

**Details of Existing Equipment**

Name of Circle: BIHARSHARIF

Name of GSS: 132/33 KV GSS BARIPAHARI

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			
			3 Phase Circuit Breaker			
			1-Ph CVT			
			LA			
			1-Ph Current Transformer			
	2nd bay..		3 Phase Isolator with/without Earth switch			
			Line control & relay panel with Distance protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			1-Ph CVT			
			LA			
220/132 KV Transformer bay(HV)	1st bay..		1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
			Transformer control & relay panel with Differential protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			LA			
220/132 KV Transformer bay(LV)			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
			Transformer control & relay panel with Differential protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			LA			
220 KV Buscoupler bay			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
			Line control & relay panel with Distance protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			1 Ph PT			

		3 Phase Isolator with/without Earth switch			
132 KV Line bay	132KV Biharsharif- Baripahari Line circuit 1	Line control & relay panel with Distance protection & O/C E/F protection	1	Areva	2010
		3 Phase Circuit Breaker	1	Areva	2010
		1 Ph CVT			
		LA	3	EMP Electric limi	2010
		1-Ph Current Transformer	3	Vijay electricals	2010
	132KV Biharsharif- Baripahari Line circuit 2	3 Phase Isolator with/without Earth switch	3	Siemens	2010
		Line control & relay panel with Distance protection & O/C E/F protection	1	Areva	2010
		3 Phase Circuit Breaker	1	Areva	2010
		1 Ph CVT			
		LA	3	EMP Electric limi	2010
132/33 KV Transformer bay(HV)	132KV Baripahari- Harnaut Line	1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator with/without Earth switch	3	Siemens	2010
		Line control & relay panel with Distance protection & O/C E/F protection	1	Areva	2010
		3 Phase Circuit Breaker	1	Areva	2010
		1 Ph CVT			
	50 MVA 132KV Kanohar Transformer Bay	LA	3	EMP Electric limited	2010
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator without Earth switch	3	Siemens	2016
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	Areva	2016
		3 Phase Circuit Breaker	1	Areva	2016
132/33 KV Transformer bay(LV)	50 MVA 132KV Arenva Transformer Bay	LA	3	EMP Electric limited	
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator without Earth switch	3	Siemens	2010
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	Areva	2010
		3 Phase Circuit Breaker	1	Areva	2010
		LA	3	EMP Electric limited	
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator without Earth switch	3	Siemens	2010

		Transformer control & relay panel with Differential protection & O/C E/F protection		1 Areva	2004
		3 Phase Circuit Breaker		1 Areva	2010
		LA		EMP Electric limited	
		1-Ph Current Transformer		3 Vijay electricals	2010
		3 Phase Isolator without Earth switch		3 Siemens	2010
		Transformer control & relay panel with Differential protection & O/C E/F protection		1 AREVA	2016
		3 Phase Circuit Breaker		1 Alind switchgear	2016
		LA		Lamco Industries	2016
		1-Ph Current Transformer		3 Vijay electricals	2016
		3 Phase Isolator without Earth switch		3 Siemens	2016
		Transformer control & relay panel with Differential protection & O/C E/F protection		1 AREVA	2010
		3 Phase Circuit Breaker		1 AREVA	2010
		LA		Lamco Industries	2017
		1-Ph Current Transformer		3 Vijay electricals	2010
		3 Phase Isolator with/without Earth switch		3 Siemens	2010
		Transformer control & relay panel with Differential protection & O/C E/F protection		1 AREVA	2010
		3 Phase Circuit Breaker		1 AREVA	2010
		LA		Lamco Industries	2010
		1-Ph Current Transformer		3 Vijay electricals	2010
		3 Phase Isolator with/without Earth switch		3 Siemens	2010
		Line control & relay panel with Distance protection & O/C E/F protection		1 AREVA	2010
		3 Phase Circuit Breaker		1 AREVA	2010
		1 Ph PT			
		LA		Lamco Industries	2010
		1-Ph Current Transformer		3 Vijay electricals	2010
		3 Phase Isolator with/without Earth switch		3 Siemens	2010
		Line control & relay panel with O/C E/F protection		1 AREVA	2010
		3 Phase Circuit Breaker		1 AREVA	2010

		LA	3	Lamco Industries	2010
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator with/without Earth switch	3	Siemens	2010
		Line control & relay panel with O/C E/F protection	1	AREVA	2010
		3 Phase Circuit Breaker	1	AREVA	2010
		LA	3	Lamco Industries	2010
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator with/without Earth switch	3	Siemens	2010
		Line control & relay panel with O/C E/F protection	1	AREVA	2010
		3 Phase Circuit Breaker	1	STELMEC	2017
		LA	3	Lamco Industries	2010
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator with/without Earth switch	3	Siemens	2010
		Line control & relay panel with O/C E/F protection	1	AREVA	2010
		3 Phase Circuit Breaker	1	AREVA	2010
		LA	3	Lamco Industries	2010
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator with/without Earth switch	3	Siemens	2010
		Line control & relay panel with O/C E/F protection	1	AREVA	2010
		3 Phase Circuit Breaker	1	AREVA	2010
		LA	3	Lamco Industries	2010
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator with/without Earth switch	3	Siemens	2010
		Line control & relay panel with O/C E/F protection	1	AREVA	2010
		3 Phase Circuit Breaker	1	STELMEC	2017
		LA	3	Lamco Industries	2010
		1-Ph Current Transformer	3	Vijay electricals	2010
		3 Phase Isolator with/without Earth switch	3	Siemens	2010

33 KV Buscoupler		Line control & relay panel with Distance protection & O/C E/F protection		1 AREVA	2010
		3 Phase Circuit Breaker		1 AREVA	2010
		1 Ph PT		3 TATA	
		LA		3 Lamco Industries	2010
		1-Ph Current Transformer		3 Vijay electricals	2018
		3 Phase Isolator with/without Earth switch		3 Siemens	2010

**Other Substation Equipments -**

Battery Charger	1(250V)	1	ABZ Electric Ltd	2016
		1	HBL	2010
		1	HBL	
	ACDB	1	AIM eng. Ltd	2011
		1	JASPER ENGINEER	2010
	DCDB(110V/48V)	1	JASPER ENGINEER	2010
	DCDB(110V/48V)	1	Maktel System	2016
	Battery bank	1	EXIDE	2016
		2	HBL	2010
	DG set	N/A		
PLCC Equipment	1.Isolator			
	2. Battery Charger			
	3. Panel		ABB, ABB, BPL,	
		4	PUNCOM	2017 & 2018
	4.telephone	2	BPL, BEETEL	2018
	Hydrant system with Pipe arrangement	N/A		
	Fire Fighting Equipment	16		2018
	Earthing Rods	6		2017
	Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)	2 SET		
	Testing Equipments(Fault locator machine)			
	MEGGER (5 KV)			
	BDB			
	Safety Gear(Helmet,Gloves,Boot, etc.)	4		
	SST	1	Tesla	2009
	Spare Hardware Fitting.			

## Sample format for GSS land assets

### GSS:- 132/33 KV GSS BARIPAHARI

	<b>LOCATION</b>	
01	Name of GSS	132/33 KV GSS Baripahari
02	Located at ( Name of locality)	Hospital Road Biharsharif
03	Block/Prakhand	Biharsharif
04	Police Station (Thana)	Lehri Thana
05	Sub-Division	Baripahari
06	District	Nalanda
07	Transmission Division	Biharsharif
08	Transmission Circle	Biharsharif
09	GPS Co-ordinates	Longitude 25.203deg Latitude 85.511 deg
	<b>LAND DETAILS</b>	
10	Initial Area (In Acre)	
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	
	(ii) Private Land	
	If Private Land, Whether	
	(i) Purchased	
	(ii) Acquired	
	(iii) Leased Land	
12	Year of Purchase/Acquisition	
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? If yes, Give details	No
16	Area of the extra land for GSS	NA
17	Cost	NA
20	Year of Purchase/lease of extra land	NA
21	Total area at present	
	Details of Land (Khata/Khesara)	
	Thana No.	
	Name of Municipality/Nagar Parishad etc.	
	Ward No./Circle No./ Holding No.	
	Amount of Early Land related Taxes	
	Taxes clear up to	
22	Land Records available with	

Nandita Jain  
 15/11/18  
 Assistant Executive Engineer  
 Transmission Sub-division Baripahari  
 Bihar Sharif

## Sample format for GSS land assets

### GSS:- 220/132/33KV GSS BIHARSHARIF

<b>LOCATION</b>	
01	Name of GSS
02	Located at ( Name of locality)
03	Block/Prakhand
04	Police Station (Thana)
05	Sub-Division
06	District
07	Transmission Division
08	Transmission Circle
09	GPS Co-ordinates
LAND DETAILS	
10	Initial Area (In Acre)
11	Whether it was:
(i)	A Govt. Land (State type GM or )
(ii)	Private Land
If Private Land, Whether	YES
(i)	Purchased
(ii)	Acquired
(iii)	Leased Land
12	Year of Purchase/Acquisition
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? If yes, Give details
16	Area of the extra land for GSS
17	Cost
20	Year of Purchase/lease of extra land
21	Total area at present
	Details of Land (Khata/Khesara)
	Thana No.
	Name of Municipality/Nagar Parishad etc.
	Ward No./Circle No./ Holding No.
	Amount of Early Land related Taxes
	Taxes clear up to
22	Land Records available with

1/2  
 15/11/18  
 AEE TSD  
 Biharsharif

**DETAILS OF EXISTING EQUIPMENTS AT 220/132/33KV GSS BIHARSHARIF**

<b>SL No.</b>	<b>Type of Bay</b>	<b>Name of the Bay</b>	<b>Equipment Name</b>	<b>Quantity</b>	<b>Make</b>	<b>Date of Commissioning</b>
		132KV BIHARSHARIF-BARIPAHARI CKT-1	control panel	1	ENGLISH ELECTRIC	1985
			Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
1	132KV LINE BAY		3 Phase Circuit Breaker	1	AREVA	9/6/2010
			1-Ph CVT	NA		
			LA	3	OBLUM	1991
			1-Ph Current Transformer	3	VIJYA ELECTRICALS	9/6/2010
			3 Phase Isolator with/without Earth switch	3	SIEMENS	9/6/2010
		132KV BIHARSHARIF-BARIPAHARI CKT-2	control panel	1	ENGLISH ELECTRIC	1985
			Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
2	132KV LINE BAY		3 Phase Circuit Breaker	1	AREVA	10/13/2010
			1-Ph CVT	1	SWITHG EAR	
			LA	3	LAMCO	2016
			1-Ph Current Transformer	3	VIJYA ELECTRICALS	10/13/2010
			3 Phase Isolator with/without Earth switch	3	SIEMENS	10/13/2010

		132KV BIHARSHARIF-HATHIDAH CKT-1	control panel	1	ENGLISH ELECTRIC	
			Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
	132KV LINE BAY 3		3 Phase Circuit Breaker	1	AREVA	10/27/2010
			1-Ph CVT	1	W.S.IND USTRY	
			LA	3	OBLUM	2010
			1-Ph Current Transformer	3	VIJYA ELECTRICALS	10/27/2010
			3 Phase Isolator with/without Earth switch	3	SIEMENS	10/27/2010
		132KV BIHARSHARIF-HATHIDAH CKT-2	control panel	1	ENGLISH ELECTRIC	1985
			Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
	132KV LINE BAY 4		3 Phase Circuit Breaker	1	CGL	2015
			1-Ph CVT	NA		
			LA	3	OBLUM	1990
			1-Ph Current Transformer	3	VIJYA ELECTRICALS	12/11/2010
			3 Phase Isolator with/without Earth switch	3	SIEMENS	12/11/2010
			control panel	1	ENGLISH ELECTRIC	1985

		Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	
	132KV LINE BAY 5	3 Phase Circuit Breaker	1	AREVA	12/28/2010
		1-Ph CVT	1	HITACHI	
		LA	3	OBLUM	12/28/2010
		1-Ph Current Transformer	3	VIJYA ELECTRICALS	12/28/2010
		3 Phase Isolator with/without Earth switch	3	SIEMENS	12/28/2010
		control panel	1	ENGLISH ELECTRIC	1985
		Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
	132KV LINE BAY 6	3 Phase Circuit Breaker	1	AREVA	2010
		1-Ph CVT	NA		
		LA	3	OBLUM	1992
		1-Ph Current Transformer	3	VIJYA ELECTRICALS	2010
		3 Phase Isolator with/without Earth switch	3	SIEMENS	2010
		control panel	1	AREVA	6/30/2010
		Relay panel with Distance protection & O/C E/F protection	1	AREVA	6/30/2010
	132KV LINE BAY 7	3 Phase Circuit Breaker	1	AREVA	6/30/2010
		1-Ph CVT	3	AREVA	6/30/2010
		LA	3	AREVA	6/30/2010
		1-Ph Current Transformer	3	AREVA	6/30/2010

		3 Phase Isolator with/without Earth switch	3	SIEMENS	6/30/2010
		control panel	1	AREVA	6/30/2010
		Relay panel with Distance protection & O/C E/F protection	1	AREVA	6/30/2010
	132KV LINE BAY 8	3 Phase Circuit Breaker	1	AREVA	6/30/2010
		1-Ph CVT	3	AREVA	6/30/2010
		LA	3	AREVA	6/30/2010
		1-Ph Current Transformer	3	AREVA	6/30/2010
		3 Phase Isolator with/without Earth switch	3	SIEMENS	6/30/2010
		control panel	1	SIEMENS	8/18/2009
		Relay panel with Distance protection & O/C E/F protection	1	SIEMENS	8/18/2009
	132KV LINE BAY 9	3 Phase Circuit Breaker	1	SIEMENS	8/18/2009
		1-Ph CVT	3	CGL	8/18/2009
		LA	3	CGL	8/18/2009
		1-Ph Current Transformer	3	CGL	8/18/2009
		3 Phase Isolator with/without Earth switch	3	SIEMENS	8/18/2009
		control Panel	1	ENGLISH ELECTRIC	1985
		relay panel with Differential protection & O/C E/F protection	NA	ENGLISH ELECTRIC	1985

10	132KV BUS COUPL ER BAY	132KV TRANSFER BUS COUPLER	3 Phase Circuit Breaker	1 AREVA 2010
			1-PH PT	3 CGL 2010
			LA	NA
			1-Ph Current Transformer	3 VIJYA ELECTRI CALS 2010
			3 Phase Isolator with/without Earth switch	3 SIEMENS 2010
			control Panel	1 AREVA 2/27/2010
			relay panel with Differential protection & O/C E/F protection	1 AREVA 2/27/2010
11	132/33 KV Transf ormer bay(HV)	20MVA TRANSFORMER(HV)	3 Phase Circuit Breaker	1 AREVA 2/27/2010
			LA	3 LAMCO 2/27/2010
			1-Ph Current Transformer	3 VIJYA ELECTRI CALS 2/27/2010
			3 Phase Isolator with/without Earth switch	3 SIEMENS 2/27/2010
			control Panel	1 AREVA 2/27/2010
			relay panel with Differential protection & O/C E/F protection	1 AREVA 2/27/2010
12	132/33 KV Transf ormer bay(LV)	20MVA TRANSFORMER(LV)	3 Phase Circuit Breaker	1 AREVA 2/27/2010
			LA	3 LAMCO 2017
			1-Ph Current Transformer	3 VIJYA ELECTRI CALS 2/27/2010

		3 Phase Isolator with/without Earth switch	3	SIEMENS	2/28/2010
		control panel	1	AREVA	2010
		Relay panel with Distance protection & O/C E/F protection	1	AREVA	2010
13	33KV FEEDER R	3 Phase Circuit Breaker	1	AREVA	2010
		LA	3	LAMCO	2017
		1-Ph Current Transformer	3	VIJYA ELECTRI CALS	2010
		3 Phase Isolator with/without Earth switch	3	SIEMENS	2010
		control panel	1	AREVA	3/3/2010
		Relay panel with Distance protection & O/C E/F protection	1	AREVA	3/3/2010
14	33KV BUS COUPL ER	3 Phase Circuit Breaker	1	AREVA	3/3/2010
		1-Ph PT	3	VIJYA ELECTRI CALS	3/3/2010
		LA	3	LAMCO	3/3/2010
		1-Ph Current Transformer	3	VIJYA ELECTRI CALS	3/3/2010
		3 Phase Isolator with/without Earth switch	3	SIEMENS	3/3/2010

DETAILS OF EXISTING EQUIPMENTS AT 220/132/33KV GSS BIHARSHARIF						
SL No.	Type of Bay	Name of the Bay	Equipment Name	Quantity	Make	Date of Commissioning
		220KV BIHARSHARIF-FATHUA CKT-1	control panel	1	ENGLISH ELECTRIC	1985
			Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
15	220KV LINE BAY		3 Phase Circuit Breaker	1	AREVA	7/31/2010
			1-Ph CVT	NA		
			LA	3	LAMCO	4/18/2017
			1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	7/31/2010
			3 Phase Isolator with/without Earth switch	4	SIEMENS	7/31/2010
		220KV BIHARSHARIF-FATHUA CKT-2	control panel	1	ENGLISH ELECTRIC	1985
			Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
16	220KV LINE BAY		3 Phase Circuit Breaker	1	AREVA	8/18/2010
			1-Ph CVT	NA		
			LA	3	LAMCO	8/18/2010
			1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	8/18/2010
			3 Phase Isolator with/without Earth switch	4	SIEMENS	8/18/2010
			control panel	1	ENGLISH ELECTRIC	1985

		Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
17	220KV LINE BAY	3 Phase Circuit Breaker	1	AREVA	6/16/2010
		1-Ph CVT	NA		
		LA	3	LAMCO	8/5/2017
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	6/16/2010
		3 Phase Isolator with/without Earth switch	4	SIEMENS	6/16/2010
		control panel	1	ENGLISH ELECTRIC	1985
		Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
18	220KV LINE BAY	3 Phase Circuit Breaker	1	AREVA	7/3/2010
		1-Ph CVT	2	CGL	1994
		LA	3	LAMCO	8/5/2017
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	7/3/2010
		3 Phase Isolator with/without Earth switch	4	SIEMENS	7/3/2010
		control panel	1	ENGLISH ELECTRIC	1985
		Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
19	220KV LINE BAY	3 Phase Circuit Breaker	1	SIEMENS	2005
		1-Ph CVT	NA		

		LA	3	LAMCO	7/26/2017
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	2010
		3 Phase Isolator with/without Earth switch	4	SIEMENS	2010
		control panel	1	SIEMENS	8/18/2009
		Relay panel with Distance protection & O/C E/F protection	1	SIEMENS	8/18/2009
20	220KV LINE BAY	220KV BIHARSHARIF-BEGUSARAI CKT-2	3 Phase Circuit Breaker	CGL	8/18/2009
		1-Ph CVT	3	BPL	8/18/2009
		LA	3	LAMCO	8/18/2009
		1-Ph Current Transformer	3	CGL	8/18/2009
		3 Phase Isolator with/without Earth switch	4	SIEMENS	8/18/2009
		control panel	1	ENGLISH ELECTRIC	1985
		Relay panel with Distance protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
21	220KV LINE BAY	220KV BIHARSHARIF-TTPS	3 Phase Circuit Breaker	AREVA	2010
		1-Ph CVT	1	CGL	1990
		LA	3	LAMCO	2017
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	2010
		3 Phase Isolator with/without Earth switch	4	SIEMENS	2010
		control panel	1	ENGLISH ELECTRIC	1985

		Relay panel with Distance protection & O/C E/F protection	<b>1</b>	ENGLISH ELECTRIC	
22	220KV LINE BAY	3 Phase Circuit Breaker	1	AREVA	9/12/2010
		1-Ph CVT	NA		
		LA	3	LAMCO	4/10/2017
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	9/12/2010
		3 Phase Isolator with/without Earth switch	4	SIEMENS	9/12/2010
		control panel	<b>1</b>	ENGLISH ELECTRIC	1985
		Relay panel with Distance protection & O/C E/F protection	<b>1</b>	ENGLISH ELECTRIC	1985
23	220KV LINE BAY	3 Phase Circuit Breaker	1	AREVA	2010
		1-Ph CVT	NA		
		LA	3	ELPRO	2002
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	2010
		3 Phase Isolator with/without Earth switch	4	SIEMENS	2010
		control panel	<b>1</b>	<b>ABB</b>	2004
		Relay panel with Distance protection & O/C E/F protection	<b>1</b>	<b>ABB</b>	2004
24	220KV LINE BAY	3 Phase Circuit Breaker	1	ABB	2013
		1-Ph CVT	1	ABB	2002
		LA	3	ELPRO	2002
		1-Ph Current Transformer	3	ALSTOM	2002

		3 Phase Isolator with/without Earth switch	4	ELPRO	2002
		control Panel	1	ENGLISH ELECTRIC	1985
		relay panel with Differential protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
	220/13 2 KV Transfo rmer bay(HV)	150MVA TRANSFORMER NO- 1(HV)	3 Phase Circuit Breaker	AREVA	
25			1		12/13/2011
		LA	3	LAMCO	2/23/2017
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	12/13/2011
		3 Phase Isolator with/without Earth switch	4	SIEMENS	12/13/2011
		control Panel	1	ENGLISH ELECTRIC	1985
		relay panel with Differential protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
	220/13 2 KV Transfo rmer bay(HV)	150MVA TRANSFORMER NO- 2(HV)	3 Phase Circuit Breaker		
26			1	AREVA	2010
		LA	3	LAMCO	2/27/2017
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	2010
		3 Phase Isolator with/without Earth switch	4	SIEMENS	2010
		control Panel	1	SIEMENS	3/31/2009

			relay panel with Differential protection & O/C E/F protection	1	SIEMENS	3/31/2009
27	220/13 2 KV Transfo rmer bay(HV)	150MVA TRANSFORMER NO- 3(HV)	3 Phase Circuit Breaker	1	SIEMENS	3/31/2009
			LA	3	CGL	3/31/2009
			1-Ph Current Transformer	3	CGL	3/31/2009
			3 Phase Isolator with/without Earth switch	4	SIEMENS	3/31/2009
			control Panel	1	ENGLISH ELECTRIC	1985
			relay panel with Differential protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985
28	220/13 2 KV Transfo rmer bay(LV)	150MVA TRANSFORMER NO- 1(LV)	3 Phase Circuit Breaker	1	AREVA	2010
			LA	3	LAMCO	2/23/2017
			1-Ph Current Transformer	3	VIJYA ELECTRIC ALS	2010
			3 Phase Isolator with/without Earth switch	4	SIEMENS	2010
			control Panel	1	ENGLISH ELECTRIC	1985
			relay panel with Differential protection & O/C E/F protection	1	ENGLISH ELECTRIC	1985

29	220/13 2 KV Transfo rmer bay(LV)	150MVA TRANSFORMER NO- 2(LV)	3 Phase Circuit Breaker	
			1	AREVA 3/13/2011
			LA	LAMCO 2/27/2017
			1-Ph Current Transformer	VIJYA ELECTRIC ALS 3/13/2011
			3 Phase Isolator with/without Earth switch	SIEMENS 3/13/2011
			control Panel	SIEMENS 3/31/2009
			relay panel with Differential protection & O/C E/F protection	SIEMENS 3/31/2009
30	220/13 2 KV Transfo rmer bay(LV)	150MVA TRANSFORMER NO- 3(LV)	3 Phase Circuit Breaker	
			1	SIEMENS 3/31/2009
			LA	CGL 3/31/2009
			1-Ph Current Transformer	CGL 3/31/2009
			3 Phase Isolator with/without Earth switch	SIEMENS 3/31/2009
			control Panel	ENGLISH ELECTRIC 1985
			relay panel with Differential protection & O/C E/F protection	ENGLISH ELECTRIC 1985
31	220KV BUS COUPL ER BAY	220KV MAIN BUS COUPLER	3 Phase Circuit Breaker	
			1	AREVA 10/2/2010
			LA	NA
			1-PH PT	CGL 10/2/2010

		1-Ph Current Transformer	6	VIJYA ELECTRIC ALS/MEH RU ELECTRIC ALS	2010/04-04-2017
		3 Phase Isolator with/without Earth switch	4	SIEMENS	10/2/2010
		control Panel	1	ENGLISH ELECTRIC	1985
		relay panel with Differential protection & O/C E/F protection	NA		1985
32	220KV BUS COUPL ER BAY	3 Phase Circuit Breaker	1	AREVA	2010
		LA	NA		
		1-PH PT	NA		
		1-Ph Current Transformer	3	VIJYA ELECTRIC ALS/SCT ELECTRIC ALS	2010/2013
		3 Phase Isolator with/without Earth switch	3	SIEMENS	2010

**Other Substation Equipments at 220/132/33KV GSS BIHARSHARIF**

**Date of  
Commissioning**

		<b>QUANTITY</b>	<b>MAKE</b>	<b>ng</b>
Battery Charger	1 2	300AH	2	AMRARAJA 5/20/2016
ACDB		4	SYSTEM CONTROL AUTOMATION/MAKTEL SYSTEM	20-11- 2017/2010
DCDB(110V/48V)		2		
Battery bank	1 2	300AH 500AH	EXIDE TAURUS	2016
DG set		2	100KVA- Jakson,40KV A-RUSTON	
PLCC Equipment	1.Isolator			
	2. Battery Charger		AMARARAJA /PEE Ltd.	
	3. Panel	5		
	4.telephone	9		
Hydrant system with Pipe arrangement		AVAILABLE	KRIOSKAR Ltd.	
Fire Fighting Equipment		31 CYLINDERS	DCP/CO2/FO AM TYPE	
Earthing Rods		6		
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		AVAILABLE		
Testing Equipments		DC EARTH FAULT TESTER- 1,OFFLINE FAULT LOCATOR- 1,MEGGER(5 KV)- 1,MULTIMET ER- 1,TOUNGE TESTER- 1,TOWER FOOTING RESISTANCE KIT-1	TAURUS/TA URUS/TAUR US/FLUKE/M OTWANI/TA URUS	
Safety Gear(Helmet,Gloves,Boot, etc.)		AVAILABLE		

	SST	2(315KVA)	EAST INDIA UDYOG Ltd.	
	Spare Hardware Fitting.	AVAILABLE		

**Details of Existing Equipment**

Name of Circle: Biharsharif

Name of GSS: 132/33 KV GSS Ekangarsarai

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			
			3 Phase Circuit Breaker			
			1-Ph CVT			
			LA			
			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
	2nd bay..		Line control & relay panel with Distance protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			1-Ph CVT			
			LA			
220/132 KV Transformer bay(HV)	1st bay..		1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
			Transformer control & relay panel with Differential protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			LA			
	2nd bay..		1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
220/132 KV Transformer bay(LV)	1st bay..		Transformer control & relay panel with Differential protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			LA			
			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
	220 KV Buscoupler bay		Line control & relay panel with Distance protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			1 Ph.PT			
			LA			
			1-Ph Current Transformer			

		3 Phase Isolator with/without Earth switch			
132 KV Line bay	Biharsharif	Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	21.12.2010
		3 Phase Circuit Breaker	1	ABB	21.12.2010
		1 Ph CVT	3	CGL	21.12.2010
		LA	3	CGL	21.12.2010
		1-Ph Current Transformer	3	CGL	21.12.2010
	Hulasganj	3 Phase Isolator with/without Earth switch	3	Siemens	21.12.2010
		Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	21.12.2010
		3 Phase Circuit Breaker	1	ABB	21.12.2010
		1 Ph CVT	3	CGL	21.12.2010
		LA	3	CGL	21.12.2010
132/33 KV Transformer bay(HV)	Transformer No.- 1	1-Ph Current Transformer	3	CGL	21.12.2010
		3 Phase Isolator with/without Earth switch	3	Siemens	21.12.2010
	Transformer no.- 2	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	21.12.2010
		3 Phase Circuit Breaker	1	ABB	21.12.2010
		LA	3	CGL	21.12.2010
	Transformer No.-3	1-Ph Current Transformer	3	CGL	21.12.2010
		3 Phase Isolator with/without Earth switch	3	Siemens	21.12.2010
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	System Control and Automation Pvt. Ltd.	07.10.2015
		3 Phase Circuit Breaker	1	CGL	07.10.2015
		LA	3	CGL	07.10.2015
		1-Ph Current Transformer	3	SCT Ltd.	07.10.2015
		3 Phase Isolator with/without Earth switch	3	P R Engineering Works	07.10.2015
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	21.12.2010

		Transformer No.- 1	3 Phase Circuit Breaker	1	ABB	21.12.2010
			LA	3	CGL	21.12.2010
			1-Ph Current Transformer	3	CGL	21.12.2010
			3 Phase Isolator with/without Earth switch	3	Siemens	21.12.2010
132/33 KV Transformer bay(LV)		Transformer No.- 2	Transformer control & relay panel with Differential protection & O/C E/F protection	1	ABB	21.12.2010
			3 Phase Circuit Breaker	1	ABB	21.12.2010
			LA	3	CGL	21.12.2010
			1-Ph Current Transformer	3	CGL	21.12.2010
			3 Phase Isolator with/without Earth switch	3	Siemens	21.12.2010
		Transformer No.- 3	Transformer control & relay panel with Differential protection & O/C E/F protection	1	System Control and Automation Pvt. Ltd.	07.10.2015
			3 Phase Circuit Breaker	1	CGL	07.10.2015
			LA	3	CGL	07.10.2015
			1-Ph Current Transformer	3	SCT Ltd.	07.10.2015
			3 Phase Isolator with/without Earth switch	3	P R Engineering Works	07.10.2015
132 KV Bus coupler bay			Line control & relay panel with Distance protection & O/C E/F protection	1	ABB	21.12.2010
			3 Phase Circuit Breaker	1	ABB	21.12.2010
			1 Ph PT	3	CGL	21.12.2010
			LA	Nil		
			1-Ph Current Transformer	3	CGL	21.12.2010
			3 Phase Isolator with/without Earth switch	2	Siemens	21.12.2010
		Islampur	Line control & relay panel with O/C E/F protection	1	ABB	21.12.2010
			3 Phase Circuit Breaker	1	CGL	10.05.2016
			LA	3	CGL	21.12.2010
			1-Ph Current Transformer	3	CGL	21.12.2010
			3 Phase Isolator with/without Earth switch	3	Siemens	21.12.2010
		Hilsa	Line control & relay panel with O/C E/F protection	1	ABB	21.12.2010
			3 Phase Circuit Breaker	1	ABB	21.12.2010
			LA	3	CGL	21.12.2010
			1-Ph Current Transformer	3	CGL	21.12.2010
			3 Phase Isolator with/without Earth switch	3	Siemens	21.12.2010
33 KV Feeder			Line control & relay panel with O/C E/F protection	1	ABB	21.12.2010

33 KV Bus coupler	Ekangarsarai	3 Phase Circuit Breaker	1	ABB
		LA	3	CGL
		1-Ph Current Transformer	3	CGL
		3 Phase Isolator with/without Earth switch	3	Siemens
	Telhara	Line control & relay panel with O/C E/F protection	1	ABB
		3 Phase Circuit Breaker	1	ABB
		LA	3	CGL
		1-Ph Current Transformer	3	CGL
		3 Phase Isolator with/without Earth switch	3	Siemens

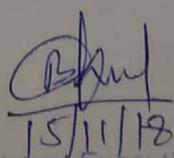
**Other Substation Equipments -**

	Battery Charger	1		1	Amara Raja	21.12.2010
		2		1	Amara Raja	21.12.2010
	ACDB			1	vikas engineering Associate	21.12.2010
	DCDB(110V/48V)			2 (1/1)	vikas engineering Associate	21.12.2010
	Battery bank	1		1	Amara Raja	21.12.2010
		2		1	Amara Raja	21.12.2010
	DG set			1	Powerica Ltd.	21.12.2010
PLCC Equipment	1.Isolator			Nil		
	2. Battery Charger			1	Amara Raja	21.12.2010
	3. Panel			2	PUNCOM	26.09.2018
	4.telephone			1	Beetel	26.09.2018
	Hydrant system with Pipe arrangement			Nil		
	Fire Fighting Equipment		30		Zenith	3/13/2018
	Earthing Rods		6			
	Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		1 Set		Taparia	
	Testing Equipments		1		Multimeter (Fluke)	
	Safety Gear(Helmet,Gloves,Boot, etc.)		15		Crystal	
	SST		1		Vijay Electricals Ltd.	21.12.2010
	Spare Hardware Fitting.		12			

## Information about GSS land assets

### GSS:- 132/33 KV GSS Ekangarsarai

LOCATION	
01	Name of GSS
02	Located at ( Name of locality)
03	Block/Prakhand
04	Police Station (Thana)
05	Sub-Division
06	District
07	Transmission Division
08	Transmission Circle
09	GPS Co-ordinates
LAND DETAILS	
10	Initial Area (In Acre)
11	Whether it was:
	(i) A Govt. Land (State type GM or )
	(ii) Private Land
	If Private Land, Whether
	(i) Purchased
	(ii) Acquired
	(iii) Leased Land
12	Year of Purchase/Acquisition
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? If yes, Give details
16	Area of the extra land for GSS
17	Cost
20	Year of Purchase/lease of extra land
21	Total area at present
	Details of Land (Khata/Khesara)
	Thana No.
	Name of Municipality/Nagar Parishad etc.
	Ward No./Circle No./ Holding No.
	Amount of Early Land related Taxes
	Taxes clear up to
22	Land Records available with

  
 15/11/18  
 Assistant Executive Engineer  
 Transmission Sub Division  
 Ekangarsarai (Nalanda)

**Details of Existing Equipment**

Name of Circle: Biharsharif

Name of GSS: 132/33KV GSS Harnaut.

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	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
			1-Ph CVT	N.A	N.A	N.A
			LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
			3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
				N.A	N.A	N.A
	2nd bay..		Line control & relay panel with Distance protection & O/C E/F protection	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
			1-Ph CVT	N.A	N.A	N.A
			LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
220/132 KV Transformer bay(HV)	1st bay..		3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
			Transformer control & relay panel with Differential protection & O/C E/F protection	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
			LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
			3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
220/132 KV Transformer bay(LV)			Transformer control & relay panel with Differential protection & O/C E/F protection	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
			LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
			3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
220 KV Buscoupler bay			Line control & relay panel with Distance protection & O/C E/F protection	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
			1 Ph PT	N.A	N.A	N.A
			LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
			3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
			Line control & relay panel with Distance protection & O/C E/F protection	1	AREVA	2012

132 KV Line bay	132KV Baripahari-Harnaut Line	3 Phase Circuit Breaker	<b>1</b>	AREVA	2012
		1 Ph CVT	<b>3</b>	AREVA	2012
		LA	<b>3</b>	AREVA	2012
		1-Ph Current Transformer	<b>3</b>	AREVA	2012
		3 Phase Isolator with/without Earth switch	<b>3</b>	Semens India Ltd.	2012
	132KV Fatuha-Harnaut Line	Line control & relay panel with Distance protection & O/C E/F protection	<b>1</b>	AREVA	2012
		3 Phase Circuit Breaker	<b>1</b>	AREVA	2012
		1 Ph CVT	<b>3</b>	AREVA	2012
		LA	<b>3</b>	AREVA	2012
		1-Ph Current Transformer	<b>3</b>	AREVA	2012
132/33 KV Transformer bay(HV)	20 MVA 132KV Transformar NO-01	Transformer control & relay panel with Differential protection & O/C E/F protection	<b>1</b>	AREVA	2012
		3 Phase Circuit Breaker	<b>1</b>	AREVA	2012
		LA	<b>3</b>	AREVA	2012
		1-Ph Current Transformer	<b>3</b>	AREVA	2012
		3 Phase Isolator with/without Earth switch	<b>2</b>	Semens India Ltd.	2012
	20 MVA 132KV Transformar NO-02	Transformer control & relay panel with Differential protection & O/C E/F protection	<b>1</b>	AREVA	2012
		3 Phase Circuit Breaker	<b>1</b>	AREVA	2012
		LA	<b>3</b>	AREVA	2012
		1-Ph Current Transformer	<b>3</b>	AREVA	2012
		3 Phase Isolator with/without Earth switch	<b>3</b>	Semens India Ltd.	2012
132/33 KV Transformer bay(LV)	20 MVA 33KV Transformar Bay NO-01	Transformer control & relay panel with Differential protection & O/C E/F protection	<b>1</b>	AREVA	2012
		3 Phase Circuit Breaker	<b>1</b>	AREVA	2012
		LA	<b>3</b>	AREVA	2012
		1-Ph Current Transformer	<b>3</b>	AREVA	2012
		3 Phase Isolator with/without Earth switch	<b>3</b>	Semens India Ltd.	2012
	20 MVA 33KV Transformar Bay NO-02	Transformer control & relay panel with Differential protection & O/C E/F protection	<b>1</b>	AREVA	2012
		3 Phase Circuit Breaker	<b>1</b>	AREVA	2012
		LA	<b>3</b>	AREVA	2012
		1-Ph Current Transformer	<b>3</b>	AREVA	2012
		3 Phase Isolator with/without Earth switch	<b>3</b>	Semens India Ltd.	2012
		Line control & relay panel with Distance protection & O/C E/F protection	<b>1</b>	AREVA	2012

		3 Phase Circuit Breaker	1	AREVA	2012
		1 Ph PT	3	AREVA	2012
		LA	N.A	N.A	2012
		1-Ph Current Transformer	3	AREVA	2012
		3 Phase Isolator with/without Earth switch	2	Semens India Ltd.	2012
		Line control & relay panel with O/C E/F protection	1	AREVA	2012
		3 Phase Circuit Breaker	1	AREVA	2012
		LA	3	AREVA	2012
		1-Ph Current Transformer	3	Laxmi Engineering	2012
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2012
		Line control & relay panel	1	AREVA	2012
		3 Phase Circuit Breaker	1	AREVA	2012
		LA	3	AREVA-2 ELEKTROLITES -1	2,01,22,018
		1-Ph Current Transformer	3	Laxmi Engineering	2012
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2012
		Line control & relay panel with O/C E/F protection	1	AREVA	2012
		3 Phase Circuit Breaker	1	AREVA	2012
		LA	3	AREVA	2012
		1-Ph Current Transformer	3	Laxmi Engineering	2012
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2012
		Line control & relay panel with O/C E/F protection	1	AREVA	2012
		3 Phase Circuit Breaker	1	AREVA -2012 Stelmec - 2016	
		LA	3	AREVA-1 ELEKTROLITES -2	2012 ,2018
		1-Ph Current Transformer	3	Laxmi Engineering	2012
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2012
		Line control & relay panel with Distance protection & O/C E/F protection	1	AREVA	2012
		3 Phase Circuit Breaker	1	AREVA	2012
		1 Ph PT	3	Laxmi Engineering	2012
		LA	N.A	N.A	2012
		1-Ph Current Transformer	3	Laxmi Engineering	2012
		3 Phase Isolator with/without Earth switch	2	Semens India Ltd.	2012
	Battery Charger	1		AZ Electronics	2017
		2		HBL Power Pvt.ltd	2012

ACDB		<b>4</b>	Jasper Engineering	<b>2012</b>
DCDB(110V/48V)		<b>2</b>	Jasper Engineering	<b>2012</b>
Battery bank	1	<b>1</b>	HBL Power Pvt.ltd	<b>2012</b>
	2	<b>1</b>	HBL Power Pvt.ltd	<b>2012</b>
DG set		<b>1</b>	Jakson Ltd	<b>2012</b>
PLCC Equipment	1.Isolator			<b>2012</b>
	2. Battery Charger	<b>2</b>	HBL Power Pvt.ltd	<b>2012</b>
	3. Panel	<b>4</b>	BPL	<b>2012</b>
	4.telephone			
Hydrant system with Pipe arrangement		<b>N.A</b>	N.A	<b>N.A</b>
Fire Fighting Equipment		<b>24</b>		<b>2018(Refiling)</b>
Earthing Rods		<b>3</b>		
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		<b>13</b>		
Testing Equipments		<b>2</b>		
Safety Gear(Helmet,Gloves,Boot, etc.)		<b>9</b>		
SST		<b>1</b>	Tesla	<b>2012</b>
Spare Hardware Fitting.		<b>28 Nos.</b>		

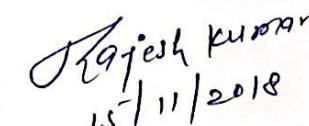
Rajesh Kumar

A.Ex.E/TSD/Harnaut

## Format for GSS land assets

### GSS:- 132/33KV GSS Harnaut

LOCATION	
01	Name of GSS
02	Located at ( Name of locality)
03	Block/Prakhand
04	Police Station (Thana)
05	Sub-Division
06	District
07	Transmission Division
08	Transmission Circle
09	GPS Co-ordinates
LAND DETAILS	
10	Initial Area (In Acre)
11	Whether it was:
(i)	A Govt. Land (State type GM or )
(ii)	Private Land
If Private Land, Whether	
(i)	Purchased
(ii)	Acquired
(iii)	Leased Land
12	Year of Purchase/Acquisition
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? If yes, Give details
16	Area of the extra land for GSS
17	Cost
20	Year of Purchase/lease of extra land
21	Total area at present
	Details of Land (Khata/Khesara)
	Khesara No. 728, 729, 704
	Thana No.
	218
	Name of Municipality/Nagar Parishad etc.
	Cheran
	Ward No./Circle No./ Holding No.
	Amount of Early Land related Taxes
	Taxes clear up to
22	Land Records available with
	Not Available

  
 15/11/2018

Assistant Electrical Engineer  
 132/33 KV. Grid Sub. Station  
 Harnaut (Nalanda)

**Details of Existing Equipment**

Name of Circle: Biharsharif

Name of GSS: 132/33KV GSS Nalanda.

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	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
			1-Ph CVT	N.A	N.A	N.A
			LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
			3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
	2nd bay..			N.A	N.A	N.A
			Line control & relay panel with Distance protection & O/C E/F protection	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
			1-Ph CVT	N.A	N.A	N.A
220/132 KV Transformer bay(HV)	1st bay..		LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
			3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
			Transformer control & relay panel with Differential protection & O/C E/F protection	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
220/132 KV Transformer bay(LV)	1st bay..		LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
			3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
			Transformer control & relay panel with Differential protection & O/C E/F protection	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A
220 KV Buscoupler bay			LA	N.A	N.A	N.A
			1-Ph Current Transformer	N.A	N.A	N.A
			3 Phase Isolator with/without Earth switch	N.A	N.A	N.A
			Line control & relay panel with Distance protection & O/C E/F protection	N.A	N.A	N.A
			3 Phase Circuit Breaker	N.A	N.A	N.A

132 KV Line bay	132 KV BIHARSHARIF L-28 T/L Bay	Line control & relay panel with Distance protection & O/C E/F protection	1	AREVA	2013
		3 Phase Circuit Breaker	1	AREVA-1 CGL-1	2,01,32,015
		1 Ph CVT	3	AREVA	2013
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	AREVA	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
132 KV Line bay	132 KV Nalanda-BARHI L-28 T/L Bay	Line control & relay panel with Distance protection & O/C E/F protection	1	AREVA	2013
		3 Phase Circuit Breaker	1	AREVA-1 CGL-1	2,01,32,015
		1 Ph CVT	3	AREVA	2013
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	AREVA	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
132/33 KV Transformer bay(HV)	20 MVA 132KV AREVA Transformar NO-02	Transformer control & relay panel with Differential protection & O/C E/F protection	1	AREVA	2013
		3 Phase Circuit Breaker	1	AREVA	2013
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	AREVA	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	AREVA	2013
132/33 KV Transformer bay(HV)	20 MVA 132KV AREVA Transformar NO-02	3 Phase Circuit Breaker	1	AREVA	2013
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	AREVA	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	AREVA	2013
		3 Phase Circuit Breaker	1	AREVA	2013
132/33 KV Transformer bay(LV)	20 MVA 33KV AREVA Transformar Bay NO-01	LA	3	AREVA	2013
		1-Ph Current Transformer	3	AREVA	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	AREVA	2013
		3 Phase Circuit Breaker	1	AREVA	2013
		LA	3	AREVA	2013
132/33 KV Transformer bay(LV)	20 MVA 33KV	1-Ph Current Transformer	3	AREVA	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	AREVA	2013
		3 Phase Circuit Breaker	1	AREVA	2013
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	AREVA	2013

	AREVA Transformer Bay NO-02	3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
Substation Equipment	132 KV Buscoupler bay	Line control & relay panel with Distance protection & O/C E/F protection	1	AREVA	2013
		3 Phase Circuit Breaker	1	AREVA	2013
		1 Ph PT	3	AREVA	2013
		LA	N.A	N.A	N.A
		1-Ph Current Transformer	3	AREVA	2013
		3 Phase Isolator with/without Earth switch	2	Semens India Ltd.	2013
33 KV Feeder	33 KV NALANDA	Line control & relay panel with O/C E/F protection	1	AREVA	2013
		3 Phase Circuit Breaker	1	AREVA-3 Stelmec-1	2013 2016
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	Laxmi Engineering	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
		Line control & relay panel	1	AREVA	2013
33 KV Feeder	33 KV RAITER	3 Phase Circuit Breaker	1	AREVA-3	2013 2016
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	Laxmi Engineering	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
		Line control & relay panel with O/C E/F protection	1	AREVA	2013
33 KV Feeder	33 KV SAIDPUR	3 Phase Circuit Breaker	1	AREVA-3 Stelmec-1	2,01,32,016
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	Laxmi Engineering	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
		Line control & relay panel with O/C E/F protection	1	AREVA	2013
33 KV Feeder	33 KV BEN	3 Phase Circuit Breaker	1	AREVA-3 Stelmec-1	2013 2016
		LA	3	AREVA	2013
		1-Ph Current Transformer	3	Laxmi Engineering	2013
		3 Phase Isolator with/without Earth switch	3	Semens India Ltd.	2013
		Line control & relay panel with Distance protection & O/C E/F protection	1	AREVA	2013
33 KV Buscoupler		3 Phase Circuit Breaker	1	AREVA	2013
		1 Ph PT	3	Laxmi Engineering	2013 ,2018
		LA	N.A	N.A	N.A
		1-Ph Current Transformer	3	Laxmi Engineering	2013

		3 Phase Isolator with/without Earth switch	2	Semens India Ltd.	2013
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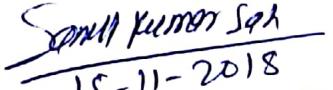
PLCC Equipment	Battery Charger	1	1	HBL Power Pvt.ltd	2013
		2	1	HBL Power Pvt.ltd	2013
	ACDB		4	Jasper Engineering	2013
	DCDB(110V/48V)		2	Jasper Engineering	2013
	Battery bank	1	1	HBL Power Pvt.ltd	2013
		2	1	HBL Power Pvt.ltd	2013
	DG set		1	Jakson Ltd	2013
	1. Isolator				
	2. Battery Charger		2	HBL Power Pvt.ltd	2013
	3. Panel		8	BPL, PUNCOM	2013 ,2017
	4. telephone				
	Hydrant system with Pipe arrangement		N.A	N.A	N.A
	Fire Fighting Equipment		34		2018(Refiling)
	Earthing Rods		3		
	Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		2 SET		
	Testing Equipments		3		
	Safety Gear(Helmet,Gloves,Boot, etc.)		9		
	SST		1	ASSOCIATED ELECTRICALS	2013
	Spare Hardware Fitting.		30 Nos.		

Sanjit Kumar sah  
A.Ex.E/TSD/Nalanda

## Format for GSS land assets

### GSS:- 132/33KV GSS Nalanda

	<b>LOCATION</b>	
01	Name of GSS	132/33KV GSS Nalanda
02	Located at ( Name of locality)	Near Nalanda Kandahar and Mahabodhi college (Nirpur Road)
03	Block/Prakhand	Silao
04	Police Station (Thana)	Nalanda
05	Sub-Division	Rajgir
06	District	Nalanda
07	Transmission Division	Biharsharif
08	Transmission Circle	Biharsharif
09	GPS Co-ordinates	Lat-25.13N & Log-85.436E
	LAND DETAILS	
10	Initial Area (In Acre)	7.39 Acre
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	
	(ii) Private Land	Private Land
	If Private Land, Whether	
	(i) Purchased	Purchased
	(ii) Acquired	
	(iii) Leased Land	
12	Year of Purchase/Acquisition	2010-11
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? If yes, Give details	N.A
16	Area of the extra land for GSS	
17	Cost	
20	Year of Purchase/lease of extra land	
21	Total area at present	
	Details of Land (Khata/Khesara)	Khesara No. 5032 to 5076
	Thana No.	402
	Name of Municipality/Nagar Parishad etc.	Bargaon
	Ward No./Circle No./ Holding No.	
	Amount of Early Land related Taxes	
	Taxes clear up to	
22	Land Records available with	Not Available

  
 15-11-2018  
 Assistant Executive Engineer  
 Grid Sub-Station  
 Nalanda

**Details of existing equipment**

**FORMAT A3**

Name of the Substation : 132/33 KV Sheikhpura

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>132 KV</b>									
1	<b>Biharsharif line</b>	Line control & relay panel with Distance protection & O/C E/F protection	2008,AREVA	2012	—	—	—	No	—
		3 Phase Circuit Breaker	2008,AREVA	2012	—	—	—	No	—
		CVT	2008,AREVA	2012	—	—	—	No	—
		LA	2008,AREVA	2012	—	—	—	No	—
		Current Transformer	2008,AREVA	2012	—	—	—	No	—
		3 Phase Isolator with Earth switch	2008,Siemens	2012	—	—	—	No	—
2	<b>Hathidah line</b>	Line control & relay panel with Distance protection & O/C E/F protection	1983,NA	1984	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	1983,NA	1984	—	—	—	Yes	Very old
		LA	1983,WS isolator of india ltd.	1984	—	—	—	Yes	Very old
		CVT	*Not provided	—	—	—	—	Yes	—
		Current Transformer	1983,NA	1984	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1982,Bharat Isolator mfd.	1984	—	—	—	Yes	Very old
3	<b>Jamui line</b>	Line control & relay panel with Distance protection & O/C E/F protection	2008,AREVA	2012	—	—	—	No	—
		3 Phase Circuit Breaker	2008,AREVA	2013	—	—	—	No	—
		Current Transformer	2008,AREVA	2013	—	5 no	—	No	—
		LA	2008,AREVA	2013	—	—	—	No	—
		CVT	2009,CGL	2013	—	—	—	No	—
		3 Phase Isolator with Earth switch	2008,Siemens	2013	—	—	—	No	—
	<b>20 MVA TRF-1</b>	Transformer Control & Relay panel	2008,AREVA	2013	—	—	—	No	—
		3 Phase Circuit Breaker	2007,AREVA	2013	—	—	—	No	—
		Current Transformer	1983,Brown bovery	1984	—	—	—	Yes	Very old
		LA	1983, WS Insulator	1984	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1982,Bharat Isolator mfd.	1984	—	—	—	Yes	Very old
		Transformer Control & Relay panel	2007,Siemens	2008	—	—	—	No	—
5	<b>20 MVA TRF-2</b>	3 Phase Circuit Breaker	2007,Siemens	2008	—	—	—	No	—
		LA	2007,CGL	2008	—	—	—	No	—
		Current Transformer	2007,CGL	2008	—	5 no	—	No	—
		3 Phase Isolator with Earth switch	2007,Siemens	2008	—	—	—	No	—
6	<b>H.L ISOLATOR WITHOUT EARTHING SWITCH</b>		*Not provided	—	—	—	—	Yes	—

Name of the Substation : 132/33 KV Sheikhpura

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>33 KV</b>									
1	<b>Hathyiyama feeder</b>	Line control relay panel with O/C E/F Protectin	1982,United elect ltd.	1984	—	—	—	Yes	Very Old
		Current Transformer	2009,Floral elect pvt ltd	2012	—	—	—	No	—
		3 ph Isolator with earth switch	1983,Bharat Isolator	1984	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2009,Megawin	2012	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1982,United elect ltd.	1984	—	—	—	Yes	Very Old
2	<b>Onama</b>	Current Transformer	2007,Floral elect pvt ltd	2012	—	—	—	No	—
		3 ph Isolator with earth switch	1983,Bharat Isolator	1984	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2009,Megawin	2012	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1982,United elect ltd.	2001	—	—	—	Yes	Old
		Current Transformer	2000,SCT Ltd	2001	—	—	—	Yes	—
3	<b>20 MVA TRF-1</b>	3 ph Isolator without earth switch	1983,Bharat Isolator	1984	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2006,Aluminium Insulator ltd.	2012	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1982,United elect ltd.	1984	—	—	—	Yes	Very old
		Current Transformer	2007, Floral	2012	—	—	—	No	—
		3 ph Isolator with earth switch	1983,Bharat Isolator	1984	—	—	—	Yes	Very old
4	<b>Sheikhpura</b>	LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2009,AREVA	2012	—	—	—	No	—
		control & relay panel	1982,United elect ltd.	1984	—	—	—	Yes	Very old
		Current Transformer	2000, SCT	2001	—	—	—	Yes	Old
		3 ph Isolator with earth switch	1983,Bharat Isolator	1984	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
5	<b>Buscoupler</b>	Circuit Breaker	2009,AREVA	2012	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1982,United elect ltd.	1984	—	—	—	Yes	Very old
		Current Transformer	2000, SCT	2001	—	—	—	Yes	Old
		3 ph Isolator with earth switch	1983,Bharat Isolator	1984	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2009,AREVA	2012	—	—	—	No	—
6	<b>Ariyari</b>	Line control relay panel with O/C E/F Protectin	1982,United elect ltd.	1984	—	—	—	Yes	Very old
		Current Transformer	2008,Floral	2012	—	—	—	No	—
		3 ph Isolator with earth switch	1983,Bharat Isolator	1984	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2013,CGL	2015	—	—	—	No	—

7	20 MVA TRF-2	3 ph Isolator without earth switch	2007,Siemens	2012	—	—	—	No	—
		Current Transformer	2007,Vidyut control sys pvt ltd.	2012	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2007,Siemens	2012	—	—	—	No	—
8	Katari	Line control relay panel with O/C E/F Protectin	2007,Siemens	2012	—	—	—	No	—
		Current Transformer	2007,Vidyut control sys pvt ltd.	2012	—	—	—	No	—
		3 ph Isolator with earth switch	2007, Siemens	2012	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2004,AREVA	2004	—	—	—	Yes	problem in mechanism.
		3 ph Isolator without earth switch(High level)	*Not provided	—	—	—	—	Yes	—
10		Battery Charger	2010,AZ electronics	2012	—	—	—	Yes	Faulty
		AC Panel	1984,United electrical	NA	—	—	—	Yes	Very old
		Battery Charger	2008,Amaraja	NA	—	—	—	No	Healthy
11	Control cable(PVC)1.1 KV	PLCC EQUIPMENT	*Not provided	—	—	—	—	Yes	—
1		2C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
2		5C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
3		7C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
4		10C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
5		12C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
6		14C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
7		19C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required

\* Not Provided- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

**Details of existing equipment**

**FORMAT A3**

Name of the Substation : 132/33 KV Mithapur

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>132 KV</b>									
1	132 KV Line 2	Line control & relay panel with Distance protection & O/C E/F protection	1998,GEC Alstom	1999	—	—	—	Yes	Old
		3 Phase Circuit Breaker	2010,Siemens	2010	—	—	—	No	—
		CTV	1998,NA	1999	—	—	—	Yes	Old
		LA	1998,ELPRO	1999	—	—	—	Yes	Old
		Current Transformer	1997,SCT Ltd.	1999	—	02 no	—	Yes	Old
		3 Phase Isolator with Earth switch	1998,NA	1999	—	—	—	Yes	Old
2	50 MVA TRF-1	Transformer control & relay panel	1999,GEC Alstom	1999	—	—	—	Yes	Old
		3 Phase Circuit Breaker	2011,CGL	2012	—	—	—	No	—
		LA	1998,ELPRO	1999	—	—	—	Yes	Old
		Current Transformer	1997,SCT ltd	1999	—	02 no	—	Yes	Old
		3 Phase Isolator with Earth switch	1998,NA	1999	—	—	—	Yes	Old
4	3 ph Isolator without earth switch(High level)		*Not provided					Yes	—

Name of the Substation : 132/33 KV Mithapur

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>33 KV</b>									
1	PESU 1	Line control & relay panel with Distance protection & O/C E/F protection	1999,GEC Alstom	2001	—	—	—	Yes	Old
		Current Transformer	2001,SCT Ltd	2001	—	03 no	—	Yes	Old
		3 ph Isolator with earth switch	1999,NA	2001	—	—	—	Yes	Old
		PT	1999,NA	2001	—	—	—	Yes	Old
		LA	*Not provided				—	Yes	—
		Circuit Breaker	2005,AREVA	2005	—	—	—	Yes	Old
2	PESU 2	Line control & relay panel with Distance protection & O/C E/F protection	1999,GEC Alstom	2001	—	—	—	Yes	Old
		Current Transformer	2001,SCT Ltd	2001	—	03 no	—	Yes	Old
		3 ph Isolator with earth switch	1999,NA	2001	—	—	—	Yes	Old
		LA	*Not provided				—	Yes	—
		Circuit Breaker	2000,Siemens	2001	—	—	—	Yes	Old
3	PESU 4	Line control & relay panel with Distance protection & O/C E/F protection	1999,GEC Alstom	1999	—	—	—	Yes	Old
		Current Transformer	1998,SCT Ltd.	1999	—	—	—	Yes	Old
		3 ph Isolator with earth switch	1999,NA	1999	—	—	—	Yes	Old
		LA	*Not provided				—	Yes	—
		Circuit Breaker	1999,Alstom	1999	—	—	—	Yes	Old
4	PESU 5	Line control & relay panel with Distance protection & O/C E/F protection	1999,GEC Alstom	1999	—	—	—	Yes	Old
		Current Transformer	1998,SCT Ltd.	1999	—	—	—	Yes	Old
		3 ph Isolator with earth switch	1999,NA	1999	—	—	—	Yes	Old
		LA	*Not provided				—	Yes	—
		Circuit Breaker	2003,Alstom	2003	—	—	—	Yes	Old
5	City	Line control & relay panel with Distance protection & O/C E/F protection	1999,GEC Alstom	1999	—	—	—	Yes	Old
		Current Transformer	1998,SCT Ltd.	1999	—	—	—	Yes	Old
		3 ph Isolator with earth switch	1999,NA	1999	—	—	—	Yes	Old
		LA	*Not provided				—	Yes	—
		Circuit Breaker	2000,Alstom	2001	—	—	—	Yes	Old
6	Telecom	Line control & relay panel with Distance protection & O/C E/F protection	1999, BHEL	2001	—	—	—	Yes	Old
		Current Transformer	2002,SCT Ltd	2002	—	—	—	Yes	Old
		3 ph Isolator with earth switch	1999,NA	2001	—	—	—	Yes	Old
		LA	*Not provided				—	Yes	—
		Circuit Breaker	2003,Alstom	2003	—	—	—	Yes	Old
7	Railway	Line control & relay panel with Distance protection & O/C E/F protection	2009,AREVA	2010	—	—	—	No	—
		3 ph Isolator with earth switch	2009,NA	2010	—	—	—	No	—
		Current Transformer	2009,Modern elect	2010	—	04 no	—	No	—
		LA	*Not provided				—	Yes	—
		Circuit Breaker	2010,AREVA	2010	—	—	—	No	—

8	<b>Bahadurpur</b>	Line control & relay panel with Distance protection & O/C E/F protection	1999,BHEL	2001	-	-	-	Yes	Old
		Current Transformer	1997,SCT Ltd	2001	-	03 no	-	Yes	Old
		3 ph Isolator with earth switch	1999,NA	2001	-	-	-	Yes	Old
		LA	*Not provided					Yes	
		Circuit Breaker	2009,Megawin	2009	-	-	-	Yes	problem in mechanism,not repairable & spare not available.
9	<b>Buscoupler</b>	Control & relay panel with Distance protection & O/C E/F protection	1999,GEC Alstom	1999	-	-	-	Yes	Old
		Current Transformer	1998,SCT Ltd.	1999	-	03 no	-	Yes	Old
		3 ph Isolator with earth switch	1999,NA	1999	-	-	-	Yes	Old
		LA	*Not provided	-	-	-	-	Yes	-
		Circuit Breaker	2003,Alstom	2003	-	-	-	Yes	Old
10	3 ph Isolator without earth switch(High level)	*Not provided						Yes	-
11	ACDB	1999,NA	-	-	-	-	-	Yes	Very old
	DCDB	1999,NA	-	-	-	-	-	Yes	Very old
	battery bank	1999,NA	-	-	-	-	-	Yes	Very old
	battery charger	1999,NA	-	-	-	-	-	Yes	Very old
	DG set	1999,NA	-	-	-	-	-	Yes	Very old
1	<b>Control cable(PVC)1.1 KV</b>	2C*2.5 sqmm	-	-	1.1 KV	-	-	Yes	Required
2		5C*2.5 sqmm	-	-	1.1 KV	-	-	Yes	Required
3		7C*2.5 sqmm	-	-	1.1 KV	-	-	Yes	Required
4		10C*2.5 sqmm	-	-	1.1 KV	-	-	Yes	Required
5		12C*2.5 sqmm	-	-	1.1 KV	-	-	Yes	Required
6		12C*2.5 sqmm	-	-	1.1 KV	-	-	Yes	Required
7		14C*2.5 sqmm	-	-	1.1 KV	-	-	Yes	Required
8		19C*2.5 sqmm	-	-	1.1 KV	-	-	Yes	Required

\* Not Provided- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

**Details of existing equipment**

**FORMAT A3**

Name of the Substation : 132/33 KV Jehanabad

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>132 KV</b>									
1	Buscoupler	Control & relay panel with Distance protection & O/C E/F protection	1973,EE	1974	—	—	—	Yes	Very Old
		3 Phase Circuit Breaker	2010,CGL	2011	—	—	—	No	—
		PT	*Not provided	—	—	—	—	Yes	—
		LA	*Not provided	—	—	—	—	Yes	—
		Current Transformer	1974,Vishal elect	1974	—	—	—	Yes	Very Old
		3 Phase Isolator with Earth switch	1973,NA	1974	—	—	—	Yes	Very Old
2	Masaurhi	Control & Relay panel with Numerical distance protection relay	2006, AREVA	2007	—	—	—	No	—
		3 Phase Circuit Breaker	2011,CGL	2011	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		CVT	*Not provided	—	—	—	—	Yes	—
		Current Transformer	1973,NA	1974	—	—	—	Yes	Very Old
3	Ataula	Line control & relay panel with Distance protection & O/C E/F protection	2008,AREVA	2011	—	—	—	No	—
		3 Phase Circuit Breaker	2008,AREVA	2011	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		CVT	2008,AREVA	2011	—	—	—	No	—
		3 Phase Isolator with Earth switch	1973,NA	1974	—	—	—	Yes	Very Old
4	Railway	Line control & relay panel with Distance protection & O/C E/F protection	2003,ERL	2004	—	—	—	Yes	Old
		2 Phase Circuit Breaker	2001,Siemens	2002	—	—	—	Yes	Old
		LA	1973,AREVA	1974	—	—	—	Yes	Very Old
		CVT	*Not provided	—	—	—	—	Yes	—
		Current Transformer	2003,SCT Ltd	2004	—	—	—	Yes	Old
5	20 MVA TRF-1	3 Phase Isolator with Earth switch	1973,NA	1974	—	—	—	Yes	Very Old
		Transformer control & relay panel	2008,ABB	2008	—	—	—	No	—
		3 Phase Circuit Breaker	2007,ABB	2008	—	—	—	No	—
		LA	1973,AREVA	1974	—	—	—	Yes	Very Old
		Current Transformer	2007,ABB	2008	—	—	—	No	—
6	20 MVA TRF-2	3 Phase Isolator with Earth switch	1973,NA	1974	—	—	—	Yes	Very Old
		Transformer control & relay panel	1973,EE	1974	—	—	—	Yes	Very Old
		3 Phase Circuit Breaker	NA,CGL	2014	—	—	—	No	—
		LA	1973,AREVA	1974	—	—	—	Yes	Very Old
		Current Transformer	1973,Artache	1974	—	—	—	Yes	Very Old
7	Tehta	3 Phase Isolator with Earth switch	1973,NA	1974	—	—	—	Yes	Very Old
		Line Control & Relay panel with Numerical distance protection relay	2006,AREVA	2007	—	—	—	No	—
		3 Phase Circuit Breaker	2001,Siemens	2009	—	—	—	No	—
		Current Transformer	1973,BHEL	1974	—	—	—	Yes	Very Old
		CVT	*Not provided	—	—	—	—	Yes	—
		LA	*Not provided	—	—	—	—	Yes	—
8	3 ph Isolator without earth switch(High level)		*Not provided						Yes

Name of the Substation : 132/33 KV Jehanabad

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>33 KV</b>									
1	20 MVA TRF-1	Current Transformer	2007,Kapco	2008	—	—	—	No	—
		3 ph Isolator with out earth switch	2005,NA	2005	—	—	—	Yes	Old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2005,ABB	2005	—	—	—	Yes	Old
		Current Transformer	1973,Floral,Kapco	1974	—	—	—	Yes	Very Old
		3 ph Isolator without earth switch	2005,NA	2005	—	—	—	Yes	Old
2	20 MVA TRF-2	LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2007,Alind	2008	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1973,EE	1974	—	—	—	Yes	Very Old
		Current Transformer	2007,Floaral	2008	—	—	—	No	—
		3 ph Isolator with earth switch	1973,NA	1974	—	—	—	Yes	Very Old
3	Jehanabad	LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2009,Megawin	2011	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	2007,ABB	2008	—	—	—	No	—
		Current Transformer	2007,Kapco	2008	—	—	—	No	—
		3 ph Isolator with earth switch	1973,NA	1974	—	—	—	Yes	Very Old
4	Erki	LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2007,ABB	2008	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	2007,ABB	2008	—	—	—	No	—
		Current Transformer	2007,Kapco	2008	—	—	—	No	—

		Line control relay panel with O/C E/F Protectin	1973,EE	1974	—	—	—	Yes	Very Old
5	<b>Buscoupler</b>	Current Transformer	1973,Floral	1974	—	—	—	Yes	Very Old
		3 ph Isolator with earth switch	1973,NA	1974	—	—	—	Yes	Very Old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2003,Alstom	2004	—	—	—	Yes	Old
		Line control relay panel with O/C E/F Protectin	1973,EE	1974	—	—	—	Yes	Very Old
6	<b>Makdumpur</b>	Current Transformer	2003,Howrel	2004	—	—	—	Yes	Very Old
		3 ph Isolator with earth switch	1973,NA	1974	—	—	—	Yes	Very Old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2005,Alind	2005	—	—	—	Yes	old
		Line control relay panel with O/C E/F Protectin	1973,EE	1974	—	—	—	Yes	Very Old
7	<b>Sakarabad</b>	3 ph Isolator with earth switch	1973,NA	1974	—	—	—	Yes	Very Old
		Current Transformer	1973,Floral	1974	—	—	—	Yes	Very Old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2006,Alind	2006	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1973,EE	1974	—	—	—	Yes	Very Old
8	<b>Kako</b>	Current Transformer	1973,Automatic elect.	1974	—	—	—	Yes	Very Old
		3 ph Isolator with earth switch	1973,NA	1974	—	—	—	Yes	Very Old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2006,Alind	2008	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1973,EE	1974	—	—	—	Yes	Very Old
9	<b>Sikarnea</b>	Current Transformer	NA,modem elect	NA	—	—	—	No	—
		3 ph Isolator with earth switch	1973,NA	1974	—	—	—	Yes	Very Old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2004,Megawin	2005	—	—	—	Yes	Old
		3 ph Isolator without earth switch(High level)	*Not provided	—	—	—	—	Yes	—
10	Battery Charger	1974,Star plus	1974	—	—	—	—	yes	Very Old
11	ACDB	1974,NA	—	—	—	—	—	Yes	Very Old
12	DCDB	1974,NA	—	—	—	—	—	Yes	Very Old
13	battery bank	1974,NA	—	—	—	—	—	Yes	Very Old
14	battery charger	1974,NA	—	—	—	—	—	Yes	Very Old
15	DG set	1974,NA	—	—	—	—	—	Yes	Very Old
16	PLCC EQUIPMENT	—	—	—	—	—	—	Yes	Required
1	<b>Control cable(PVC)1.1 KV</b>	2C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
2		5C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
3		7C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
4		10C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
5		12C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
6		12C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
7		14C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
8		19C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required

\* Not Provided- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

Details of existing equipment

FORMAT A3

Name of the Substation : 132/33 KV Banjari

Sl. No.	Name of Feeder	Equipment Name	Make and year of Manufacturing	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement	
<b>132 KV</b>										
1	KCL line	Line control & relay panel	1995,GEC Alstom	1996	—	—	—	Yes	Very old	
		3 Phase Circuit Breaker	1995,CGL	1996	—	—	—	Yes	Very old, Regular air pressure required.	
		Current Transformer	1995,HBB, SCT	1996	—	—	—	Yes	It has become old and technical problems may arise frequently resulting into malfunctioning at any time.	
		CVT	*Not provided	—	—	—	—	Yes	—	
		LA	*Not provided	—	—	—	—	Yes	—	
2	132 Bus Coupler	3 Phase Isolator with Earth switch	1995,Old	1996	—	—	—	Yes	closing and opening takes too much time ,fragile, alignment problem and it has become too old.	
		Bus coupler Control & Relay	1995,GEC Alstom	1995	—	—	—	Yes	Very old	
		3 Phase Circuit Breaker	1995, CGL	1996	—	—	—	Yes	Very old, Regular air pressure required.	
		Current Transformer	1996,SCT	1996	—	4	—	Yes	Very Old	
		LA	*Not provided	—	—	—	—	Yes	—	
3	Banjari - Dehri Line	PT	1995,NA	1996	—	—	—	Yes	Very old	
		3 Phase Isolator with Earth switch	1995,NA	1996	—	—	—	Yes	closing and opening takes too much time ,fragile, alignment problem and it has become too old.	
		Line control & relay panel	1995,GEC Alstom	1996	—	—	—	Yes	Very old	
		3 Phase Circuit Breaker	2012,CGL	2014	—	—	—	No	—	
		CVT	*Not provided	—	—	—	—	Yes	—	
4	Banjari- Sasaram line	Current Transformer	2009,VISHAL	2015	—	3	—	No	—	
		LA	1995,NA	1996	—	—	—	Yes	It has become old and technical problems may arise frequently resulting into malfunctioning at any time.	
		3 Phase Isolator with Earth switch	1995,NA	1996	—	—	—	Yes	closing and opening takes too much time ,fragile, alignment problem and it has become too old.	
		Line control & relay panel	2011, ABB	2011	—	—	—	No	—	
		CVT/PT	2008, CGL	2011	—	—	—	No	—	
5	20 MVA Tr-I	3 Phase Circuit Breaker	2005, ABB	2005	—	—	—	Yes	Old	
		Current Transformer	2009,CGL	2011	—	4	—	No	—	
		LA	2009,CGL	2011	—	—	—	No	—	
		3 Phase Isolator with Earth switch	2009,Siemens	2011	—	—	—	No	—	
		Transformer control & relay	2012, Danish	2015	—	—	—	No	—	
6	20 MVA Tr-II	Current Transformer	1989,SCT	1990	—	4	—	Yes	Very Old	
		3 Phase Isolator with Earth switch	1995,NA	1996	—	—	—	Yes	closing and opening takes too much time ,fragile, alignment problem and it has become too old.	
		LA	1995,NA	1996	—	—	—	Yes	Very Old	
		Circuit Breaker	2013,Siemens	2015	—	—	—	No	—	
		Transformer control & relay	2009,ABB	2011	—	—	—	No	—	
7	3 ph Isolator without earth switch(High level)	Current Transformer	2009, CGL	2011	—	4	—	No	—	
		LA	2009, CGL	2011	—	—	—	No	—	
		3 Phase Isolator with Earth switch	2009,Siemens	2011	—	—	—	No	—	
		Circuit Breaker	2012, CGL	2013	—	—	—	No	—	
		*Not provided	—	—	—	—	—	Yes	—	

33 KV								
1	Samhuta feeder	Line control relay panel with	1995,GEC Alstom	1996			Yes	More than 20 years
		Current Transformer	1992,NA	1993	—	—	Yes	It has become old and technical problems may arise frequently resulting into malfunctioning at any time.
		3 Phase Isolator with Earth switch	1992,NA	1993	—	—	Yes	closing and opening takes too much time ,fragile, alignment problem and it has become too old.
		LA	1992,NA	1993	—	—	Yes	It has become old and technical problems may arise frequently resulting into malfunctioning at any time.
2	Bus coupler I	Circuit Breaker	2013,CGL	2013			No	
		Line control relay panel with	1995, GEC Alstom	1996			Yes	More than 20 years
		Current Transformer	2009, Modern	2011	—	—	No	—
		3 Phase Isolator withEarth switch	1992,NA	1993	—	—	Yes	Very old
		LA	*Not provided	—	—	—	Yes	—
		Circuit Breaker	2013,CGL	2013	—	—	No	—
3	Kerpa feeder	PT	1995,NA	1996	—	—	Yes	Very old
		Line control relay panel with	2009,ABB	2011			No	
		Current Transformer	2009, CGL	2011	—	4	No	—
		3 Phase Isolator with Earth switch	2009, Siemens	2011	—	—	No	—
		LA	2009,CGL	2011	—	—	No	—
		Circuit Breaker	2008,ABB	2011	—	—	No	—
4	Nauhatta feeder	Line control relay panel with	1992,GEC Alstom	1993			Yes	More than 20 years
		Current Transformer	2009,Modern	2012	—	—	No	—
		3 Phase Isolator with Earth switch	1992,NA	1993	—	—	Yes	closing and opening takes too much time ,fragile, alignment problem and it has become too old.
		LA	1992,NA	1993	—	—	Yes	It has become old and technical problems may arise frequently resulting into malfunctioning at any time.
		Circuit Breaker	CGL 2011	2013	—	—	No	—
		C&R Panel	ABB,NA	2011	—	—	No	—
5	Bus coupler II	Current Transformer	CGL 2009	2011	—	—	No	—
		3 Phase Isolator with Earth switch	SIEMENS 2009	2011	—	—	No	—
		LA	CGL 2009	2011	—	—	No	—
		Circuit Breaker	ABB 2008	2011	—	—	Yes	problem in mechanism,not repairable & spare not available.
		Current Transformer	NA,1995	1996			Yes	Very Old
		3 Phase Isolator without Earth switch	NA,1995	1996	—	—	Yes	Very old
6	20MVA TRANSFORMER I	LA	NA,1995	1996	—	—	Yes	It has become old and technical problems may arise frequently resulting into malfunctioning at any time.
		Circuit Breaker	CGL 2009	2011	—	—	Yes	Defective
		Current Transformer	CGL 2009	2011	—	—	No	—
		3 Phase Isolator without Earth switch	SIEMENS 2009	2011	—	—	No	—
		LA	CGL 2009	2011	—	—	No	—
		Circuit Breaker	ABB 2009	2011	—	—	Yes	problem in mechanism,not repairable & spare not available.
8	33KV HIGH LEVEL ISOLATOR		NA,1995	1996			Yes	Very old
9	ACDB PANEL	CGL		NA,1995	1996		Yes	Very old
10	DCDB PANEL	TRANGIETZ		NA,1995	1996		Yes	Very old
11	DG SET	NA					Yes	NA
<b>BATTERY BANK</b>								
SET-1	TAURUS		TAURUS,1995	1996			Yes	Very old
SET-2	NA		NA,1995	1996			Yes	Very old
<b>BATTERY CHARGER</b>								
SET-1	PEE		PEE,1995	1996			Yes	Very old
SET-2	NA		NA,1995	1996			Yes	Very old
1	Control cable(PVC)1.1 KV	2C*2.5 sqmm		—	1.1 KV		Yes	Required
2		5C*2.5 sqmm		—	1.1 KV		Yes	Required
3		7C*2.5 sqmm		—	1.1 KV		Yes	Required
4		10C*2.5 sqmm		—	1.1 KV		Yes	Required
5		12C*2.5 sqmm		—	1.1 KV		Yes	Required
6		12C*2.5 sqmm		—	1.1 KV		Yes	Required
7		14C*2.5 sqmm		—	1.1 KV		Yes	Required
8		19C*2.5 sqmm		—	1.1 KV		Yes	Required

\* Not Provided- Particular equipment is not provided in given CSS, now it is realised that for smooth operation of grid system ,it is needed.

**Details of existing equipment**

Name of the Substation : 132/33 KV GSS Muzaffarpur

Sl. No.	Name of Feeder	Equipment Name	Year of Manufacturing and make	Date of Commissioning	voltage	No. of cores available (in case of CT/PT)	Type of insulation /operation	Tagged for replacement (yes/no)	Reason for replacement
<b>132 KV</b>									
1	Bus Coupler	Line control & relay panel with Distance protection & O/C E/F protection	1965,NA	1966	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	1965,ASIA	1966	—	—	—	Yes	Very old
		Current Transformer	1965,ASIA	1966	—	—	—	Yes	Very old
		PT	*Not provided	—	—	—	—	Yes	—
		LA	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		Line control & relay panel	1965,NA	1966	—	—	—	Yes	Very old
2	MTPS-Muz CKT-I	3 Phase Circuit Breaker	1965,BHEL	1966	—	—	—	Yes	Very old
		CVT	*Not provided	—	—	—	—	Yes	—
		Current Transformer	1965, BHEL	1966	—	—	—	Yes	Very old
		LA	1965,NA	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		3 Phase Isolator without Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		Line control & relay panel	1965,NA	1966	—	—	—	Yes	Very old
3	MTPS-Muz CKT-II	CVT	*Not provided	—	—	—	—	Yes	—
		3 Phase Circuit Breaker	2014,SIEMENS	2015	—	—	—	No	—
		Current Transformer	2014,SIEMENS	2015	—	—	—	No	—
		LA	1965,NA	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		3 Phase Isolator without Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		Line control & relay panel	1965,NA	1966	—	—	—	Yes	very old
4	Muz-Sitamarhi(SKMCH)	CVT	*Not provided	—	—	—	—	Yes	—
		3 Phase Circuit Breaker	1965,NA	1966	—	—	—	Yes	very old
		Current Transformer	1965,BHEL	1966	—	—	—	Yes	very old
		3 Phase Isolator without Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		Line C&R Panel	2014,ERL	2015	—	—	—	No	Newly commissioned
5	Muz-Vaishali CKT-I	CVT/PT	2014,CGL	2015	—	—	—	No	
		3 Phase Circuit Breaker	2014,CGL	2015	—	—	—	No	
		Current Transformer	2014,CGL	2015	—	—	—	No	
		LA	2014,CGL	2015	—	—	—	No	
		3 Phase Isolator with Earth switch	2014,Electrolites	2015	—	—	—	No	
		3 Phase Isolator without Earth switch	2014,Electrolites	2015	—	—	—	No	
		Line control & relay panel	2014,CGL	2015	—	—	—	No	
6	Muz-Vaishali CKT-II	CVT/PT	2014,CGL	2015	—	—	—	No	—
		3 Phase Circuit Breaker	2014,CGL	2015	—	—	—	No	
		Current Transformer	2014,CGL	2015	—	—	—	No	
		3 Phase Isolator with Earth switch	2014,CGL	2015	—	—	—	No	
		LA	*Not provided	—	—	—	—	Yes	
		3 Phase Isolator without Earth switch	2014,CGL	2015	—	—	—	No	
		Line control & relay panel	2014,CGL	2015	—	—	—	No	

		Transformer C&R Panel	1965,NA	1966				Yes	Very old
		Current Transformer	1965,SCT	1966	—	—	—	Yes	Very old
7	<b>50 MVA Transformer-I</b>	3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		3 Phase Isolator without Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	1965,NA	1966				Yes	Very old
		Circuit Breaker	1965,ASIA	1966	—	—	—	Yes	Very old
		Transformer C&R Panel	1965,NA	1966				Yes	Very old
8	<b>50 MVA Transformer-II</b>	Current Transformer	1965,BHEL	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		3 Phase Isolator without Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		Circuit Breaker	1965,CGL	1966	—	—	—	Yes	Very old
		LA	1965,CGL	1966	—	—	—	Yes	Very old
<b>33 KV</b>									
	<b>50 MVA Trf-I</b>	Current Transformer	1965,ADVENT ENGG.	1966	—	—	—	Yes	Very old
		3 Phase Isolator without Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965, AREVA	1966	—	—	—	Yes	Very old
	<b>50 MVA Trf-II</b>	Current Transformer	1965, FLORAL	1966	—	—	—	Yes	Very old
		3 Phase Isolator without Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965, AREVA	1966	—	—	—	Yes	Very old
3	<b>Dholi Feeder</b>	Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
		Current Transformer	1965, FLORAL	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
	<b>Maripur Feeder</b>	Circuit Breaker	1965, AREVA	1966	—	—	—	Yes	Very old
		Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
4		Current Transformer	1965,MagrinI	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
	<b>Marwan Feeder</b>	LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965, AREVA	1966	—	—	—	Yes	Very old
		Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
5		Current Transformer	1965, SCT	1966	—	—	—	Yes	Very old
	<b>Dairy Feeder</b>	3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965, AREVA	1966	—	—	—	Yes	Very old
6		Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
	<b>Buscoupler</b>	Current Transformer	1965,MagrinI	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965, SIEMENS	1966	—	—	—	Yes	Very old
	<b>Motipur Feeder</b>	Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
7		Current Transformer	1965, SCT	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965,CGL	1966	—	—	—	Yes	Very old
	<b>Motipur Feeder</b>	Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
		Current Transformer	1965,MagrinI	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965, ALSTOM	1966	—	—	—	Yes	Very old

9	Nayatola Feeder	Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
		Current Transformer	1965,MODERN	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
10	IDPL Feeder	Circuit Breaker	1965,SIEMENS	1966	—	—	—	Yes	Very old
		Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
		Current Transformer	1965, SCT	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
11	Khabra Feeder	LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965, SIEMENS	1966	—	—	—	Yes	Very old
		Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
		Current Transformer	1965, FLORAL	1966	—	—	—	Yes	Very old
12	Bhikhanpura Feeder	3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965, AREVA	1966	—	—	—	Yes	Very old
		Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
13	Kurhani Feeder	Current Transformer	1965,ADVENT ENGG.	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	1965,CGL	1966	—	—	—	Yes	Very old
14	Railway Feeder	Line control relay panel with O/C E/F Protectin	1965,NA	1966	—	—	—	Yes	Very old
		Current Transformer	1965, SCT	1966	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1965,NA	1966	—	—	—	Yes	Very old
		LA	*Not provided	—	—	—	—	Yes	—
15	132 KV & 33 KV High level isolator		Circuit Breaker	1965,SIEMENS	1966	—	—	Yes	Very old
	PLCC EQIPMENT		*Not provided	—	—	—	—	Yes	—
			*Not provided	—	—	—	—	Yes	—
<b>Others</b>									
1		ACDB	NA,1965	1966	415 V	—	—	Yes	Very old
2		DCDB	NA,1965	1966	250 V	—	—	Yes	Very old
3		BATTERY Bank	NA,1965	1966	200AH	—	—	Yes	Very old
4		BATTERY CHARGER	POWER ELECTRONICS ENGINEERS,1966	1966	400+-10% V	—	—	Yes	Very old
1	Control cable(PVC)1.1 KV	2C*2.5 sqmm			1.1 KV			Yes	Required
2		5C*2.5 sqmm	—	—	1.1 KV			Yes	Required
3		7C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
4		10C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
5		12C*2.5 sqmm	—	—	1.1 KV			Yes	Required
6		12C*2.5 sqmm	—	—	1.1 KV			Yes	Required
7		14C*2.5 sqmm	—	—	1.1 KV			Yes	Required
8		19C*2.5 sqmm	—	—	1.1 KV			Yes	Required

\* Not Provided- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

**Details of existing equipment**

**FORMAT A3**

Name of the Substation : 132/33 kV Hajipur G/S/S

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available ( in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>132 KV</b>									
1	HAJIPUR CKT-1ST	Line control & relay panel with Distance protection & O/C E/F protection	1981, Universal electrical ltd	1983	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	2012,CGL	2013	—	—	—	No	—
		CVT	2004,BPL	2004	—	—	—	Yes	Old
		LA	2010,Electrolites (power) pvt.ltd.	2013	—	—	—	No	—
		Current Transformer	1989,Sistem control & Transformers ltd.	1999	—	—	—	Yes	very old
		3 Phase Isolator without Earth switch	1981,NA	1982	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	2004, The best Towers (pvt) ltd	2004	—	—	—	Yes	Old
2	HAJIPUR CKT-2ND	Line control & relay panel with Distance protection & O/C E/F protection	1981, Universal electrical ltd	1983	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	2012,CGL	2013	—	—	—	No	—
		CVT	2004,BPL	2004	—	—	—	Yes	Old
		LA	2010,Electrolites (power) pvt.ltd.	2013	—	—	—	No	—
		Current Transformer	1989,Sistem control & Transformers ltd.	1999	—	—	—	Yes	very old
		3 Phase Isolator without Earth switch	1981,NA	1982	—	—	—	Yes	very old
		3 Phase Isolator with Earth switch	2004, The best Towers (pvt) ltd	2004	—	—	—	Yes	Old
3	SAMASTIPUR	Line control & relay panel with Distance protection & O/C E/F protection	1981,English Electric	1983	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	2011, CGL	2013	—	—	—	No	—
		Current Transformer	1981,Asea	1982	—	—	—	Yes	Very old
		LA	2003.,Elpro International Ltd	2004	—	—	—	Yes	Old
		CVT	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	1981,Switchgear Manufacturer co. Pvt ltd	1983	—	—	—	Yes	Very old
		Line control & relay panel with Distance protection & O/C E/F protection	1981,English Electric	1983	—	—	—	Yes	Very old
4	SHEETALPUR	3 Phase Circuit Breaker	2011, CGL	2013	—	—	—	No	—
		Current Transformer	1981,HBB	1982	—	—	—	Yes	Very old
		CVT	*Not provided	—	—	—	—	Yes	—
		LA	2000.,Elpro International Ltd	2002	—	—	—	Yes	Old
		3 Phase Isolator with Earth switch	1981,NA	1982	—	—	—	Yes	Very old
		Buscoupler control & relay panel	1981,EE	1983	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	1987,ABB	1988	—	—	—	Yes	Very old
5	Bus coupler	3 phase PT	1981,BHEL	1982	—	—	—	Yes	Very old
		Current Transformer	1986,HBB	1988	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1981,Switchgear Manufacturer co. Pvt ltd	1982	—	—	—	Yes	Very old
		Transformer C&R panel	2014,&S	2015	—	—	—	No	—
		3 Phase Circuit Breaker	2013,Siemens	2015	—	—	—	No	—
		Current Transformer	2013,NA	2015	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
6	20 MVA Transformer-I	3 Phase Isolator with Earth switch	1981,Switchgear Manufacturer co. Pvt ltd	1982	—	—	—	Yes	Very old
		Transformer C&R panel	2014,&S	2015	—	—	—	No	—
		3 Phase Circuit Breaker	2010, SIEMENS	2010	—	—	—	No	—
		LA	1981,NA	1982	—	—	—	Yes	Very old
		Current Transformer	1985,HBB	1986	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1981,Switchgear Manufacturer co. Pvt ltd	1982	—	—	—	Yes	Very old
		Transformer C&R panel	2009,Easun Reyrolle	2010	—	—	—	No	—
7	20 MVA Transformer-II	3 Phase Circuit Breaker	2013,Siemens	2014	—	—	—	No	—
		Current Transformer	2004, CGL	2005	—	—	—	Yes	old
		LA	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	*Not provided	—	—	—	—	Yes	—
		Transformer C&R panel	2014,&S	2015	—	—	—	No	—
		3 Phase Circuit Breaker	2010, SIEMENS	2010	—	—	—	No	—
		LA	1981,NA	1982	—	—	—	Yes	Very old
8	50 MVA Transformer-III	Current Transformer	1985,HBB	1986	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1981,Switchgear Manufacturer co. Pvt ltd	1982	—	—	—	Yes	Very old
		Transformer C&R panel	2009,Easun Reyrolle	2010	—	—	—	No	—
		3 Phase Circuit Breaker	2013,Siemens	2014	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	*Not provided	—	—	—	—	Yes	—
		Transformer C&R panel	2009,CGL	2012	—	—	—	No	—
9	TSS	3 Phase Circuit Breaker	2009,CGL	2012	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		Current Transformer	2009,CGL	2012	—	—	—	No	—
		3 Phase Isolator with Earth switch	1981,Project Electrical industries(india) pvt ltd.	1982	—	—	—	Yes	Very old

33 KV								
1	Hajipur Feeder	Line control relay panel with O/C E/F Protectin	1982,UE	1983	—	—	—	Yes Very old
		Current Transformer	2010, Advent Engineers	2013	—	—	—	No —
		3 ph Isolator with earth switch	*Not provided	—	—	—	—	Yes —
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	1982,GEC	1982	—	—	—	Yes very old
2	EPIP Feeder	Line control relay panel with O/C E/F Protectin	2003,EE	2004	—	—	—	Yes Old
		Current Transformer	2008, Floral elect. Pvt.Ltd.	2009	—	—	—	No —
		3 ph Isolator with earth switch	2003, switchgear Manufacturer co. Pvt Ltd	2004	—	—	—	Yes Old
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	2013,CGL	2014	—	—	—	No —
3	Railway	Line control relay panel with O/C E/F Protectin	2003,EE	2004	—	—	—	Yes Old
		Current Transformer	2002, S.C.Tt. Ltd.	2004	—	—	—	Yes Old
		3 ph Isolator with earth switch	*Not provided	—	—	—	—	Yes —
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	2003,ALOSTOM	2004	—	—	—	Yes Old
4	Bidupur Feeder	Line control relay panel with O/C E/F Protectin	1982,EE	1983	—	—	—	Yes Very old
		Current Transformer	2005, S.C.T. Ltd.	2005	—	—	—	Yes Old
		3 ph Isolator with & without earth switch	*Not provided	—	—	—	—	Yes —
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	2009,Megawin	2010	—	—	—	No —
5	Hajipur-01 Feeder	Line control relay panel with O/C E/F Protectin	2012,Easun Reyrolle	2013	—	—	—	No —
		Current Transformer	2009,Mehru	2013	—	—	—	No —
		3 ph Isolator with earth switch	2004,Switchgear Structure. Pvt ltd	2005	—	—	—	Yes Old
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	2009,CGL	2013	—	—	—	No —
6	Hajipur-02 Feeder	Line control relay panel with O/C E/F Protectin	2012,Easun Reyrolle	2013	—	—	—	No —
		Current Transformer	2009,Mehru	2013	—	—	—	No —
		3 ph Isolator with earth switch	2012,Switchgear Structure. Pvt ltd	2013	—	—	—	No —
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	2009,CGL	2013	—	—	—	No —
7	Rajapaker Feeder	Line control relay panel with O/C E/F Protectin	2012,Vension	2013	—	—	—	No —
		3 ph Isolator with earth switch	2004,farady electricals	2005	—	—	—	Yes Old
		Current Transformer	2012,CGL	2013	—	—	—	No —
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	2012,CGL	2013	—	—	—	No —
8	Sarai Feeder	Line control relay panel with O/C E/F Protectin	2014,Easun Reyrolle	2015	—	—	—	No —
		Current Transformer	2009,Mehru	2015	—	—	—	No —
		3 ph Isolator with earth switch	2014,Switchgear Structure. Pvt ltd	2015	—	—	—	No —
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	2009,CGL	2015	—	—	—	No —
9	50 MVA Transformer-III	3 ph Isolator without earth	2004,SIEMENS	2005	—	—	—	Yes Old
		LA	*Not provided	—	—	—	—	Yes —
		Current Transformer	2009, CGL	2010	—	—	—	No —
		Circuit Breaker	2009,CGL	2010	—	—	—	No —
		Buscoupler control & relay panel	1982, EE	1983	—	—	—	Yes Very old
12	Transfer Buscoupler	Current Transformer	2007, Floral electricalt. Ltd.	2008	—	—	—	No —
		Potential Transformer	1982,NA	1983	—	—	—	Yes Very old
		LA	*Not provided	—	—	—	—	Yes —
		Circuit Breaker	2006,alind	2008	—	—	—	No —
		ACDB	NA,1983	1983	—	—	—	Yes very old
13	DCDB	NA,1983	1983	—	—	—	—	Yes very old
14	132 KV & 33 KV High level isolator without earth switch	*Not provided	—	—	—	—	—	Yes —
<b>Control CABLE</b>								
1	Control cable(PVC)1.1 KV	2C*2.5 sqmm	—	—	1.1 KV	—	—	Yes Required
2		5C*2.5 sqmm	—	—	1.1 KV	—	—	Yes Required
3		7C*2.5 sqmm	—	—	1.1 KV	—	—	Yes Required
4		10C*2.5 sqmm	—	—	1.1 KV	—	—	Yes Required
5		12C*2.5 sqmm	—	—	1.1 KV	—	—	Yes Required
6		12C*2.5 sqmm	—	—	1.1 KV	—	—	Yes Required
7		14C*2.5 sqmm	—	—	1.1 KV	—	—	Yes Required
8		19C*2.5 sqmm	—	—	1.1 KV	—	—	Yes Required

Note-Estimate for PCC & Graveling has been already put up to higher authority. Estimate for slab of cable trench is being made. AluminumPainting of all structures is also required.

\* **Not Provided**- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

**Details of existing equipment**

FORMAT A3

Name of the Substation : 132/33 KV Bettiah

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available ( in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>132 KV</b>									
1	20 MVA Tr no 2	Transformer control & relay panel	2009 ,ABB	2009	—	—	—	No	—
		3 Phase Circuit Breaker	2009 ,ABB	2009	—	—	—	No	—
		Current Transformer	2009,CGL	2009	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	2007,Siemens	2009	—	—	—	No	—
2	132 KV Bus Coupler	Buscoupler C&R Panel	1987, Universal	1989	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	1988, CGL	1989	—	—	—	Yes	Very old
		CVT	1980,T&E	1988	—	—	—	Yes	Very old
		Current Transformer	1986,hbb	1989	—	—	—	Yes	Very old
		LA	1987,AV	1988	—	—	—	Yes	Very old
3	50 MVA TR. No 1	3 Phase Isolator with Earth switch	1987,NA	1989	—	—	—	Yes	Very old
		Transformer control & relay panel	2014, Danish	2014	—	—	—	No	—
		3 Phase Circuit Breaker	2005, Areva	2005	—	—	—	Yes	Old
		Current Transformer	1986,hbb	1989	—	—	—	Yes	Very old
		LA	1987,NA	1988	—	—	—	Yes	Very old
4	Gopalganj Bettiah I	3 Phase Isolator with Earth switch	1988,NA	1989	—	—	—	Yes	Very old
		Line control & relay panel	2006, C&S	2006	—	—	—	No	—
		CVT	2006,CGL	2006	—	—	—	No	—
		3 Phase Circuit Breaker	2006,Simesns	2006	—	—	—	No	—
		Current Transformer	1999, SCT	2012	—	—	—	No	—
5	Rammager	LA	1987,NA	1988	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	2006,NA	2006	—	—	—	No	—
		Line control & relay panel with Distance protection & O/C E/F protection	1987, universal	1989	—	—	—	Yes	Very old
		CVT	*Not provided	—	—	—	—	Yes	—
		3 Phase Circuit Breaker	1988,HBB	1989	—	—	—	Yes	very old
6	Motihari	Current Transformer	1989,T&E	1990	—	—	—	Yes	Very old
		LA	1988,AV	1988	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1987,NA	1988	—	—	—	Yes	Very old
		Line control & relay panel with Distance protection & O/C E/F protection	1987, Universal	1988	—	—	—	Yes	Very old
		CVT	*Not provided	—	—	—	—	Yes	—
7	Gopalganj II	3 Phase Circuit Breaker	1987,CGL	1988	—	—	—	Yes	Very old
		Current Transformer	1983,BHL	1988	—	—	—	Yes	Very Old
		LA	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	1987,NA	—	—	—	—	Yes	Very Old
		Line control & relay panel with Distance protection & O/C E/F protection	C&S ,2008	2012	—	—	—	No	—
8	Raxaul I	Current Transformer	2005,t&e	2005	—	—	—	Yes	Old
		3 Phase Isolator with Earth switch	2009,siemens	2012	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		CVT	2009,CGL	2012	—	—	—	No	—
		Circuit Breaker	2008,CGL	2012	—	—	—	No	—
9	20 MVA T3	Line control & relay panel with Distance protection & O/C E/F protection	2007,ABB	2012	—	—	—	No	—
		CVT/PT	2007,CGL	2012	—	—	—	No	—
		Current Transformer	2007,CGL	2012	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		3 Phase Isolator with Earth switch	2007,Siemens	2012	—	—	—	No	—
		Circuit Breaker	2005,ABB	2012	—	—	—	No	—
		Current Transformer	2012,SCT	2015	—	—	—	No	—
		3 Phase Isolator with Earth switch	2012,NA	2015	—	—	—	No	—
		Transformer control relay panel	2012,C&S	2015	—	—	—	No	—
		Circuit Breaker	2012,ALSTOM	2015	—	—	—	No	—
		LA	2012,NA	2015	—	—	—	No	—

33 KV									
1	Chapatiya Feeder	Line control relay panel with O/C E/F Protectin	2009,Vension	2012	—	—	—	No	—
		Current Transformer	2010,Kapco	2012	—	—	—	No	—
		3 Phase Isolator with Earth switch	2009,Ruma	2012	—	—	—	No	—
		LA	2009,NA	2012	—	—	—	No	—
		Circuit Breaker	2009,Areva	2012	—	—	—	No	—
2	Yogappatti Feeder	Line control relay panel with O/C E/F Protectin	2009,Vension	2012	—	—	—	No	—
		Current Transformer	2010,Kapco	2012	—	—	—	No	—
		3 Phase Isolator with Earth switch	2009,Ruma	2012	—	—	—	No	—
		LA	2009,NA	2012	—	—	—	No	—
		Circuit Breaker	2009,Areva	2012	—	—	—	No	—
3	Nautan Feeder	Line control relay panel with O/C E/F Protectin	2009,Vension	2012	—	—	—	No	—
		Current Transformer	2010,Kapco	2012	—	—	—	No	—
		3 Phase Isolator with Earth switch	2009,Ruma	2012	—	—	—	No	—
		LA	2009,NA	2012	—	—	—	No	—
		Circuit Breaker	2009,Areva	2012	—	—	—	No	—
4	Bairiya Feeder	Line control relay panel with O/C E/F Protectin	2005,Vension	2005	—	—	—	Yes	Old
		Current Transformer	2005,Kapco	2005	—	—	—	Yes	Problem in mechanism/spares etc.
		3 Phase Isolator with Earth switch	2005,Ruma	2005	—	—	—	Yes	Due to inappropriate rating frequent problem in functioning occur.
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2009,Areva	2012	—	—	—	No	—
5	SAIL I & II Feeder	Line control relay panel with Current Transformer	2007,ABB	2009	—	—	—	No	—
		3 Phase Isolator with Earth switch	2008,Vishal	2009	—	—	—	No	—
		LA	2007,Siemens	2009	—	—	—	No	—
		Circuit Breaker	2007,ABB	2009	—	—	—	No	—
		Transformer control & relay panel	2007,ABB	2009	—	—	—	No	—
6	20 MVA Tr no 2	Current Transformer	2008,Vishal	2009	—	—	—	No	—
		3 Phase Isolator without Earth switch	2007,Siemens	2009	—	—	—	No	—
		LA	2007,NA	2009	—	—	—	No	—
		Circuit Breaker	2007,ABB	2009	—	—	—	No	—
		LA	2007,NA	2009	—	—	—	No	—
7	Naurangabad Feeder	Line control relay panel with O/C E/F Protectin	1987,Universal	1988	—	—	—	Yes	Very Old
		Current Transformer	1987, Eastern switchgear ltd.	1988	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1987,NA	1988	—	—	—	Yes	very old ,Not Operated
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2005,Alind	2006	—	—	—	No	—
8	50 MVA TR. No 1	Current Transformer	2005,Floral	2006	—	—	—	Yes	Old
		3 Phase Isolator without Earth switch	1988	1988	—	—	—	Yes	Very old
		Circuit Breaker	2007,Areva	2008	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1987, Universal	1988	—	—	—	Yes	Very old
		Current Transformer	1987 ,Esl	1988	—	—	—	Yes	Very old
9	Bettiah Feeder	3 Phase Isolator with Earth switch	2012,Electrolyte	2013	—	—	—	No	—
		LA	*Not provided	—	—	—	—	Yes	—
		Circuit Breaker	2003,Alstom	2004	—	—	—	Yes	Mechanism problem,not repairable.
10	33KV HIGH LEVEL ISOLATOR	*Not provided	—	—	—	—	—	Yes	—
11	ACDB Panel	1988,GEC	1988	—	—	—	—	Yes	Very Old
12	DCDB Panel	1988,NA	1988	—	—	—	—	Yes	Very Old
13	DG SET	1988,NA	1988	—	—	—	—	Yes	Very Old
14	BATTERY BANK	SET-1 SET-2	2001,Star 1988,NA	2002 1988	—	—	—	Yes	Old
15	BATTERY CHARGER	SET-1 SET-2	1987,PEE 2007,Caldyne	1988 2008	—	—	—	Yes	Very Old
16	I32 KV PT	1980,T&E	1988	—	—	—	—	Yes	Very Old
17	33 KV PT	1988,CGL	1988	—	—	—	—	Yes	Very Old
18	Control cable(PVC)1.1 KV	2C*2.5 sqmm			1.1 KV			Yes	Required
		5C*2.5 sqmm	—	—	1.1 KV			Yes	Required
		7C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
		10C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
		12C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
		14C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required
		19C*2.5 sqmm	—	—	1.1 KV	—	—	Yes	Required

\* Not Provided- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

**Details of existing equipments**

Name of sub-station:-132kV GSS Jamalpur

Sl. No.	Name of Feeder	Equipment Name	year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
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**132kV**

1	Sultanganj-Jamalpur single circuit	Line control & relay panel	1976, EE	1976	—	—	Yes	Very Old
		3 Phase Circuit Breaker	2013, CGL	2014	—	—	No	—
		CVT	*Not provided	—	—	—	Yes	—
		LA	1975,NA	1976	—	—	Yes	Very Old
		Current Transformer	2013,VISHAL	2014	—	—	No	—
		3 Phase Isolator with Earth switch	1976,BIMC	1976	—	—	Yes	Very old
2	Lakhisarai-Jamalpur single circuit	Line control & relay panel	1976, EE	1976	—	—	Yes	Very old
		3 Phase Circuit Breaker	2010, SIEMENS	2011	—	—	No	No
		LA	1975,NA	1976	—	—	Yes	Very Old
		CVT	*Not provided	—	—	—	Yes	—
		Current Transformer	1976,BHEL	1976	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1976,BHEL	1976	—	—	Yes	Very old
3	50MVA Transformer I	Transformer C&R panel	2008,SIEMENS	2009	—	—	No	—
		3 Phase Circuit Breaker	2008,SIEMENS	2009	—	—	No	—
		LA	1976,Link oxide surge arrester	1976	—	—	Yes	Very Old
		Current Transformer	2008,CGL	2009	—	—	No	—
		3 Phase Isolator with Earth switch	2008,SIEMENS	2009	—	—	No	—
		Transformer C&R panel	2014,DANISH	2015	—	—	No	—
4	50MVA Transformer II	3 Phase Circuit Breaker	2013,CGL	2014	—	—	No	—
		LA	1975,NA	1976	—	—	yes	Very Old
		Current Transformer	2014,VISHAL	2015	—	—	No	—
		3 Phase Isolator with Earth switch	1976,BIMC	1976	—	—	Yes	Very Old
		Bus coupler C&R panel	1976,EE	1976	—	—	Yes	Very old
		3 Phase oil Circuit Breaker	1976,BHEL	1976	—	—	Yes	Very old
5	Transfer bus-coupler	LA	1975,NA	1976	—	—	Yes	Very Old
		Current Transformer	1976,BHEL	1976	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1976,BIMC	1976	—	—	Yes	Very Old

**33kV**

1	Dharhara / Ramchandarpur	Line control relay panel with	2010, VENSON	2011	—	—	No	—
		3 Phase Circuit Breaker	2013,CGL	2014	—	—	No	—
		LA	1975,NA	1976	—	—	Yes	Very Old
		Current Transformer	1975,NA	1976	—	—	Yes	Very Old
		3 Phase Isolator with Earth switch	2005,elektrolites	2005	—	—	Yes	Old
		Line control relay panel with	1976,EE	1976	—	—	Yes	Very old
2	Railway	3 Phase Circuit Breaker	2005,ALSTOM	2005	—	—	Yes	Old
		LA	1975,NA	1976	—	—	Yes	Very Old
		Current Transformer	1975,Floral electrical pvt ltd	1976	—	—	Yes	Very Old
		3 Phase Isolator with Earth switch	1975,NA	1976	—	—	Yes	Very Old
		3 Phase Circuit Breaker	2005,ALSTOM	2005	—	—	Yes	mechanical problem,not
		LA	1975,LA	1976	—	—	Yes	Very Old
3	Transformer 2	Current Transformer	2013,advent eng	2014	—	—	No	—
		3 Phase Isolator without Earth switch	1975,NA	1976	—	—	Yes	Very Old
		Line control relay panel with	1976,EE	1976	—	—	Yes	Very Old
		3 Phase Circuit Breaker	2005,ALSTOM	2005	—	—	Yes	Old
		LA	1975,NA	1976	—	—	Yes	Very Old
		Current Transformer	1975,Electrical stumping	1976	—	—	Yes	Very Old
4	ITC	3 Phase Isolator with Earth switch	1975,NA	1976	—	—	Yes	Very Old
		Line control relay panel with	1976,EE	1976	—	—	Yes	Very Old
		3 Phase Circuit Breaker	2005,ALSTOM	2005	—	—	Yes	Old
		LA	1975,NA	1976	—	—	Yes	Very Old
		Current Transformer	1975,Electrical stumping	1976	—	—	Yes	Very Old
		3 Phase Isolator with Earth switch	1975,NA	1976	—	—	Yes	Very Old
5	33kV bus-coupler	Bus coupler control relay	1976,EE	1976	—	—	Yes	Very old
		3 Phase Circuit Breaker	2014,CGL	2015	—	—	No	—
		LA	1975,NA	1976	—	—	Yes	Very Old
		Current Transformer	2014,Advent engg	2015	—	—	No	—
		3 Phase Isolator with Earth switch	1975,NA	1976	—	—	Yes	Very Old
		Line control relay panel with	1976,EE	1976	—	—	Yes	Very old
6	Bindwara	3 Phase Circuit Breaker	2012,MEGWIN	2013	—	—	No	—
		LA	1975,NA	1976	—	—	Yes	Very Old
		Current Transformer	1975,SCT Ltd	1976	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1975,NA	1976	—	—	Yes	Very Old
		Line control relay panel with	1976,EE	1976	—	—	Yes	Very old
		3 Phase Circuit Breaker	2012,MEGWIN	2013	—	—	No	—

7	Karanchaora	Line control relay panel with	1976,EE	1976				Yes	Very old
		3 Phase Circuit Breaker	2006,AREVA	2006	-	-	-	Yes	mechanical problem,not repairable.
		LA	1975,NA	1976	-	-	-	Yes	Very Old
		Current Transformer	2007,floral electric	2008	-	-	-	No	
		3 Phase Isolator with Earth switch	1975,NA	1976	-	-	-	Yes	Very Old
8	Safibabad	Line control relay panel with	1976,EE	1976				Yes	Very old
		3 Phase Circuit Breaker	2006,AREVA	2007	-	-	-	Yes	mechanical problem ,not repairable & spare not available,
		LA	1975,NA	1976	-	-	-	Yes	Very old
		Current Transformer	2007,floral electric	2008	-	-	-	No	
		3 Phase Isolator with Earth switch	1975,NA	1976	-	-	-	Yes	Very old
9	Nandalpur	Line control relay panel with	2008,SIEMENS	2009				No	
		3 Phase Circuit Breaker	2008,CGL	2009	-	-	-	No	-
		LA	1975,link oxide surge arrester	1976	-	-	-	Yes	Very old
		Current Transformer	2005,Vidyut control sys	2006	-	-	-	Yes	Old
		3 Phase Isolator with Earth switch	2006,SIEMENS	2006	-	-	-	Yes	Problem in mechanism & spare not available..
10	Bariyarpur	Line control relay panel with	2005,VENSON	2005				Yes	Old
		3 Phase Circuit Breaker	2005,AREVA	2006	-	-	-	Yes	Problem in mechanism & spare not available,
		LA	1975,NA	1976	-	-	-	Yes	Very old
		Current Transformer	2007,LE	2008	-	-	-	No	-
		3 Phase Isolator with Earth switch	2004,Altima switch gear	2005	-	-	-	Yes	Isolator got problem due to frequent opening & closing
11	Transformer 1	3 Phase Circuit Breaker	2008,SIEMENS	2009				No	
		LA	1975,link oxide surge arrester	1976	-	-	-	Yes	Very old
		Current Transformer	2008,vidyut control sys	2009				No	
		3 Phase Isolator without Earth switch	2005,SIEMENS	2006	-	-	-	yes	Old
		C&R panel	2008,SIEMENS	2009				No	
12	Dakranala	3 Phase Circuit Breaker	2008,CGL	2009	-	-	-	No	-
		LA	1975,link oxide surge arrester	1976	-	-	-	Yes	Very old
		Current Transformer	2007,Vidyut control sys	2008	-	-	-	No	-
		3 Phase Isolator with Earth switch	2006,SIEMENS	2006	-	-	-	Yes	got damaged due to frequent opening & closing
		1975,NA	1976					Yes	Very old
13	ACDB		2008,MS	2009	-	-	-	No	-
14	DCDB		1976, Andrewyule	1976				Yes	Very old
15	battery bank		2008,MS	2009	-	-	-	No	-
16	battery charger		1975,NA	1976	-	-	-	Yes	Very old
17	DG set		2002,Star	2003	-	-	-	Yes	Old
18	Control cable(PVC)1.1 KV	DG set	1976,Power electronic	1976				Yes	Very old
		2C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
		4C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
		5C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
		7C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
		10C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
		12C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
		14C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
		19C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
19	High level isolator	33kV side(3Nos.)	1975,NA	1976	-	-	-	Yes	Very old
20	High level isolator	132kV side(3Nos.)	1975,NA	1976	-	-	-	Yes	Very old

\* Not Provided- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

Name of sub-station:-132kV GSS Motihari

132 KV								
1	Bettiah	Current Transformer-1ph	2009,VTS	2010	—	—	—	No
		Circuit Breaker 3 ph	2009,Siemens	2010	—	—	—	No
		3 Phase Isolator with Earth switch	1971,ELE	1972	—	—	—	Yes
		CVT	1971,ELE	1972	—	—	—	Yes
		LA	2005,Areva	2005	—	—	—	Yes
	MTPS	Line control & relay panel with Distance protection & O/C E/F protection	1972,EE	1973	—	—	—	Yes
		Current Transformer-1ph	1971,Siemens	1972	—	—	—	Yes
		Circuit Breaker 3 ph	1999,CGL	2005	—	—	—	Yes
		3 Phase Isolator with Earth switch	1972,Alliance engineering pvt. Ltd	1973	—	—	—	Yes
		CVT	1971,NA	1972	—	—	—	Yes
2	Dhaka	LA	1971,Areva	1972	—	—	—	Yes
		Line control & relay panel with Distance protection & O/C E/F protection	1972,EE	1973	—	—	—	Yes
		Current Transformer-1ph	2004,TELK	2004	—	—	—	Yes
		Circuit Breaker 3 ph	2005/Siemens	2005	—	—	—	Yes
		3 Phase Isolator with Earth switch	NA,S & S Pvt. Ltd.	NA	—	—	—	No
		LA	2004,ZLA	2005	—	—	—	Yes
	Sugauli	Line control & relay panel with Distance protection & O/C E/F protection	2004,ERL	2005	—	—	—	Yes
		Current Transformer-1ph	2014,SCT ltd.	2015	—	—	—	No
		Circuit Breaker 3 ph	2010,AREVA	2011	—	—	—	No
		3 Phase Isolator with Earth switch	NA,S & S Pvt. Ltd.	NA	—	—	—	No
		CVT	2010,CGL	2011	—	—	—	No
3	20 MVA Transformer	LA	2010,OEIPL	2011	—	—	—	No
		Line control & relay panel with Distance protection & O/C E/F protection	2010,ERL	2011	—	—	—	No
		Current Transformer-1ph	1971,Siemens	1972	—	—	—	Yes
		Circuit Breaker 3 ph	2011,CGL	2011	—	—	—	No
		3 Phase Isolator with Earth switch	1971,Alliance engineering pvt. Ltd	1972	—	—	—	Yes
		LA	1971,IEC	1972	—	—	—	Yes
	50 MVA Transformer	Transformer C&R Panel	1972,EE	1973	—	—	—	Yes
		Current Transformer-1ph	2007,CGL	2008	—	—	—	No
		Circuit Breaker 3 ph	2005,SIEMENS	2005	—	—	—	Yes
		3 Phase Isolator with Earth switch	1971,Alliance engineering pvt. Ltd	1972	—	—	—	Yes
		LA	1971,IEC	1972	—	—	—	Yes
4	Bus-Coupler	Transformer C&R Panel	2008,ABB	2009	—	—	—	No
		Current Transformer-1ph	2001,SCT Ltd.	2002	—	—	—	Yes
		Circuit Breaker 3 ph	2013,SIEMENS	2014	—	—	—	No
		3 Phase Isolator with Earth switch	1971,Alliance engineering pvt. Ltd	1972	—	—	—	Yes
		PT	1971,Victrance Engg.	1972	—	—	—	Yes
		Bus coupler C&R Panel	1972, EE	1973	—	—	—	Yes
	Areraj Feeder	Current Transformer-1ph	2008,Floaral electrical ltd.	2009	—	—	—	No
		Vaccum Circuit Breaker 3 ph	2004,Megawin switchgear	2004	—	—	—	Yes
		3 Phase Isolator without Earth switch	1971,BIMCO	1972	—	—	—	Yes
		LA	1971,NA	1972	—	—	—	Yes
		Current Transformer-1ph	2013,CGL	2014	—	—	—	No
5	Kotwa Feeder	Vaccum Circuit Breaker 3 ph	2004,ABB	2004	—	—	—	Yes
		3 Phase Isolator without Earth switch	1971,BIMCO	1972	—	—	—	Yes
		LA	1971,IEC	1972	—	—	—	Yes
		Line control relay panel with O/C E/F Protectin	1972,EE	1973	—	—	—	Yes
		Current Transformer-1ph	2008,Vishal Electric	2001	—	—	—	Yes
		Vaccum Circuit Breaker 3 ph	2001,Alstom	2002	—	—	—	Yes
		3 Phase Isolator with Earth switch	1971,BIMCO	1972	—	—	—	Yes
		LA	1971,IEC	1972	—	—	—	Yes
		Line control relay panel with O/C E/F Protectin	*Not provided	—	—	—	—	Yes
		Current Transformer-1ph	2008,ABB	2009	—	—	—	No

6	Madhopur Feeder	Current Transformer-1ph	2004,Modern Elect	2005	-	-	-	Yes	old
		Vaccum Circuit Breaker 3 ph	2009,Megawin	2009	-	-	-	No	-
		3 Phase Isolator with Earth switch	1971,BIMCO	1972	-	-	-	Yes	Very Old
		LA	1971,IEC	1972	-	-	-	Yes	Very Old
		Line control relay panel with O/C E/F Protectin	1972, EE	1973	-	-	-	Yes	Very Old
7	Chakiya Feeder	Current Transformer-1ph	MEHRU & 2005/Floral	2005	-	-	-	Yes	Old
		Vaccum Circuit Breaker 3 ph	2004,Megawin	2005	-	-	-	Yes	Old
		3 Phase Isolator with Earth switch	1971,BIMCO	1972	-	-	-	Yes	Very Old
		LA	1971,IEC	1972	-	-	-	Yes	Very Old
		Line control relay panel with O/C E/F Protectin	1972, EE	1973	-	-	-	Yes	Very Old
8	Banjariya Feeder	Current Transformer-1ph	2002,SCT Ltd.	2003	-	-	-	Yes	Old
		Vaccum Circuit Breaker 3 ph	2014,Stelmec	2014	-	-	-	No	-
		3 Phase Isolator with Earth switch	1971,BIMCO	1972	-	-	-	Yes	Very Old
		PT	1971,NA	1973	-	-	-	Yes	Very Old
		LA	1971,IEC	1972	-	-	-	Yes	Very Old
9	Chatauni Feeder	Line control relay panel with O/C E/F Protectin	1972, EE	1973	-	-	-	Yes	Very Old
		Current Transformer-1ph	2000/Flora Elect& MEHRU	2001	-	-	-	Yes	Old
		Vaccum Circuit Breaker 3 ph	2015,Stelmec	2015	-	-	-	No	-
		3 Phase Isolator with Earth switch	1971,BIMCO	1972	-	-	-	Yes	Very Old
		LA	1971,IEC	1972	-	-	-	Yes	Very Old
10	Motihari-I Feeder	Line control relay panel with O/C E/F Protectin	1972, EE	1973	-	-	-	Yes	Very Old
		Current Transformer-1ph	2009,Modern Elect	2010	-	-	-	No	-
		Vaccum Circuit Breaker 3 ph	2013,CGL	2014	-	-	-	No	-
		3 Phase Isolator with Earth switch	1971,BIMCO	1972	-	-	-	Yes	Very Old
		LA	NA	NA	-	-	-	No	-
11	Belisarai Feeder	Line control relay panel with O/C E/F Protectin	1972, EE	1973	-	-	-	Yes	Very Old
		Current Transformer-1ph	2008,Vishal Elect.	2009	-	-	-	No	-
		Vaccum Circuit Breaker 3 ph	2007,ABB	2011	-	-	-	Yes	Defective
		3 Phase Isolator with Earth switch	NA,Siemens	NA	-	-	-	No	-
		LA	NA	NA	-	-	-	No	-
12	132 & 33 KV high level isolator without earth switch	Line control relay panel with O/C E/F Protectin	2008,ABB	2009	-	-	-	No	-
		*Not provided	*Not provided	-	-	-	-	Yes	-
		PLCC equipment	*Not provided	-	-	-	-	Yes	-
		ACDB	1971,NA	1972	-	-	-	Yes	Very Old
		DCDB	1971,NA	1972	-	-	-	Yes	Very Old
13	battery bank	battery bank	1971,NA	1972	-	-	-	Yes	Very Old
		battery charger	1971,NA	1972	-	-	-	Yes	Very Old
		DG set	1971,NA	1972	-	-	-	Yes	Very Old
		1	2C*2.5sqmm	-	-	1.1kV	-	-	Yes Required
		2	4C*2.5sqmm	-	-	1.1kV	-	-	Yes Required
14	Control cable(PVC)1.1 KV	3	5C*2.5sqmm	-	-	1.1kV	-	-	Yes Required
		4	7C*2.5sqmm	-	-	1.1kV	-	-	Yes Required
		5	10C*2.5sqmm	-	-	1.1kV	-	-	Yes Required
		6	12C*2.5sqmm	-	-	1.1kV	-	-	Yes Required
		7	14C*2.5sqmm	-	-	1.1kV	-	-	Yes Required
		8	19C*2.5sqmm	-	-	1.1kV	-	-	Yes Required

\* Not Provided- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

Details of existing equipment

FORMAT A3

NAME OF SUBSTATION : 132/33 KV GSS DARBHANGA

132 KV

Sl. No.	Name of Feeder	Equipment Name	Year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
1	50 MVA T-1	Transformer Control & relay	NEW ABB					No	
		3 Phase Circuit Breaker	1993,CGL	1994	—	—	—	Yes	Very old
		Current Transformer	1993,SCT LTD	1994	—	—	—	Yes	Very old
		LA	1993,NA	1994	—	—	—	yes	Very old
		3 Phase Isolator with Earth switch	1993,NA	1994	—	—	—	yes	Very old
2	20 MVA T-2	Transformer Control & relay	1993,EE	1994				Yes	Very old
		3 Phase Circuit Breaker	1993,CGL	1994	—	—	—	Yes	Very old
		Current Transformer	1993,ASEA	1994	—	—	—	Yes	Very old
		LA	1993,NA	1994	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1993, NA	1994	—	—	—	Yes	Very old
3	Bus Coupler	Bus coupler Control & relay panel	1993 ,EE	1994	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	2012, CGL	2012	—	—	—	No	—
		Current Transformer	1993, System control	1994				Yes	Very old
		L.A	1993,NA	1994	—	—	—	Yes	Very old
		PT	1993, SCT PVT LTD	1994				Yes	Very old
4	Samastipur Line	3 Phase Isolator with Earth switch	1993,NA	1994	—	—	—	Yes	Very old
		Line control & relay panel with Distance protection & O/C E/F protection	1993,EE	1994	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	1993, Siemens	1994	—	—	—	Yes	Very old
		CVT	*Not provided					Yes	
		LA	1993,NA	1994	—	—	—	Yes	Very old
5	Pandal line	Current Transformer	1993,SCT	1994	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1994,NA	1994	—	—	—	Yes	Very old
		Line control & relay panel with Distance protection & O/C E/F protection	1994,EE	1994	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	1993, Siemens	1994	—	—	—	Yes	Very old
		Current Transformer	1993,VISHAL TRANSFORMER SWITCH LTD	1994	—	—	—	Yes	Very old
6	Phulparas line	LA	*Not provided					Yes	—
		CVT	*Not provided					Yes	—
		3 Phase Isolator with Earth switch	1993,NA	1994	—	—	—	Yes	Very old
		Line control & relay panel with Distance protection & O/C E/F protection	New,ABB	—	—	—	—	No	—
		3 Phase Circuit Breaker	New,ABB	—	—	—	—	No	—
33 KV	Gangwara feeder	CVT	New, CGL	—	—	—	—	No	—
		Current Transformer	1993, BHEL	1994	—	—	—	Yes	Very Old
		LA	New,NA	—	—	—	—	No	—
		3 Phase Isolator with Earth switch	New,NA	—	—	—	—	No	—
		Line control relay panel with O/C E/F Protectin	1993,EE	1994	—	—	—	Yes	Very old
1	Pandasarai feeder	3 Phase Circuit Breaker	1994,SCT	1994	—	—	—	Yes	Very old
		Current Transformer	New, CGL	—	—	—	—	No	—
		LA	1993,NA	1994	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1993,NA	1994	—	—	—	Yes	Very old
		Line control relay panel with O/C E/F Protectin	1993,EE	1994	—	—	—	Yes	Very old
2	Anar feeder	3 Phase Circuit Breaker	1994,MEGAWIN	1994	—	—	—	Yes	Very old
		CT	1994,SCT PVT LTD	1994	—	—	—	Yes	Very old
		LA	1994,NA	1994	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1993,NA	1994	—	—	—	Yes	Very old
		Line control relay panel with O/C E/F Protectin	1993,EE	1994	—	—	—	Yes	Very old
3	Donar feeder	3 Phase Circuit Breaker	New,ABB	—	—	—	—	No	—
		LA	1994,NA	1994	—	—	—	Yes	Very old
		Current Transformer	1994,VIDYUT CONTROL SYSTEM	1994	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1994,NA	1994	—	—	—	Yes	Very old
		Line control relay panel with O/C E/F Protectin	1993,EE	1994	—	—	—	Yes	Very old
4	Donar feeder	LA	1993,NA	1994	—	—	—	Yes	Very old
		3 Phase Circuit Breaker	1993,MEGAWIN SG PVT LTD	1994	—	—	—	Yes	Very old
		Current Transformer	1994,SCT PVT LTD	1994	—	—	—	Yes	Very old
		3 Phase Isolator with Earth switch	1994,NA	1994	—	—	—	Yes	Very old

5	<b>Bus coupler</b>	Bus coupler C&R Panel	1994,EE	1994	-	-	-	Yes	Very old
		3 Phase Circuit Breaker	New,CGL	-	-	-	-	No	-
		Current Transformer	New,SCT Ltd.	-	-	-	-	No	-
		PT	1993 ,ELECTRICAL STAMPING &MAN LTD	1994	-	-	-	Yes	Very old
		3 Phase Isolator with Earth switch	New,NA	-	-	-	-	No	-
6	<b>Fekala feeder</b>	Line C&R panel	1993,NA	1994	-	-	-	Yes	Very old
		Current Transformer	New, ABB	-	-	-	-	No	-
		CT	New,VISHAL SYSTEM	-	-	-	-	No	-
		3 Phase Isolator with Earth switch	New,NA	-	-	-	-	No	-
		LA	New,NA	-	-	-	-	No	-
7	<b>APM feeder</b>	Circuit Breaker	New,ABB	-	-	-	-	No	-
		Line control relay panel with O/C E/F Protectin	New,ABB	-	-	-	-	No	-
		CT	New, VISHAL SYSTEM	-	-	-	-	No	-
		LA	1993,NA	1994	-	-	-	Yes	Very old
		CB	New ,ABB	-	-	-	-	No	-
8	<b>Incomer-I</b>	3 Phase Isolator with Earth switch	2002, CGL	2003	-	-	-	Yes	Old
		Circuit Breaker	1987, CGL	1994	-	-	-	Yes	Very old
		Line control relay panel with	1994 ,EE	1994	-	-	-	Yes	Very old
		Current Transformer	New, VISHAL SYSTEM SYS.	-	-	-	-	No	-
		3 Phase Isolator without Earth switch	1993,NA	1994	-	-	-	Yes	Very old
9	<b>Incomer-II</b>	LA	*Not provided	-	-	-	-	Yes	-
		Circuit Breaker	1994,ALSTOM	1994	-	-	-	Yes	Very old
		Line control relay panel with	1993,EE	1994	-	-	-	Yes	Very old
		Current Transformer	1994,SCT LTD	1994	-	-	-	Yes	Very old
		3 Phase Isolator without Earth switch	1993,NA	1994	-	-	-	Yes	Very old
10	132 & 33 KV high level isolator without earth switch	Circuit Breaker	1993,MEGAWIN SG PVT LTD	1994	-	-	-	Yes	Very old
		LA	1993,NA	1994	-	-	-	Yes	Very old
		*Not provided	-	-	-	-	-	Yes	-
		ACDB	1993,NA	1994	-	-	-	Yes	Very old
		DCDB	1994,NA	1994	-	-	-	Yes	Very old
11	<b>Control cable(PVC)1.1 KV</b>	battery bank	1993,NA	1994	-	-	-	Yes	Very old
12		battery charger	1994,NA	1994	-	-	-	Yes	Very old
13		DG set	1993,NA	1994	-	-	-	Yes	Very old
14		2C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
15		4C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
1		5C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
2		7C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
3		10C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
4		12C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
5		14C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
6		19C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
7									
8									

\* Not Provided- Particular equipment is not provided in given GSS, now it is realised that for smooth operation of grid system ,it is needed.

**Details of existing equipment**

FORMAT A3

Name of the Substation : 132/33 KV Purnea

Sl. No.	Name of Feeder	Equipment Name	Year of Manufacturing and make	date of Commissioning	voltage	no. of cores available (in case of CT/PT)	type of insulation /operation	tagged for replacement (yes/no)	reason for replacement
<b>132 KV</b>									
1	Katihar	Current Transformer-1ph	2002,SCT	31/12/2003	—	5	—	Yes	Old
		Circuit Breaker 3 ph	2000,CGL	2001	—	—	—	Yes	Old
		Isolator	1965,GS NANDI	1965	—	—	—	Yes	Not Motorised & Very old.
		CVT	*Not available	—	—	—	—	Yes	—
		LA	1964,ELPRO	1965	—	—	—	Yes	Very old
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
2	Khagaria	Current Transformer-1ph	1986,VICTRANS,BHEL,B	07/87	—	5	—	Yes	Very old
		Circuit Breaker 3 ph	2012, CGL	2013	—	—	—	No	—
		Isolator	1965,GS NANDI	1965	—	—	—	Yes	Not Motorised & Very old.
		CVT	*Not available	—	—	—	—	Yes	—
		LA	1983,W.S Insulator	1984	—	—	—	Yes	Very old
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
3	Saharsa	Current Transformer-1ph	1964,SCT	1965	—	—	—	Yes	Very old
		Circuit Breaker 3 ph	2001,SIEMENS	2007	—	—	—	No	—
		Isolator	1964,GS NANDI	1965	—	—	—	Yes	Not Motorised & Very old.
		CVT	*Not available	—	—	—	—	Yes	—
		LA	1983,W.S Insulator	1984	—	—	—	Yes	Very old
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
4	Naugachia	Current Transformer-1ph	NA,VICTRANS	NA	—	—	—	No	—
		Circuit Breaker 3 ph	2013, SIEMENS	12/11/2014	—	—	—	No	—
		Isolator	1964,AEI	1965	—	—	—	Yes	Not Motorised & Very old.
		CVT	*Not available	—	—	—	—	Yes	—
		LA	1983,ELPRO,AREVA	1984	—	—	—	Yes	Very old
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
5	Forbesganj	Current Transformer-1ph	1985,BHEL	16/02/1986	—	—	—	Yes	Very old
		Circuit Breaker 3 ph	SIEMENS 2013	2014	—	—	—	No	—
		Isolator	1964,GS NANDI	1965	—	—	—	Yes	Not Motorised & Very old.
		CVT	*Not available	—	—	—	—	Yes	—
		LA	1983,W.S Industries	1984	—	—	—	Yes	Very old
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
6	Bus coupler	Current Transformer-1ph	1964,ASEA	1965	—	3	—	Yes	Very old
		Circuit Breaker 3 ph	2013,SIEMENS	29/01/2015	—	—	—	No	—
		Isolator	1964,AEI	1965	—	—	—	Yes	Not Motorised & Very old.
		PT	*Not available	—	—	—	—	Yes	—
		Buscoupler C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
		Current Transformer-1ph	1964,CGL	1965	—	—	—	Yes	Very old
7	50MVA Tr I	Circuit Breaker 3 ph	2007,SIEMENS	2008	—	—	—	No	—
		Isolator	2007,SIEMENS	2008	—	—	—	No	—
		LA	2007,CGL	2008	—	—	—	No	—
		Transformer C&R Panel	2007,SIEMENS	2008	—	—	—	No	—
		Current Transformer-1ph	1964,SCT	1965	—	—	—	Yes	Very old
		Circuit Breaker 3 ph	2012,CGL	2013	—	—	—	No	—
8	50MVA Tr II	Isolator	1964,AEI	1965	—	—	—	Yes	Not Motorised & Very old.
		Transformer C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
		Current Transformer-1ph	1974,ASEA	1975	—	—	—	Yes	Very old
		Circuit Breaker 3 ph	2012,CGL	17/01/2015	—	—	—	No	—
		Isolator	1964,AEI	1965	—	—	—	Yes	Not Motorised & Very old.
		Transformer C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
9	20MVA Tr III	Current Transformer-1ph	1974,ASEA	1975	—	—	—	Yes	Very old
		Circuit Breaker 3 ph	2012,CGL	17/01/2015	—	—	—	No	—
		Isolator	1964,AEI	1965	—	—	—	Yes	Not Motorised & Very old.
		Transformer C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
		Current Transformer-1ph	1974,HEL	09/10/1975	—	—	—	Yes	Very old
		Circuit Breaker 3 ph	SIEMENS 2013	08/02/2014	—	—	—	No	—
10	PGCIL I	Isolator	1964,GS NANDI	1965	—	—	—	Yes	Not Motorised & Very old.
		CVT	*Not available	—	—	—	—	Yes	—
		LA	W.S Insulator 1980,ELPRO	1981	—	—	—	Yes	Very old
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
		Current Transformer-1ph	1965,ARTECNE	1965	—	—	—	Yes	Very old
		Circuit Breaker 3 ph	2013,SIEMENS	19/04/2014	—	—	—	No	—
11	PGCIL II	Isolator	1964,GS NANDI	1965	—	—	—	Yes	Not Motorised & Very old.
		CVT	*Not available	—	—	—	—	Yes	—
		LA	1983,W.S Insulator	1984	—	—	—	Yes	Very old
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old
		Current Transformer-1ph	1964,HBB	1965	—	—	—	Yes	Very old
		Circuit Breaker 3 ph	2000, CGL	2001	—	—	—	Yes	Old
12	PGCIL III	Isolator	1964,GS NANDI	1965	—	—	—	Yes	Not Motorised & Very old.
		CVT	*Not available	—	—	—	—	Yes	—
		LA	ELPRO 2002	2002	—	—	—	Yes	old
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes	Very old

33 KV								
1	Group Control	Current Transformer-1ph	1970,MAGRINI	16/12/1971	—	3	—	Yes Very old
		Vaccum Circuit Breaker 3 ph	2002, ALSTOM	2003	—	—	—	No Replaced By CGL
		Isolator	1964,GS NANDI	1965	—	—	—	Not Motorised & Very old.
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes Very old
2	Jalagarh	Current Transformer-1ph	1964,SCT	1965	—	—	—	Yes Very old
		Vaccum Circuit Breaker 3 ph	2009,MEGAWIN	2010	—	—	—	No —
		Isolator	1964,GS NANDI	1965	—	—	—	Yes Very old
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes Very old
3	Dalkola	Current Transformer-1ph	1964,FLORAL	1965	—	—	—	Yes Very old
		Vaccum Circuit Breaker 3 ph	2004, AREVA	2005	—	—	—	Yes old
		Isolator	1964,GS NANDI	1965	—	—	—	Yes Very old
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes Very old
4	Zeromile	Current Transformer-1ph	1964,MAGRINI	1965	—	—	—	Yes Very old
		Vaccum Circuit Breaker 3 ph	2013, CGL	19/09/2013	—	—	—	No
		Isolator	1964,GS NANDI	1965	—	—	—	Yes Very old
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes Very old
5	Sonauli	Current Transformer-1ph	1990,SCT	10/05/1991	—	—	—	Yes old
		Vaccum Circuit Breaker 3 ph	MEGAWIN 2009	09/04/2010	—	—	—	No
		Isolator	1964,GS NANDI	1965	—	—	—	Yes Very old
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Line C&R Panel	1964,English Electric	1965	—	—	—	Yes Very old
6	Madhubani	Current Transformer-1ph	1964,VIDYUT	1965	—	—	—	Yes Very old
		Vaccum Circuit Breaker 3 ph	2007, SIEMENS	2008	—	—	—	No —
		Isolator	2007, SIEMENS	2008	—	—	—	Yes Damaged
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Line C&R Panel	2007, SIEMENS	2008	—	—	—	No
7	Maranga	Current Transformer-1ph	1964,VIDYUT	1965	—	—	—	Yes Very old
		Vaccum Circuit Breaker 3 ph	MEGAWIN 2009	2010	—	—	—	No
		Isolator	2004, SIEMENS	2004	—	—	—	Yes old
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Line C&R Panel	2007, SIEMENS	2008	—	—	—	No —
8	Incomer I	Current Transformer-1ph	1964,VIDYUT	1965	—	—	—	Yes Very old
		Vaccum Circuit Breaker 3 ph	SIEMENS 2007	2008	—	—	—	No —
		Isolator	SIEMENS 2007	2008	—	—	—	Yes Damaged
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Transformer C&R Panel	SIEMENS 2007	2008	—	—	—	No
9	Incomer II	Current Transformer-1ph	1964,ADVENT	1965	—	—	—	Yes Very old
		Vaccum Circuit Breaker 3 ph	MEGAWIN 2009	2010	—	—	—	No
		Isolator	1964,GS NANDI	1965	—	—	—	Yes Very old
		PT	*Not available	—	—	—	—	Yes
		LA	*Not available	—	—	—	—	Yes
		Transformer C&R Panel	1964,English Electric	1965	—	—	—	Yes Very old

10	Incomer III	Current Transformer-1ph	1964,VISHAL	1965		3		Yes	Very old
		Vaccum Circuit Breaker 3 ph	2013, CGL	31/08/2013	-	-	-	No	-
		Isolator	1964,GS NANDI	1965	-	-	-	Yes	Very old
		PT	*Not available	-	-	-	-	Yes	-
		LA	*Not available	-	-	-	-	Yes	-
		Transformer C&R Panel	1964,English Electric	1965	-	-	-	Yes	Very old
11	Bus Coupler I	Current Transformer-1ph	1964,MAGRINI	1965	-	-	-	Yes	Very old
		Vaccum Circuit Breaker 3 ph	2007,AREVA	2008	-	-	-	No	-
		Isolator	1964,GS NANDI	1965	-	-	-	Yes	Very old
		PT	1970,NA	11/71	-	-	-	Yes	Very old
12	Bus coupler II	Buscoupler C&R Panel	1964,English Electric	1965	-	-	-	Yes	Very old
		Current Transformer-1ph	1964,VIDYUT	1965	-	-	-	Yes	Very old
		Vaccum Circuit Breaker 3 ph	SIEMENS 2007	2008	-	-	-	No	-
13	132KV HIGH LEVEL ISOLATOR		SIEMENS 2007	2008	-	-	-	Yes	Damaged
	33KV HIGH LEVEL ISOLATOR		SIEMENS 2007	2008	-	-	-	No	-
14								Yes	Very old
15								Yes	Very old
16								No	New
<b>DCDB PANEL</b>									
17	N.A		1965,NA	1965				Yes	Very Old
18	MAKTEL								New
<b>BATTERY BANK</b>									
SET-1	STAR		STAR,1999	19/11/2000				Yes	Very Old
SET-2	HBL POWER		HBL POWER,1999	2000				Yes	Very Old
<b>BATTERY CHARGER</b>									
SET-1	PEE		PEE,1987	01/05/1988				Yes	Very Old and noisy
SET-2	AMARARAJA		Amararaja,2004	2005				Yes	Old
1	<u>Control cable(PVC)1.1 KV</u>	2C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
2		4C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
3		5C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
4		7C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
5		10C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
6		12C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
7		14C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required
8		19C*2.5sqmm	-	-	1.1kV	-	-	Yes	Required

\*All 132Kv CT is need to be keep CT ratio of 1200/600/300/150/1

\*All blade type isolator in 33KV Side is need to be changed. \* all cable need to be changed by multi stranded armored cable.

**Details of Existing Equipment**

Name of Circle: BIHARSHARIF

Name of GSS: 132 KV GSS NAWADA

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			
			3 Phase Circuit Breaker			
			1-Ph CVT			
			LA			
			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
	2nd bay..					
			Line control & relay panel with Distance protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			1-Ph CVT			
220/132 KV Transformer bay(HV)	1st bay..		LA			
			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
220/132 KV Transformer bay(LV)			Transformer control &			
			3 Phase Circuit Breaker			
			LA			
			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
220 KV Buscoupler bay			Transformer control & relay panel with Differential protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			LA			
			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
			Line control & relay panel with Distance protection & O/C E/F protection			
			3 Phase Circuit Breaker			
			1 Ph PT			
			LA			
			1-Ph Current Transformer			
			3 Phase Isolator with/without Earth switch			
			Line control & relay panel	1	Areva	2012

		3 Phase Circuit Breaker		Areva	2012
		1 Ph CVT	3	Areva	2012
		LA	3	Areva	2012
	132KV Biharsharif- Nawada Line	1-Ph Current Transformer		3 Areva	2012
		3 Phase Isolator with/without Earth switch		3 Siemens	2012
132 KV Line bay	132KV Wazirganj- Nawada Line	Line control & relay panel	1	C&S Electric	2014
		3 Phase Circuit Breaker	1	Siemens	2014
		1 Ph CVT	3	BHEL	1981
		LA	3	Lamco Industries	2014
		1-Ph Current Transformer	3	BHEL	1981
		3 Phase Isolator with/without Earth switch	3	Siemens	2015
	132KV Khanwa- Nawada Line-1	Line control & relay panel	1	Siemens	16.6.2017
		3 Phase Circuit Breaker	1	Siemens	16.6.2017
		1 Ph CVT	3	Siemens	16.6.2017
		LA	3	CGL	16.6.2017
		1-Ph Current Transformer	3	Siemens	16.6.2017
132/33 KV Transformer bay(HV)	132KV Khanwa- Nawada Line-2	3 Phase Isolator with/without Earth switch	3	Siemens	16.6.2017
		Line control & relay panel	1	siemens	16.6.2017
		3 Phase Circuit Breaker	1	Siemens	16.6.2017
		1 Ph CVT	3	Siemens	16.6.2017
		LA	3	CGL	16.6.2017
		1-Ph Current Transformer	3	Siemens	16.6.2017
	50 MVA 132KV Kanohar Transformer Bay	3 Phase Isolator with/without Earth switch	3	Siemens	16.6.2017
		Transformer control &	1	Venson Electric	21.01.2016
		3 Phase Circuit Breaker	1	CGL	21.01.2016
		LA	3	Lamco Industries	21.01.2016
132/33 KV Transformer bay(HV)	20 MVA 132KV NGEF Transformer Bay	1-Ph Current Transformer	3	HEPTACARE POW	21.01.2016
		3 Phase Isolator without Earth switch	3	Siemens	21.01.2016
		Transformer control &	1	C&S Electric	2015
		3 Phase Circuit Breaker	1	Siemens	2015
	50 MVA 132KV VIJAY Transformer Bay	LA	3	Lamco Industries	2015
		1-Ph Current Transformer	3	BHEL	1981
		3 Phase Isolator without Earth switch	3	Siemens	2015
	50 MVA 132KV VIJAY Transformer Bay	Transformer control &	1	C&S Electric	2015
		3 Phase Circuit Breaker	1	Siemens	2015
		LA	3	Lamco Industries	2015
	50 MVA 132KV VIJAY Transformer Bay	1-Ph Current Transformer	3	BHEL	1981
		3 Phase Isolator without Earth switch	3	Siemens	2015
		Transformer control &	1	ALSTOM	2014
		3 Phase Circuit Breaker	1	ALSTOM	2014
		LA	3	ELEKTROLITE	2014

		50 MVA 132KV BBL Transformer Bay	1-Ph Current Transformer	3	SCT	2014
			3 Phase Isolator without Earth switch	3	ELEKTROLITE	2014
			Transformer control &	1	Venson Electric	21.01.2016
			3 Phase Circuit Breaker	1	CGL	21.01.2016
			LA	3	Lamco Industries	21.01.2016
		50 MVA 132KV Kanohar Transformer Bay	1-Ph Current Transformer	3	SCT	21.01.2016
			3 Phase Isolator without Earth switch	3	Siemens	21.01.2016
			Transformer control &	1	C&S Electric	2014
			3 Phase Circuit Breaker	1	Siemens	2014
			LA	3	Lamco Industries	2014
		20 MVA 132KV NGEF Transformer Bay	1-Ph Current Transformer	3	FLORAL ELECTRO	2007
			3 Phase Isolator with/without Earth switch	3	FARADAY	2015
			Transformer control &	1	C&S Electric	2015
			3 Phase Circuit Breaker	1	Siemens	2015
			LA	3	Lamco Industries	2015
		50 MVA 132KV VIJAY Transformer Bay	1-Ph Current Transformer	3	BHEL	1981
			3 Phase Isolator with/without Earth switch	3	FARADAY	2015
			Transformer control &	1	Alstom	2014
			3 Phase Circuit Breaker	1	Alstom	2014
			LA	3	ELEKTROLITE	2014
		50 MVA 132KV BBL Transformer Bay	1-Ph Current Transformer	3	SCT	2014
			3 Phase Isolator with/without Earth switch	3	ELEKTROLITE	2014
			Line control & relay panel with Distance protection & O/C E/F protection			
				1	C&S Electric	2015
			3 Phase Circuit Breaker	1	Siemens	2015
			1 Ph PT	3	SCT	2015
			LA			
			1-Ph Current Transformer	3	BHEL	1981
			3 Phase Isolator with/without Earth switch	3	Siemens	2015
			Line control & relay panel with O/C E/F protection			
				1	C&S Electric	11.07.2015
			3 Phase Circuit Breaker	1	CGL	2015
			LA	3	Lamco Industries	2014
			1-Ph Current Transformer	3	SCT	2014
		33 KV HISUA	3 Phase Isolator with/without Earth switch	3	FARADAY	2015
			Line control & relay panel	1	C&S Electric	2015
			3 Phase Circuit Breaker	1	Siemens	2015

		LA	3	Lamco Industries	2015
		1-Ph Current Transformer	3	SCT	
	33 KV OLD NAWADA	3 Phase Isolator with/without Earth switch	3	FARADAY	2015
		Line control & relay panel	1	Areva	2016
		3 Phase Circuit Breaker	1	Siemens	2015
		LA	3	Lamco Industries	2015
	33 KV NEW NAWADA	1-Ph Current Transformer	3	FLORAL ELECTRONICS	
		3 Phase Isolator with/without Earth switch	3	N/A	2010
		Line control & relay panel with O/C E/F protection	1	C&S Electric	2012
		3 Phase Circuit Breaker	1	Siemens	2015
		LA	3	Lamco Industries	2015
		1-Ph Current Transformer	3	KAPOO ELECTRONICS	2012
	33 KV NARHAT	3 Phase Isolator with/without Earth switch	3		2015
		Line control & relay panel	1	C&S Electric	2015
		3 Phase Circuit Breaker	1	STELMEC	20107
		LA	3	Lamco Industries	2015
	33 KV WARSALIGANJ	1-Ph Current Transformer	3	S & S POWER LTD	16.06.2016
		3 Phase Isolator with/without Earth switch	3	FARADAY	2015
		Line control & relay panel with O/C E/F protection	1	C&S Electric	2015
		3 Phase Circuit Breaker	1	STELMEC	20.03.2016
		LA	3	Lamco Industries	2015
		1-Ph Current Transformer	3	FLORAL ELECTRONICS	
	33 KV AKBARPUR	3 Phase Isolator with/without Earth switch	3	FARADAY	2015
		Line control & relay panel with Distance protection & O/C E/F protection	1	C&S Electric	2015
		3 Phase Circuit Breaker	1	Siemens	2015
		1 Ph PT	3	SCT	27.02.2015
		LA			
		1-Ph Current Transformer	3	Shri Electro	2018
		3 Phase Isolator with/without Earth switch	3	FARADAY	2015
		<b>Other Substation Equipments -</b>			
	Battery Charger	1(250V)	1	CHLORIDE	2014
		2(250V)	1	AMAR RAJA	2017
		3 (48V)	1	AMAR RAJA	2017
			1	AMAR RAJA	2017

	Battery Charger	1(250V)	1	CHLORIDE	2014
		2(250V)	1	AMAR RAJA	2017
		3 (48V)	1	AMAR RAJA	2017
			1	AMAR RAJA	2017

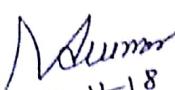
	ACDB	1	CGL	1981
		1	JASPER ENGINEER	2011
		1	AMAR RAJA	2017
	DCDB(110V/48V)	1	JASPER ENGINEER	2011
Battery bank	1	1	EXIDE	2014
	2	1	AMAR RAJA	2017
DG set		N/A		
PLCC Equipment	1. Isolator			
	2. Battery Charger			
	3. Panel	4	ABB, ABB, BPL, PUNCOM	2017 & 2018
	4. telephone	2	BPL, BEETEL	2018
Hydrant system with Pipe arrangement		N/A		
Fire Fighting Equipment		17		2018
Earthing Rods		6		2017
Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		2 SET		
Testing Equipments(Fault locator machine)		1	TAURUS	2016
MEGGER (5 KV)		2	KUSAM MECO	
BDB		2	RECTIFIERS AND ELECTRONICS	2016
Safety Gear(Helmet,Gloves,Boot, etc.)		4		
SST		1	ALPHA	2003
		1	ASSOCIATED ELECTRICALS	2013
Spare Hardware Fitting.				

MANOJ KUMAR  
A.Ex.E/TSD/NAWAD

## Format for GSS land assets

### GSS:- NAWADA

	<b>LOCATION</b>	NAWADA
01	Name of GSS	132/33 KV GSS NAWADA
02	Located at ( Name of locality)	NAWADA
03	Block/Prakhand	AKBARPUR
04	Police Station (Thana)	AKBARPUR
05	Sub-Division	NAWADA
06	District	NAWADA
07	Transmission Division	BIHARSHARIF
08	Transmission Circle	BIHARSHARIF
09	GPS Co-ordinates	Latitude=24.8675304 Longitude=85.519285 LAND DETAILS
10	Initial Area (In Acre)	11.24 acre
11	Whether it was:	
	(i) A Govt. Land (State type GM or )	Govt. + Private
	(ii) Private Land	
	If Private Land, Whether	
	(i) Purchased	NA
	(ii) Acquired	NA
	(iii) Leased Land	NA
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? If yes, Give details	NO
16	Area of the extra land for GSS	
17	Cost	NA
20	Year of Purchase/lease of extra land	NA
21	Total area at present	11.24 acre
	Details of Land (Khata/Khesara)	KHATA NO.- 43,05,41,32,01,49
	Thana No.	379
	Name of Municipality/Nagar Parishad etc.	AKBARPUR
	Ward No./Circle No./ Holding No.	NA
	Amount of Early Land related Taxes	NA
	Taxes clear up to	NA
22	Land Records available with	NA

  
 12-11-18  
 Assistant Executive Engineer  
 Transmission Sub Division  
 Nawada

**Details of Existing Equipment**

Name of Circle: Biharsharif

Name of GSS:132/33Kv G.S.S Rajgir

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	0	N.A	N.A		
			3 Phase Circuit Breaker	0	N.A	N.A		
			1-Ph CVT	0	N.A	N.A		
			LA	0	N.A	N.A		
			1-Ph Current Transformer	0	N.A	N.A		
			3 Phase Isolator with/without Earth switch	0	N.A	N.A		
				0	N.A	N.A		
	2nd bay..		Line control & relay panel with Distance protection & O/C E/F protection	0	N.A	N.A		
			3 Phase Circuit Breaker	0	N.A	N.A		
			1-Ph CVT	0	N.A	N.A		
			LA	0	N.A	N.A		
220/132 KV Transformer bay(HV)	1st bay..		1-Ph Current Transformer	0	N.A	N.A		
			3 Phase Isolator with/without Earth switch	0	N.A	N.A		
			Transformer control & relay panel with Differential protection & O/C E/F protection	0	N.A	N.A		
			3 Phase Circuit Breaker	0	N.A	N.A		
			LA	0	N.A	N.A		
220/132 KV Transformer bay(LV)			1-Ph Current Transformer	0	N.A	N.A		
			3 Phase Isolator with/without Earth switch	0	N.A	N.A		
			Transformer control & relay panel with Differential protection & O/C E/F protection	0	N.A	N.A		
			3 Phase Circuit Breaker	0	N.A	N.A		
			LA	0	N.A	N.A		
220 KV Buscoupler bay			1-Ph Current Transformer	0	N.A	N.A		
			3 Phase Isolator with/without Earth switch	0	N.A	N.A		
			Line control & relay panel with Distance protection & O/C E/F protection	0	N.A	N.A		
			3 Phase Circuit Breaker	0	N.A	N.A		
			1 Ph PT	0	N.A	N.A		
132 KV Line bay	132 KV BIHARSHARIF-RAJGIR L-29 T/L Bay		LA	0	N.A	N.A		
			1-Ph Current Transformer	0	N.A	N.A		
			3 Phase Isolator with/without Earth switch	0	N.A	N.A		
			Line control & relay panel with Distance protection & O/C E/F protection	1	SEL	2016		
			3 Phase Circuit Breaker	1	SIEMENES	2016		
			1 Ph CVT	3	CGL	2,017		
132 KV Line bay	132 KV BARHI-RAJGIR L-29 T/L Bay		LA	3	LAMCO	2017		
			1-Ph Current Transformer	3	S.C.T	2016		
			3 Phase Isolator with/without Earth switch	3	Farady Electrical & SIEMENES	2016		
			Line control & relay panel with Distance protection & O/C E/F protection	1	SEL	2016		
			3 Phase Circuit Breaker	1	SIEMENES	2016		
			1 Ph CVT	3	CGL	2,017		
			LA	3	LAMCO	2017		

		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	Farady Electrical	2016
132 KV Line bay	132 KV BARHI-RAJGIR -NALANDA L-28 T/L Bay	Line control & relay panel with Distance protection & O/C E/F protection	1	SEL	2016
		3 Phase Circuit Breaker	1	SIEMENES	2016
		1 Ph CVT	3	CGL	1,995
		LA	3	CGL	2017
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	Farady Electrical	2016
1	20 MVA 132KV ANDREW YULE POWER TRANAFORMER BAY NO-01	Transformer control & relay panel with Differential protection & O/C E/F protection	1	SEL	2,017
		3 Phase Circuit Breaker	1	SIEMENES	2016
		LA	3	LAMCO	2018
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	Farady Electrical	2016
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	SEL	2,016
	20 MVA 132KV NGF POWER TRANAFORMER BAY NO-02	3 Phase Circuit Breaker	1	SIEMENES	2016,
		LA	3	LAMCO	2018
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	Farady Electrical	2016
		Transformer control & relay panel with Differential protection & O/C E/F protection	1	SYSTEM CONTROL	2,016
		3 Phase Circuit Breaker	1	SIEMENES	2016,
132/33 KV Transformer bay(HV)	50 MVA 132KV ECE POWER TRANAFORMER BAY NO-03	LA	3	C.G.L	2016
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	Farady Electrical	2016
		Transformer control & relay panel with Differential protection & O/C E/F protection	N.A	N.A	N.A
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	Lamco	2018
	20 MVA 33KV ANDREW YULE POWER TRANAFORMER BAY NO-01	1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
		Transformer control & relay panel with Differential protection & O/C E/F protection	N.A	N.A	N.A
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	Lamco	2016
		1-Ph Current Transformer	3	S.C.T	2016
132/33 KV Transformer bay(LV)	20 MVA 33KV NGF POWER TRANAFORMER BAY NO-02	3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
		Transformer control & relay panel with Differential protection & O/C E/F protection	N.A	N.A	N.A
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	CGL	2016
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
	50 MVA 33KV ECE POWER TRANAFORMER BAY NO-03	Transformer control & relay panel with Differential protection & O/C E/F protection	N.A	N.A	N.A
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	CGL	2016
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016

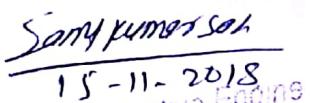
132 KV Buscoupler bay		Line control & relay panel with Distance protection & O/C E/F protection	1	S.E.L	2016
		3 Phase Circuit Breaker	1	CGL	2016
		1 Ph PT	0	N.A	N.A
		LA	0	N.A	N.A
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	2	P.R Engineering works	2016
33 KV Feeder Bays	33KV RAJGIR-01	Line control & relay panel with O/C E/F protection	1	S.E.L	2016
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	LAMCO	2016
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
	33KV RAJGIR-02	Line control & relay panel with Distance protection & O/C E/F protection	1	S.E.L	2016
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	LAMCO	2016
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
	33KV SILAO	Line control & relay panel with O/C E/F protection	1	S.E.L	2016
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	LAMCO	
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
	33KV ANDWAS	Line control & relay panel with O/C E/F protection	1	S.E.L	2016
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	LAMCO	2016
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
	33KV SPARE	Line control & relay panel with Distance protection & O/C E/F protection	1	S.E.L	2016
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		LA	3	LAMCO	2016
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
	33KV ATRI FEEDER	Line control & relay panel with O/C E/F protection	1	S.E.L	2016
		3 Phase Circuit Breaker	1	CGL	2016
		LA	3	LAMCO	2016
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	3	farady Electrical	2016
	33 KV Buscoupler	Line control & relay panel with Distance protection & O/C E/F protection	1	S.E.L	2016
		3 Phase Circuit Breaker	1	SCHNIDER	2016
		1 Ph PT	3	S.C.T	2016
		LA	0	N.A	N.A
		1-Ph Current Transformer	3	S.C.T	2016
		3 Phase Isolator with/without Earth switch	2	Farady Electrical	2016

OTHER SUBSTATION EQUIPMINTS	Battery Charger	1(250V) 2(250V)	1 1	CHLORIDE Amararaja	2018 2016
	ACDB		2	1-(Maktel), 1-(ASIAN Switchgear Pvt.Ltd)	2018
	DCDB(110V/48V)		1	ASIAN Switchgear Pvt.Lt	2018
	Battery bank	1(250V) 2(250V)	1 1	CHLORIDE Amararaja	2018 2016
	DG set		0	N.A	N.A
	PLCC Equipment	1.Isolator			
		2. Battery Charger	1	Belk	2018
		3. Panel	1	Puncom	2018
		4.telephone	1	Beetel	2018
	Hydrant system with Pipe arrangement		0	N.A	N.A
	Fire Fighting Equipment		11	sagar impex Chawla fire protection engineers	2018
	Earthing Rods		9		
	Tools & Tackles(Spanners,Wrench..etc.(Set/Piece)		18	Taparia	2018
	Testing Equipments		8	Tauras,Suraj Motwani,Maste ch,etc	2016 2017
	Safety Gear(Helmet,Gloves,Boot, etc.)		12		
	SST		2	East india	2018
	Spare Hardware Fitting.				

## 132/33Kv GSS Rajgir land assets

<b>LOCATION</b>	
01	Name of GSS
02	Located at ( Name of locality)
03	Block/Prakhand
04	Police Station (Thana)
05	Sub-Division
06	District
07	Transmission Division
08	Transmission Circle
09	GPS Co-ordinates
<b>LAND DETAILS</b>	
10	Initial Area (In Acre)
11	Whether it was:
	(i) A Govt. Land (State type GM or )
	(ii) Private Land
	If Private Land, Whether
	(i) Purchased
	(ii) Acquired
	(iii) Leased Land
12	Year of Purchase/Acquisition
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? If yes, Give details
16	Area of the extra land for GSS
17	Cost
20	Year of Purchase/lease of extra land
21	Total area at present
	Details of Land (Khata/Khesara)
	Thana No.
	Name of Municipality/Nagar Parishad etc.
	Ward No./Circle No./ Holding No.
	Amount of Early Land related Taxes
	Taxes clear up to
22	Land Records available with

Note. For further details see the Next page

  
 15-11-2018  
 Assistant Executive Engineer  
 Transmission Sub div  
 Rajgir (Nalanda)