

List of Important Grid Elements in Eastern Region

In compliance to IEGC 5.2©

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1.0 Introduction

Important Grid Elements of Eastern regional Grid has been issued in compliance with IEGC 5.2 (c).

1. The criterion that has been adopted for including a transmission line in this list is as follows:
 - a) All HVDC Transmission Line & HVDC Back-to-back
 - b) All 400kV EHVAC Transmission Lines
 - c) Important 220kV Transmission line belonging to Central Transmission Utility & Regional Entities Generating Station
 - d) Important 220kV transmission line from the territory of one State control area to other state control areas (Tie lines)
 - e) 220kV Lines affecting system security or forming part of Islanding Scheme
 - f) 220kV Lines feeding loads of a strategic/sensitive nature
2. The transmission lines in the above context means a grid element from bus-bar to busbar and includes all equipment such as associated circuit breakers, Line reactors , isolators, CVT's , CT's etc.
3. The criteria that has been adopted for including a generating unit is as follows:
 - a) All Regional entities
 - b) All thermal unit of 100 MW and above
 - c) All Hydro unit of 50 MW and above
4. Outage or the intention to take under outage, of any major component/sub-system, which would reduce security/ redundancy level of the above element, shall be precisely intimated to ERLDC along with the likely time and status regarding revival.
5. Any 400kV bus shutdown at substations needs the approval of ERLDC.
6. In respect of two main and transfer bus switching scheme at 400kV substations, ERLDC shall be informed whenever the 400kV transfer breakers at any substation is utilized for switching any line/ICT.
7. In respect of 400kV substation/Power station switchyard having breaker and a half switching scheme, outage within the substation (say main or tie circuit breaker) not affecting power flow on any line/ICT can be availed by the constituents under intimation to ERLDC. However, while availing such shutdowns or carrying out switching operations it must be ensured by the substation that at least two Dias are complete even after such outage from the view point of network reliability. Any outage not fulfilling the above condition needs the approval of ERLDC.

2.0 List of Important Transmission Lines

2.1 Tie lines

SL NO	TIE-LINE	OWNED BY	CONNECTED SYSTEMS		LENGTH (KM)	COND. (TYPE)	VOLTS (KV)	NO. OF CKTS.
			END-1	END-2				
1	FARAKKA-JEERAT	POWERGRID	POWERGRID	WBSETCL	238	TW.MOOSE	400	S/C
2	FARAKKA-SAGARDIGHI	POWERGRID	NTPC	WBPDC	67	TW.MOOSE	400	S/C
3	SAGARDIGHI-SUBHASGRAM	POWERGRID	WBPDC	POWERGRID	246	TW.MOOSE	400	S/C
4	JEERAT-SUBHASGRAM	POWERGRID	WBSETCL	POWERGRID	80	TW.MOOSE	400	S/C
5	PARULIA-BIDHANAGAR	WBSETCL	POWERGRID	WBSETCL	11	TW.MOOSE	400	S/C
6	BINAGURI-BONGAIGAON	POWERGRID	POWERGRID(ER)	POWERGRID(NER)	216	TW.MOOSE	400	D/C
7	JEYPORE-GAZUWAKA	POWERGRID	POWERGRID(ER)	POWERGRID(SR)	220	TW.MOOSE	400	D/C
8	JEYPORE-MERAMUNDALI	POWERGRID	POWERGRID(ER)	OPTCL	456	TW.MOOSE	400	S/C
9	INDRAVATI-INDRAVATI	OPTCL	POWERGRID(ER)	OPTCL	1	TW.MOOSE	400	S/C
10	KOLAGHAT-BARIPADA	WBSETCL & OPTCL	WBSETCL	POWERGRID(ER)	174	TW.MOOSE	400	S/C
11	SAGARDIGHI-PARULIA	WBSETCL	WBSETCL	POWERGRID	130	TW.MOOSE	400	S/C
12	TSTPP-MERAMUNDALI	POWERGRID	NTPC	OPTCL	51	TW.MOOSE	400	D/C
13	BINAGURI-TALA I & II	POWERGRID	POWERGRID	THEP	115	TW.MOOSE	400	D/C
14	MAITHON-MAITHON RIGHT BANK	POWERGRID	POWERGRID	MPL	30	TW.MOOSE	400	D/C
15	BINAGURI-MALBASE	POWERGRID	POWERGRID	THEP	121	TW.MOOSE	400	S/C
16	MUZZFARPUR-GOROKHPUR	POWERLINKS	POWERGRID(ER)	POWERGRID(NR)	261	QUAD-MOOSE	400	D/C
17	PATNA-BALIA	POWERGRID	POWERGRID(ER)	POWERGRID(NR)	195	QUAD-MOOSE	400	D/C
18	BIHARSHARIF-BALIA	POWERGRID	POWERGRID(ER)	POWERGRID(NR)	242	QUAD-MOOSE	400	D/C
19	RANCHI-SIPAT	POWERGRID	POWERGRID(ER)	POWERGRID(WR)	405	TW.MOOSE	400	D/C
20	SASARAM-SARNATH	POWERGRID	POWERGRID(ER)	POWERGRID(NR)	76	TW.MOOSE	400	S/C
21	SASARAM-ALLAHABAD	POWERGRID	POWERGRID(ER)	POWERGRID(NR)	271	TW.MOOSE	400	S/C
22	ROURKELA-RAIGARH	POWERGRID	POWERGRID(ER)	POWERGRID(WR)	212	TW.MOOSE	400	S/C
23	ROURKELA-RAIGARH	POWERGRID	POWERGRID(ER)	POWERGRID(WR)	210	TW.MOOSE	400	D/C
24	ROURKELA-SEL	POWERGRID & SEL	POWERGRID	SEL	114	TW.MOOSE	400	S/C
25	SEL-RAIGARH	POWERGRID & SEL	SEL	POWERGRID(WR)	147	TW.MOOSE	400	S/C
26	DEHRI-PUSUALI	BSEB	BSEB	POWERGRID	64	ZEBRA	220	S/C
27	PUSUALI-SAHUPURI	BSEB & UPPCL	POWERGRID	UPPCL	72	ZEBRA	220	S/C
28	ARRAHA-KAHAGAUL	POWERGRID	POWERGRID	BSEB	50	ZEBRA	220	D/C
29	WARIA-BIDHANNAGAR	DVC & WBSETCL	DVC	WBSETCL	17	ZEBRA	220	D/C
30	BALMELA-U.SILLERU	OPTCL & APTRANSCO	OPTCL	APTRANSCO	24	ZEBRA	220	S/C
31	JINDAL-JAMSHEDPUR	OPTCL & DVC	OPTCL	DVC	130	ZEBRA	220	S/C
32	JODA-RAMCHANDRAPUR	OPTCL & JSEB	OPTCL	JSEB	127	ZEBRA	220	S/C
33	BUDHIPADAR-KORBA	OPTCL & CSEB	OPTCL	CHATTISGARH	180	ZEBRA	220	D/C
34	BUDHIPADAR-RAIGARH	POWERGRID	OPTCL	CHATTISGARH	81	ZEBRA	220	S/C
35	PATRATU-BODHGAYA	BSEB & JSEB	JSEB	BSEB	136	ZEBRA	220	T/C
36	PATNA-KHAGUAL	BSEB	POWERGRID	BSEB	25	ZEBRA	220	S/C
37	TENUGHAT-BIHARSHARIF	BSEB & JSEB	JSEB	BSEB	182	TW.MOOSE	220	S/C
38	CHANDIL-SANTALDIH	WBSETCL & JSEB	JSEB	WBSETCL	105	ZEBRA	220	S/C
39	TSTPP-MERAMUNDALI	OPTCL	NTPC	OPTCL	40	ZEBRA	220	D/C
40	TSTPP-RENGALI	OPTCL	NTPC	OPTCL	40	ZEBRA	220	S/C
41	TSTPP-TALCHER	OPTCL	NTPC	OPTCL	30	ZEBRA	220	S/C
42	FARAKKA-LALMATIA	POWERGRID	NTPC	JSEB	79	ZEBRA	220	S/C
43	B'SHARIF-B'SHARIF	POWERGRID	POWERGRID	BSEB	0	ZEBRA	220	T/C
44	MAITHON-K'SWARI	DVC	POWERGRID	DVC	8	ZEBRA	220	D/C
45	PARULIA(PG)-PARULIA(DVC)	DVC	POWERGRID	DVC	1	ZEBRA	220	D/C
46	BISRA-TARKERA	OPTCL	POWERGRID	OPTCL	15	ZEBRA	220	D/C
47	JEYPORE-JAYNAGAR	OPTCL	POWERGRID	OPTCL	6	ZEBRA	220	D/C
48	RENGALI-RENGALI	OPTCL	POWERGRID	OPTCL	1	ZEBRA	220	D/C
49	BARIPADA-BALASORE	OPTCL	POWERGRID	OPTCL	77	ZEBRA	220	D/C
50	JAMSHEDPUR-RAMCHANDRAPUR	DVC & JSEB	POWERGRID	JSEB	0	ZEBRA	220	D/C

Tie Lines..(Cont...)

SL NO	TIE-LINE	OWNED BY	CONNECTED SYSTEMS		LENGTH (KM)	COND. (TYPE)	VOLTS (KV)	NO. OF CKTS.
			END-1	END-2				
51	PARULIA-BIDHANNAGAR	WBSETCL	POWERGRID	WBSETCL	11	TW.MOOSE	220	S/C
52	BINAGURI-NJP	POWERGRID	POWERGRID	WBSETCL	0.2	ZEBRA	220	S/C
53	SUBH'GRM(PG) - SUBH'GRM (WB)	WBSETCL	POWERGRID	WBSETCL	0.5	ZEBRA	220	D/C
54	BIRPARA - CHUKHA	POWERGRID	POWERGRID	POWERGRID	38	ZEBRA	220	D/C
55	BIRPARA-MALBASE	POWERGRID	POWERGRID	POWERGRID	40	ZEBRA	220	S/C
56	MUZZFARPUR-KANTI	POWERLINKS	POWERGRID	BSEB	22	ZEBRA	220	D/C
57	RANCHI-HATIA	JSEB	POWERGRID	JSEB	34	ZEBRA	220	S/C
58	CHANDIL-RANCHI	JSEB	JSEB	POWERGRID	42	ZEBRA	220	S/C
59	BIRPARA-SALAKATI	POWERGRID	POWERGRID(ER)	POWERGRID(NER)	160	ZEBRA	220	D/C
60	BARHI - B'SHARIFF	BSEB & DVC	DVC	BSEB	170	LARK	132	S/C
61	BARHI-RAJGIR	BSEB & DVC	DVC	BSEB	125	LARK	132	S/C
62	DEOGHAR-SULTANGANJ	DVC & JSEB	JSEB	BSEB	93	PANTHER	132	S/C
63	KAHALGAON-KAHALGAON	POWERGRID	BSEB	NTPC	2	PANTHER	132	S/C
64	ARRAH-ARRAH	BSEB	BSEB	POWERGRID	3	PANTHER	132	S/C
65	DUMRAON-ARRAH	BSEB	BSEB	POWERGRID	61	PANTHER	132	S/C
66	PURNEA(PG)-PURNEA(BS)	BSEB	BSEB	POWERGRID	1	LARK	132	T/C
67	PURNEA(PG)-KISANGANJ	BSEB	BSEB	POWERGRID	70	PANTHER	132	S/C
68	DEHRI-PUSUALI	POWERGRID	BSEB	POWERGRID	63	PANTHER	132	S/C
69	KARMANASA --PUSUALI	POWERGRID	BSEB	POWERGRID	29	PANTHER	132	S/C
70	KARMANASA-SAHUPURI	BSEB & UPCL	BSEB	UPCL	27	PANTHER	132	S/C
71	KARMANASA-CHANDAUULI	BSEB & UPCL	BSEB	UPCL	25	PANTHER	132	S/C
72	SONENAGAR - RIHAND	BSEB & UPCL	BSEB	UPCL	139	PANTHER	132	S/C
73	MAITHON-JAMTARA	DVC & JSEB	DVC	JSEB	100	PANTHER	132	S/C
74	KHARAGPUR-KHARAGPUR	DVC	DVC	WBSETCL	1	PANTHER	132	S/C
75	KOLAGHAT-KOLAGHAT	DVC	DVC	WBSETCL	1	PANTHER	132	S/C
76	MACHKUND-VIZAG	OPTCL & APTRANSCO	OPTCL	APTRANSCO	160	LARK	132	S/C
77	JODA-KENDPOSI	OPTCL & JSEB	OPTCL	JSEB	48	PANTHER	132	S/C
78	BARIPADA-RAIRANGPUR	OPTCL	POWERGRID	OPTCL	70	PANTHER	132	S/C
79	BARIPADA-BARIPADA	OPTCL	POWERGRID	OPTCL	11	PANTHER	132	S/C
80	GARWA-SONENAGAR	BSEB & JSEB	JSEB	BSEB	104	PANTHER	132	S/C
81	LALMATIA-SABOUR	BSEB & JSEB	JSEB	BSEB	72	PANTHER	132	S/C
82	CHANDIL-MANIQUE	JSEB & DVC	JSEB	DVC	1	PANTHER	132	D/C
83	PATRATU-PATRATU	JSEB & DVC	JSEB	DVC	3	LARK	132	S/C
84	GARWA-RIHAND	JSEB & UPCL	JSEB	UPCL	30	PANTHER	132	S/C
85	RANGIT-RAMMAM	POWERGRID	NHPC	WBSETCL	27	ZEBRA	132	S/C
86	KAHALGAON-SABOUR	POWERGRID	NTPC	BSEB	37	PANTHER	132	S/C
87	KAHALGAON-LALMATIA	POWERGRID	NTPC	JSEB	34	PANTHER	132	S/C
88	BIRPARA-BIRPARA	WBSETCL	POWERGRID	WBSETCL	1	PANTHER	132	D/C
89	MALDA-MALDA	WBSETCL	POWERGRID	WBSETCL	6	PANTHER	132	D/C
90	NJP-NBU	WBSETCL	POWERGRID	WBSETCL	8	PANTHER	132	D/C
91	PURULIA-PURULIA	WBSETCL & DVC	WBSETCL	DVC	1	PANTHER	132	S/C
92	RANGIT - MELLI	SIKKIM	NHPC	SIKKIM	32.5	PANTHER	132	D/C
93	RANGIT - MELLI	POWERGRID	NHPC	SIKKIM	37	LARK	66	S/C
94	GANGTOK - MELLI	POWERGRID	POWERGRID	SIKKIM	37	PANTHER	132	S/C
95	GANGTOK - GANGTOK	POWERGRID	POWERGRID	SIKKIM	0	PANTHER	132	D/C
96	KALINGPONG-MELLI	WBSETCL & SIKKIM	WBSETCL	SIKKIM	15	DOG	66	D/C
97	NJP-MELLI	POWERGRID	POWERGRID	SIKKIM	90	PANTHER	132	S/C

2.2 Other Important lines

LINE	OWNED BY	CONNECTED SYSTEMS		LENGTH (KM)	COND. (TYPE)	VOLTS (KV)	NO. OF CKTS.
		END-1	END-2				
PTPS -TENUGHAT	JSEB	JSEB	TVNL	53	TW. MOOSE	220	1
MERAMUNDALI - BIDANASI	OPTCL	OPTCL	OPTCL	90	TW. MOOSE	220	2
MERAMUNDALI - MENDASAL	OPTCL	OPTCL	OPTCL	99	TW. MOOSE	400	1
RENGALI - BARIKADA	OPTCL	POWERGRID	POWERGRID	240	TW. MOOSE	400	1
KTPS - JEERAT	WBSETCL	WBPDC	WBSETCL	130	TW. MOOSE	400	1
BAKRESWAR - JEERAT	WBSETCL	WBPDC	WBSETCL	162	TW. MOOSE	400	1
BAKRESWAR - ARAMBAGH	WBSETCL	WBPDC	WBSETCL	130	TW. MOOSE	400	1
PPSP - ARAMBAGH	WBSEDCL	WBPDC	WBSETCL	210	TW. MOOSE	400	2
PPSP - BIDHANAGAR	WBSEDCL	WBPDC	WBSETCL	185	TW. MOOSE	400	2
KTPS - ARAMBAGH	WBSETCL	WBPDC	WBSETCL	75	TW. MOOSE	400	1
JEYPORE - INDRAVATI	POWERGRID	POWERGRID	POWERGRID	72	TW. MOOSE	400	1
INDRAVATI - RENGALI	POWERGRID	POWERGRID	POWERGRID	356	TW. MOOSE	400	1
FARAKKA - KAHALGAON	POWERGRID	NTPC	NTPC	95	TW. MOOSE	400	2
PARULIA - JAMSHEDPUR	POWERGRID	POWERGRID	POWERGRID	177	TW. MOOSE	400	1
MAITHON - JAMSHEDPUR	POWERGRID	POWERGRID	POWERGRID	153	TW. MOOSE	400	1
MAITHON - DSTPS	POWERGRID	POWERGRID	POWERGRID	97	TW. MOOSE	400	1
DSTPS-MEJIA-B	POWERGRID	POWERGRID	POWERGRID	32	TW. MOOSE	400	1
MEJIA -B - JAMSHEDPUR	POWERGRID	POWERGRID	POWERGRID	168	TW. MOOSE	400	1
MAITHON - MAITHON POWER STATIO	POWERGRID	POWERGRID	POWERGRID	30	TW. MOOSE	400	2
MAITHON - KAHALGAON	POWERGRID	POWERGRID	POWERGRID	172	TW. MOOSE	400	2
MAITHON - RANCHI	POWERGRID	POWERGRID	POWERGRID	200	TW. MOOSE	400	2
FARAKKA - MALDA	POWERGRID	NTPC	POWERGRID	40	TW. MOOSE	400	2
KAHALGAON BIHARSARIFF I & II	POWERGRID	NTPC	POWERGRID	201	TW. MOOSE	400	2
KAHALGAON-BIHARSARIFF III & IV	POWERGRID	NTPC	POWERGRID	166	TW. MOOSE	400	2
KAHALGAON -PATNA	POWERGRID	NTPC	POWERGRID	257	QD. MOOSE	400	1
KAHALGAON -BARH	POWERGRID	NTPC	NTPC	217	QD. MOOSE	400	1
BARH -PATNA	POWERGRID	NTPC	POWERGRID	94	QD. MOOSE	400	1
TSTPP - ROURKELA	POWERGRID	NTPC	POWERGRID	171	TW. MOOSE	400	2
FRAKKA - PARULIA	POWERGRID	NTPC	POWERGRID	150	TW. MOOSE	400	1
TSTPP - RENGALI	POWERGRID	NTPC	POWERGRID	24	TW. MOOSE	400	2
JAMSHEDPUR - ROURKELA	POWERGRID	POWERGRID	POWERGRID	174	TW. MOOSE	400	2
MALDA - PURNEA	POWERGRID	POWERGRID	POWERGRID	167	TW. MOOSE	400	2
PURNEA - BINAGURI I & II	POWERGRID	POWERGRID	POWERGRID	168	TW. MOOSE	400	2
PURNEA - BINAGURI III & IV	POWERGRID	POWERGRID	POWERGRID	160	QD. MOOSE	400	2
PURNEA - MUZAFFARPUR	POWERLINKS	POWERGRID	POWERGRID	240	QD. MOOSE	400	2
BIHARSHARIFF-MUZAFFARPUR	POWERGRID	POWERGRID	POWERGRID	130	TW. MOOSE	400	2
BIHARSHARIFF- PUSAULI	POWERGRID	POWERGRID	POWERGRID	195	TW. MOOSE	400	2

Other Important lines (Cont...)

LINE	OWNED BY	CONNECTED SYSTEMS		LENGTH (KM)	COND. (TYPE)	VOLTS (KV)	NO. OF CKTS.
		END-1	END-2				
TALA - BINAGURI I & II (Indian part)	POWERGRID	THEP	POWERGRID	115	TW. MOOSE	400	2
TALA - BINAGURI IV (Indian part)	POWERGRID	THEP	POWERGRID	98	TW. MOOSE	400	1
MALBASE-BINAGURI (Indian part)	POWERGRID	BPC	POWERGRID	125.1	TW. MOOSE	400	1
TEESTA-V - BINAGURI	POWERGRID	NHPC	POWERGRID	115	TW. MOOSE	400	2
BIHARSHARIFF-FATUAH	BSEB	BSEB	BSEB	40	ZEBRA	220	2
BIHARSHARIFF-BODHAGYA	BSEB	BSEB	BSEB	85	ZEBRA	220	2
DEHRI-BODHAGYA	BSEB	BSEB	BSEB	90	ZEBRA	220	2
FATUAH-MTPS	BSEB	BSEB	BSEB	92	ZEBRA	220	1
WARIA-PARULIA	DVC	DVC	DVC	21	ZEBRA	220	2
WARIA-MEJIA	DVC	DVC	DVC	34	ZEBRA	220	2
CTPS-KALYANESWARI	DVC	DVC	DVC	91	ZEBRA	220	2
MEJIA-CTPS	DVC	DVC	DVC	119	ZEBRA	220	2
BOKARO-JAMSHEDPUR	DVC	DVC	DVC	150	ZEBRA	220	2
BOKARO-CTPS	DVC	DVC	DVC	41	ZEBRA	220	1
BOKARO-CTPS B	DVC	DVC	DVC	42	ZEBRA	220	1
KALYANESHWARI-MEJIA	DVC	DVC	DVC	55	ZEBRA	220	1
BOKARO-RAMGARH	DVC	DVC	DVC	55	ZEBRA	220	2
PATRATU-HATIA	JSEB	JSEB	JSEB	51	ZEBRA	220	1
JEYANAGAR-U.KOLAB	OPTCL	OPTCL	OHPC	6	ZEBRA	220	2
TALCHER-NALCO	OPTCL	NTPC	NALCO	17	ZEBRA	220	1
NALCO-RENGALI HPS	OPTCL	NALCO	OHPC	34	ZEBRA	220	1
BALIMELA-JEYNAGAR	OPTCL	OHPC	OPTCL	93	ZEBRA	220	3
IBTPS - BUDHIPADAR	OPTCL	OPGC	OPTCL	25	ZEBRA	220	3
TARKERA-BUDHIPADAR	OPTCL	OPTCL	OPTCL	120	ZEBRA	220	2
U. KOLAB-THERUVALI	OPTCL	OHPC	OPTCL	136	ZEBRA	220	1
TALCHER-MERAMUNDALI	OPTCL	NTPC	OPTCL	20	ZEBRA	220	2
UIHEP-THERUVALI	OPTCL	OHPC	OPTCL	90	ZEBRA	220	4
KTPS-HOWRAH	WBSETCL	WBPDC	WBSETCL	71	ZEBRA	220	2
ARAMBAGH-SANTALDIH	WBSETCL	WBSETCL	WBPDC	183	ZEBRA	220	2
SANTALDIH-BIDHANNAGR	WBSETCL	WBDPCL	WBSETCL	100	ZEBRA	220	1
BIDHANNAGAR-DPL	WBSETCL	WBSETCL	DPL	5	ZEBRA	220	1
BIDHANNAGAR-BAKRESWAR	WBSETCL	WBSETCL	WBPDC	47	ZEBRA	220	2
BAKRESWAR-GOKARNO	WBSETCL	WBPDC	WBSETCL	82	ZEBRA	220	2
GOKARNO-SAGARDIGHI	WBSETCL	WBSETCL	WBPDC	39	ZEBRA	200	2
DALKHOLA-PURNEA	POWERGRID	POWERGRID	POWERGRID	41	ZEBRA	220	2
BIRPARA-BINAGURI	POWERGRID	POWERGRID	POWERGRID	80	ZEBRA	220	2
NJP-BINAGURI	POWERGRID	POWERGRID	POWERGRID	6	ZEBRA	220	2
NJP-DALKHOLA	POWERGRID	POWERGRID	POWERGRID	119	ZEBRA	220	2
DALKHOLA-MALDA	POWERGRID	POWERGRID	POWERGRID	116	ZEBRA	220	2
SASARAM-ARRAH	POWERGRID	POWERGRID	POWERGRID	112	ZEBRA	220	2

3.0 List of Important Transformer

LOCATION	VOLTAGE RATIO	CAPACITY (MVA)	OWNERSHIP
JAMSHEDPUR	400/220	2X315	POWERGRID
FARAKKA	400/220	1X315	POWERGRID
PARULIA	400/220	2X315	POWERGRID
MALDA	400/220	2X315	POWERGRID
BIHARSHARIF	400/220	3X315	POWERGRID
JEYPORE	400/220	2X315	POWERGRID
RENGALI	400/220	2X315	POWERGRID
KAHALGAON	400/132	2X200	NTPC
MAITHON	400/220	2X315	POWERGRID
ROURKELA	400/220	2X315	POWERGRID
SASARAM	400/220	2X315	POWERGRID
TSTPP	400/220	2X315	NTPC
BINAGURI	400/220	2X315	POWERGRID
NEW PURNEA	400/220	2X315	POWERGRID
MUZAFFARPUR	400/220	2X315	POWERGRID
BARIPADA	400/220	2X315	POWERGRID
INDRAVATI ICT-I	400/220	1X315	OHPC
INDRAVATI ICT-II	400/220	1X315	POWERGRID
SUBHASGRAM	400/220	2X315	POWERGRID
PATNA	400/220	2X315	POWERGRID
RANCHI	400/220	2X315	POWERGRID
TALCHER HVDC CONV. XMER	400/(210/√3)/210	6X(397/198.5/198.5)	POWERGRID
SSRM HVDC CONV. XFER (EAST)	400/(93/√3)/93	3X(234/117/117)	POWERGRID
SSRM HVDC CONV. XFER (NORTH)	400/(93/√3)/93	3X(234/117/117)	POWERGRID
BIRPARA	220/132	1x50+1x100	POWERGRID
NJP	220/132	1X100	POWERGRID
PURNEA	220/132	3X100	POWERGRID
MALDA	220/132	3X50	POWERGRID
BARIPADA	220/132	1X160	POWERGRID
ARRAHA	220/132	2X100	POWERGRID
GANGTOK	132/66	2X50	POWERGRID
KHAGAUL	220/132	2X100	BSEB
PATRATU	220/132	2X150	JSEB
BOKARO	220/132	2X150	DVC
CHANDRAPURA	220/132	2x100+2x150	DVC
WARIA	220/132	2X150	DVC
UIHEP	400/220	1x315	OHPC
MERAMUNDALI	400/220	2X315	OPTCL
MENDHASAL	400/220	2X315	OPTCL
JODA	220/132	2X100	OPTCL
TALCHER	220/132	2X160	NTPC
BUDHIPADAR	220/132	2X160	OPTCL
KOLAGHAT TPS	400/220	2X315	WBPDCL
BAKRESWAR	400/220	2X315	WBPDCL
SAGARDIGHI	400/220	1X315	WBPDCL
JEERAT	400/220	3X315	WBSETCL
ARAMBAGH	400/220	3X315	WBSETCL
BIDHANNAGAR	400/220	1X315	WBSETCL
SANTALDIH	220/132	1X100	WBPDCL

4.0 List of Reactors and Harmonic Filters

LINE/SUB-STN	LENGTH (KM)	REACTOR CAPACITY (MVAR)			REMARKS	
		BUS	LINE	END		
FARAKKA - JEERAT-I	238		50	JEERAT		
SAGARDIGHI-SUBHASGRAM	256.3		50	SUBHASHGRM		
			63	SAGARDIGHI		
FARAKKA-PARULIA-I	150		1X50	FARAKKA	OWNED BY NTPC	
PPSP-PARULIA-I	150		1X50	PARULIA		
K'GAON-B'SHARIFF-I	196		1X50	B'SHARIFF		
K'GAON-B'SHARIFF-II	196		1X50	B'SHARIFF		
K'GAON-MAITHON-I	172		1X50	MAITHON		
K'GAON-MAITHON-II	172		1X50	MAITHON		
JAMSHEDPUR-R'KELA-I	174		1X50	ROURKELA		SWITCHABLE
JAMSHEDPUR-R'KELA-II	174		1x50	ROURKELA		
TSTPP-ROURKELA-I	175		1X50	TSTPP		OWNED BY NTPC
TSTPP-ROURKELA-II	175		1X50	TSTPP		OWNED BY NTPC
BARIPADA-RENGALI	239		1x 63	RENGALI		
BAKRESWAR-ARAMBAG	132		1X 50	BAKRESWAR		
BAKRESWAR-JERRAT	162		1X 50	JEERAT		
RENGALI-INDRAVATI(S/C)	356		1x50	RENGALI		
			1x50	INDRAVATI		
BIHARSARIF-TENUGHAT(S/C)	180		1X 50	TENUGHAT		
MALDA-PURNEA I	167		1X63	MALDA		
MALDA-PURNEA II	167		1X63	MALDA		
BINAGURI-TALA-I	140		1x63	BINAGURI		
PURNEA-BINAGURI-I	168		1x63	PURNEA	SWITCHABLE	
PURNEA-MUZAFFARPUR-I	240		1x63	PURNEA		
			1x63	MZFRPR	SWITCHABLE	
PURNEA-MUZAFFARPUR-II	240		1x63	PURNEA	SWITCHABLE	
			1x63	MZFRPR	SWITCHABLE	
ROURKELA-RAIGARH I	212.4		1x63	ROURKELA		
ROURKELA-RAIGARH II	212.4		1X63	ROURKELA		
MERAMUNDALI-JEYPORE	456		1x80	JEYPORE		
			1x80	MERAMUNDALI		
B'SHARIFF-SASARAM I	195		1X63	SASARAM	SWITCHABLE	
B'SHARIFF-SASARAM II	195		1X63	SASARAM	SWITCHABLE	
SASARAM-SARNATH	76		1X63	SASARAM	SWITCHABLE	
SASARAM-ALLAHABAD	271		1X63	SASARAM	SWITCHABLE	
MUZAFFARPUR-GRKPR-I	260		1X63	MUZAFFARPUF	SWITCHABLE	
MUZAFFARPUR-GRKPR-II	260		1X63	MUZAFFARPUF	SWITCHABLE	
KAHALGAON-PATNA	257		1X50	PATNA		
BARH-PATNA	94		1X50	PATNA		
RANCHI-SIPAT-I	405		1X80	RANCHI	SWITCHABLE	
RANCHI-SIPAT-II	405		1X80	RANCHI	SWITCHABLE	
FARRAKA		2X50				
BIHARSHARIFF		1X50+1X80				
MAITHON		1X50				
MAITHON RIGHT BANK		2 X 50				
JAMSHEDPUR		2X50				
ROURKELA		1X50				
PARULIA		1X50				
NEW PURNEA		1X125				
MUZAFFARPUR		1X63				
PATNA		1X80				
RANCHI		1X80				
SASARAM (EAST) FILTER BANK		4X112				
SASARAM (NORTH) FILTER BANK		4X112				
TALCHER FILTER BANK		6X120+3X97				
TALCHER HVDC		2X80				
RENGALI		31.5*			* TERTIARY WINDING OF 400/220KV ICTS	
JEYPORE		31.5* +				
		1 x 63				
KOLAGHAT		1X 50				
BAKRESWAR		1X 50				
JEERAT		1X 50				
ARAMABG		1X 50				

SERIES COMPENSATION ELEMENTS & HVDC CONVERTERS

- 1 FSC + TCSC AT PURNEA END OF 400KV PURNEA - MUZAFFARPUR I & II
- 2 FSC AT JEYPORE END OF 400KV MERAMUNDALI-JEYPORE LINE
- 3 FSC AT JEYPORE END OF 400KV JEYPORE - GAJUWAKA I & II
- 4 500MW HVDC BACK-TO-BACK CONVERTER AT SASARAM

5.0 List of Important Generators

Control Area	Station	Type	Owner	Capacity(MW)
Farakka	Farakka STPS	ISGS Thermal	NTPC	3x200+2x500
Kahalgaon	Kahalgaon STPS Stage I	ISGS Thermal	NTPC	4x210
	Kahalgaon STPS Stage II	ISGS Thermal	NTPC	2x500
Talcher Stg I	Talcher STPS Stage I	ISGS Thermal	NTPC	2x500
Talcher Stg II	Talcher STPS Stage II	ISGS Thermal	NTPC	4x500
Teesta -V	Teesta	ISGS Hydro	NHPC	3x170
Rangit	Rangit	ISGS Hydro	NHPC	3x20
Bhutan	Tala	ISGS Hydro	DGPC(Bhutan)	6x170
Bhutan	Chukha	ISGS Hydro	DGPC(Bhutan)	4x84
Bhutan	Kurichu	ISGS Hydro	DGPC(Bhutan)	4x15
Jharkhand	Tenughat	Thermal	TVNL(JSEB)	2x210
	Subarnarekha	Hydro	JSEB	2X65
DVC	Waria	Thermal	DVC	(U#4) 210
	Mejia	Thermal	DVC	4X210+2X250
	Mejia-B	Thermal	DVC	500 (U#1)
	Bokaro"B"	Thermal	DVC	3x210
West Bengal	Kolaghat	Thermal	WBPDCL	6x210
	Sagardighi	Thermal	WBPDCL	2x300
	Bakreswar	Thermal	WBPDCL	5x210
	Santaldih	Thermal	WBPDCL	(U#5) 250
	Bandel	Thermal	WBPDCL	U#5 (210)
	PPSP	Hydro	WBSEDCL	4X225
	DPL	Thermal	DPL	(U#7) 300
Budge-Budge	Thermal	CESC	2X250	
Orissa	IB	Thermal	OPGC	2x210
	Balimela	Hydro	OHPC	6x60+2x75
	U-Kolab	Hydro	OHPC	4x80
	U-Indravati	Hydro	OHPC	4x150
	Rengali	Hydro	OHPC	4x50
IPP	MPL	Thermal	MPL	2 x 525
	SEL	Thermal	SEL	2 x 600

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