ELPRO			
	1-Ph Current Transformer	2	SCT			
3 Phase Isolator with/without Earth switch	3	NA				
132/33 KV Transformer bay(HV)	50 MVA TR-1	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	ENGLISH ELECTRIC	1994	
		3 Phase Circuit Breaker	1	GE	2017	
		LA	3	ELPRO	1994	
		1-Ph Current Transformer	3	BROWN BOVERY	DO	
		3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS(LI)	2016	
	80 MVA TR-2	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	DANISH	2018	
		3 Phase Circuit Breaker	1	GE	2017	
		LA	3	ELPRO	1991	
		1-Ph Current Transformer	3	SCT	DO	
		3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS(LI)	2017	
	80 MVA TR-3	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	DANISH	2018	
		3 Phase Circuit Breaker	1	CGL		
		LA	3	ELPRO	2001	
		1-Ph Current Transformer	3	SCT	2018	
		3 Phase Isolator with/without Earth switch	3			
	80 MVA TR-4	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	ALSTOM	2014	
		3 Phase Circuit Breaker	1	ALSTOM	2018	
		LA	3	ELPRO	DO	
		1-Ph Current Transformer	3	SCT	2018	
		3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS	2014	
50 MVA TR-5	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	VENSON ELECTRIC	2016		
	3 Phase Circuit Breaker	1	CGL	DO		
	LA	3	ELPRO	DO		
	1-Ph Current Transformer	3	HEPTACARE	2016		
	3 Phase Isolator with/without Earth switch	3	AK POWER INDUSTRIES	2016		
132/33 KV Transformer bay(LV)	50 MVA TR-1	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ENGLISH ELECTRIC	1994	
		3 Phase Circuit Breaker	1	SIEMENS	2017	
		LA	3	ELPRO	1994	
		1-Ph Current Transformer	3	SCT		
		3 Phase Isolator with/without Earth switch	3	NA		
	80 MVA TR-2	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	DANISH	2018	
		3 Phase Circuit Breaker	1	SIEMENS	2017	
		LA	3	ELPRO	1991	
		1-Ph Current Transformer	3	SCT	2018	
		3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS	2018	
	80 MVA TR-3	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	DANISH	2001	
		3 Phase Circuit Breaker	1	SIEMENS	2017	
		LA	3	ELPRO	2001	
		1-Ph Current Transformer	3	SCT	2,018	
		3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS	2018	
	80 MVA TR-4	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	ALSTOM	2014	
		3 Phase Circuit Breaker	1	CGL	DO	
		LA	3	ELPRO	DO	
		1-Ph Current Transformer	3	SCT	DO	
		3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS	2018	
50 MVA TR-5	TRANSFORMER control & relay panel with Differential protection & O/C E/F protection	1	VENSON ELECTRIC	2016		
	3 Phase Circuit Breaker	1	CGL	DO		
	LA	3	ELPRO	DO		
	1-Ph Current Transformer	3	SCT	2016		
	3 Phase Isolator with/without Earth switch	3	AK POWER INDUSTRIES	2016		

132 KV Buscoupler bay		Line control & relay panel with Distance protection & O/C E/F protection	1	VENSON ELECTRIC	2015	
		3 Phase Circuit Breaker	1	CGL	DO	
		1 Ph PT	3	SCT	NA	
		LA	3		NA	
		1-Ph Current Transformer	3	HEPTACARE	2015	
	3 Phase Isolator with/without Earth switch	3	AK POWER INDUSTRIES	DO		
33 KV Feeder	KHAGAUL-1	Line control & relay panel with O/C E/F protection	1	GE	2017	
		3 Phase Circuit Breaker	1	MEGAWIN	2011	
		LA	3	WS		
		1-Ph Current Transformer	3	SCT	2017/2018	
	3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS(LLMBI)	2017		
	KHAGAUL-2	Line control & relay panel with O/C E/F protection	1	GE	2017	
		3 Phase Circuit Breaker	1	CGL		
		LA	3	WS		
		1-Ph Current Transformer	3	MEHRU	2017	
	3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS,(MBI)	2017		
	KHAGAUL-3	Line control & relay panel with O/C E/F protection	1	GE	2017	
		3 Phase Circuit Breaker	1	MEGAWIN	2014	
		LA	3	ELPRO		
		1-Ph Current Transformer	3	LAMCO	2016	
	3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS(MBI)	2017		
	KHAGAUL-4	Line control & relay panel with O/C E/F protection	1	GE	2017	
		3 Phase Circuit Breaker	1	ALIND		
		LA	3	ELPRO		
		1-Ph Current Transformer	3	SCT		
	3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS(MBI)	2017		
	DNR-1	Line control & relay panel with O/C E/F protection	1	GE	2017	
		3 Phase Circuit Breaker	1	SIEMENS	2017	
		LA	3	WS		
		1-Ph Current Transformer	3	SCT, MODERN ELECTRIC, FLORAL	2016,2016,--	
	3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS	2017		
	DNR-2	Line control & relay panel with O/C E/F protection	1	GE	2017	
		3 Phase Circuit Breaker	1	ALSTOM		
		LA	3	WS		
		1-Ph Current Transformer	3	SCT		
	3 Phase Isolator with/without Earth switch	3	FARADAY ELECTRICALS(TBI,MBI)	2017		
	NEORA	Line control & relay panel with O/C E/F protection	1	GE	2017	
		3 Phase Circuit Breaker	1	SCHNEIDER ELECTRIC	2017	
		LA	3	WS		
		1-Ph Current Transformer	3	SCT, MODERN ELECTRIC	2016	
	3 Phase Isolator with/without Earth switch	3				
	SAGUNA MORE	Line control & relay panel with O/C E/F protection	1	ALSTOM	2015	
		3 Phase Circuit Breaker	1	SIEMENS	2017	
		LA	3			
		1-Ph Current Transformer	3	SCT	2015	
	3 Phase Isolator with/without Earth switch	3	ELECTROLITE	2015		
AIIMS-1(JAGDEO PATH)	Line control & relay panel with O/C E/F protection	1	AREVA	2012		
	3 Phase Circuit Breaker	1	AREVA	2012		
	LA	3	OBLUM ELECTRICAL INDUSTRIES	2012		
	1-Ph Current Transformer	3	MODERN ELECTRIC	2012		
3 Phase Isolator with/without Earth switch	3	ELECTROLITE	2012			
33 KV Buscoupler		Line control & relay panel with Distance protection & O/C E/F protection	1	VENSON ELECTRIC	2015	
		3 Phase Circuit Breaker	1	CGL	DO	
		1 Ph PT	3			
		LA	3			
		1-Ph Current Transformer	3	HEPTACARE	2015	
	3 Phase Isolator with/without Earth switch	3	AK POWER INDUSTRIES	DO		

Other Substation Equipments -						
Battery Charger	1		1	HBL	2010	
	2		1	CHLORIDE	2017	
ACDB			2	ELECTRO ALIED PRODUCTS, ELECTRO MECHANICAL(INDIA)	2017,NA	
DCDB(110V/48V)			2	ELECTRO MECHANICAL(INDIA), UNILEC		
Battery bank	1		1	HBL	2010	
	2		1	EXIDE	2012	
DG set			1	KIRLOSKAR		
PLCC Equipment	1.Isolator					
	2. Battery Charger		2	HBL,ELTEK		
	3. Panel		11	PUNCOM,ABB,BPL,EPI ENGINEERING LIMITED,TEJAS,		
	4.telephone					
Hydrant system with Pipe arrangement						
Fire Fighting Equipment			25			
Earthing Rods			4 SET			
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)			3 SET	TAPARIA		
Testing Equipments			10(MEGGER, BDV TESTER, MULTI METER, DC FAULT LOCATOR, OFF LINE FAULT LOCATOR, HV TESTER, RELAY TESTING KIT)			
Safety Gear(Helmet,Gloves,Boot, etc.)			HELMET-6, GLOVES-1, BOOT-2			
SST			2	EAST INDIA TRANSFORMER & SWITCH GEAR	1988, 2002	
Spare Hardware Fitting.						

## Details of Existing Equipment

Name of Circle:

Name of GSS: 132/33KV GSS MITHAPUR

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
	132 KV Line Bay	Line control & relay panel with Distance protection & O/C E/F protection	1	GEC ALASTOM	1999
		3 Phase Circuit Breaker	1	SIEMEN	2010
		1-Ph CVT	1		
		LA	3	ELPRO INTERNATIONAL LTD	1999
		1-Ph Current Transformer	3	R and B- SCT INDIA LTD, Y- VISHAL TRANSFORMER	1999
		3 Phase Isolator with/without Earth switch	3	.....	1999
	80 MVA T2 Transformer bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	KANO HAR ELECTRICAL LTD	2018
		3 Phase Circuit Breaker	1	SIEMEN	2009
		LA	3	ELPRO INTERNATIONAL LTD	2000
		1-Ph Current Transformer	3	SCT INDIA LTD	1999
		3 Phase Isolator with/without Earth switch	3	.....	1999
	80 MVA T2 Transformer bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	KANO HAR ELECTRICAL LTD	2018
		3 Phase Circuit Breaker	1	SIEMEN	2001
		LA	3	ELPRO INTERNATIONAL LTD	1999
		1-Ph Current Transformer	3	SCT INDIA LTD	2018
		3 Phase Isolator with/without Earth switch	3	SCT INDIA LTD	1999

132/33 KV 50 MVA Transformer bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	GEC ALASTOM	1999
	3 Phase Circuit Breaker	1	CGL	2012
	LA	3	ELPRO INTERNATIONAL LTD	1999
	1-Ph Current Transformer	3	SCT INDIA LTD	2000, FOR R PHASE -2009
	3 Phase Isolator with/without Earth switch	3		2000
132/33 KV 50 MVA Transformer bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	GEC ALASTOM	1999
	3 Phase Circuit Breaker	1	ALSTOM	2000
	LA	3	ELPRO INTERNATIONAL LTD	1999
	1-Ph Current Transformer	3	SCT INDIA LTD (2)ADVENT ENGG NASIK,	2000 , 2012
	3 Phase Isolator with/without Earth switch	3		
33 KV Feeder	Line control & relay panel with O/C E/F protection	8	DANISH LTD	2018
	3 Phase Circuit Breaker	8	Alstom (4),areva (1),megawin (1),seimens (1), CGL (1)	2003 (3),2000 (1),2010 (1),2001 (1), 14.09.2017(1)
	LA	7	NA	NA
	1-Ph Current Transformer	24	SCT ghaziabad	1999 (06),2000 (3),2001 (9),2000 (3),2010 (3)
	3 Phase Isolator with/without Earth switch	24	NA	1999
33 KV Buscoupler	Line control & relay panel with Distance protection & O/C E/F protection	1	DANISH LTD	2018
	3 Phase Circuit Breaker	1	SIEMEN	07.08.2018
	1 Ph PT	3	system control ghaziabad, electrical stamping manufacturing ,SCT Ltd ghaziabad	1999 (02),2001
	LA	-	-	-
	1-Ph Current Transformer	3	SCT India ltd	1999
	3 Phase Isolator with/without Earth switch	2	Na	1999

**Other Substation Equipments -**

Battery Charger	1	1	AZ electronic	2013
	2			
ACDB		1	transgiet T3	1999
DCDB(110V/48V)		1	transgiet T3	1999
Battery bank	1	1set	HBL power system Ltd.	2014
	2			
DG set		1	mech engineer EEP-80	2004
PLCC Equipment	1.Isolator	NA		
	2. Battery Charger	Na		
	3. Panel	RTU panel (1)	chemtrol	
	4.telephone	NA		
Hydrant system with Pipe arrangement		na		
Fire Fighting Equipment		20	Ajax fire control system	2016
Earthing Rods		12	NA	2016
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		4 set	taparia	2016-17
Testing Equipments		Multimeter (1),digital clamp meter (1),megger (1), fault locator (1),hv detector kit (1)	multimeter (waco),digital clamp meter (metrix),megger (wacom), fault locator (taurus),hv detector kit (motwane)	2016
Safety Gear(Helmet,Gloves,Boot, etc.)		helemet(10),gloves (3),boot (3)	na,crystal,managala	2016-17
SST		1	alfa transfer ltd	2006
Spare Hardware Fitting.		PG (25),palm (40),T (35),isolator (1set),pulley (9nos)rope 1",.5"	na	2016

## Details of Existing Equipment

Name of Circle: Patna

Name of GSS: 132/33 kV Masaurhi

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
	132 KV Line bay	Line control & relay panel with Distance protection & O/C E/F protection	2	Areva	06.05.2008
		3 Phase Circuit Breaker	2	Areva & CGL	06.05.2008
		1 Ph CVT	N/A		
		LA	6	CGL	06.05.2008
		1-Ph Current Transformer	6	SCT	06.05.2008
		3 Phase Isolator with/without Earth switch	6	NA	06.05.2008
	132/33 KV Transformer bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	3	2 nos. Areva & 1 nos system Control and automation Pvt. Ltd	06.05.2008 & 20.12.16 Respectively
		3 Phase Circuit Breaker	3	01 nos CGL, 01 Nos Siemens & 01 Nos Areva	06.05.2008(1 no CGL),19.05.2010(Siemens),06.05.2008 (Areva)
		1 Ph PT	3	SCT	06.05.2008
		LA	9	CGL	06.05.2008(6 nos),20.12.16(3 nos)
		1-Ph Current Transformer	9	SCT & Vishal	06.05.2008(3 nos),19.05.2010(3 nos),01.08.2016(3 nos)
		3 Phase Isolator with/without Earth switch	9	J.D Electricals(1 no),Rest are Na	06.05.2008(3 nos),19.05.2010(3 nos),01.08.2016(3 nos)



132/33 KV Transformer bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	3	2 nos. Areva & 1 nos system Control and automation Pvt. Ltd	06.05.2008 & 20.12.16 Respectively
	3 Phase Circuit Breaker	3	Areva,Megawin, Alind	07.01.2010(Areva), 19.05.10(Megawin),06.05.08(Alind)
	1 Ph PT	3	Deccan	29.07.18
	LA	9	CGL	06.05.08(6 nos),20.12.16(3nos)
	1-Ph Current Transformer	9	Floral Electricals Ltd(6 nos),SCT(3 nos)	06.05.2008(3 nos),19.05.2010(3 nos),01.08.2016(3 nos)
	3 Phase Isolator with/without Earth switch	9	J.D Electricals(1 no),Rest are Na	06.05.2008(3 nos),19.05.2010(3 nos),01.08.2016(3 nos)
132 KV Buscoupler bay	Line control & relay panel with Distance protection & O/C E/F protection	1	Areva	06.05.2008
	3 Phase Circuit Breaker	1	CGL	01.08.16
	LA	N/A		
	1-Ph Current Transformer	3	SCT	06.05.2008
	3 Phase Isolator with/without Earth switch	2	J.D Electricals	01.08.16
33 KV Feeder	Line control & relay panel with O/C E/F protection	4	Tech-up	06.05.2008
	3 Phase Circuit Breaker	4	Areva(2nos),Megawin(2nos)	06.05.2008
	LA	NA		
	1-Ph Current Transformer	12	Floral Electricals Ltd(7 nos),SCT(5 nos)	06.05.2008(9 nos),2012(2 nos),10.02.16(1 no)
	3 Phase Isolator with/without Earth switch	12	NA	06.05.2008

33 KV Buscoupler	Line control & relay panel with Distance protection & O/C E/F protection	1	Tech-up	06.05.2008
	3 Phase Circuit Breaker	1	CGL	01.08.16
	LA	NA		
	1-Ph Current Transformer	3	Sree Electro	14.08.18
	3 Phase Isolator with/without Earth switch	2	J.D Electricals	01.0820.16

**Other Substation Equipments -**

Battery Charger	1	250V	1	Electro Service	11.03..2008
	2	48V	1	Eltek Sgs Pvt Ltd.	24.10.17
ACDB			2	Vikas	06.05.2008 &01.12.2016 respectively
DCDB(110V/48V)			NA		
Battery bank	1	250V	112	HBL Power Systems Ltd	11.03.2008
	2	48V	24	HBL Power Systems Ltd	24.10.17
DG set			1	Ruston & Horsnby	24.06.18
PLCC Equipment	1.Isolator				
	2. Battery Charger		1	ACPL	05.03.2015
	3. Panel		1	ABB	Not commissioned
	4.telephone		1	ABB	Not commissioned
Hydrant system with Pipe arrangement			NA		
Fire Fighting Equipment			12	Ajay Industries ,Kanadia Fyre Fighter Pvt. Ltd	2008 & 2016
Earthing Rods			3	NA	03.10.2017(1 no)
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)			8 set	Taparia	2008
Testing Equipments			3	Waco(multimete r),Metrix(Tong Tester),Waco(M egger)	
Safety Gear(Helmet,Gloves,Boot, etc.)			24	Commander(gu mboot)	2016
SST			1	Orisssa Transformer Coorporation Pvt. Ltd	27.08.2009
Spare Hardware Fitting.			200	Na	

## Details of Existing Equipment

Name of Circle: **Patna**

Name of GSS: **Karbigahia**

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
	132 KV Line bay	Line control & relay panel with Distance protection & O/C E/F protection	2	Micom ( Alstom)	2012-13
		3 Phase Circuit Breaker	2	C.G.L	2012-13
		1 Ph CVT	6	CGL	2012-13
		LA	6	Lamco	2012-13
		1-Ph Current Transformer	6	LAMCO Industries Ltd.	2012-13
		3 Phase Isolator with/without Earth switch	6/ earth switch-2	GR power switchgear ltd.	2012-13
	132/33 KV Transformer bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	4 each	Micom ( Alstom)	2012-13
		3 Phase Circuit Breaker	4	C.G.L	2012-13
		LA	12	Lamco	2012-13
		1-Ph Current Transformer	12	LAMCO Industries Ltd.	2012-13
		3 Phase Isolator with/without Earth switch	12/ earth switch-4	GR power switchgear ltd.	2012-13
	132/33 KV Transformer bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	4	Micom ( Alstom)	2012-13
		3 Phase Circuit Breaker	4	C.G.L	2012-13
		LA	12	Lamco -10 & Engineers Enterprises-2	2012-13
		1-Ph Current Transformer	12	LAMCO Industries Ltd.	2012-13
		3 Phase Isolator with/without Earth switch	12/ earth switch-4	GR power switchgear ltd.	2012-13

132 KV Buscoupler bay		Line control & relay panel with Distance protection & O/C E/F protection	1 each	Micom ( Alstom)	2012-13
		3 Phase Circuit Breaker	1	C.G.L	2012-13
		1 Ph PT	3	LAMCO Industries Ltd.	2012-13
		LA			
		1-Ph Current Transformer	3	LAMCO Industries Ltd.	2012-13
		3 Phase Isolator with/without Earth switch	6	GR power switchgear ltd.	2012-13
33 KV Feeder		Line control & relay panel with O/C E/F protection	9	Micom ( Alstom)	2012-13
		3 Phase Circuit Breaker	9	C.G.L-8 & stlmech ltd-1	2012-13 & stelmech -2017
		LA	27	Lamco-24 & Engineers enterprises-3	2012-13 & 2017
		1-Ph Current Transformer	27	LAMCO Industries Ltd.	2012-13
		3 Phase Isolator with/without Earth switch	27 , with earth switch-9	GR power switchgear ltd.	2012-13
33 KV Buscoupler		Line control & relay panel with Distance protection & O/C E/F protection	1	Micom ( Alstom)	2012-13
		3 Phase Circuit Breaker	1	C.G.L	2012-13
		1 Ph PT	3	LAMCO Industries Ltd.	2012-13
		LA			
		1-Ph Current Transformer	3	LAMCO Industries Ltd.	2012-13
		3 Phase Isolator with/without Earth switch	2	GR power switchgear ltd.	2012-13

**Other Substation Equipments -**

Battery Charger	1	1	Chloride power sytem & solution ltd.	2012-13
	2	1	Chloride power sytem & solution ltd.	2012-13
ACDB		1	Bose eng. pvt.ltd.	2012-13
DCDB(110V/48V)		1	Bose eng. pvt.ltd.	2012-13
Battery bank	1	1	Exide industries ltd.	2012-13
	2	1	Exide industries ltd.	2012-13
DG set		1	kirloskar electric	2012-13
PLCC Equipment	1.Isolator			
	2. Battery Charger			Chloride Power Sysytem and Solution Ltd.
	3. Panel			ABB, BPL
	4.telephone			
Hydrant system with Pipe arrangement		NA		
Fire Fighting Equipment		24	safex	2017
Earthing Rods		LS		
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		3	Taparia	
Testing Equipments		5	waco, Motwane, scope T&M pvt.ltd.	
Safety Gear(Helmet,Gloves,Boot, etc.)		LS		
SST		2	East india udyog ltd.	2012-13
Spare Hardware Fitting.		LS		

Details of Existing Equipment							
Name of Circle: Patna		Name of GSS: 132/33Kv GSS Jakkanpur					
Sl No.		Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning	
1	132Kv Line Bay	Sipara Circuit-1	Line control & Relay panel with Distance protection & O/C, E/F protection	1	Schneider Electric & Micom	11-08-2013	
			3 Phase Circuit Breaker	1	CGL	Mar-16	
			Y-Ph PT	1	BHEL	1985	
			LA	3	Lamco	2017	
			1-Ph Current Transformer	3	MEHRU Electricals LTD	2018	
			3 Phase Isolator with/ without Earth Switch	01 (with)& 02 (without)	Associated Electricals	NA	
2		132Kv Line Bay	Sipara Circuit-2	Line control & Relay panel with Distance protection & O/C, E/F protection	1	Schneider Electric & Micom	19-08-2013
				3 Phase Circuit Breaker	1	Alstom	2002
				Y-Ph PT	2	BHEL	1985
				LA	3	Lamco	2017
				1-Ph Current Transformer	3	MEHRU Electricals LTD	2018
				3 Phase Isolator with/ without Earth Switch	01 (with)& 02 (without)	Associated Electricals	NA
3	132Kv Line Bay		Jakkanpur-Karbigahiya TL	Line control & Relay panel with Distance protection & O/C, E/F protection	1	Schneider Electric & Micom	05-08-2013
				3 Phase Circuit Breaker	1	CGL	2011
				Y-Ph PT	1	BHEL	1985
				LA	3	Lamco	Aug-17
				1-Ph Current Transformer	3	Areva	2012
				3 Phase Isolator with/ without Earth Switch	01 (with)& 02 (without)	Bimlo	Feb-82
4		132KV Bus Coupler Bay		Line control & Relay panel with Distance protection & O/C, E/F protection	1	Schneider Electric & Micom	30-06-2018
				3 Phase Circuit Breaker	1	ALSTOM	2018
				Y-Ph PT	0		
				LA	0		
				1-Ph Current Transformer	3	SCT	30-06-2018
				3 Phase Isolator with/ without Earth Switch	02 (without)	Faraday Electrical LTD	30-06-2018
5	132/33KV T2 New (80MVA) Transformer bay (HV)		Transformer control & Relay panel with Differential protection & O/C, E/F protection	1	Danish Pvt Ltd. & ALSTOM	Jul-18	
			3 Phase Circuit Breaker	1	CGL	2011	
			LA	3	Elektrolites(Power) PVT LTD.	21-07-2018	
			1-Ph current Transformer	3	Vishal Transformer LTD	Aug-13	
			3 Phase Isolator without Earth switch	3	Associated Electricals	NA	
6	132/33 Kv T2 (50 MVA) Transformer bay (HV)		Transformer control & Relay panel with Differential protection & O/C, E/F protection	1	Danish Pvt Ltd & Micom	Dec-15	
			3 Phase Circuit Breaker	1	CGL	2001	
			LA	3	Lamco	2017	
			1-Ph current Transformer	3	Victrans Engineers	2009	

			3 Phase Isolator without Earth switch	3	Associated Electricals	NA
7	132/33 Kv T3 Transformer bay (HV)		Transformer control & Relay panel with Differential protection & O/C, E/F protection	1	Danish Pvt Ltd & Micom	2017
			3 Phase Circuit Breaker	1	CGL (Air type)	2000
			LA	3	Lamco	2017
			1-Ph current Transformer	3	Brown Boveri	NA
			3 Phase Isolator without Earth switch	3	SRCP	NA
8	132/33 Kv T4 Transformer bay (HV)		Transformer control & Relay panel with Differential protection & O/C, E/F protection	1	ABB	2008
			3 Phase Circuit Breaker	1	ABB	2008
			LA	3	Lamco	Aug-17
			1-Ph current Transformer	3	ABB	2008
			3 Phase Isolator without Earth switch	3	Simen's Pvt Ltd	2008
9	33 Kv T2 New (80MVA) (LV)		Line control & relay panel with O/C, E/F protection	1	Danish PVT LTD & Micom	Jul-18
			3 Phase Circuit Breaker	1	CGL	2018
			LA	3	Elektrolites(Power) PVT LTD.	21-07-2018
			1-Ph Current Transformer	3	SCT	21-07-2018
			3 Phase Isolator without Earth Switch	2	Faraday Electrical LTD	2018
10	33 Kv T2 (50MVA) (LV)		Line control & relay panel with O/C, E/F protection	1	Danish Pvt Ltd & Micom	Dec-15
			3 Phase Circuit Breaker	1	CGL & Micom	2013
			LA	3	NA	
			1-Ph Current Transformer	3	Advent	2013
			3 Phase Isolator without Earth Switch	1	Electrolyte Power Pvt Ltd	2012
11	33 Kv T3 (LV)		Line control & relay panel with O/C, E/F protection	1	Danish Pvt Ltd & Micom	16-10-2017
			3 Phase Circuit Breaker	1	Alstom	2008
			LA	3	NA	
			1-Ph Current Transformer	3	SCT	NA
			3 Phase Isolator without Earth Switch	2	Hitachi	1956
12	33 Kv T4 (LV)		Line control & relay panel with O/C, E/F protection	1	ABB & Micom & ABB relay	2008
			3 Phase Circuit Breaker	1	ABB	2008
			LA	3	NA	
			1-Ph Current Transformer	3	Kapco Electric ltd	2008
			3 Phase Isolator without Earth Switch	1	Semen's Pvt Ltd	2008
15	33KV T2 Feeder		Line control & relay panel with O/C, E/F protection	1	Micon relay	2013
			3 Phase Circuit Breaker	1	CGL	2013
			1-Ph Current Transformer	3	Advent	2013
			3 Phase Isolator without Earth Switch	1	Electrolyte Pvt Ltd.	2013
17	33KV T4 Feeder		Line control & relay panel with O/C, E/F protection	1	Micom Relay	2013
			3 Phase Circuit Breaker	1	CGL	2013
			1-Ph Current Transformer	3	Advent	2013
			3 Phase Isolator without Earth Switch	1	Hitachi	NA

18	33KV Bus Coupler		Not available	0		
Other Substation Equipments-						
19	Battery Charger	1		1	Amara Raja	Aug-18
		2		1	Chloride Power	Jul-17
		ACDB		1	Vikas Power Equipment (P) Limited	25-05-2013
		DCDB		1	Vikas Power Equipment (P) Limited	2013
20	Battery Bank	1		1	Exide Power Safe	Nov-16
		2		1	Exide Power Safe	Mar-17
		DG Set		1	Kirloskar Oil Engine Ltd	NA
21	PLCC Equipment	1. Isolator		Nil		
		2. Battery Charger		2	Amra Raja & BPL	NA
		3. Panel		5	ABB	NA
		4. Telephone		2	BPL & Alcatel Lucent	NA
22	Hydrant system with Pipe arrangement			NA		
23	Fire Fighting Equipment			Available	16	2016
24	Earthing Rods			2 Sets		2017
25	Tools & Tackels (Spanners, Wrench etc. (Set/Piece)			Available in sufficient quantity	Taparia	NA
26	Testing Equipments ( Megar 5KV {Manual Use}, Multimeter,			1, 1	Waco, Waco-86	NA
27	Safety Gear (Helmet, Gloves, Boot etc)			Available in sufficient quantity	Life & Karam	NA
20	Battery Bank	1		1	Exide Power Safe	Nov-16
		2		1	Exide Power Safe	Mar-17
		DG Set		1	Kirloskar Oil Engine Ltd	NA
21	PLCC Equipment	1. Isolator		Nil		
		2. Battery Charger		2	Amra Raja & BPL	NA
		3. Panel		5	ABB	NA
		4. Telephone		2	BPL & Alcatel Lucent	NA
22	Hydrant system with Pipe arrangement			NA		
23	Fire Fighting Equipment			Available	16	2016
24	Earthing Rods			2 Sets		2017
25	Tools & Tackels (Spanners, Wrench etc. (Set/Piece)			Available in sufficient quantity	Taparia	NA
26	Testing Equipments ( Megar 5KV {Manual Use}, Multimeter,			1, 1	Waco, Waco-86	NA
27	Safety Gear (Helmet, Gloves, Boot etc)			Available in sufficient quantity	Life & Karam	NA



Details of Existing Equipment						
Name of Circle: Transmission Circle, Patna		Name of Division: Transmission Divisio, Patna				
Name of GSS: 220/132/33kV GSS Gaurichak						
For 220kv Bay						
Sl. No.		Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
1		220kV Patna-1	Line control & relay panel without Distance protection & O/C E/F protection <b>Note:- Line has Differential protection and Main relay installed in remote end (PGCIL Patna S/S)</b>	4	ABB	29-06-2013
			3 Phase Circuit Breaker	1	ABB	
			1-Ph CVT	3	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator with two Earth switch	1	Siemens	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	
2		220kV Patna-2	Line control & relay panel without Distance protection & O/C E/F protection <b>Note:- Line has Differential protection and Main relay installed in remote end (PGCIL Patna S/S)</b>	4	ABB	18-01-2013
			3 Phase Circuit Breaker	1	ABB	
			1-Ph CVT	3	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator with Earth two switch	1	Siemens	
			3 Phase Isolator with Earth one switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	

3

220kV Patna-3	Line control & relay panel without Distance protection & O/C E/F protection <b>Note:- Line has Differential protection and Main relay installed in remote end (PGCIL Patna S/S)</b>	2	Venson	05-03-2018
	3 Phase Circuit Breaker	1	Siemens	
	1-Ph CVT	3	Siemens	
	LA	3	Lamco	
	1-Ph Current Transformer	3	SCT	
	3 Phase Isolator with Earth two switch	1	Siemens	
	3 Phase Isolator with Earth one switch	1	Siemens	
	3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	
220kV Khagaul	Line control & relay panel with Distance protection Main -1 & Main -2 protection	4	ABB	29-06-2013
	3 Phase Circuit Breaker	1	ABB	
	1-Ph CVT	3	ABB	
	LA	3	Oblum Electricals	
	1-Ph Current Transformer	3	ABB	
	3 Phase Isolator with Earth two switch	1	Siemens	
	3 Phase Isolator with Earth one switch	1	Siemens	
	3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	
220kV Fatuha	Line control & relay panel with Distance protection Main -1 & Main -2 protection	4	ABB	29-06-2013
	3 Phase Circuit Breaker	1	ABB	
	1-Ph CVT	3	ABB	
	LA	3	Oblum Electricals	
	1-Ph Current Transformer	3	R-Ph CGL, Y&B Ph-ABB	
	3 Phase Isolator with Two Earth switch	1	Siemens	
	3 Phase Isolator with one Earth switch	1	Siemens	

4

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6	220kV Bihta-1	3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	Not commissioned
		Line control & relay panel with Distance protection Main -1 & Main -2 protection	3	Alstom	
		3 Phase Circuit Breaker	1	Alstom	
		1-Ph CVT	3	Alstom	
		LA	3	Lamco	
		1-Ph Current Transformer	3	Mehru Electricals	
		3 Phase Isolator with Two Earth switch	1	Siemens	
		3 Phase Isolator with one Earth switch	1	Siemens	
7	220kV Bihta-2	3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	Not commissioned
		Line control & relay panel with Distance protection Main -1 & Main -2 protection	3	Alstom	
		3 Phase Circuit Breaker	1	Alstom	
		1-Ph CVT	3	Alstom	
		LA		Lamco	
		1-Ph Current Transformer	3	Mehru Electricals	
		3 Phase Isolator with Two Earth switch	1	Siemens	
		3 Phase Isolator with one Earth switch	1	Siemens	
8	220kV ICT-1	3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	05-08-2015
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	Vension	
		3 Phase Circuit Breaker	1	CGL	
		LA	3	Lamco	
		1-Ph Current Transformer	3	Heptacare	
		3 Phase Isolator with Two Earth switch	1	Siemens	
		3 Phase Isolator with one Earth switch	1	Siemens	
		3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	

9	132KV ICT-1	Transformer control & relay panel with Differential protection & O/C E/F protection	1	Vension	
		3 Phase Circuit Breaker	1	CGL	
		LA	3	Lamco	
		1-Ph Current Transformer	3	R, Y ph Vishal & B ph SCT	
		3 Phase Isolator without Earth switch	2	Siemens	
		3 Phase Isolator without Earth switch(Tendam type)	1	Siemens	
10	220kV ICT-2	Line control & relay panel with Distance protection & O/C E/F protection	3	ABB	04-02-2013
		3 Phase Circuit Breaker	1	ABB	
		1-Ph CVT	Nil		
		LA		Oblum Electricals	
		1-Ph Current Transformer	3	ABB	
		3 Phase Isolator with Two Earth switch	1	Siemens	
		3 Phase Isolator with one Earth switch	1	Siemens	
		3 Phase Isolator without Earth switch(Tendam type)	2	Siemens	
11	132KV ICT-2	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	
		3 Phase Circuit Breaker	1	ABB	
		LA	3	R&Yph-Lamco, B Ph-Oblum Electricals	
		1-Ph Current Transformer	3	ABB	
		3 Phase Isolator without Earth	2	Siemens	
		3 Phase Isolator without Earth switch(Tendam type)	1	Siemens	
		Line control & relay panel with Distance protection & O/C E/F protection	3	ABB	
		3 Phase Circuit Breaker	1	ABB	
		1-Ph CVT	Nil		
		LA		R ph-Lamco, Y&B Ph-Oblum Electricals	

12	220/132 KV 150MVA Transformer- 3 bay(HV)	220kV ICT-3	1-Ph Current Transformer	3	ABB	18-01-2013	
			3 Phase Isolator with Two Earth switch	1	Siemens		
			3 Phase Isolator with one Earth switch	1	Siemens		
			3 Phase Isolator without Earth switch(Tendam type)	2	Siemens		
		13	132kV ICT-3	Transformer control & relay panel with Differential protection & O/C E/F protection	1		ABB
				3 Phase Circuit Breaker	1		ABB
				LA	3		R Ph-Lamco, Y&B Ph-Oblum Electricals
				1-Ph Current Transformer	3		ABB
				3 Phase Isolator without Earth switch	2		Siemens
				3 Phase Isolator without Earth switch(Tendam type)	1		Siemens
14	220 KV Buscoupler bay			Line control & relay panel with LBB protections	2	ABB	02-10-2013
		3 Phase Circuit Breaker	1	ABB			
		1 Ph CVT	6	ABB			
		LA	nil				
		1-Ph Current Transformer	3	ABB			
		3 Phase Isolator with two Earth switch	2	Siemens			
15	220 KV TBC bay	Line control & relay panel with LBB protections	1	ABB	17-04-2013		
		3 Phase Circuit Breaker	1	ABB			
		1 Ph PT	nil				
		LA	nil				
		1-Ph Current Transformer	3	ABB			
		3 Phase Isolator with two Earth switch	1	Siemens			
		3 Phase Isolator without Earth	1	Siemens			
		3 Phase Isolator without Earth switch(Tendam type)	1	Siemens			

**For 132 kV Bay**

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
		Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	

1	132 KV Line bay	132kV Gaya-1 (Masaurhi)	3 Phase Circuit Breaker	1	ABB	27-04-2013
			1 Ph CVT	3	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
2	132 KV Line bay	132kV Gaya-2	Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	27-04-2013
			3 Phase Circuit Breaker	1	ABB	
			1 Ph CVT	3	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
3	132 KV Line bay	132kV Jakkanpur-1	Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	18-01-2013
			3 Phase Circuit Breaker	1	ABB	
			1 Ph CVT	3	ABB	
			LA	3	R&Y Ph-Oblum Electricals, B Ph-Lamco	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
			Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	
			3 Phase Circuit Breaker	1	ABB	
			1 Ph CVT	3	ABB	

4	132 KV Line bay	132kV Jakkanpur-2	LA	3	Oblum Electricals	08-04-2013
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
5	132 KV Line bay	132kV Mithapur	Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	16-05-2013
			3 Phase Circuit Breaker	1	ABB	
			1 Ph CVT	3	ABB	
			LA	3	R Ph-Lamco, Y&B Ph-Oblum Electricals	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
6	132 KV Line bay	132kV Fatuha	Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	16-05-2013
			3 Phase Circuit Breaker	1	ABB	
			1 Ph CVT	3	ABB	
			LA	3	R&Y Ph-Oblum Electricals, B Ph-Lamco	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
	132KV TRC		Line control & relay panel with LBB protections	1	ABB	
			3 Phase Circuit Breaker	1	ABB	
			1 Ph CVT	3	ABB	
			LA	nil		
			1-Ph Current Transformer	3	ABB	

7	132kV TBC Bay	132kV TBC	3 Phase Isolator with one Earth switch	nil		13-03-2013
			3 Phase Isolator without Earth switch	2	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	nil		
8	132kV		3 Phase Isolator without Earth switch for High Level	2	Siemens	18-01-2013
<b>For 33kv Bay</b>						
Sl. No.		Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
1		Parsabazaar	Line control & relay panel with O/C E/F protection	1	ABB	02-10-2013
			3 Phase Circuit Breaker	1	Stelmec	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	Kapco	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
2		Transport Nagar	Line control & relay panel with O/C E/F protection	1	ABB	02-10-2013
			3 Phase Circuit Breaker	1	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	Kapco	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
3		Kudanawada	Line control & relay panel with O/C E/F protection	1	ABB	03-07-2013
			3 Phase Circuit Breaker	1	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	Kapco	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch	1	Siemens	



			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
4	33 KV Feeder	Karbigaiya	Line control & relay panel with O/C E/F protection	1	ABB	02-10-2013
			3 Phase Circuit Breaker	1	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	Kapco	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
5	33 KV Feeder	Sampachak	Line control & relay panel with O/C E/F protection	1	ABB	08-03-2013
			3 Phase Circuit Breaker	1	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	Kapco	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
6	33 KV Feeder	Beldarichak	Line control & relay panel with O/C E/F protection	1	ABB	10-05-2013
			3 Phase Circuit Breaker	1	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	Kapco	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth	1	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
7	33 KV Feeder	TBC	Line control & relay panel with O/C E/F protection	1	ABB	03-06-2013
			3 Phase Circuit Breaker	1	Stelmec	
			1 Ph CVT	3	Kapco	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	Kapco	
			3 Phase Isolator with one Earth switch	1	Siemens	
			3 Phase Isolator without Earth	1	Siemens	

			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
8	132/33 KV Transformer bay	132/33 KV Transformer- 2 bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	08-03-2013
			3 Phase Circuit Breaker	1	ABB	
			LA	3	Oblum	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator without Earth	2	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
9		132/33 KV Transformer - 2 bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	
			3 Phase Circuit Breaker	1	ABB	
			LA	3	Oblum Electricals	
			1-Ph Current Transformer	3	Kapco	
			3 Phase Isolator without Earth	2	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
10	132/33 KV Transformer bay	132/33 KV Transformer- 3 bay(HV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	31-05-2013
			3 Phase Circuit Breaker	1	ABB	
			LA	3	Oblum	
			1-Ph Current Transformer	3	ABB	
			3 Phase Isolator without Earth	2	Siemens	
			3 Phase Isolator without Earth switch(Tandem type)	1	Siemens	
11	132/33 KV Transformer- 3 bay(LV)	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB		
		3 Phase Circuit Breaker	1	ABB		
		LA	3	Oblum Electricals		
		1-Ph Current Transformer	3	Kapco		
		3 Phase Isolator without Earth	2	Siemens		
		3 Phase Isolator without Earth switch(Tandem type)	1	Siemens		

**Other Substation Equipments -**

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
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1	Battery Charger	1		250V	2	Amara Raja	31-12-2012	
		2		48V	2	Amara Raja	31-12-2012	
2	ACDB				2 set	NA	31-12-2012	
3	DCDB(250V/48V)							
	Battery bank	1		250V Battery Bank	2	Amara Raja	31-12-2012	
		2		48V battery Bank	2	Amara Raja	31-12-2012	
4	DG set (100KVA)				1	Powerica	2013	
	PLCC Equipment	1.Isolator						
		2. Battery Charger						
		3. Panel				14	ABB	2014
4.telephone				6	Alstom	Not Commisioned		
5	Hydrant system with Pipe arrangement				4	Mehta Fire	2013	
6	Fire Fighting Equipment				1 set	Mehta Fire	2013	
7	Earthing Rods				4	NA	2017	
8	Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)				02 set	Taparia	NA	
9	Testing Equipments				Given Below			
10	Safety Gear(Helmet,Gloves,Boot, etc.)				Available in Sufficient quantity	Life & Karam	NA	
11	SST				2	Tesla	31-12-2012	
12	Spare Hardware Fitting.				Available in Sufficient quantity	NA	NA	

**Testing Equipments available at GSS GAURICHAK**

S.No	Name of Equipments	Quantity	Make	Date of Commissioning
1	Transformet turn ratio meter	1 no.	Sivananda Electronics	NA
2	Differential/Distance relay test kit	1 no.	ABB	NA
3	Over current relay test kit	1 no.	ABB	NA
4	Portable dissolved Gas analysis kit	1 no.	GE	NA
5	Megger 1kV	1 no.	Wapco	NA
6	Megger 5kV	2 nos.	Megger and	NA
7	Off line distance fault locator with Signature	1 no.	Taurus	2015
8	Gas leak detector	1 no.	Rothenberger	NA
9	Online DC earth fault locator	1 no.	Taurus	NA
10	HV detector	1 no.	Motwane	NA
11	Digital Multimeter	2 nos.	Amprobe	NA
12	Digital Clamp meter	2 nos.	Mextech	NA
13	BDV testing equipment	1 no.	Rectifier & Electronics	NA

### Details of Existing Equipment

Name of Circle: Patna

Name of GSS:132/33kv GSS Katra

Sl. No.	Name of Bay	Equipment Name	Quantity	Make	Date of Commissioning
132KV Line Bay Fatuha-Katra		Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	04.09.2009
		3 Phase Circuit Breaker	1	ABB	04.09.2009
		1Ph CVT	3	CGL	04.09.2009
		LA	3	CGL	04.09.2009
		1-Ph Current Transformer	3	CGL	25.12.2016 / 08.10.2018
		3-Ph Isolator with /without Earth switch	3set	siemens	04.09.2009
132 KV Line bay Katra-Gaighat		Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	04.09.2009
		3 Phase Circuit Breaker	1	ABB	04.09.2009
		1 Ph CVT	3	CGL	04.09.2009
		LA	3	CGL	04.09.2009
		1-Ph Current Transformer	3	CGL	04.09.2009
		3 Phase Isolator with/without Earth switch	3set	SIEMENS	04.09.2009
132/33KV Transformer Bay(HV) T -1 (80MVA, Kanoahar Make)		Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	04.09.2009
		3-phase circuit breaker	1	ABB	04.09.2009
		LA	3	CGL	04.09.2009
		1-Ph Current Transformer	3	CGL	04.09.2009
		3-Phase Isolator with/without Earth switch	3	SIEMENS	04.09.2009
132/33 KV Transformer bay(HV) T-2		Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	04.09.2009
		3 Phase Circuit Breaker	1	ABB	04.09.2009
		LA	3	CGL	04.09.2009
		1-Ph Current Transformer	3	CGL	04.09.2009
		3 Phase Isolator with/without Earth switch	3	siemens	04.09.2009
132/33 KV Transformer bay(HV) T-3		Transformer control & relay panel with Differential protection & O/C E/F protection	1	System control and automation pvt. Ltd.	16.10.2015
		3 Phase Circuit Breaker	1	CGL	16.10.2015
		LA	3	CGL	16.10.2015
		1-Ph Current Transformer	3	SCT	16.10.2015
		3 Phase Isolator with/without Earth switch	3	JD Electrical	16.10.2015
132/33 KV Transformer bay(LV) T-1		Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	04.09.2009
		3 Phase Circuit Breaker	1	CGL	14.04.2018
		LA	3	CGL	04.09.2009
		1-Ph Current Transformer	3	SCT	14.04.2018
		3 Phase Isolator with/without Earth switch	3	Faraday Ele.Pvt.Ltd/Simens	14.04.2018/04.09.2009
132/33 KV Transformer bay(LV) T-2		Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	04.09.2009
		3 Phase Circuit Breaker	1	ABB	04.09.2009
		LA	3	CGL	04.09.2009
		1-Ph Current Transformer	3	Vishal	04.09.2009
		3 Phase Isolator with/without Earth switch	3	siemens	04.09.2009
132/33 KV Transformer bay(LV) T-3		Transformer control & relay panel with Differential protection & O/C E/F protection	1	System control and automation pvt. Ltd.	16.10.2015
		3 Phase Circuit Breaker	1	ABB	16.10.2015
		LA	3	CGL	16.10.2015

		1-Ph Current Transformer	3	SCT	16.10.2015
		3 Phase Isolator with/without Earth switch	3	JD Electrical	16.10.2015
132/33kv Transformer bay (HV) Tr-4 (KanoHar make 80mva)		Line control & relay panel with Distance protection & O/C E/F protection	1	Danish	04.10.2018
		3 Phase Circuit Breaker	1	CGL	04.10.2018
		1 Ph PT	3	CGL	04.09.2009
		LA	3	LAMCO	04.10.2018
		1-Ph Current Transformer	3	CGL	04.09.2009
		3 Phase Isolator with/without Earth switch	3	siemens/Fraday	04.09.2009 /04.10.2018
33KV Pahari feeder		Line control & relay panel with O/C E/F protection	1	ABB	04.09.2009
		3 Phase Circuit Breaker	1	Simens	30.07.2018
		LA	3		04.09.2009
		1-Ph Current Transformer	3	LAMCO	28.11.16
		3 Phase Isolator with/without Earth switch	3	SIEMENS	04.09.2009
33 kv Sabalpur		Line control & relay panel with O/C E/F protection	1	ABB	09,05.2013
		3 Phase Circuit Breaker	1	SIEMENS	16.10.2017
		LA	3	CGL	09,05.2013
		1-Ph Current Transformer	3	Shree Electro Controls Private Ltd.	23.09.2018
		3 Phase Isolator with/without Earth switch	3	siemens	09,05.2013
33kv techno tuff & Ashoknagar		Line control & relay panel with O/C E/F protection	1	ABB	09,05.2013
		3 Phase Circuit Breaker	1	ABB	09.05.2013
		LA	3	CGL	09.05.2013
		1-Ph Current Transformer	3	Vishal	09.05.2013
		3 Phase Isolator with/without Earth switch	3	SIEMENS	09.05.2013
132/33kv Transformer bay(LV) T-4(80MVA, KanoHar make)		Line control & relay panel with O/C E/F protection	1	Danish	04.10.2018
		3 Phase Circuit Breaker	1	CGL	04.10.2018
		LA	3	CGL	22.02.2011
		1-Ph Current Transformer	3	SCT	04.10.2018
		3 Phase Isolator with/without Earth switch	3	Fraday	04.10.2018
33Kv Karmalichak feeder		Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	21.07.2011
		3 Phase Circuit Breaker	1	ABB	21.07.2011
		LA	3	CGL	21.07.2011
		1-Ph Current Transformer	3	SCT	
		3 Phase Isolator with/without Earth switch	3	SIEMENS	21.07.2011
33Kv Malslami feeder		Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	30.04.2016
		3 Phase Circuit Breaker	1	CGL	30.04.2016
					30.04.2016
		LA	3	CGL	30.04.2016
		1-Ph Current Transformer	3	VISHAL	30.04.2016
		3 Phase Isolator with/without Earth switch	3	JD Electrical	30.04.2016
33 KV Buscoupler		Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	04.09.2009
		3 Phase Circuit Breaker	1	ABB	04.09.2009
		1 Ph PT	3		04.09.2009
		LA	NIL	NA	
		1-Ph Current Transformer	3	VISHAL	04.09.2009
		3 Phase Isolator with/without Earth switch	2	SIEMENS	04.09.2009

Battery Charger		1		AMARA RAJA	04.09.17
		2		AMARA RAJA	04.09.17
ACDB					
DCDB(110V/48V )					
Battery bank		1		AMARA RAJA	04.09.17
		2		AMARA RAJA	04.09.17
DG set					
PLCC Equipment	1.Isolator				NOT COMMISSIONED
	2. Battery Charger				
	3. Panel				
	4.telephone				
Fire Fighting Equipment			Co2- 08, dry powder-08 and foam type fire extinguisher-02		
Earthing Rods			3SET		
Tools & Tackles(Spanners, Wrench..etc.(Set/Piece)			02set spanner 02 set wrench,pipe wrench,box wrench,plier etc.		
<b>Other Substation Equipments -</b>					
Testing Equipments			Relay test kit-01 ,BDV kit-01, digital multimeter-		
Safety Gear(Helmet,Gloves,Boot, etc.)			Helmet-08, Gloves-03set, boot-02set		
SST			2	Make-Vijay Electrical Ltd. & TBEA	04.09.2009 & 2017
Spare Hardware Fitting.			150nos.(including PG moose to moose,ct studd connector,palm connector,,T-connector etc. including different size of nuts and bolts)		

## Details of Existing Equipment

NAME OF CIRCLE : BIHARSHARIF

NAME OF GSS : 132/33KV GSS BARH

SL. NO.		NAME OF BAY	EQUIPMENT NAME	QUANTITY	MAKE	DATE OF COMMISSIONING		
1	132KV Line bay	132KV Biharsharif-Barh T/L ckt-01	Line control & relay panel with Distance protection & O/C E/F protection	1	EASUN REYROLLE LTD.,SCHWEITZER ENGINEERING LABROTIES, Micom P127 AREVA	2006, 28.08.2016		
			3-Phase Circuit Breaker	1	Crompton Greaves CO. LTD.	2006		
			1-Phase CVT	3	BHEL	2006		
			LA	3	Crompton Greaves CO. LTD.	2006		
			1-Ph Current Transformer	3	BHEL	2006		
			3-Ph Isolator with/without Earth switch	03 set	GR POWER SWITCH GEAR LTD.	2006		
			132KV Barh-Hathidah T/L ckt-01	Line control & relay panel with Distance protection & O/C E/F protection	1	EASUN REYROLLE LTD.,SCHWEITZER ENGINEERING LABROTIES, MIT131	2006	
		3-Phase Circuit Breaker		1	Crompton Greaves CO. LTD.	2006		
		1-Phase CVT		3	BHEL	2006		
		LA		3	02 nos EPRO International LTD. & 01 nos. Crompton Greaves CO. LTD.	2010, 2006		
		1-Ph Current Transformer		3	BHEL	2006		
		3-Ph Isolator with/without Earth switch		03 set	GR POWER SWITCH GEAR LTD.	2006		
		2		132/33KV Transformer bay	20 MVA Power Transformer no. 01	(HV)	1	EASUN REYROLLE LTD.,Schneider Electric, Micom P643, MIT131
			Transformer control & relay panel with Differential protection & O/C E/F protection			1		
3-Phase Circuit Breaker	1		Crompton Greaves CO. LTD.			2006		
1-Phase CVT	3		BHEL			2006		
LA	3		Crompton Greaves CO. LTD.			2006		
1-Ph Current Transformer	3		BHEL			2006		
3-Ph Isolator with/without Earth switch	03 set		GR POWER SWITCH GEAR LTD.			2006		
50 MVA Power Transformer no. 02	Transformer control & relay panel with Differential protection & O/C E/F protection		1			EASUN REYROLLE LTD.,ALSTOM, Micom P642,	31.12.2013	
	3-Phase Circuit Breaker		1			Crompton Greaves CO. LTD.	2006	
	1-Phase CVT		3			BHEL	2006	
	LA		3			Crompton Greaves CO. LTD.	2006	
	1-Ph Current Transformer		3			BHEL	2006	
	3-Ph Isolator with/without Earth switch		03 set			GR POWER SWITCH GEAR LTD.	2006	
	20 MVA Transformer Bay 01		Transformer control & relay panel with Differential protection & O/C E/F protection			1	EASUN REYROLLE LTD., MIT114	2006
3-Phase Circuit Breaker		1	BHEL	2006				
LA		3	Crompton Greaves CO. LTD.	2006				
1-Ph Current Transformer		3	Vidhut Control System	2006				
3-Ph Isolator with/without Earth switch		3	Kiran Textile Industries	2006				
(LV)								

3	50 MVA Transformer Bay 02	Transformer control & relay panel with Differential protection & O/C E/F protection	1	EASUN REYROLLE LTD., Schneider Electric, P122	2006			
			3-Phase Circuit Breaker			1	BHEL	2006
			LA			3	Crompton Greaves CO. LTD.	2006
			1-Ph Current Transformer			3	01 no.Vijai Electrical Ltd. & 02 no. shree electro controls pvt ltd.	2013/2018
			3-Ph Isolator with/without Earth switch			03 set	Kiran Textile Industries	2006
			Line control & relay panel with Distance protection & O/C E/F protection			1	EASUN REYROLLE LTD., Schneider Electric, P127	2006
4	132KV Bus Coupler Bay	Line control & relay panel with Distance protection & O/C E/F protection	1	EASUN REYROLLE LTD., Schneider Electric, P127	2006			
			3-Phase Circuit Breaker			1	Crompton Greaves CO. LTD.	2006
			1-Ph PT			3	BHEL	2006
			LA			N/A		
			1-Ph Current Transformer			3	BHEL	2006
			3-Ph Isolator with/without Earth switch			04 set	GR POWER SWITCH GEAR LTD.	2006
5	33KV Feeders	Biharibigha	Line control & relay panel with Distance protection & O/C E/F protection	1	EASUN REYROLLE LTD., Schneider Electric, P127	2006		
			3-Phase Circuit Breaker	1			BHEL	2006
			LA	Nil				
			1-Ph Current Transformer	3			02 nos. Vidhut Control system, 01 nos FLORAL Electrical Ltd.	2006
		3-Ph Isolator with/without Earth switch	03 set	Kiran Textile Industries	2006			
		Barh Town	Line control & relay panel with Distance protection & O/C E/F protection	1	EASUN REYROLLE LTD.,MIT114	2006		
			3-Phase Circuit Breaker	1			BHEL	2006
			LA				Crompton Greaves CO. LTD.	2006
	1-Ph Current Transformer		3	Vijai Electricals			-----	
	3-Ph Isolator with/without Earth switch		Kiran Textile Industries	2006				
	Pandarakh	Line control & relay panel with Distance protection & O/C E/F protection	1	EASUN REYROLLE LTD., Schneider Electric, P122	2006			
		3-Phase Circuit Breaker				BHEL	2006	
		LA	3			Crompton Greaves CO. LTD.	2006	
		1-Ph Current Transformer	3			02 nos. Vidhut Control system, 01 nos FLORAL Electrical Ltd.	2006	
	3-Ph Isolator with/without Earth switch	03 set	Kiran Textile Industries	2006				
	6	33KV Bus Coupler	Line control & relay panel with Distance protection & O/C E/F protection	1	EASUN REYROLLE LTD., Schneider Electric, P122	2006		
3-Phase Circuit Breaker				1			BHEL	2006
1-Ph PT				3			Universal Magnoflux (P) LTD.	2006
LA				N/A				
1-Ph Current Transformer				3			S C T L td.	2018
3-Ph Isolator with/without Earth switch				04 set			Kiran Textile Industries	2006
<b>Other Sub-Station Equipments</b>								
7	Battery Charger	1	250 V	1	CALDYNE AUTOMATICS LTD	2006		
		2	250 V	1	CALDYNE AUTOMATICS LTD.	2006		
8	ACDB			2	MAKTEL SYSTEMS BARODA	2006		
9	DCDB(250V/48V)			250V-01	MAKTEL SYSTEMS BARODA	2006		



	DCDD(200V/70V)		48V-01	MANTEL SYSTEMS BARODA	2000	
10	Battery Bank	1	105	EXIDE	2006	
		2	106	HBL Power System	-----	
11	DG Set		100 KVA	1	GREAVES COTTON LTD.	2006
12	PLCC Equipment		1.Isolator	02 set		
			2.Battery Charger	1	BPL Telecom pvt. Ltd./PUNCOM	2006/2018
			3.Panel	1		
			4.Telephone	1		
13	Hydrant system with pipe arrangement		N/A	N/A	N/A	
14	Fire Fighting Equipments		Dry Powder Type-05	Nitin Fire Protection Industries LTD.		
			Carbon dioxide-08			
15	Earthing Rods		02 set			
16	Tools & Tackles(Spanners,Wrench, etc. (Set/ <u>Piece</u> ))		Spanners-08	Taparia		
			Wrench-07			
			Hammer-01			
			Screw driver-02			
			Hexwa frame with blade-01			
			Pipe wrench-01			
			Pliers-01			
			Nose pliers-01			
			Etc.			
17	Testing Equipments		Multimeter-01, Oil insulation test	FLUKE,		
				Siva Nanda,		
				Siva Nanda		
18	Safety Gear (Helmet, Gloves, Boot, etc.)		Halmet-10			
			Boot-02 pairs			
19	SST		01 (315 KV)	Kanohar Electronics LTD.	2006	
20	Spare Hardware Fitting.		PG Clamp-10			
			33KV Female contact-12			
			132KV Female contact-02			
			etc			

## GSS land assets details

GSS Name:- 132/33 kV Jakkanpur

Sl. No	LOCATION	
1	Name of GSS	132/33kv GSS JAKKANPUR
2	Located at ( Name of locality)	Near D.V.C. chowk, Jakkanpur, Patna-01
3	Block/Prakhand	Patna Sadar
4	Police Station (Thana)	Jakkanpur
5	Sub-Division	Patna Sadar
6	District	Patna
7	Transmission Division	Patna
8	Transmission Circle	Patna
9	GPS Co-ordinates	Latitude (North): 25.591, Longitude (East): 85.129
	<b>LAND DETAILS</b>	
10	Initial Area (In Acre)	3.03 Acre ( As per Najari Naksha)
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	No
	(ii) Private Land	Yes
	If Private Land, Whether	
	(i) Purchased	Yes ( as per local public)
	(ii) Acquired	
	(iii) Leased Land	
12	Year of Purchase/Acquisition	NA
13	Whether mutation completed	No
14	Cost of the Land (At the time of procurement)	
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	NA
16	If yes, Give details	No
17	Area of the extra land for GSS	NA
20	Cost	NA
21	Year of Purchase/lease of extra land	NA
	Total area at present	3.03 Acre ( As per Najari Naksha)
	Details of Land (Khata/Khesara)	Touji no. 588
	Thana No.	29
	Name of Municipality/Nagar Parishad etc.	Patna Nagar Nigam
	Ward No./Circle No./ Holding No.	Ward no. 17
	Amount of Early Land related Taxes	
22	Taxes clear up to	
	Land Records available with	

## GSS land assets details

GSS Name:- 132/33 kV Masaurhi

Sl. No	LOCATION	
1	Name of GSS	Masaurhi
2	Located at ( Name of locality)	Masaurhi
3	Block/Prakhand	Masaurhi
4	Police Station (Thana)	Masaurhi
5	Sub-Division	Masaurhi
6	District	Patna
7	Transmission Division	Patna
8	Transmission Circle	Patna
9	GPS Co-ordinates	25.3513'N , 85.0311'E
	<b>LAND DETAILS</b>	
10	Initial Area (In Acre)	4.1
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	Govt Land
	(ii) Private Land	
	If Private Land, Whether	
	(i) Purchased	
	(ii) Acquired	
	(iii) Leased Land	
12	Year of Purchase/Acquisition	NA
13	Whether mutation completed	NA
14	Cost of the Land (At the time of procurement)	NA
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	No
16	If yes, Give details	
17	Area of the extra land for GSS	
20	Cost	
21	Year of Purchase/lease of extra land	
	Total area at present	
	Details of Land (Khata/Khesara)	1621,1622,1623,1624(Plot Nos)
	Thana No.	152
	Name of Municipality/Nagar Parishad etc.	Masaurhi Nagar Parishad
	Ward No./Circle No./ Holding No.	NA
	Amount of Early Land related Taxes	
22	Taxes clear up to	
	Land Records available with	

## GSS land assets details

GSS Name:- 132/33 kV Katra

Sl. No	LOCATION	
1	Name of GSS	132/33kv GSS Katra
2	Located at ( Name of locality)	Abdul Rahmanpur Road ,Near Didarganj Check post, Patna City,Pin Code. 800008
3	Block/Prakhand	Patna Sadar
4	Police Station (Thana)	Malsalami
5	Sub-Division	Patna City
6	District	Patna
7	Transmission Division	Patna
8	Transmission Circle	Patna
9	GPS Co-ordinates	LAT: 25.573233, LONG:85.247819
	<b>LAND DETAILS</b>	
10	Initial Area (In Acre)	6.86acre
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	GOVT LAND
	(ii) Private Land	NO
	If Private Land, Whether	
	(i) Purchased	NA
	(ii) Acquired	NA
	(iii) Leased Land	
12	Year of Purchase/Acquisition	1999
13	Whether mutation completed	NO
14	Cost of the Land (At the time of procurement)	
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	NO
16	If yes, Give details	
17	Area of the extra land for GSS	NA
20	Cost	NA
21	Year of Purchase/lease of extra land	
	Total area at present	6.86acre
	Details of Land (Khata/Khesara)	1525,1526,1527,1528,1529,1530,1531,15 41,1542,1543, 1544,1545,1546,1547,1548,2954,2955,29 56,2957
	Thana No.	38
	Name of Municipality/Nagar Parishad etc.	Patna Nagar Nigam
	Ward No./Circle No./ Holding No.	Ward-71
	Amount of Early Land related Taxes	
22	Taxes clear up to	
	Land Records available with	

## GSS land assets details

GSS Name:- 220/132/33kV Fatuha

Sl. No	LOCATION	
1	Name of GSS	Fatuha
2	Located at ( Name of locality)	Industrial Area.
3	Block/Prakhand	Fatuha
4	Police Station (Thana)	Fatuha
5	Sub-Division	Fatuha
6	District	Patna
7	Transmission Division	Patna
8	Transmission Circle	Patna
9	GPS Co-ordinates	25.499(N),85.324517(E)
	LAND DETAILS	
10	Initial Area (In Acre)	-
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	Government Land(Biada)
	(ii) Private Land	No
	If Private Land, Whether	No
	(i) Purchased	No
	(ii) Acquired	No
	(iii) Leased Land	No
12	Year of Purchase/Acquisition	Not available.
13	Whether mutation completed	Not completed
14	Cost of the Land (At the time of procurement)	-
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	No
16	If yes, Give details	No
17	Area of the extra land for GSS	
20	Cost	-
21	Year of Purchase/lease of extra land	-
	Total area at present	17.30 Acre
	Details of Land (Khata/Khesara)	970,148/969,152/992,159/975P,195/952,198/974,199/971,89/964,57/972,-/960,-/993P
	Thana No.	23
	Name of Municipality/Nagar Parishad etc.	NA
	Ward No./Circle No./ Holding No.	NA
	Amount of Early Land related Taxes	
22	Taxes clear up to	
	Land Records available with	No any Land Records are available

## GSS land assets details

GSS Name:- 220/132/33 kV Gaurichak

Sl. No	LOCATION	
1	Name of GSS	Gaurichak
2	Located at ( Name of locality)	Gaurichak
3	Block/Prakhand	Sampatchak
4	Police Station (Thana)	Gaurichak
5	Sub-Division	Patna Sadar
6	District	Patna
7	Transmission Division	Patna
8	Transmission Circle	Patna
9	GPS Co-ordinates	Latitude=25°30.057'N Longitude=85°11.018'E
	<b>LAND DETAILS</b>	
10	Initial Area (In Acre)	29.115
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	
	(ii) Private Land	
	If Private Land, Whether	
	(i) Purchased	
	(ii) Acquired	Yes
	(iii) Leased Land	
12	Year of Purchase/Acquisition	2009
13	Whether mutation completed	A/F
14	Cost of the Land (At the time of procurement)	Jujharpur – `24,70,44,718.00 Kamarji – Not available
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	No
16	If yes, Give details	
17	Area of the extra land for GSS	NA
20	Cost	Not available
21	Year of Purchase/lease of extra land	
	Total area at present	29.115 Acre
	Details of Land (Khata/Khesara)	Mention in below
	Thana No.	136 for Mauja- Kamarji 128 for Mauja- Jujharpur
	Name of Municipality/Nagar Parishad etc.	
	Ward No./Circle No./ Holding No.	NA
	Amount of Early Land related Taxes	NA
22	Taxes clear up to	Not paid till date
	Land Records available with	DLAO, Patna

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DETAILS OF LAND ACQUIRED FOR 220/132/33KV GSS GAURI

Sl. no.	Mauja	Khata/Khesra
1	Jujharpur	1064
2		1067
3		1068
4		1069
5		1070
6		1075
7		1097
8		1174
9		1175
10		1176
11		1177
12		1178
13		1179
14		1180
15		1181
16		1182
17		1183
18		1184
19		1185
20		1186
21		1187
22		1188
23		1189
24		1191
25		1195
26		1196
27		1173 (1377)
28	Kamarji	1
29		7
30		23
31		26
32		28
33		29
34		30
35		31
36		32
37		34
38		35



39
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36
363
364
365
366
367
368
370





CHAK	
Rakwa (in acre)	Remarks (Part or full)
1.4	P
0.31	F
0.22	F
0.68	F
0.32	P
0.9	P
0.18	P
2.79	P
3.96	P
0.35	F
0.32	F
1.89	F
0.89	F
0.52	F
0.51	F
1.28	F
1.23	F
1.16	F
1.36	F
0.65	F
0.62	F
0.77	F
0.24	P
0.04	P
0.4	P
0.38	P
1.24	P
24.61	
0.4	P
0.2	P
0.02	P
0.06	P
0.05	P
0.055	P
0.31	F
0.09	P
0.09	P
0.46	P
0.37	F

0.68	P
0.09	P
0.35	P
0.2	F
0.16	F
0.37	F
0.17	F
0.38	F
4.505	

GSS land assets details		
GSS Name:- 132/33 kV Bihta		
Sl. No	LOCATION	
1	Name of GSS	132/33KV GSS Bihta
2	Located at ( Name of locality)	Village- Patsa
3	Block/Prakhand	Bihta
4	Police Station (Thana)	Bihta
5	Sub-Division	Danapur
6	District	PATNA
7	Transmission Division	KHAGAUL
8	Transmission Circle	PATNA
9	GPS Co-ordinates	LAT-25.576577LONG-84.888668
LAND DETAILS		
10	Initial Area (In Acre)	9 .60 Acr.
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	GOVT LAND (AGRICULTURE DEPARTMENT)
	(ii) Private Land	NO
	If Private Land, Whether	
	(i) Purchased	NA
	(ii) Acquired	NA
	(iii) Leased Land	
12	Year of Purchase/Acquisition	2003
13	Whether mutation completed	Application submitted
14	Cost of the Land (At the time of procurement)	Rs. 4536000.00
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	No
16	If yes, Give details	
17	Area of the extra land for GSS	NA
20	Cost	NA
21	Year of Purchase/lease of extra land	NA
	Total area at present	9.60 Acr.
	Details of Land (Khata/Khesara)	Detail attached below
	Thana No.	59
	Name of Municipality/Nagar Parishad etc.	N/A
	Ward No./Circle No./ Holding No.	N/A
	Amount of Early Land related Taxes	
22	Taxes clear up to	
	Land Records available with	



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GSS land assets details		
GSS Name:- 132/33 kV Gaighat		
Sl. No	LOCATION	
1	Name of GSS	Gaighat
2	Located at ( Name of locality)	Patna
3	Block/Prakhand	Patna sadar
4	Police Station (Thana)	Alamganj
5	Sub-Division	Patna city
6	District	Patna
7	Transmission Division	Khagaul
8	Transmission Circle	Patna
9	GPS Co-ordinates	25.607N,85.8974E
	LAND DETAILS	
10	Initial Area (In Acre)	1Acre87.75decimal
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	-
	(ii) Private Land	-
	If Private Land, Whether	-
	(i) Purchased	-
	(ii) Acquired	From RCD.
	(iii) Leased Land	
12	Year of Purchase/Acquisition	Not available.
13	Whether mutation completed	NO
14	Cost of the Land (At the time of procurement)	Not available.
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	NO
16	If yes, Give details	NO
17	Area of the extra land for GSS	

20	Cost	
21	Year of Purchase/lease of extra land	
	Total area at present	1Acre 87.75decimal
	Details of Land (Khata/Khesara)	3039,40,41,48,50,51,52,85,86,87,88,89,90,91,92,93,95,96,97,98
	Thana No.	11
	Name of Municipality/Nagar Parishad etc.	PMC
	Ward No./Circle No./ Holding No.	54
	Amount of Early Land related Taxes	NA
22	Taxes clear up to	NA
	Land Records available with	Only khatiyani.



## GSS land assets details

GSS Name:- 132/33 kV Mithapur

Sl. No	LOCATION	
1	Name of GSS	132/33KV GSS MITHAPUR
2	Located at ( Name of locality)	NEAR MITHAPUR BUS STAND
3	Block/Prakhand	PATNA SADAR
4	Police Station (Thana)	JAKKANPUR
5	Sub-Division	PATNA SADAR
6	District	PATNA
7	Transmission Division	KHAGAUL
8	Transmission Circle	PATNA
9	GPS Co-ordinates	LAT-25.585659, LONG-85.131152
	LAND DETAILS	
10	Initial Area (In Acre)	4 ACRE 20 DEC.
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	GOVT LAND (AGRICULTURE DEPARTMENT)
	(ii) Private Land	NO
	If Private Land, Whether	
	(i) Purchased	NA
	(ii) Acquired	NA
	(iii) Leased Land	
12	Year of Purchase/Acquisition	1991
13	Whether mutation completed	NO
14	Cost of the Land (At the time of procurement)	
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	NO
16	If yes, Give details	
17	Area of the extra land for GSS	-
20	Cost	-
21	Year of Purchase/lease of extra land	-
	Total area at present	4 ACRE 20 DEC.
	Details of Land (Khata/Khesara)	KHATANO-119/PLOT NO-409
	Thana No.	27
	Name of Municipality/Nagar Parishad etc.	PATNA NAGAR NIGAM
	Ward No./Circle No./ Holding No.	WARD-30/KANKARBAGH CIRCLE/
	Amount of Early Land related Taxes	
22	Taxes clear up to	
	Land Records available with	

## GSS land assets details

GSS Name:- 220/132/33 kV Khagaul

Sl. No	LOCATION	
1	Name of GSS	Khagaul
2	Located at ( Name of locality)	Near srari Railway crossing
3	Block/Prakhand	Danapur
4	Police Station (Thana)	sahpur
5	Sub-Division	Danapur
6	District	patna
7	Transmission Division	khagaul
8	Transmission Circle	patna
9	GPS Co-ordinates	Lat-25.579693, long-85.01747
	LAND DETAILS	
10	Initial Area (In Acre)	10.10 Acr
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	
	(ii) Private Land	Yes
	If Private Land, Whether	
	(i) Purchased	Yes
	(ii) Acquired	
	(iii) Leased Land	
12	Year of Purchase/Acquisition	1987
13	Whether mutation completed	
14	Cost of the Land (At the time of procurement)	
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	
16	If yes, Give details	Nil
17	Area of the extra land for GSS	
20	Cost	
21	Year of Purchase/lease of extra land	
	Total area at present	10.10Acr
	Details of Land (Khata/Khesara)	281/1552, 250/1554,279/1555,274/1556, 271/1557,274/1558,277/1559,297/1560, 290/1561 279/1562,274/1563,133/1564,129/1571, 149/1572, 120/1573,254/1574,262/1575,249/1576, 254/1578, 258/1579,253/1580,131/1581,254/1582, 262/1583 161/1584, /1583
	Thana No.	44
	Name of Municipality/Nagar Parishad etc.	sarari
	Ward No./Circle No./ Holding No.	
	Amount of Early Land related Taxes	
22	Taxes clear up to	
	Land Records available with	

## GSS land assets details

GSS Name:- 132/33kV Digha

Sl. No	LOCATION	
1	Name of GSS	132/33 KV Grid Sub-station, Digha
2	Located at ( Name of locality)	Digha
3	Block/Prakhand	Patna Sadar
4	Police Station (Thana)	Digha
5	Sub-Division	Patna Sadar
6	District	Patna
7	Transmission Division	Khagaul
8	Transmission Circle	Patna
9	GPS Co-ordinates	(25°38'53.77''N,85°4'55.14''E)
	LAND DETAILS	
10	Initial Area (In Acre)	2.1551 Acre
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	Yes
	(ii) Private Land	-
	If Private Land, Whether	NA
	(i) Purchased	-
	(ii) Acquired	-
	(iii) Leased Land	-
12	Year of Purchase/Acquisition	Not available
13	Whether mutation completed	No
14	Cost of the Land (At the time of procurement)	Not available
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	No
16	If yes, Give details	
17	Area of the extra land for GSS	NA
20	Cost	NA
21	Year of Purchase/lease of extra land	NA
	Total area at present	2.1551 Acre
	Details of Land (Khata/Khesara)	Khesara No. 1782
	Thana No.	1
	Name of Municipality/Nagar Parishad etc.	Patna
	Ward No./Circle No./ Holding No.	Ward no:01, Circle No: Not available, Holding No: Not available
	Amount of Early Land related Taxes	Not available
22	Taxes clear up to	Not available
	Land Records available with	

## GSS land assets details

GSS Name:- 132/33kV Karbigahia

Sl. No	LOCATION	
1	Name of GSS	Karbigahia
2	Located at ( Name of locality)	Patna
3	Block/Prakhand	Patna sadar
4	Police Station (Thana)	Jakkanpur
5	Sub-Division	Patna sadar
6	District	Patna
7	Transmission Division	Khagaul
8	Transmission Circle	Patna
9	GPS Co-ordinates	25.600,85.13
	<b>LAND DETAILS</b>	
10	Initial Area (In Acre)	NA
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	Govt.land
	(ii) Private Land	-
	If Private Land, Whether	-
	(i) Purchased	-
	(ii) Acquired	
	(iii) Leased Land	
12	Year of Purchase/Acquisition	Not available.
13	Whether mutation completed	NO
14	Cost of the Land (At the time of procurement)	Not available.
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	No
16	If yes, Give details	
17	Area of the extra land for GSS	-
20	Cost	-
21	Year of Purchase/lease of extra land	-
	Total area at present	NA
	<b>Details of Land (Khata/Khesara)</b>	
	Thana No.	27,21,20,19
	Name of Municipality/Nagar Parishad etc.	Patna nagar nigam
	Ward No./Circle No./ Holding No.	NA
	Amount of Early Land related Taxes	NA
22	Taxes clear up to	NA
	Land Records available with	

## GSS land assets details

GSS Name:- 132/33kVHathidah

Sl. No	LOCATION	
1	Name of GSS	Hathidah
2	Located at ( Name of locality)	HathidahBujurg ,patna
3	Block/Prakhand	Mokama
4	Police Station (Thana)	Hathidah No-20
5	Sub-Division	Barh
6	District	Patna
7	Transmission Division	Patna
8	Transmission Circle	Patna
9	GPS Co-ordinates	Lat-25.365336,long-85.990570
	<b>LAND DETAILS</b>	
10	Initial Area (In Acre)	11.266 Acre
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	Yes
	(ii) Private Land	
	If Private Land, Whether	
	(i) Purchased	
	(ii) Acquired	
	(iii) Leased Land	
12	Year of Purchase/Acquisition	NA
13	Whether mutation completed	Yes
14	Cost of the Land (At the time of procurement)	NA
15	Whether more land was purchased /acquired/ Leased in for GSS Extension work?	yes
16	If yes, Give details	
17	Area of the extra land for GSS	0.4202 Acre
20	Cost	Rs 18,15,726.00
21	Year of Purchase/lease of extra land	NA
	Total area at present	11.6862Acre
	Details of Land (Khata/Khesara)	5087
	Thana No.	Thana no-20 &500
	Name of Municipality/Nagar Parishad etc.	-
	Ward No./Circle No./ Holding No.	Ward no-05
	Amount of Early Land related Taxes	NA
22	Taxes clear up to	NA
	Land Records available with	NA