

पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पब्लिसिड की पूर्ण स्वामित्व प्राप्त सार्वजनिक कंपनी)



उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 07.08.2015
Date of Reporting : 08.08.2015

I. Regional Availability/Demand:

Evening Peak (20:00 Hrs) MW				Off Peak (03:00 Hrs) MW				Day Energy (Net MU)	
Demand Met	Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage
4534.1	3135	48475	50.12	42638	2612	45250	50.11	1033.2	45.47

* Half hourly (two 15 minutes block—one block each before and after the designated time) average frequency

II. A. State's Load Details (At States periphery) in MUs:

State	State's Control Area Generation (Net MU)				Drawal Schedule (Net MU)	Actual Drawal (Net MU)	UI (Net MU)	Consumption (Net MU)	Shortages* (MU)
	Thermal	Hydro	Renewable/others \$	Total					
Punjab	53.73	21.49		75.21	129.76	129.76	-0.36	204.61	0.00
Haryana	38.82	0.64		39.47	129.19	126.59	-2.60	166.05	0.00
Rajasthan	106.40	5.99	17.13	129.52	50.14	49.54	-0.60	179.05	0.00
Delhi	15.19			15.19	87.66	87.30	-0.36	102.50	0.09
UP	116.61	6.70		130.81	145.30	149.53	4.23	280.34	37.29
Uttarakhand		24.27		24.27	10.71	11.32	0.61	35.60	0.11
HP		24.80		24.80	0.31	1.14	0.83	25.94	0.00
J & K		14.02	0.00	14.02	19.83	19.51	-0.33	33.53	7.99
Chandigarh				0.00	6.16	5.61	0.27	5.61	0.00
Total	330.75	97.92	17.13	453.30	579.06	579.93	1.69	1033.22	45.47

* Shortage furnished by the respective constituent. \$ Others include UP Co-generation and JK Diesel

II. B. State's Demand Met in MWs:

State	Evening Peak (20:00 Hrs) MW				Off Peak (03:00 Hrs) MW				# Max(hourly) Demand Met of Day (MW)
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction	
Punjab	8502	0	-45	1685	8689	0	-79	1969	9054
Haryana	7828	0	-226	1889	6981	0	111	1897	7828
Rajasthan	7601	0	-266	120	7327	0	-52	-35	7999
Delhi	4608	0	99	241	4103	0	-13	423	4896
UP	11988	2700	337	652	11916	2420	122	1017	12452
Uttarakhand	1695	0	-8	-214	1389	0	-36	-313	1695
HP	1130	0	27	-1427	931	0	81	-1613	1233
J&K	1739	435	68	-476	1086	192	-81	-888	1797
Chandigarh	250	0	-19	0	217	0	-18	0	267
Total	45341	3135	-34	2471	42638	2612	36	2457	45341

* STOA figures are at sellers boundary & PX figures are at regional boundary. # figures may not be at simultaneous hour.

III. Regional Entities :

Entity	Station/Constituent	Inst. Capacity (Effective) MW	Declared Capacity (MW)	Peak MW (Gross)	Off Peak MW (Gross)	Energy (Net MU)	Average Sentout (MW)	Schedule Net MU	UI Net MU	
										UI
A. NTPC	Singrauli STPS (5*200+2*500)	2000	1865	2015	1627	4.06	169	40.00	-35.95	
	Rihand I STPS (2*500)	1000	848	888	785	17.81	742	17.90	-0.09	
	Rihand II STPS (2*500)	1000	470	476	380	10.22	426	10.06	0.16	
	Rihand III STPS (2*500)	1000	471	451	349	9.27	386	9.21	-0.05	
	Dadri I STPS (4*210)	840	810	527	509	11.82	492	12.78	0.97	
	Dadri II STPS (2*490)	980	975	732	695	16.54	689	17.31	-0.76	
	Unchahar I TPS (2*210)	420	400	306	261	6.30	263	7.62	-1.32	
	Unchahar II TPS (2*210)	420	400	270	257	5.72	238	6.89	-1.17	
	Unchahar III TPS (1*220)	210	200	170	123	2.86	119	3.57	-0.71	
	ISTPP (Jhajjar) (3*500)	1500	1435	604	611	13.69	570	13.82	-0.14	
	Dadri GPS (4*130.19+2*154.51)	830	800	428	484	11.03	459	11.35	-0.32	
	Anta GPS (3*88.71+1*153.2)	419	396	0	0	0.00	0	0.00	0.00	
	Auraiya GPS (4*111.19+2*109.30)	663	638	224	271	5.89	246	5.96	-0.06	
	Dadri Solar	5	1	0	0	0.00	0	0.02	-0.02	
	Unchahar Solar	10	3	0	0	0.03	1	0.06	-0.03	
	Singrauli Solar	15	3	0	0	0.00	0	0.07	-0.07	
	KHEP	800	820	829	808	19.99	833	19.68	0.31	
	Sub Total (A)	12112	10534	7920	7160	135	5634	176	-41	
	B. NPC	NAPS (2*220)	440	370	420	415	9.05	377	8.88	0.17
		RAPS- B (2*220)	440	388	432	433	9.31	388	9.31	-0.01
RAPS- C (2*220)		440	375	405	410	8.71	363	9.00	-0.29	
Sub Total (B)		1320	1133	1257	1258	27.06	1128	27.19	-0.13	
C. NHPC	Chamera I HPS (3*180)	540	537	546	548	13.12	546	12.89	0.23	
	Chamera II HPS (3*100)	300	300	303	303	7.23	301	7.20	0.03	
	Chamera III HPS (3*77)	231	229	230	233	5.61	234	5.50	0.11	
	Bairasuil HPS (3*60)	180	179	185	123	3.28	137	3.21	0.07	
	Salal-HPS (6*115)	690	657	666	668	16.10	671	15.76	0.33	
	Tanakpur-HPS (3*40)	94	91	95	93	2.24	93	2.19	0.05	
	Uri-I HPS (4*120)	480	473	472	470	11.44	477	11.35	0.09	
	Uri-II HPS (4*60)	240	224	230	233	5.40	225	5.37	0.03	
	Dhauliganga-HPS (4*70)	280	280	284	283	6.75	281	6.72	0.03	
	Dulhasti-HPS (3*130)	390	386	398	397	9.36	390	9.26	0.10	
	Sewa-II HPS (3*40)	120	119	119	122	2.75	114	2.65	0.10	
	Parbati 3 (4*130)	520	390	394	260	5.40	225	5.36	0.03	
	Sub Total (C)	4065	3866	3921	3733	89	3695	87	1	
	D. SJVNL	NJPC (6*250)	1500	1605	1620	1605	38.37	1599	38.52	-0.14
Rampur HEP (6*68.67)		412	428	429	429	10.32	430	10.27	0.05	
Sub Total (D)		1912	2033	2049	2034	48.69	2029	48.79	-0.10	
E. THDC	Tehri HPS (4*250)	1000	948	248	238	12.65	527	12.50	0.15	
	Koteshwar HPS (4*100)	400	196	402	201	4.74	198	4.70	0.04	
	Sub Total (E)	1400	1144	650	439	17.39	725	17.20	0.19	
F. BBMB	Bhakra HPS (3*108+2*126+5*157)	1361	1431	1451	1459	34.70	1446	34.34	0.35	
	Dehar HPS (6*165)	990	606	660	560	14.52	605	14.54	-0.02	
	Pong HPS (6*66)	396	376	384	384	9.15	381	9.02	0.12	
	Sub Total (F)	2747	2413	2495	2403	58.36	2432	57.91	0.46	
G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	201	188	4.48	187	4.30	0.17	
	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	1200	1200	28.69	1195	28.51	0.18	
	Malana Stg-II HPS (2*50)	100	0	111	111	2.63	110	2.46	0.17	
	Shree Cement TPS (2*150)	300	0	288	272	6.53	272	6.74	-0.21	
	Budhil HPS(IPP) (2*35)	70	0	76	76	1.80	75	1.80	0.00	
Sub Total (G)	1662	0	1877	1847	44.13	1839	43.81	0.31		
H. Total Regional Entities (A-G)	25219	21123	20170	18873	419.53	17480	458.68	-39.16		

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UI [OG:(+ve), UG: (-ve)]

I. State Entities	Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(Sent out MW)	
Punjab	Guru Gobind Singh TPS (Ropar) (6*210)	1260	1080	930	24.13	1005	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	80	80	2.80	117	
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	387	393	8.95	373	
	Goindwal(GVK)		0	0	0.00	0	
	Rajpura (2*700)	1400	706	881	17.86	744	
	Talwandi Saboo (1*660)	660	0	0	0.00	0	
	Thermal (Total)	4700	2253	2284	53.73	2239	
	Total Hydro	1000	911	910	21.49	895	
	Total Punjab	5700	3164	3194	75.21	3134	
	Haryana	Panipat TPS (4*110+2*210+2*250)	1367	0	0	0.00	0
DCRTPP (Yamuna nagar) (2*300)		600	501	475	11.66	486	
Faridabad GPS (NTPC)		432	318	318	8.19	341	
RGTPP (khedar) (IPP) (2*600)		1200	441	370	9.69	404	
Magnum Diesel (IPP)		25	0	0	0.00	0	
Jhajjar(CLP) (2*660)		1320	408	380	9.28	387	
Thermal (Total)		4944	1668	1543	38.82	1618	
Total Hydro		62	28	26	0.64	27	
Total Haryana		5006	1696	1569	39.47	1644	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	772	1017	21.23	885
		suratgarh TPS (6*250)	1500	711	762	17.40	725
		Chabra TPS (4*250)	1000	370	278	8.31	346
		Dholpur GPS (3*110)	330	78	78	1.91	80
	Ramgarh GPS (1*37.5 + 1*35.5 +2*37.5 +1*110 +1*50)	271	178	179	4.73	197	
	RAPS A (NPC) (1*100+1*200)	300	183	183	4.26	178	
	Barsingsar (NLC) (2*125)	250	186	187	4.32	180	
	Giral LTPS (2*125)	250	62	48	0.85	35	
	Rajwest LTPS (IPP) (8*135)	1080	522	446	11.43	476	
	V/S LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	480	457	11.28	470	
	Kawai(Adani) (2*660)	1320	865	865	20.68	862	
	Thermal (Total)	8876	4407	4500	106	4433	
	Total Hydro	550	282	258	5.99	250	
	Wind power	3214	599	758	14.05	585	
	Biomass	99	24	24	0.58	24	
	Solar	730	0	0	2.50	104	
	Renewable/Others (Total)	4043	623	782	17.13	714	
	Total Rajasthan	13469	5312	5540	129.52	5397	
	UP	Anpara TPS (3*210+2*500)	1630	1154	1156	27.60	1150
Obra TPS (2*50+2*94+5*200)		1194	430	439	10.40	433	
Panicha TPS (2*110+2*220+2*250)		1140	761	779	18.40	767	
Panki TPS (2*105)		210	113	117	1.20	50	
Harduaganj TPS (1*60+1*105+2*250)		665	473	501	10.50	438	
Tanda TPS (NTPC) (4*110)		440	290	280	6.51	271	
Roza TPS (IPP) (4*300)		1200	797	810	19.20	800	
Anpara-C (IPP) (2*600)		1200	537	540	12.80	533	
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	363	365	8.50	354	
Anpara-D(1*500)		500	0	0	0.30	13	
Lalitpur TPS(1*660)		660	0	0	0.00	0	
Thermal (Total)		9289	4918	4987	115	4809	
Vishnuparyag HPS (IPP)(4*110)		440	0	0	0.00	0	
Alakananda(4*82.5)		330	323	319	7.50	313	
Other Hydro		527	271	351	6.70	279	
Cogeneration	981	50	50	1.20	50		
Total UP	11237	5239	5388	130.812	5138		
Uttarakhand	Total Hydro	1398	990	1052	24.27	1011	
	Total Uttarakhand	1398	990	1052	24.27	1011	
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	27	73	1.24	52	
	Pragati Gas Turbine (2x104+ 1x122)	330	263	264	6.39	266	
	Riithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	0	0	0.10	4	
	Badarpur TPS (NTPC) (3*95+2*210)	705	322	315	7.47	311	
	Thermal (Total)	2917	612	652	15.19	633	
	Total Delhi	2917	612	652	15.19	633	
HP	Baspa HPS (IPP) (3*100)	300	335	335	7.47	311	
	Malana HPS (IPP) (2*43)	86	105	104	2.50	104	
	Other Hydro	878	627	557	14.83	618	
	Total HP	1264	1067	996	24.80	1033	
J & K	Baglihar HPS (IPP) (3*150)	450	450	450	10.80	450	
	Other Hydro/IPP	560	183	112	3.22	134	
	Gas/Diesel/Others	190	0	0	0.00	0	
	Total J & K	1200	633	562	14.02	584	
Total State Control Area Generation		42191	18713	18953	453.30	18575	
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			4612	4590	135.06	5628	
Total Regional Availability(Gross)		67410	43495	42416	1007.88	41683	

IV. Total Hydro Generation:

Regional Entities Hydro	12216	11458	10916	268.91	11205
State Control Area Hydro	5811	4182	4155	97.92	4080
Total Regional Hydro	18027	15640	15071	366.82	15284

VI(A). Inter Regional Exchange [Import (+ve)/Export (-ve)] [Linkwise]

Element	Peak(20:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	Import	Export	Import	Export	
Vindhychal(HVDC B/B)	250	250	250	0	4.66	0.00	4.66
765 KV Gwalior-Agra (D/C)	2250	1836	2525	0	44.32	0.00	44.32
400 KV Zerda-Kankroli	-103	-250	0	311	0.00	5.15	-5.15
400 KV Zerda-Bhimmal	-68	-211	0	287	0.00	4.06	-4.06
220 KV Auraiya-Malanpur	-32	-101	0	116	0.00	1.52	-1.52
220 KV Badod-Kota/Morak	-17	-112	23	132	0.00	1.45	-1.45
Mundra-Mohinderqarh(HVDC Bipole)	1800	2300	2506	0	51.49	0.00	51.49
400 KV Vindhychal - Rihand	-456	-470	503	0	11.26	0.00	11.26
Sub Total WR	3624	3242			111.73	12.17	99.55
Pusauli Bypass/HVDC	400	400	400	0	9.08	0.00	9.08
400 KV MZP- GKP (D/C)	92	240	348	0	5.53	0.00	5.53
400 KV Patna-Balia(D/C) X 2	217	232	317	0	6.00	0.00	6.00
400 KV B'Sharif-Balia (D/C)	27	50	155	0	1.85	0.00	1.85
765 KV Pusauli-Balia	26	85	203	0	1.17	0.00	1.17
765 KV Gaya-Fatehpur	-195	-94	255	0	3.70	0.00	3.70
220 KV Pusauli-Sahupuri	160	165	181	0	3.87	0.00	3.87
132 KV Knasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV Son Ngr-Rihand	-41	-40	0	46	0.00	0.87	-0.87
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	22	76	67	122	0.00	0.52	-0.52
400 KV Barh -GKP (D/C)	280	234	296	0	5.70	0.00	5.70
Sub Total ER	988	1348			36.89	1.39	35.51
Total IR Exch	4612	4590			148.62	13.56	135.06

VI(B). Inter Regional Schedule & Actual Exchanges [Import (+ve)/Export (-ve)] [Corridor wise]

ER	ISGS/LT Schedule (MU)		Bilateral Schedule (MU)		Power Exchange Shdl (MU)		Wheeling (MU)	
	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
29.33	3.99	33.32	22.44	12.55	-0.76	-0.49	1.22	-1.22

Total IR Schedule (MU)			Total IR Actual (MU)			Net IR UI (MU)		
Through ER	Through WR Inclds Mndra	Total	Through ER	Through WR	Total	Through ER	Through WR	Total
56.22	82.80	139.02	35.51	99.55	135.06	-20.71	16.75	-3.96

VI(C). Inter National Exchange with Nepal [Import (+ve)/Export (-ve)] [Linkwise]

Element	Peak(20:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	Import	Export	Import	Export	
132 KV Tanakpur - Mahendarnagar	-26	-29	0	3013	0	0	-0.50

VI. Frequency Profile ←----- % of Time Frequency ----->

<49.2	<49.7	<49.8	<49.9	<50.0	49.9-50.05	50.05-50.10	50.10-50.20	>50.20	>50.50
0.00	0.00	0.00	4.12	42.58	75.10	16.97	3.73	0.13	0.00

Frequency (Hz)				Average Frequency	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block	
Maximum		Minimum					MAX	MIN
Freq	Time	Freq	Time	Hz	(Hz)	(Hz)		
50.22	18.02	49.84	6.40	50.01	0.03	0.06	50.19	49.98

VII. Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)			
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV
Rihand	400	405	07:59	397	14:47	0.0	0.0	0.0	0.0
Gorakhpur	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Bareilly	400	414	00:00	414	00:00	0.0	0.0	0.0	0.0
Kanpur	400	416	06:02	403	22:07	0.0	0.0	0.0	0.0
Dadri	400	413	05:03	398	14:46	0.0	0.0	0.0	0.0
Ballabgarh	400	419	05:05	190	14:05	12.3	12.3	0.0	0.0
Bawana	400	415	05:03	400	14:47	0.0	0.0	0.0	0.0
Bassi	400	424	03:57	410	14:34	0.0	0.0	22.2	0.0
Hissar	400	410	05:04	397	14:35	0.0	0.0	0.0	0.0
Moga	400	407	05:06	397	14:51	0.0	0.0	0.0	0.0
Abdullapur	400	411	05:21	398	11:36	0.0	0.0	0.0	0.0
Nalagarh	400	411	05:03	403	00:00	0.0	0.0	0.0	0.0
Kishenpur	400	412	05:05	403	11:54	0.0	0.0	0.0	0.0
Wagoora	400	406	03:59	388	13:36	0.0	9.5	0.0	0.0
Amritsar	400	408	06:01	393	04:06	0.0	0.0	0.0	0.0
Kashipur	400	419	16:05	412	22:05	0.0	0.0	0.0	0.0
Hamirpur	400	402	00:00	402	00:00	0.0	0.0	0.0	0.0
Rishikesh	400	410	08:06	394	22:08	0.0	0.0	0.0	0.0

VIII. Voltage profile 765 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)			
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV
Fatehpur	765	773	08:03	744	22:10	0.0	0.0	0.0	0.0
Balia	765	757	00:00	757	00:00	0.0	0.0	0.0	0.0
Moga	765	781	06:02	760	14:53	0.0	0.0	0.0	0.0
Agra	765	788	06:02	760	22:07	0.0	0.0	0.0	0.0
Bhiwani	765	785	05:03	765	14:18	0.0	0.0	0.0	0.0
Unnao	765	743	00:00	743	00:00	0.0	0.0	0.0	0.0
Lucknow	765	779	06:02	756	00:08	0.0	0.0	0.0	0.0
Meerut	765	797	06:02	768	22:08	0.0	0.0	0.0	0.0
Jhatikara	765	789	05:04	764	14:35	0.0	0.0	0.0	0.0
Bareilly	765	789	06:01	759	22:11	0.0	0.0	0.0	0.0
Anta	765	760	00:00	760	00:00	0.0	0.0	0.0	0.0
Phagi	765	786	02:02	401	17:27	0.3	0.3	0.0	0.0

IX. Reservoir Parameters:

Name of Reservoir	Parameters		Present Parameters		Last Year		Last day	
	FRL (m)	MDDL (m)	Level (m)	Energy (MU)	Level (m)	Energy (MU)	Inflow (m ³ /s)	Usage (m ³ /s)
Bhakra	513.59	445.62	505.21	1312.37	505.49	1325.82	1868.51	1174.44
Pong	426.72	384.05	418.46	821.34	408.21	435.19	1537.29	542.30
Tehri	829.79	740.04	801.20	630.00	801.70	637.00	733.51	308.00
Koteshwar	612.50	598.50	610.95	5.20	610.10	4.80	308.00	312.28
Chamera-I	760.00	748.75	756.65	0.00	0.00	0.00	426.16	355.79
Rihand	268.22	252.98	850.50	263.50	845.70	191.10	0.00	0.00
RPS	352.80	343.81	0.00	0.00	0.00	0.00	0.00	0.00
Jawahar Sagar	298.70	295.78	0.00	0.00	0.00	0.00	0.00	0.00
RSD	527.91	487.91	523.50	10.74	519.66	10.54	468.13	419.46

* NA: Not Available

X(A). Short-Term Open Access Details:

State	Off- Peak Hours (03:00 Hrs)			Peak Hours (20:00 Hrs)			Day Energy (MU)		
	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MW)	IEX (MW)	PXIL (MW)	Bilateral (MU)	IEX / PXIL (MU)	Total (MU)
Punjab	1864	105	0	1652	33	0	42.69	1.44	44.13
Delhi	367	57	-2	415	-173	-2	9.10	1.41	10.52
Haryana	1628	269	0	1649	240	0	39.07	5.89	44.96
HP	-1217	-397	0	-1000	-427	0	-25.15	-10.63	-35.78
J&K	-793	-96	0	-540	65	0	-14.27	-1.12	-15.39
CHD	0	0	0	0	0	0	0.24	0.08	0.32
Rajasthan	-496	460	2	-487	605	2	-11.74	12.90	1.16
UP	1017	0	0	652	0	0	16.50	0.00	16.50
Uttarakhand	-212	-101	0	-246	33	0	-5.10	-0.66	-5.76
Total	2159	298	0	2094	376	0	51.33	9.33	60.66

X(B). Short-Term Open Access Details:

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	1891	1616	105	0	0	0
Delhi	685	104	396	-192	0	-2
Haryana	1680	1554	286	61	0	0
HP	-915	-1253	-375	-575	0	0
J&K	-490	-793	79	-171	0	0
CHD	30	0	25	-10	0	0
Rajasthan	-448	-496	695	-233	2	0
UP	1033	509	0	0	0	0
Uttarakhand	-160	-287	33	-101	0	0

XI. System Constraints:

XII. Grid Disturbance / Any Other Significant Event:

XIII. Weather Conditions For 07.08.2015 :

XIV. Synchronisation of new generating units :

XV. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / /substation :

240 MVAR (80 *3) Bus Reactor at Phagi first time charged at 19.01 Hrs on 08.08.2015.

XVI. Tripping of lines in pooling stations :

XVII. Complete generation loss in a generating station :