

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 09.08.2015
Date of Reporting : 10.08.2015

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
41506	2876	44381	50.04	40355	3152	43507	50.09	960.1	63.51

* 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	47.77	21.75		69.52	114.62	114.42	-0.20	183.94	0.00
Haryana	23.23	0.53		23.76	119.18	119.85	0.67	143.61	0.02
Rajasthan	101.66	6.69	14.42	122.77	58.93	60.30	1.38	183.07	0.00
Delhi	12.38			12.38	74.35	73.17	-1.18	85.55	0.02
UP	113.21	6.50		122.51	140.92	144.59	3.67	272.10	54.13
Uttarakhand		21.28		21.28	9.24	12.21	2.97	33.50	0.38
HP		23.61		23.61	-4.11	-1.73	2.38	21.88	1.40
J & K		14.44	0.00	14.44	17.97	17.39	-0.59	31.83	7.57
Chandigarh				0.00	5.27	4.58	0.27	4.58	0.00
Total	298.26	94.79	14.42	415.27	536.38	544.78	9.36	960.05	63.51

* 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	7948	0	43	1217	7576	0	39	1683	7948
Haryana	7128	87	130	1845	6197	0	52	1850	7404
Rajasthan	7502	0	-41	186	7855	0	92	-165	8255
Delhi	3591	0	-19	497	3782	0	-11	214	4231
UP	10929	2135	67	570	11597	2970	109	1012	11869
Uttarakhand	1597	0	202	-214	1272	0	126	-479	1638
HP	873	226	459	-1479	869	0	61	-1657	1080
J&K	1711	428	290	-455	1029	182	-144	-818	1730
Chandigarh	227	0	5	0	178	0	-32	0	230
Total	41506	2876	1136	2167	40355	3152	292	1640	42645

* 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	2027	1989	44.49	1854	44.03	0.45	
	Rihand I STPS (2*500)	1000	831	871	716	17.26	719	17.09	0.17	
	Rihand II STPS (2*500)	1000	472	514	375	9.64	402	9.39	0.24	
	Rihand III STPS (2*500)	1000	480	514	350	9.64	402	9.72	-0.08	
	Dadri I STPS (4*210)	840	810	535	410	10.68	445	11.31	-0.63	
	Dadri II STPS (2*490)	980	975	954	662	16.86	703	17.60	-0.73	
	Unchahar I TPS (2*210)	420	400	411	275	6.64	277	7.88	-1.24	
	Unchahar II TPS (2*210)	420	400	431	246	6.44	268	7.58	-1.14	
	Unchahar III TPS (1*220)	210	200	212	129	3.18	133	3.81	-0.62	
	ISTPP (Jhajjar) (3*500)	1500	1436	834	644	15.66	652	15.83	-0.17	
	Dadri GPS (4*130.19+2*154.51)	830	800	377	372	8.73	364	9.07	-0.35	
	Anta GPS (3*88.71+1*153.2)	419	396	-1	-1	0.00	0	0.00	0.00	
	Auraiya GPS (4*111.19+2*109.30)	663	638	315	204	5.88	245	6.04	-0.17	
	Dadri Solar	5	1	0	0	0.01	0	0.02	0.00	
	Unchahar Solar	10	3	0	0	0.02	1	0.06	-0.04	
	Singrauli Solar	15	3	0	0	0.01	0	0.07	-0.07	
	KHEP	800	807	834	829	19.33	805	19.36	-0.03	
	Sub Total (A)	12112	10516	8828	7200	174	7269	179	-4	
	B. NPC	NAPS (2*220)	440	377	377	377	9.05	377	9.05	0.00
		RAPS- B (2*220)	440	388	439	432	9.34	389	9.31	0.03
RAPS- C (2*220)		440	375	410	410	8.75	365	9.00	-0.25	
Sub Total (B)		1320	1140	1226	1219	27.14	1131	27.36	-0.22	
C. NHPC	Chamera I HPS (3*180)	540	537	549	542	13.07	545	12.89	0.18	
	Chamera II HPS (3*100)	300	300	303	303	7.23	301	7.20	0.03	
	Chamera III HPS (3*77)	231	229	236	235	5.60	233	5.50	0.10	
	Bairasuil HPS (3*60)	180	179	185	124	3.43	143	3.34	0.09	
	Salal-HPS (6*115)	690	448	673	649	10.75	448	10.89	-0.13	
	Tanakpur-HPS (3*40)	94	92	94	94	2.24	93	2.20	0.03	
	Uri-I HPS (4*120)	480	471	467	463	11.33	472	11.31	0.02	
	Uri-II HPS (4*60)	240	230	234	232	5.56	232	5.52	0.04	
	Dhauliganga-HPS (4*70)	280	280	284	285	6.77	282	6.72	0.05	
	Dulhasti-HPS (3*130)	390	97	395	0	2.32	97	2.32	0.00	
	Sewa-II HPS (3*40)	120	119	130	0	1.72	72	1.63	0.09	
	Parbati 3 (4*130)	520	390	395	260	6.54	273	6.53	0.01	
	Sub Total (C)	4065	3373	3947	3187	77	3190	76	1	
D.SJVNL	NJPC (6*250)	1500	1203	0	1611	28.97	1207	29.25	-0.28	
	Rampur HEP (6*68.67)	412	315	0	428	7.67	320	7.58	0.09	
	Sub Total (D)	1912	1518	0	2039	36.64	1527	36.84	-0.20	
E. THDC	Tehri HPS (4*250)	1000	980	980	490	19.78	824	19.71	0.07	
	Koteshwar HPS (4*100)	400	300	302	302	7.21	300	7.20	0.01	
	Sub Total (E)	1400	1280	1282	792	26.98	1124	26.91	0.07	
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	1431	1453	1456	34.77	1449	34.34	0.42	
	Dehar HPS (6*165)	990	468	330	560	11.35	473	11.24	0.11	
	Pong HPS (6*66)	396	376	384	384	9.09	379	9.02	0.07	
	Sub Total (F)	2765	2275	2167	2400	55.21	2300	54.61	0.60	
	G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	230	182	4.49	187	4.61	-0.12
KARCHAM WANGTOO HPS(IPP) (4*250)		1000	0	0	1200	17.10	712	19.72	-2.62	
Malana Stg-II HPS (2*50)		100	0	111	111	2.63	110	2.48	0.15	
Shree Cement TPS (2*150)		300	0	263	284	6.23	259	6.37	-0.14	
Budhil HPS(IPP) (2*35)		70	0	76	76	1.81	75	1.80	0.01	
Sub Total (G)	1662	0	681	1853	32.26	1344	34.98	-2.72		
H. Total Regional Entities (A-G)	25237	20101	18131	18690	429.22	17884	435.59	-6.37		

Diversity is 1.04

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	840	880	17.90	746	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	100	80	1.77	74	
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	462	413	9.43	393	
	Goindwal(GVK)		0	0	0.00	0	
	Rajpura (2*700)	1400	1255	704	18.67	778	
	Talwandi Saboo (1*660)	660	0	0	0.00	0	
	Thermal (Total)	4700	2657	2077	47.77	1991	
	Total Hydro	1000	924	912	21.75	906	
	Total Punjab	5700	3581	2989	69.52	2897	
	Haryana	Panipat TPS (4*110+2*210+2*250)	1367	0	0	0.00	0
DCRTPP (Yamuna nagar) (2*300)		600	230	224	5.43	226	
Faridabad GPS (NTPC)		432	318	319	8.10	338	
RGTPP (khedar) (IPP) (2*600)		1200	428	357	9.70	404	
Magnum Diesel (IPP)		25	0	0	0.00	0	
Jhajjar(CLP) (2*660)		1320	0	0	0.00	0	
Thermal (Total)		4944	976	900	23.23	968	
Total Hydro		62	24	21	0.53	22	
Total Haryana		5006	1000	921	23.76	990	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	656	848	19.69	821
		suratgarh TPS (6*250)	1500	855	730	18.06	752
		Chabra TPS (4*250)	1000	177	116	3.70	154
		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	183	193	4.86	203	
	RAPS A (NPC) (1*100+1*200)	300	181	184	4.27	178	
	Barsingsar (NLC) (2*125)	250	187	188	4.38	183	
	Giral LTPS (2*125)	250	73	71	1.32	55	
	Rajwst LTPS (IPP) (8*135)	1080	740	685	13.89	579	
	V/S LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	0	472	7.26	302	
	Kawai(Adani) (2*660)	1320	1079	864	22.32	930	
	Thermal (Total)	8876	4209	4429	102	4236	
	Total Hydro	550	305	330	6.69	279	
	Wind power	3214	553	573	13.84	577	
	Biomass	99	24	24	0.58	24	
	Solar	730	0	0	0.00	0	
	Renewable/Others (Total)	4043	577	597	14.42	601	
	Total Rajasthan	13469	5091	5356	122.77	5115	
	UP	Anpara TPS (3*210+2*500)	1630	1225	1194	28.80	1200
Obra TPS (2*50+2*94+5*200)		1194	440	449	10.40	433	
Panicha TPS (2*110+2*220+2*250)		1140	755	712	17.50	729	
Panki TPS (2*105)		210	90	99	2.60	108	
Harduaganj TPS (1*60+1*105+2*250)		665	285	268	6.20	258	
Tanda TPS (NTPC) (4*110)		440	260	268	6.51	271	
Roza TPS (IPP) (4*300)		1200	815	806	19.40	808	
Anpara-C (IPP) (2*600)		1200	540	540	13.00	542	
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	347	363	7.60	317	
Anpara-D(1*500)		500	0	0	0.00	0	
Lalitpur TPS(1*660)		660	0	0	0.00	0	
Thermal (Total)		9289	4757	4699	112	4667	
Vishnuparyag HPS (IPP)(4*110)		440	0	0	0.00	0	
Alakananda(4*82.5)		330	327	324	7.80	325	
Other Hydro		527	293	320	6.50	271	
Cogeneration		981	50	50	1.20	50	
Total UP	11567	5427	5393	128	5313		
Uttarakhand	Total Hydro	1398	916	891	21.28	887	
	Total Uttarakhand	1398	916	891	21.28	887	
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.01	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	33	35	0.74	31	
	Pragati Gas Turbine (2x104+ 1x122)	330	0	259	2.34	98	
	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	316	319	9.42	392	
	Thermal (Total)	2917	348	613	12.38	516	
	Total Delhi	2917	348	613	12.38	516	
HP	Baspa HPS (IPP) (3*100)	300	221	302	7.54	314	
	Malana HPS (IPP) (2*43)	86	106	106	2.53	105	
	Other Hydro	878	613	537	13.53	564	
	Total HP	1264	940	945	23.61	984	
J & K	Baglihar HPS (IPP) (3*150)	450	440	440	10.56	440	
	Other Hydro/IPP	560	178	173	3.88	162	
	Gas/Diesel/Others	190	0	0	0.00	0	
	Total J & K	1200	618	613	14.44	602	
Total State Control Area Generation		42521	17921	17721	415.27	17303	
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			6028	4512	104.22	4343	
Total Regional Availability(Gross)		67758	42080	40922	948.72	39530	

IV. Total Hydro Generation:

Regional Entities Hydro	12234	8571	10740	238.93	9955
State Control Area Hydro	5811	4020	4032	94.79	3950
Total Regional Hydro	18045	12591	14772	333.72	13905

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	6.00	0.00	6.00
765 KV Gwalior-Agra (D/C)	2349		1412		2441	0	34.39	0.00	34.39
400 KV Zerda-Kankroli	-91		-240		0	309	0.00	5.52	-5.52
400 KV Zerda-Bhimmal	-61		-200		0	251	0.00	4.10	-4.10
220 KV Auraiya-Malanpur	-52		-79		0	104	0.00	1.75	-1.75
220 KV Badod-Kota/Morak	41		-8		74	101	0.00	0.89	-0.89
Mundra-Mohinderqarh(HVDC Bipole)	1902		2000		2305	0	39.30	0.00	39.30
400 KV Vindhychal - Rihand	501		503		503	0	11.11	0.00	11.11
Sub Total WR	4839		3638				90.80	12.26	78.54
Pusauli Bypass/HVDC	400		400		400	0	9.04	0.00	9.04
400 KV MZP- GKP (D/C)	188		120		342	0	5.44	0.00	5.44
400 KV Patna-Balia(D/C) X 2	154		191		270	0	4.39	0.00	4.39
400 KV B'Sharif-Balia (D/C)	32		70		178	0	2.07	0.00	2.07
765 KV Pusauli-Balia	89		57		131	0	0.90	0.00	0.90
765 KV Gaya-Fatehpur	84		-7		124	76	0.56	0.00	0.56
220 KV Pusauli-Sahupuri	172		126		180	0	3.58	0.00	3.58
132 KV Knasa-Sahupuri	0		0		0	0	0.00	0.00	0.00
132 KV Son Ngr-Rihand	-24		-40		0	43	0.00	0.78	-0.78
132 KV Garhwa-Rihand	0		0		0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-89		-139		0	198	0.00	2.71	-2.71
400 KV Barh -GKP (D/C)	183		96		193	0	3.20	0.00	3.20
Sub Total ER	1189		874				29.18	3.49	25.68
Total IR Exch	6028		4512				119.98	15.76	104.22

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
19.06	3.92	22.98	20.93	9.49	-0.53	-8.21	1.07	-1.07

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
44.45	74.35	118.80	25.68	78.54	104.22	-18.76	4.18	-14.58

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	-28		-25		0	34	0	1	-0.56

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	0.14	1.85	9.62	49.62	70.57	15.59	3.88	0.43	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)		
50.23	18.01	49.68	22.06	49.99	0.06	0.07	50.24	49.86

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	08:57	398	22:03	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	421	08:49	403	22:04	0.0	0.0	1.4	0.0
Dadri	400	416	08:49	400	21:11	0.0	0.0	0.0	0.0
Ballabgarh	400	424	08:49	406	21:07	0.0	0.0	20.9	0.0
Bawana	400	422	17:02	408	00:00	0.0	0.0	3.6	0.0
Bassi	400	424	17:04	408	11:21	0.0	0.0	11.7	0.0
Hissar	400	418	17:02	401	21:06	0.0	0.0	0.0	0.0
Moga	400	414	18:04	402	21:00	0.0	0.0	0.0	0.0
Abdullapur	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Nalagarh	400	425	18:53	408	00:00	0.0	0.0	5.3	0.0
Kishenpur	400	419	05:01	406	20:59	0.0	0.0	0.0	0.0
Wagoora	400	412	01:51	391	21:00	0.0	0.0	0.0	0.0
Amritsar	400	416	18:04	393	00:52	0.0	0.0	0.0	0.0
Kashipur	400	420	05:03	412	21:05	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	412	16:22	391	19:53	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	782	08:51	746	22:05	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	793	16:04	766	21:07	0.0	0.0	0.0	0.0
Agra	765	799	18:05	759	22:04	0.0	0.0	0.0	0.0
Bhiwani	765	797	16:02	766	21:09	0.0	0.0	0.0	0.0
Unnao	765	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Lucknow	765	784	08:50	462	03:22	0.1	0.1	0.0	0.0
Meerut	765	808	17:05	771	21:08	0.0	0.0	12.5	0.0
Jhatikara	765	802	08:49	769	21:11	0.0	0.0	3.4	0.0
Bareilly	765	794	05:22	0	13:16	11.4	11.4	0.0	0.0
Anta	765	760	00:00	760	00:00	0.0	0.0	0.0	0.0
Phagi	765	781	16:03	753	20:33	0.0	0.0	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	506.56	1382.01	506.33	1367.40	2508.45	1146.80
Pong	426.72	384.05	420.56	916.71	409.50	474.29	2446.71	532.98
Tehri	829.79	740.04	805.25	707.00	805.25	707.00	862.80	507.00
Koteshwar	612.50	598.50	611.47	5.46	610.95	4.95	507.00	474.87
Chamera-I	760.00	748.75	755.92	0.00	0.00	0.00	480.58	353.87
Rihand	268.22	252.98	0.00	0.00	0.00	0.00	0.00	0.00
RPS	352.80	343.81	1156.23	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	523.58	10.80	519.66	11.56	398.57	421.37

* 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	1517	166	0	1115	102	0	33.74	3.42	37.16
Delhi	367	-152	-2	431	69	-2	9.13	-0.17	8.95
Haryana	1628	221	0	1680	165	0	39.28	2.79	42.08
HP	-1217	-440	0	-1000	-479	0	-25.15	-12.92	-38.07
J&K	-742	-76	0	-490	35	0	-13.26	-0.70	-13.96
CHD	0	0	0	0	0	0	0.24	-0.19	0.05
Rajasthan	-496	330	2	-496	680	2	-11.91	14.75	2.84
UP	1012	0	0	570	0	0	15.06	0.00	15.06
Uttarakhand	-240	-239	0	-188	-26	0	-4.83	-4.22	-9.05
Total	1829	-189	0	1621	546	0	42.29	2.76	45.05

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	1594	1115	171	53	0	0
Delhi	685	106	450	-449	-2	-2
Haryana	1680	1628	223	-336	0	0
HP	-915	-1253	-396	-707	0	0
J&K	-490	-742	35	-151	0	0
CHD	30	0	0	-25	0	0
Rajasthan	-496	-496	774	272	2	2
UP	1017	402	0	0	0	0
Uttarakhand	-170	-272	-26	-243	0	0

XI. System Constraints:

XII. Grid Disturbance / Any Other Significant Event:

XIII. Weather Conditions For 09.08.2015 :

XIV. Synchronisation of new generating units :

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

765kV Phagi-Gwalior-1 test charged with L/R from Phagi end upto 129km at 2054Hrs.

XVI. Tripping of lines in pooling stations :

XVII. Complete generation loss in a generating station :