

पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पब्लिसिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 17.09.2015
Date of Reporting : 18.09.2015

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
47632	2815	50447	49.86	44500	2675	47175	50.01	1074.8	72.52

* 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	77.51	16.27		93.78	98.02	97.36	-0.66	191.14	0.00
Haryana	50.28	0.72		50.99	120.09	119.74	-0.35	170.73	0.00
Rajasthan	135.89	4.87	5.60	146.35	72.56	71.34	-1.22	217.69	0.00
Delhi	17.16			17.16	93.35	91.34	-2.00	108.50	0.54
UP	123.59	18.20		141.79	141.43	142.95	1.52	284.74	64.07
Uttarakhand		21.21		21.21	16.00	17.41	1.41	38.61	0.00
HP		15.32		15.32	8.15	9.42	1.27	24.74	0.03
J & K		13.19	0.00	13.19	20.01	20.20	0.18	33.38	7.90
Chandigarh				0.00	5.70	5.25	0.27	5.25	0.00
Total	404.42	89.77	5.60	499.78	575.30	575.00	0.41	1074.78	72.52

* 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	8597	0	-86	334	7031	0	37	578	8916
Haryana	8714	0	-190	1724	6825	0	-11	1731	8714
Rajasthan	8659	0	-125	-30	10122	0	-40	1161	10416
Delhi	4918	0	-3	682	4527	0	127	337	5228
UP	11691	2380	-93	492	12253	2460	267	1399	12601
Uttarakhand	1847	0	33	129	1560	0	56	166	1847
HP	1211	0	95	-878	866	12	50	-776	1211
J&K	1739	435	18	-207	1149	203	-50	-407	1739
Chandigarh	255	0	-16	10	168	0	-12	0	266
Total	47632	2815	-367	2257	44500	2675	424	4188	47632

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

Diversity is 1.07

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
A. NTPC	Singrauli STPS (5*200+2*500)	2000	1372	1541	1539	34.43	1434	32.89	1.54
	Rihand I STPS (2*500)	1000	783	856	876	18.91	788	18.70	0.21
	Rihand II STPS (2*500)	1000	950	1017	1007	22.94	956	22.60	0.33
	Rihand III STPS (2*500)	1000	480	485	514	11.40	475	11.43	-0.02
	Dadri I STPS (4*210)	840	600	605	662	13.62	568	14.18	-0.56
	Dadri II STPS (2*490)	980	970	895	921	20.09	837	21.54	-1.46
	Unchahar I TPS (2*210)	420	393	421	430	8.91	371	9.35	-0.44
	Unchahar II TPS (2*210)	420	400	401	440	9.06	378	9.42	-0.36
	Unchahar III TPS (1*220)	210	200	204	217	4.46	186	4.72	-0.27
	ISTPP (Jhajjar) (3*500)	1500	1436	626	751	14.41	600	14.83	-0.42
	Dadri GPS (4*130.19+2*154.51)	830	800	385	360	8.62	359	8.80	-0.18
	Anta GPS (3*88.71+1*153.2)	419	341	252	236	5.55	231	5.70	-0.15
	Auraiya GPS (4*111.19+2*109.30)	663	635	0	0	0.00	0	0.00	0.00
	Dadri Solar	5	1	0	0	0.02	1	0.03	-0.01
	Unchahar Solar	10	3	0	0	0.03	1	0.06	-0.03
	Singrauli Solar	15	3	0	0	0.07	3	0.08	-0.01
	KHEP	800	785	636	0	10.06	419	10.49	-0.43
	Sub Total (A)	12112	10151	8324	7953	183	7607	185	-2
	B. NPC	NAPS (2*220)	440	372	406	413	4.46	372	4.44
RAPS- B (2*220)		440	185	206	213	4.46	186	4.44	0.02
RAPS- C (2*220)		440	401	427	430	9.18	383	9.64	-0.45
Sub Total (B)		1320	958	1039	1056	22.58	941	23.00	-0.42
C. NHPC	Chamera I HPS (3*180)	540	534	543	0	4.16	173	4.00	0.16
	Chamera II HPS (3*100)	300	300	305	127	4.50	188	4.33	0.18
	Chamera III HPS (3*77)	231	229	223	0	2.85	119	2.72	0.13
	Bairasuli HPS(3*60)	180	179	123	0	1.22	51	1.14	0.08
	Salal-HPS (6*115)	690	559	671	528	14.25	594	13.36	0.88
	Tanakpur-HPS (3*40)	94	81	89	82	2.09	87	1.95	0.13
	Uri-I HPS (4*120)	480	172	314	158	4.70	196	4.14	0.57
	Uri-II HPS (4*60)	240	106	183	83	2.70	112	2.55	0.15
	Dhauliganga-HPS (4*70)	280	280	289	156	4.31	180	4.12	0.19
	Dulhasti-HPS (3*130)	390	386	400	403	9.48	395	9.26	0.21
	Sewa-II HPS (3*40)	120	119	129	0	0.43	18	0.37	0.06
	Parbati 3 (4*130)	520	390	396	0	1.61	67	1.66	-0.05
	Sub Total (C)	4065	3336	3664	1537	52	2179	50	3
D. SJVNL	NJPC (6*250)	1500	1350	1361	1363	29.03	1210	28.80	0.23
	Rampur HEP (6*68.67)	412	432	367	374	8.12	339	7.78	0.34
	Sub Total (D)	1912	1782	1728	1737	37.16	1548	36.59	0.57
E. THDC	Tehri HPS (4*250)	1000	1080	1014	235	6.61	276	6.50	0.11
	Koteshwar HPS (4*100)	400	92	101	94	2.24	93	2.20	0.04
	Sub Total (E)	1400	1172	1115	329	8.86	369	8.70	0.16
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	983	1435	778	23.37	974	23.60	-0.24
	Dehar HPS (6*165)	990	397	825	560	10.09	420	9.52	0.57
	Pong HPS (6*66)	396	355	384	258	8.60	358	8.52	0.08
	Sub Total (F)	2765	1735	2644	1596	42.06	1752	41.65	0.41
G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	74	48	1.38	57	1.35	0.03
	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	850	650	15.93	664	15.96	-0.03
	Malana Stg-II HPS (2*50)	100	0	100	55	1.23	51	1.18	0.05
	Shree Cement TPS (2*150)	300	0	145	146	3.47	145	3.58	-0.11
	Budhil HPS(IPP) (2*35)	70	0	44	0	0.83	34	0.98	-0.16
	Sub Total (G)	1662	0	1213	899	22.84	952	23.05	-0.21
H. Total Regional Entities (A-G)	25237	19135	19728	15107	368.35	15348	367.42	0.93	

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	900	880	20.53	855	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	225	260	4.71	196	
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	633	597	14.51	605	
	Goindwal(GVK)		0	0	0.00	0	
	Rajpura (2*700)	1400	1375	810	26.48	1103	
	Talwandi Saboo (1*660)	660	666	362	11.28	470	
	Thermal (Total)	4700	3799	2909	77.51	3230	
	Total Hydro	1000	709	667	16.27	678	
	Total Punjab	5700	4508	3576	93.78	3908	
	Haryana	Panipat TPS (4*110+2*210+2*250)	1367	0	171	1.69	70
DCRTPP (Yamuna nagar) (2*300)		600	541	458	11.53	480	
Faridabad GPS (NTPC)		432	373	306	7.36	307	
RGTPP (khedar) (IPP) (2*600)		1200	1141	777	20.44	852	
Magnum Diesel (IPP)		25	0	0	0.00	0	
Jhajjar(CLP) (2*660)		1320	561	352	9.26	386	
Thermal (Total)		4944	2616	2064	50.28	2095	
Total Hydro		62	33	30	0.72	30	
Total Haryana		5006	2649	2094	50.99	2125	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	951	1028	23.58	983
		suratgarh TPS (6*250)	1500	1308	1160	28.09	1171
		Chabra TPS (4*250)	1000	353	391	9.08	378
		Dholpur GPS (3*110)	330	87	88	2.12	88
	Ramgarh GPS (1*37.5 + 1*35.5 + 2*37.5 + 1*110 + 1*50)	271	182	184	4.53	189	
	RAPS A (NPC) (1*100+1*200)	300	160	161	3.97	165	
	Barsingar (NLC) (2*125)	250	191	191	4.47	186	
	Giral LTPS (2*125)	250	61	42	0.72	30	
	Rajwest LTPS (IPP) (8*135)	1080	783	952	21.66	902	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	1034	1001	24.04	1002	
	Kawai(Adani) (2*660)	1320	509	611	13.62	568	
	Thermal (Total)	8876	5619	5809	136	5662	
	Total Hydro	550	268	201	4.87	203	
	Wind power	3214	182	482	5.02	209	
	Biomass	99	24	24	0.57	24	
	Solar	730	0	0	0.00	0	
	Renewable/Others (Total)	4043	206	506	5.60	233	
	Total Rajasthan	13469	6093	6516	146.35	6098	
	UP	Anpara TPS (3*210+2*500)	1630	1086	1353	29.40	1225
Obra TPS (2*50+2*94+5*200)		1194	453	471	11.00	468	
Paricha TPS (2*110+2*220+2*250)		1140	624	639	14.90	621	
Panki TPS (2*105)		210	72	68	1.70	71	
Harduaganj TPS (1*60+1*105+2*250)		665	448	441	10.60	442	
Tanda TPS (NTPC) (4*110)		440	189	178	4.49	187	
Roza TPS (IPP) (4*300)		1200	1080	1108	26.30	1096	
Anpara-C (IPP) (2*600)		1200	543	540	13.00	542	
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	405	403	9.50	396	
Anpara-D(1*500)		500	214	0	1.50	63	
Lalitpur TPS(1*660)		660	0	0	0.00	0	
Thermal (Total)		9289	5114	5201	122	5100	
Vishnuparyag HPS (IPP)(4*110)		440	325	435	10.30	429	
Alaknanda(4*82.5)		330	224	274	6.10	254	
Other Hydro		527	81	59	1.80	75	
Cogeneration		981	50	50	1.20	50	
Total UP		11567	5794	6019	142	5908	
Uttarakhand	Total Hydro	1398	944	817	21.21	884	
	Total Uttarakhand	1398	944	817	21.21	884	
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	37	37	0.81	34	
	Prahati Gas Turbine (2x104+ 1x122)	330	259	263	6.38	266	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	257	24	3.10	129	
	Badarpur TPS (NTPC) (3*95+2*210)	705	325	321	6.87	286	
	Thermal (Total)	2917	878	644	17.16	715	
	Total Delhi	2917	878	644	17.16	715	
HP	Baspa HPS (IPP) (3*100)	300	200	180	5.65	235	
	Malana HPS (IPP) (2*43)	86	86	41	1.24	52	
	Other Hydro	878	377	382	8.43	351	
	Total HP	1264	663	603	15.32	638	
J & K	Baqilhar HPS (IPP) (3*150)	450	450	450	10.80	450	
	Other Hydro/IPP	560	98	99	2.39	99	
	Gas/Diesel/Others	190	0	0	0.00	0	
	Total J & K	1200	548	549	13.19	549	
Total State Control Area Generation		42521	22077	20818	499.78	20824	
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			8347.22	9713.77	225.71	9405	
Total Regional Availability(Gross)		67758	50151	45640	1093.84	45577	

IV. Total Hydro Generation:

Regional Entities Hydro	12234	10811	5953	168.97	7040
State Control Area Hydro	6581	3795	3635	90	3740
Total Regional Hydro	18815	14606	9588	258.74	10781

V(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)	150	-50	250	50	3.24	0.38	2.86		
765 KV Gwalior-Agra (D/C)	2750	3024	3461	0	70.74	0.00	70.74		
400 KV Zerda-Kankroli	-48	70	70	48	0.49	0.54	-0.04		
400 KV Zerda-Bhinmal	-4	138	179	100	1.53	0.00	1.53		
220 KV Auraiya-Malanpur	1	-18	106	0	0.57	0.00	0.57		
220 KV Badod-Kota/Morak	-19	30	80	62	0.52	0.00	0.52		
Mundra-Mohindergarh(HVDC Bipole)	2500	2500	2701	0	60.48	0.00	60.48		
400 KV Vindhychal - Rihand	377	491	502	0	10.09	0.00	10.09		
765 kV Phagi-Gwalior (D/C)	966	1231	617	0	27.06	0.00	27.06		
Sub Total WR	6673	7416			174.72	0.92	173.81		
Pusauli Bypass/HVDC	400	400	4700	0	8.99	0.00	8.99		
400 KV MZP- GKP (D/C)	130	364	602	0	8.86	0.00	8.86		
400 KV Patna-Balia(D/C) X 2	500	461	715	0	12.61	0.00	12.61		
400 KV B'Sharif-Balia (D/C)	205	252	446	0	7.12	0.00	7.12		
765 KV Pusauli-Balia	269	246	409	0	3.63	0.00	3.63		
765 KV Gaya-Fatehpur	-3	206	248	44	3.21	0.00	3.21		
220 KV Pusauli-Sahupuri	161	135	208	0	3.47	0.00	3.47		
132 KV K'nasa-Sahupuri	0	0	1	0	0.00	0.00	0.00		
132 KV Son Ngr-Rihand	-34	-40	0	43	0.00	0.93	-0.93		
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00		
765 KV Sasaram - Fatehpur	-180	31	109	226	0.00	0.62	-0.62		
400 KV Barh -GKP (D/C)	226	243	304	0	5.57	0.00	5.57		
Sub Total ER	1674	2298			53.45	1.55	51.90		
+/- 800 KV BiswanathChariali-Agra	0	0	0	0	0	0	0		
Sub Total NER	0	0			0	0	0		
Total IR Exch	8347	9714			228.18	2.47	225.71		

V(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
42.44	3.74	46.18	8.75	21.19	13.52	35.04	1.19	-1.19
Total IR Schedule (MU)								
Through ER	Through WR Inclds Mndra	Total	Through ER	Through WR	Total	Through ER	Through WR	Total
69.64	153.86	223.50	51.90	173.81	225.71	-17.74	19.95	2.21

V(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	0	0	0	21	0	0	-0.06		

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	0.08	4.03	27.20	72.39	62.85	7.65	1.90	0.43	0.00

Frequency (Hz)					Average Frequency Hz	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block	
Maximum		Minimum						MAX (Hz)	MIN (Hz)
Freq	Time	Freq	Time	Time					
50.29	15.03	49.69	12.39	49.95	0.095	0.082	50.21	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	08:02	399	09:48	0.0	0.0	0.0	0.0
Gorakhpur	400	417	08:02	399	04:55	0.0	0.0	0.0	0.0
Barilly	400	413	15:03	378	12:45	0.1	0.2	0.0	0.0
Kanpur	400	420	08:03	403	00:15	0.0	0.0	0.0	0.0
Dadri	400	415	07:01	398	10:42	0.0	0.0	0.0	0.0
Ballabgarh	400	421	08:02	403	11:45	0.0	0.0	0.1	0.0
Bawana	400	420	06:01	402	11:47	0.0	0.0	0.0	0.0
Bassi	400	423	18:03	398	00:00	0.0	0.0	0.8	0.0
Hissar	400	416	18:03	399	11:51	0.0	0.0	0.0	0.0
Moga	400	415	04:01	399	19:11	0.0	0.0	0.0	0.0
Abdullapur	400	424	06:01	403	19:08	0.0	0.0	5.7	0.0
Nalagarh	400	428	05:02	409	12:12	0.0	0.0	30.0	0.0
Kishenpur	400	422	03:59	401	19:06	0.0	0.0	4.6	0.0
Wagoora	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Amritsar	400	420	04:00	402	19:08	0.0	0.0	0.0	0.0
Kashipur	400	416	08:02	408	11:45	0.0	0.0	0.0	0.0
Hamirpur	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Rishikesh	400	403	18:02	372	12:54	1.7	21.3	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	787	08:04	756	00:15	0.0	0.0	0.0	0.0
Balia	765	773	08:03	744	11:51	0.0	0.0	0.0	0.0
Moga	765	800	04:02	771	19:10	0.0	0.0	0.0	0.0
Agra	765	792	18:02	758	00:15	0.0	0.0	0.0	0.0
Bhiwani	765	795	06:01	768	11:44	0.0	0.0	0.0	0.0
Unnao	765	764	08:04	738	11:45	0.0	7.2	0.0	0.0
Lucknow	765	774	08:03	745	11:51	0.0	0.0	0.0	0.0
Meerut	765	802	07:01	762	15:02	0.0	0.0	0.8	0.0
Jhatikara	765	795	07:01	765	11:45	0.0	0.0	0.0	0.0
Barilly	765	776	08:03	746	11:46	0.0	0.0	0.0	0.0
Anta	765	768	00:00	768	00:00	0.0	0.0	0.0	0.0
Phagi	765	790	18:01	753	15:04	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	511.20	1605.30	511.58	1620.46	564.55	702.31
Pong	426.72	384.05	421.31	946.20	416.83	755.83	122.10	492.77
Tehri	829.79	740.04	822.35	1044.51	820.95	1020.00	220.23	147.00
Koteshwar	612.50	598.50	610.80	5.20	611.91	5.73	147.00	147.86
Chamera-I	760.00	748.75	753.47	0.00	0.00	0.00	145.38	112.84
Rihand	268.22	252.98	0.00	0.00	0.00	0.00	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	512.15	6.52	517.71	10.76	161.64	314.87

* 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	534	44	0	284	50	0	10.76	8.40	19.16
Delhi	148	188	0	624	57	0	8.20	7.08	15.27
Haryana	1728	3	0	1527	197	0	40.46	1.27	41.73
HP	-640	-136	0	-388	-490	0	-11.33	-6.83	-18.16
J&K	-471	65	0	-471	264	0	-11.31	4.24	-7.08
CHD	0	0	0	0	10	0	0.00	0.77	0.77
Rajasthan	-555	1713	2	-572	540	2	-13.38	28.40	15.02
UP	732	667	0	492	0	0	12.77	8.97	21.74
Uttarakhand	-94	260	0	-249	378	0	-2.96	5.91	2.95
Total	1382	2804	2	1248	1007	2	33.19	58.21	91.41

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	534	284	892	41	0	0
Delhi	669	61	615	-4	0	0
Haryana	1731	1502	204	-403	0	0
HP	-388	-640	-74	-652	0	0
J&K	-471	-471	339	-35	0	0
CHD	0	0	79	0	0	0
Rajasthan	-544	-572	1896	418	2	2
UP	747	403	983	0	0	0
Uttarakhand	-80	-249	416	107	0	0

XI. System Constraints:

XII. Grid Disturbance / Any Other Significant Event:

1) Congestion charges were applied on WR-NR corridor from 01.15 Hrs to 01.45 Hrs on 18-09-2015.

XIII. Weather Conditions For 17.09.2015 :

Normal

XIV. Synchronisation of new generating units :

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

XVI. Tripping of lines in pooling stations :

XVII. Complete generation loss in a generating station :