पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 30.06.2015
Date of Reporting : 01.07.2015

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
42104	2463	44567	50.04	38565	1363	39928	50.11	947.5	41.49

* 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:

UI [OD:(+ve), UD: (-ve)]

State	State's Control Area Generation (Net MU)				Drawal Schedule	Actual Drawal	UI	Consumption	Shortages *
	Thermal	Hydro	Renewable/others $	Total	(Net MU)	(Net MU)	(Net MU)	(Net MU)	(MU)
Punjab	45.84	21.19		67.03	103.70	101.06	-2.63	168.09	0.00
Haryana	37.80	0.77		38.57	114.52	121.85	7.33	160.41	0.01
Rajasthan	95.27	0.18	14.43	109.88	58.03	57.25	-0.78	167.13	0.00
Delhi	22.64			22.64	85.51	83.04	-2.48	105.67	0.04
UP	111.00	8.30		119.30	118.49	124.10	5.61	243.40	32.88
Uttarakhand		21.21		21.21	15.56	13.92	-1.64	35.13	0.00
HP		21.57		21.57	3.16	4.01	0.85	25.59	0.00
J & K		15.47	0.00	15.47	20.42	20.79	0.37	36.26	8.55
Chandigarh				0.00	6.17	5.85	0.27	5.85	0.00
Total	**312.54**	**88.70**	**14.43**	**415.66**	**525.56**	**531.87**	**6.90**	**947.53**	**41.49**

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

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

UI/OA/PX [OD/Import: (+ve), UD/Export: (-ve)

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	8174	0	-67	1153	6258	0	-8	1226	8533
Haryana	7435	0	-19	1211	6373	0	521	1208	7810
Rajasthan	6808	0	151	-34	6812	0	-381	-378	7487
Delhi	4405	0	-83	410	4358	0	-52	519	5041
UP	10483	1990	23	622	10614	1080	468	861	11703
Uttarakhand	1654	0	-43	194	1450	0	19	68	1654
HP	995	0	-4	-1257	891	0	11	-1314	1244
J&K	1892	473	163	-272	1602	283	61	-277	1957
Chandigarh	258	0	0	0	209	0	-30	20	288
Total	**42104**	**2463**	**121**	**2028**	**38565**	**1363**	**609**	**1932**	**44614**

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

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III. Regional Entities :

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

	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	1630	1537	1551	33.38	1391	32.69	0.69
	Rihand I STPS (2*500)	1000	819	849	654	17.91	746	16.08	1.84
	Rihand II STPS (2*500)	1000	943	1013	732	19.91	830	18.27	1.64
	Rihand III STPS (2*500)	1000	477	472	374	9.99	416	8.99	1.00
	Dadri I STPS (4*210)	840	810	526	550	14.59	608	13.62	0.97
	Dadri II STPS (2*490)	980	975	641	639	16.69	695	16.48	0.21
	Unchahar I TPS (2*210)	420	402	346	276	7.04	293	6.93	0.11
	Unchahar II TPS (2*210)	420	395	295	245	6.69	279	6.81	-0.12
	Unchahar III TPS (1*220)	210	200	137	121	3.25	135	3.44	-0.18
	ISTPP (Jhajjhar) (3*500)	1500	1000	841	630	14.83	618	15.31	-0.48
	Dadri GPS (4*130.19+2*154.51)	830	800	173	147	4.06	169	3.97	0.10
	Anta GPS (3*88.71+1*153.2)	419	383	249	180	4.79	199	4.66	0.13
	Auraiya GPS (4*111.19+2*109.30)	663	634	162	161	3.83	160	3.75	0.09
	Dadri Solar	5	1	0	0	0.02	1	0.03	-0.01
	Unchahar Solar	10	3	0	0	0.02	1	0.06	-0.05
	Singrauli Solar	15	3	0	0	0.06	3	0.07	-0.01
	KHEP	800	0	798	800	14.76	615	0.00	14.76
	Sub Total (A)	**12112**	**9473**	**8039**	**7060**	**172**	**7160**	**151**	**21**
B. NPC	NAPS (2*220)	440	371	426	422	9.21	384	8.90	0.31
	RAPS- B (2*220)	440	367	421	418	8.96	373	8.81	0.15
	RAPS- C (2*220)	440	400	430	437	9.33	389	9.60	-0.27
	Sub Total (B)	**1320**	**1138**	**1277**	**1277**	**27.50**	**1146**	**27.31**	**0.19**
C. NHPC	Chamera I HPS (3*180)	540	536	543	540	13.11	546	12.86	0.25
	Chamera II HPS (3*100)	300	300	315	312	7.45	311	7.20	0.25
	Chamera III HPS (3*77)	231	229	231	230	5.50	229	5.50	0.00
	Bairasuil HPS(3*60)	180	179	186	124	2.63	110	2.54	0.09
	Salal-HPS (6*115)	690	648	670	665	15.76	657	15.55	0.21
	Tanakpur-HPS (3*40)	94	93	95	96	2.28	95	2.22	0.06
	Uri-I HPS (4*120)	480	475	473	470	11.53	481	11.40	0.13
	Uri-II HPS (4*60)	240	120	122	122	2.90	121	2.88	0.02
	Dhauliganga-HPS (4*70)	280	280	283	273	6.73	280	6.72	0.01
	Dulhasti-HPS (3*130)	390	386	397	392	9.32	388	9.26	0.06
	Sewa-II HPS (3*40)	120	119	130	109	2.34	97	1.99	0.35
	Parbati 3 (4*130)	520	241	263	31	3.94	164	4.14	-0.20
	Sub Total (C)	**4065**	**3606**	**3708**	**3364**	**83**	**3479**	**82**	**1**
D.SJVNL	NJPC (6*250)	1500	1605	1623	1618	38.82	1618	38.52	0.31
	Rampur HEP (6*68.67)	412	410	447	375	9.93	414	9.84	0.09
	Sub Total (D)	**1912**	**2015**	**2070**	**1993**	**48.75**	**2031**	**48.36**	**0.40**
E. THDC	Tehri HPS (4*250)	1000	548	548	0	5.68	237	5.60	0.08
	Koteshwar HPS (4*100)	400	121	300	91	2.93	122	2.90	0.03
	Sub Total (E)	**1400**	**669**	**848**	**91**	**8.62**	**359**	**8.50**	**0.12**
F. BBMB	Bhakra HPS (3*108+2*126+6*157)	1514	1138	1317	946	27.24	1135	27.32	-0.08
	Dehar HPS (6*165)	990	596	825	560	14.42	601	14.31	0.11
	Pong HPS (6*66)	396	167	318	66	4.02	168	4.01	0.01
	Sub Total (F)	**2900**	**1902**	**2460**	**1572**	**45.68**	**1903**	**45.64**	**0.03**
G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	200	202	4.64	193	5.13	-0.49
	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	1200	1200	28.39	1183	27.75	0.64
	Malana Stg-II HPS (2*50)	100	0	75	85	2.01	84	1.88	0.12
	Shree Cement TPS (2*150)	300	0	138	146	3.36	140	4.39	-1.04
	Budhil HPS(IPP) (2*35)	70	0	74	73	1.75	73	1.67	0.08
	Sub Total (G)	1662	0	1688	1707	40.14	1673	40.83	-0.69
H. Total Regional Entities (A-G)		**25372**	**18803**	**20090**	**17063**	**426.01**	**17751**	**404.05**	**21.96**

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	420	530	9.71	405
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	195	260	4.61	192
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	210	180	4.08	170
	Goindwal(GVK)		0	0	0.00	0
	Rajpura (2*700)	1400	1107	702	19.56	815
	Talwandi Saboo (1*660)	660	340	338	7.87	328
	Thermal (Total)	**4700**	**2272**	**2010**	**45.84**	**1910**
	Total Hydro	1000	898	841	21.19	883
	Total Punjab	**5700**	**3170**	**2851**	**67.03**	**2793**
Haryana	Panipat TPS (4*110+2*210+2*250)	1367	219	215	5.11	213
	DCRTPP (Yamuna nagar) (2*300)	600	267	228	5.55	231
	Faridabad GPS (NTPC)	432	188	299	6.89	287
	RGTPP (khedar) (IPP) (2*600)	1200	560	374	9.81	409
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP) (2*660)	1320	535	376	10.44	435
	Thermal (Total)	**4944**	**1769**	**1492**	**37.80**	**1575**
	Total Hydro	62	33	31	0.77	32
	Total Haryana	**5006**	**1802**	**1523**	**38.57**	**1607**
Rajasthan	kota TPS (2*110+2*195+3*210)	1240	608	768	16.57	690
	suratgarh TPS (6*250)	1500	376	378	9.17	382
	Chabra TPS (4*250)	1000	607	601	13.77	574
	Dholpur GPS (3*110)	330	0	0	0.00	0
	Ramgarh GPS (1*37.5 + 1*35.5 +2*37.5 +1*110 +1*50)	271	197	199	4.95	206
	RAPS A (NPC) (1*100+1*200)	300	143	135	3.37	140
	Barsingsar (NLC) (2*125)	250	97	96	2.13	89
	Giral LTPS (2*125)	250	82	81	1.59	66
	Rajwest LTPS (IPP) (8*135)	1080	828	519	15.06	628
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0
	Kalisindh Thermal(1*600)	600	670	899	17.38	724
	Kawai(Adani) (2*660)	1320	425	424	11.28	470
	Thermal (Total)	**8276**	**4033**	**4100**	**95**	**3970**
	Total Hydro	550	0	34	0.18	7
	Wind power	3214	320	969	13.76	573
	Biomass	99	24	24	0.58	24
	Solar	730	0	0	0.09	4
	Renewable/Others (Total)	4043	344	993	14.43	601
	Total Rajasthan	**12869**	**4377**	**5127**	**109.88**	**4578**
UP	Anpara TPS (3*210+2*500)	1630	1205	1171	24.90	1038
	Obra TPS (2*50+2*94+5*200)	1194	453	437	10.40	433
	Paricha TPS (2*110+2*220+2*250)	1140	748	705	17.30	721
	Panki TPS (2*105)	210	126	122	3.10	129
	Harduaganj TPS (1*60+1*105+2*250)	665	398	375	9.20	383
	Tanda TPS (NTPC) (4*110)	440	280	275	7.00	292
	Roza TPS (IPP) (4*300)	1200	577	572	14.10	588
	Anpara-C (IPP) (2*600)	1200	990	657	19.50	813
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	112	112	2.60	108
	Anpara-D(1*500)	500	0	0	0.00	0
	Lalitpur TPS(1*660)	660	0	0	0.00	0
	Thermal (Total)	**9289**	**4889**	**4426**	**108**	**4504**
	Vishnuparyag HPS (IPP)(including Alaknanada)	730	260	264	6.10	254
	Other Hydro	527	71	55	2.20	92
	Cogeneration	981	120	120	2.90	121
	Total UP	**11527**	**5340**	**4865**	**119.30**	**4717**
Uttarakhand	Total Hydro	1398	901	802	21.21	884
	Total Uttarakhand	**1398**	**901**	**802**	**21.21**	**884**
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.01	0
	Delhi Gas Turbine (6x30 + 3x34)	282	72	71	1.76	73
	Pragati Gas Turbine (2x104+ 1x122)	330	265	263	6.38	266
	Rithala GPS (3*36)	95	0	0	0.00	0
	Bawana GPS (6*250)	1370	270	267	6.77	282
	Badarpur TPS (NTPC) (3*95+2*210)	705	323	382	7.74	322
	Thermal (Total)	2917	930	983	22.64	943
	Total Delhi	**2917**	**930**	**983**	**22.64**	**943**
HP	Baspa HPS (IPP) (2*100)	300	332	321	7.68	320
	Malana HPS (IPP) (2*43)	86	60	74	1.58	66
	Other Hydro	878	521	500	12.31	513
	Total HP	**1264**	**913**	**895**	**21.57**	**899**
J & K	Baglihar HPS (IPP) (3*150)	450	450	450	10.80	450
	Other Hydro/IPP	560	201	198	4.67	195
	Gas/Diesel/Others	190	0	0	0.00	0
	Total J & K	**1200**	**651**	**648**	**15.47**	645
Total State Control Area Generation		**41881**	**18084**	**17694**	**415.66**	**17065**
J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]			**6009**	**3445**	**135.72**	**5655**
Total Regional Availability(Gross)		**67253**	**44183**	**38202**	**977.40**	**40471**

IV. Total Hydro Generation:

Regional Entities Hydro	**12369**	**11360**	**9307**	**236.33**	**9847**
State Control Area Hydro	**5811**	**3467**	**3306**	**88.70**	**3441**
Total Regional Hydro	**18180**	**14827**	**12613**	**325.03**	**13289**

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
	MW	MW	Import	Export	Import	Export	MU
Vindhychal B/B	100	-350	400	500	1.87	5.04	-3.17
Gwalior-Agra (D/C)	2073	1405	2134	0	37.20	0.00	37.20
Zerda-Kankroli	-114	-274	0	322	0.00	4.76	-4.76
Zerda-Bhinmal	-92	-256	0	289	0.00	3.89	-3.89
Malanpur-Auraiya	-36	-48	0	115	0.00	1.01	-1.01
Badod-Kota/Morak	-61	-135	13	81	0.00	1.38	-1.38
Mundra-Mohindergarh(HVDC)	2500	1800	2506	0	52.03	0.00	52.03
Vindhyachal - Rihand	-492	-501	509	0	11.75	0.00	11.75
Sub Total WR	**3878**	**1641**			**102.85**	**16.08**	**86.77**
Pusauli Bypass	100	100	100	0	2.40	0.00	2.40
MZP- GKP (D/C)	482	540	756	0	13.49	0.00	13.49
Patna-Balia(D/C)	388	301	490	0	8.03	0.00	8.03
B'Sharif-Balia (D/C)	289	191	392	0	7.12	0.00	7.12
Pusauli-Balia	0	27	148	0	0.27	0.00	0.27
Gaya-Fatehpur (765 Kv)	346	202	407	0	6.95	0.00	6.95
Pusauli-Sahupuri	125	97	174	0	2.81	0.00	2.81
K'nasa-Sahupuri	0	0	0	0	0.00	0.48	-0.48
Son Ngr-Rihand	-32	-40	0	44	0.00	0.80	-0.80
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
Sasaram - Fatehpur(765 KV)	184	150	250	0	4.45	0.00	4.45
Barh -GKP (D/C)	249	236	251	0	4.71	0.00	4.71
Sub Total ER	**2131**	**1804**			**50.23**	**1.28**	**48.95**
Total IR Exch	**6009**	**3445**			**153.08**	**17.36**	**135.72**

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

ISGS/LT Schedule (MU)			Bilateral Schedule (MU)		Power Exchange Shdl (MU)		Wheeling (MU)	
ER	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
34.10	3.99	38.09	20.74	2.63	-0.02	-0.29	1.33	-1.33

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
60.14	78.87	139.01	48.95	86.77	135.72	-11.18	7.89	-3.29

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
	MW	MW	Import	Export	Import	Export	MU
132 KV Tanakpur - Mahendarnagar	-20	-23	0	25	0	0	-0.49

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	0.41	9.86	60.83	77.71	10.57	1.90	0.00	NA

<---------- 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)
50.18	6.03	49.80	12.15	49.98	0.04	0.06	50.15	49.91

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	406	04:09	397	22:21	0.0	0.0	0.0	0.0
Gorakhpur	400	415	06:32	405	22:13	0.0	0.0	0.0	0.0
Bareilly	400	418	08:00	396	20:00	0.0	0.0	0.0	0.0
Kanpur	400	420	06:03	402	22:20	0.0	0.0	0.0	0.0
Dadri	400	416	05:59	396	14:22	0.1	0.1	0.0	0.0
Ballabhgarh	400	422	06:00	402	14:17	0.0	0.0	3.2	0.0
Bawana	400	417	06:01	399	14:19	0.0	0.0	0.0	0.0
Bassi	400	426	17:33	411	09:15	0.0	0.0	26.3	0.0
Hissar	400	413	04:00	120	00:15	1.1	1.1	0.0	0.0
Moga	400	415	04:00	399	14:18	0.0	0.0	0.0	0.0
Abdullapur	400	410	03:24	396	14:22	0.0	0.0	0.0	0.0
Nalagarh	400	422	05:02	404	14:19	0.0	0.0	9.9	0.0
Kishenpur	400	420	05:00	402	19:38	0.0	0.0	0.0	0.0
Wagoora	400	412	06:02	378	20:44	3.9	13.5	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	06:02	746	21:04	0.0	0.0	0.0	0.0
Balia	765	773	08:07	745	22:17	0.0	0.0	0.0	0.0
Moga	765	794	06:02	762	14:20	0.0	0.0	0.0	0.0
Agra	765	784	06:00	758	14:17	0.0	0.0	0.0	0.0
Bhiwani	765	797	06:01	763	14:27	0.0	0.0	0.0	0.0
Unnao	765	767	06:01	736	22:18	0.0	13.6	0.0	0.0

IX. Reservior Parameters:

Name of Reservior	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	488.22	680.71	487.77	661.49	766.65	960.22
Pong	426.72	384.05	406.13	370.28	400.72	237.89	286.91	274.81
Tehri	829.79	740.04	749.90	49.32	748.65	42.68	316.70	190.00
Koteshwar	612.50	598.50	610.77	4.95	610.88	4.95	190.00	194.00
Chamera-I	760.00	748.75	754.10	0.00	0.00	0.00	401.42	355.25
Rihand	268.22	252.98	836.90	79.80	839.40	110.20	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	522.78	10.24	520.59	9.73	316.16	403.67

*** 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	1012	214	0	1115	38	0	27.09	2.91	30.00
Delhi	356	166	-3	413	0	-3	10.07	1.36	11.43
Haryana	1017	191	0	1053	159	0	25.31	2.09	27.40
HP	-992	-323	0	-941	-316	0	-22.58	-6.86	-29.45
J&K	-439	162	0	-434	162	0	-11.04	-1.11	-12.15
CHD	0	20	0	0	0	0	0.24	0.45	0.69
Rajasthan	-318	-62	2	-314	281	0	-7.02	10.45	3.43
UP	861	0	0	622	0	0	15.01	0.00	15.01
Uttarakhand	28	39	0	53	137	3	1.22	2.25	3.47
Total	**1525**	**408**	**-1**	**1567**	**461**	**0**	**38.29**	**11.54**	**49.83**

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	1255	1011	223	38	0	0
Delhi	624	220	360	-102	0	-6
Haryana	1095	1017	195	-231	0	0
HP	-840	-1093	-182	-392	0	0
J&K	-398	-599	212	-323	0	0
CHD	30	0	54	0	0	0
Rajasthan	-247	-336	638	-62	2	0
UP	892	457	0	0	0	0
Uttarakhand	72	28	137	39	3	0

XI. System Constraints:

XII. Grid Disturbance / Any Other Significant Event:

XIII. Weather Conditions For 30.06.2015 :

XIV. Synchronisation of new generating units :

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

1. 400 kV Moga - Hissar 1 charged at 20:07 hrs.
2. 400 kV Moga - Hissar 2 charged at 20:12 hrs.
3. 400 kV Hissar - Bhiwadi 1 charged at 20:22 hrs.
4. 400 kV Hissar - Bhiwadi 2 charged at 20:26 hrs.

XVI. Tripping of lines in pooling stations :

XVII. Complete generation loss in a generating station :

Report for : 30.06.2015

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER