

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पारंपरिक की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

CIN: U40105DL2009GOI188682

Power Supply Position in Northern Region for 28.09.2016

Date of Reporting : 29.09.2016



### 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
47180	2714	49894	50.05	43559	1507	45066	50.09	1042.9	50.01

\* 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 (Net MU)	Actual Drawal (Net MU)	UI (Net MU)	Consumption (Net MU)	Shortages * (MU)
	Thermal	Hydro	Renewable/others \$	Total					
Punjab	86.68	16.02		102.70	78.92	79.87	0.95	182.57	0.00
Haryana	46.01	0.94		46.95	112.37	113.86	1.49	160.81	5.41
Rajasthan	140.83	1.49	21.46	163.77	45.47	45.75	0.29	209.53	2.43
Delhi	19.51			19.51	85.15	86.91	1.75	106.41	0.08
UP	138.98	21.00		159.98	116.95	120.03	3.09	280.01	33.84
Uttarakhand		16.95		22.23	15.21	17.12	1.91	39.35	0.00
HP		14.81		14.81	7.72	11.28	3.56	26.09	0.00
J & K		15.95	0.00	15.95	18.08	17.09	-0.99	33.03	8.26
Chandigarh				0.00	5.06	5.14	0.09	5.14	0.00
<b>Total</b>	<b>432.00</b>	<b>87.16</b>	<b>21.46</b>	<b>545.89</b>	<b>484.91</b>	<b>497.05</b>	<b>12.15</b>	<b>1042.95</b>	<b>50.01</b>

\* Shortage furnished by the respective constituent's 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				Maximum Demand Met (MW) and Time(Hrs)	Shortage (MW)	
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction			
Punjab	7918	0	-112	222	6961	0	160	599	7918	20:00	0
Haryana	7938	485	313	1156	6912	0	-137	1785	7938	20:00	485
Rajasthan	9058	0	-205	-373	8976	272	294	-372	9561	24:00	55
Delhi	4744	0	81	426	4321	0	200	361	5081	24:00	0
UP	12418	1790	208	786	12869	985	335	1516	13317	1:00	1175
Uttarakhand	1853	0	111	109	1478	0	22	55	1916	19:00	0
HP	1245	0	126	-1092	872	0	264	-523	1307	8:00	0
J&K	1758	439	30	-313	1001	250	-96	-412	1758	20:00	439
Chandigarh	249	0	-22	0	170	0	-7	0	256	19:00	0
<b>Total</b>	<b>47180</b>	<b>2714</b>	<b>531</b>	<b>921</b>	<b>43559</b>	<b>1507</b>	<b>1035</b>	<b>3009</b>	<b>47180</b>	<b>20:00</b>	<b>2714</b>

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

Diversity is 1.04

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

### III. Regional Entities :

Station/ Constituent	Inst. Capacity (Effective) MW	Declared Capacity(MW)	Peak MW	Off Peak MW	Energy	Average	Schedule	UI
			(Gross)	(Gross)	(Net MU)	Sentout(MW)	Net MU	Net MU
<b>A. NTPC</b>								
Singrauli STPS (5*200+2*500)	2000	1185	1406	1483	29.65	1235	28.44	1.21
Rihand I STPS (2*500)	1000	701	660	795	17.05	711	16.82	0.24
Rihand II STPS (2*500)	1000	721	658	764	18.06	752	17.31	0.75
Rihand III STPS (2*500)	1000	728	653	734	17.66	736	17.46	0.20
Dadri I STPS (4*210)	840	815	861	802	18.32	763	19.70	-1.38
Dadri II STPS (2*490)	980	970	938	846	21.23	885	22.81	-1.58
Unchahar I TPS (2*210)	420	153	164	167	3.65	152	3.65	-0.01
Unchahar II TPS (2*210)	420	400	441	408	9.36	390	9.55	-0.19
Unchahar III TPS (1*210)	210	200	216	206	4.65	194	4.77	-0.12
ISTPP (Jhajjar) (3*500)	1500	1425	0	0	0.00	0	0.00	0.00
Dadri GPS (4*130.19+2*154.51)	830	781	388	360	8.85	369	9.28	-0.43
Anta GPS (3*88.71+1*153.2)	419	392	252	219	5.84	243	5.75	0.09
Auraiya GPS (4*111.19+2*109.30)	663	623	0	0	0.00	0	0.02	-0.02
Dadri Solar(5)	5	1	0	0	0.02	1	0.02	0.00
Unchahar Solar(10)	10	2	0	0	0.03	1	0.04	-0.01
Singrauli Solar(15)	15	1	0	0	0.00	0	0.02	-0.02
KHEP(4*200)	800	758	855	219	7.52	313	7.00	0.52
<b>Sub Total (A)</b>	<b>12112</b>	<b>9855</b>	<b>7492</b>	<b>7003</b>	<b>162</b>	<b>6745</b>	<b>163</b>	<b>-0.76</b>
<b>B. NPC</b>								
NAPS (2*220)	440	190	214	214	4.57	190	4.56	0.01
RAPS- B (2*220)	440	371	411	413	8.85	369	8.90	-0.05
RAPS- C (2*220)	440	0	0	0	0.00	0	0.00	0.00
<b>Sub Total (B)</b>	<b>1320</b>	<b>561</b>	<b>625</b>	<b>627</b>	<b>13.42</b>	<b>559</b>	<b>13.46</b>	<b>-0.04</b>
<b>C. NHPC</b>								
Chamera I HPS (3*180)	540	540	551	0	3.67	153	3.50	0.17
Chamera II HPS (3*100)	300	301	308	0	3.66	153	3.43	0.24
Chamera III HPS (3*77)	231	221	225	75	2.27	95	2.05	0.22
Bairasuli HPS(3*60)	180	179	182	61	1.35	56	1.27	0.08
Salal-HPS (6*115)	690	411	522	315	10.34	431	9.87	0.47
Tanakpur-HPS (3*31.4)	94	66	65	79	1.92	80	1.58	0.34
Uri-I HPS (4*120)	480	190	338	146	4.86	203	4.56	0.30
Uri-II HPS (4*60)	240	102	185	119	2.66	111	2.44	0.22
Dhauliganga-HPS (4*70)	280	280	274	0	2.86	119	2.73	0.13
Dulhasti-HPS (3*130)	390	383	395	394	9.28	387	9.18	0.10
Sewa-II HPS (3*40)	120	119	45	0	0.71	30	0.65	0.06
Parbati 3 (4*130)	520	520	391	0	1.56	65	1.50	0.07
<b>Sub Total (C)</b>	<b>4065</b>	<b>3312</b>	<b>3480</b>	<b>1189</b>	<b>45</b>	<b>1882</b>	<b>43</b>	<b>2.41</b>
<b>D.SJVNL</b>								
NJPC (6*250)	1500	1605	1467	504	22.62	942	22.09	0.53
Rampur HEP (6*68.67)	412	442	434	204	6.45	269	6.15	0.30
<b>Sub Total (D)</b>	<b>1912</b>	<b>2047</b>	<b>1901</b>	<b>708</b>	<b>29.06</b>	<b>1211</b>	<b>28.24</b>	<b>0.82</b>
<b>E. THDC</b>								
Tehri HPS (4*250)	1000	1071	1039	804	9.28	387	9.05	0.23
Koteshwar HPS (4*100)	400	123	272	91	3.06	128	3.00	0.06
<b>Sub Total (E)</b>	<b>1400</b>	<b>1194</b>	<b>1311</b>	<b>895</b>	<b>12.34</b>	<b>514</b>	<b>12.05</b>	<b>0.29</b>
<b>F. BBMB</b>								
Bhakra HPS (2*108+3*126+5*157)	1379	773	1220	641	18.94	789	18.56	0.38
Dehar HPS (6*165)	990	427	660	330	10.56	440	10.24	0.32
Pong HPS (6*66)	396	269	396	132	6.57	274	6.46	0.11
<b>Sub Total (F)</b>	<b>2765</b>	<b>1469</b>	<b>2276</b>	<b>1103</b>	<b>36.07</b>	<b>1503</b>	<b>35.25</b>	<b>0.82</b>
<b>G. IPP(s)/JV(s)</b>								
ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	80	53	1.54	64	1.49	0.06
KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	900	350	12.37	515	11.80	0.57
Malana Stg-II HPS (2*50)	100	0	50	30	1.10	46	1.03	0.07
Shree Cement TPS (2*150)	300	0	297	290	6.98	291	6.97	0.01
Budhil HPS(IPP) (2*35)	70	0	35	35	0.73	30	0.95	-0.22
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1362</b>	<b>758</b>	<b>22.71</b>	<b>946</b>	<b>22.23</b>	<b>0.48</b>
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>18437</b>	<b>18447</b>	<b>12284</b>	<b>320.64</b>	<b>13360</b>	<b>316.62</b>	<b>4.02</b>

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	690	17.59	733	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	120	90	2.31	96	
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	465	408	9.69	404	
	Goindwal(GVK) (2*270)	540	0	0	0.00	0	
	Rajpura (2*700)	1400	1320	1320	31.73	1322	
	Talwandi Saboo (3*660)	1980	1228	750	25.36	1057	
	<b>Thermal (Total)</b>	<b>6560</b>	<b>3973</b>	<b>3258</b>	<b>86.68</b>	<b>3612</b>	
	Total Hydro	1000	675	648	16.02	668	
	Wind Power	0	0	0	0.00	0	
	Biomass	73	0	0	0.00	0	
	Solar	494	0	0	0.00	0	
	<b>Renewable(Total)</b>	<b>567</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	
	<b>Total Punjab</b>	<b>8127</b>	<b>4648</b>	<b>3906</b>	<b>102.70</b>	<b>4279</b>	
	Haryana	Panipat TPS (2*210+2*250)	920	233	202	5.27	220
		DCRTPP (Yamuna nagar) (2*300)	600	553	464	12.58	524
Faridabad GPS (NTPC)(2*137.75+1*156)		432	174	189	4.31	179	
RGTPP (khedar) (IPP) (2*600)		1200	1150	768	23.85	994	
Magnum Diesel (IPP)		25	0	0	0.00	0	
Jhajjar(CLP) (2*660)		1320	0	0	0.00	0	
<b>Thermal (Total)</b>		<b>4497</b>	<b>2110</b>	<b>1623</b>	<b>46.01</b>	<b>1917</b>	
Total Hydro		62	40	36	0.94	39	
Wind Power		0	0	0	0.00	0	
Biomass		40	0	0	0.00	0	
Solar		0	0	0	0.00	0	
<b>Renewable(Total)</b>		<b>40</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	
<b>Total Haryana</b>		<b>4599</b>	<b>2150</b>	<b>1659</b>	<b>46.95</b>	<b>1956</b>	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	861	933	23.38	974
		suratgarh TPS (6*250)	1500	954	1131	25.32	1055
	Chabra TPS (4*250)	1000	900	811	20.97	874	
	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	141	144	3.39	141	
	RAPS A (NPC) (1*100+1*200)	300	168	171	4.16	173	
	Barsingar (NLC) (2*125)	250	0	0	0.00	0	
	Giral LTPS (2*125)	250	0	0	0.00	0	
	Rajwest LTPS (IPP) (8*135)	1080	923	829	21.11	880	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	482	554	13.03	543	
	Kawai(Adani) (2*660)	1320	1236	1231	29.49	1229	
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5665</b>	<b>5804</b>	<b>140.83</b>	<b>5868</b>	
	Total Hydro	550	89	89	1.49	62	
	Wind power	4017	593	817	17.69	737	
	Biomass	99	16	16	0.38	16	
	Solar	1295	1	0	3.39	141	
	Renewable/Others (Total)	5411	610	833	21.46	894	
	<b>Total Rajasthan</b>	<b>14837</b>	<b>6364</b>	<b>6726</b>	<b>163.77</b>	<b>6824</b>	
	UP	Anpara TPS (3*210+2*500)	1630	587	651	14.60	608
Obra TPS (2*50+2*94+5*200)		1194	285	249	6.40	267	
Paricha TPS (2*110+2*220+2*250)		1160	785	662	16.50	688	
Panki TPS (2*105)		210	135	131	3.10	129	
Harduaganj TPS (1*60+1*105+2*250)		665	530	518	12.60	525	
Tanda TPS (NTPC) (4*110)		440	384	348	8.98	374	
Roza TPS (IPP) (4*300)		1200	1134	1094	26.70	1113	
Anpara-C (IPP) (2*600)		1200	900	899	21.50	896	
Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)		450	405	404	9.60	400	
Anpara-D(2*500)		1000	345	267	7.90	329	
Lalitpur TPS(3*660)		1980	357	498	9.90	413	
Bara(2*660)		1320	0	0	0.00	0	
<b>Thermal (Total)</b>		<b>12449</b>	<b>5847</b>	<b>5721</b>	<b>137.78</b>	<b>5741</b>	
Vishnuparyag HPS (IPP)(4*110)		440	435	395	9.30	388	
Alaknada(4*82.5)		330	165	170	5.00	208	
Other Hydro		527	337	266	6.70	279	
Cogeneration		981	50	50	1.20	50	
Wind Power		0	0	0	0.00	0	
Biomass		26	0	0	0.00	0	
Solar		102	0	0	0.00	0	
<b>Renewable(Total)</b>		<b>128</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	
<b>Total UP</b>		<b>14855</b>	<b>6834</b>	<b>6602</b>	<b>159.98</b>	<b>6666</b>	
Uttarakhand	Other Hydro	1250	799	639	16.95	706	
	Total Gas	225	222	228	5.28	220	
	Wind Power	0	0	0	0.00	0	
	Biomass	127	0	0	0.00	0	
	Solar	20	0	0	0.00	0	
	Small Hydro (< 25 MW)	180	0	0	0.00	0	
	<b>Renewable(Total)</b>	<b>327</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	
	<b>Total Uttarakhand</b>	<b>1802</b>	<b>1021</b>	<b>867</b>	<b>22.23</b>	<b>926</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	0.00	0	
	Delhi Gas Turbine (6x30 + 3x34)	282	70	72	1.83	76	
	Pragati Gas Turbine (2x104+ 1x122)	330	151	150	3.61	150	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	250	250	6.68	278	
	Badarpur TPS (NTPC) (3*95+2*210)	705	150	300	7.39	308	
	<b>Thermal (Total)</b>	<b>2917</b>	<b>621</b>	<b>772</b>	<b>19.51</b>	<b>813</b>	
	Wind Power	0	0	0	0.00	0	
	Biomass	16	0	0	0.00	0	
	Solar	2	0	0	0.00	0	
<b>Renewable(Total)</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>		
<b>Total Delhi</b>	<b>2935</b>	<b>621</b>	<b>772</b>	<b>19.51</b>	<b>813</b>		

HP	Baspa HPS (IPP) (3*100)	300	181	141	4.80	200
	Malana HPS (IPP) (2*43)	86	45	41	1.02	43
	Other Hydro	372	166	144	3.55	148
	Wind Power	0	0	0	0.00	0
	Biomass	0	0	0	0.00	0
	Solar	0	0	0	0.00	0
	Small Hydro (< 25 MW)	486	228	225	5.44	227
	<b>Renewable(Total)</b>	<b>486</b>	<b>228</b>	<b>225</b>	<b>5.44</b>	<b>227</b>
	<b>Total HP</b>	<b>1244</b>	<b>621</b>	<b>550</b>	<b>14.81</b>	<b>617</b>
	J & K	Baglihar HPS (IPP) (3*150+3*150)	900	586	438	13.18
Other Hydro/IPP(including 98 MW Small Hydro)		308	137	93	2.77	115
Gas/Diesel/Others		190	0	0	0.00	0
Wind Power		0	0	0	0.00	0
Biomass		0	0	0	0.00	0
Solar		0	0	0	0.00	0
Small Hydro (< 25 MW)Included in Other Hydro Above		98	0	0	0.00	0
<b>Renewable(Total)</b>		<b>98</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>
<b>Total J &amp; K</b>		<b>1398</b>	<b>723</b>	<b>531</b>	<b>16</b>	<b>664</b>
<b>Total State Control Area Generation</b>		<b>49797</b>	<b>22981</b>	<b>21613</b>	<b>545.89</b>	<b>22746</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>		<b>7420</b>	<b>10255</b>	<b>193.21</b>	<b>8050</b>	
<b>Total Regional Availability(Gross)</b>	<b>75034</b>	<b>48849</b>	<b>44152</b>	<b>1059.74</b>	<b>44156</b>	

IV. Total Hydro Generation:

Regional Entities Hydro	12234	10854	4547	145.15	6048
State Control Area Hydro	7163	4106	3552	87.16	3852
<b>Total Regional Hydro</b>	<b>19397</b>	<b>14959</b>	<b>8099</b>	<b>232.31</b>	<b>9900</b>

V. Total Renewable Generation:

Regional Entities Renewable	30	0	0	0.04	2
State Control Area Renewable	7075	838	1058	26.90	1121
<b>Total Regional Renewable</b>	<b>7105</b>	<b>838</b>	<b>1058</b>	<b>26.94</b>	<b>1123</b>

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

Element	Peak(20:00 Hrs) MW	Off Peak(03:00 Hrs) MW	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
			Import	Export	Import	Export	
Vindhychal(HVDC B/B)	200	150	400	-300	3.87	0.88	3.00
765 KV Gwalior-Agra (D/C)	2212	2484	2739	0	56.97	0.00	56.97
400 KV Zerda-Kankroli	43	58	107	127	0.00	0.46	-0.46
400 KV Zerda-Bhinmal	37	88	182	145	0.10	0.00	0.10
220 KV Auraiya-Malanpur	-64	-39	0	88	0.00	1.05	-1.05
220 KV Badod-Kota/Morak	50	79	98	11	0.70	0.00	0.70
Mundra-Mohindergerh(HVDC Bipole)	2302	2002	2306	0.00	52.73	0.00	52.73
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	258	910	926	0	9.17	0.00	9.17
<b>Sub Total WR</b>	<b>5038</b>	<b>5732</b>			<b>123.54</b>	<b>2.39</b>	<b>121.15</b>
Pusauli Bypass/HVDC	141	68	0	148	0.00	2.23	-2.23
400 KV MZP- GKP (D/C)	74	486	486	0	7.30	0.00	7.30
400 KV Patna-Balia(D/C) X 2	333	633	691	0	11.46	0.00	11.46
400 KV B Sharif-Balia (D/C)	111	263	263	0	4.37	0.00	4.37
765 KV Gaya-Balia	297	410	417	0	4.19	0.00	4.19
765 KV Gaya-Varanasi (D/C)	476	839	851	0	14.18	0.00	14.18
220 KV Pusauli-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV K'nasa-Sahupuri	-24	0	0	26	0.00	0.41	-0.41
132 KV Son Ngr-Rihand	-10	-8	0	22	0.00	0.31	-0.31
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-12	140	160	12	2.14	0.00	2.14
400 KV Barh -GKP (D/C)	286	474	500	0	7.27	0.00	7.27
400 kV B Sharif - Varanasi (D/C)	10	218	232	0	2.89	0.00	2.89
<b>Sub Total ER</b>	<b>1682</b>	<b>3523</b>			<b>53.81</b>	<b>2.95</b>	<b>50.86</b>
+/- 800 KV BiswanathChariali-Agra	700	1000	1000	0.00	21.19	0.00	21.19
<b>Sub Total NER</b>	<b>700</b>	<b>1000</b>			<b>21.19</b>	<b>0.00</b>	<b>21.19</b>
<b>Total IR Exch</b>	<b>7420</b>	<b>10255</b>			<b>198.54</b>	<b>5.33</b>	<b>193.21</b>

VI(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
47.80	3.57	51.37	20.18	2.61	1.86	2.62	0.00	0.00

Total IR Schedule (MU)			Total IR Actual (MU)			Net IR UI (MU)		
Through ER	Through WR Inclds Mndra	Total	Through ER(including NER)	Through WR	Total	Through ER (including NER)	Through WR	Total
73.41	111.41	184.83	72.05	121.15	193.21	-1.36	9.74	8.38

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

Element	Peak(20:00 Hrs) MW	Off Peak(03:00 Hrs) MW	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
			Import	Export	Import	Export	
132 KV Tanakpur - Mahendarnagar	-23	0	0	25	0	0	-0.31

VII. 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	1.97	20.57	72.13	71.59	7.85	0.34	0.00	0.00

<----- Frequency (Hz) ----->				Average Frequency Hz	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block		Freq Dev Index (% of Time)
Maximum		Minimum					MAX (Hz)	MIN (Hz)	
Freq	Time	Freq	Time						
50.15	13.01	49.73	18.43	49.96	0.068	0.069	50.13	49.90	28.41

## VIII(A). Voltage profile 400 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<380 kV	<390 kV	>420 kV	>430 kV	
Rihand	400	411	0:00	396	22:30	0.1	0.1	0.0	0.0	0.1
Gorakhpur	400	428	6:01	411	0:11	0.0	0.0	22.0	0.0	22.0
Bareilly(PG)400kV	400	417	7:06	401	0:08	0.0	0.0	0.0	0.0	0.0
Kanpur	400	420	7:03	405	0:08	0.0	0.0	0.0	0.0	0.0
Dadri	400	414	7:06	398	12:08	0.1	0.1	0.0	0.0	0.1
Ballabgarh	400	420	7:04	402	11:29	0.0	0.0	0.0	0.0	0.0
Bawana	400	417	7:05	399	12:09	0.0	0.0	0.0	0.0	0.0
Bassi	400	419	4:01	399	19:09	0.0	0.0	0.0	0.0	0.0
Hissar	400	411	4:00	397	12:06	0.0	0.0	0.0	0.0	0.0
Moga	400	414	4:04	401	12:07	0.0	0.0	0.0	0.0	0.0
Abdullapur	400	421	4:00	405	19:30	0.0	0.0	0.6	0.0	0.6
Nalagarh	400	424	3:30	407	14:41	0.0	0.0	15.7	0.0	15.7
Kishenpur	400	419	3:24	400	19:12	0.0	0.0	0.0	0.0	0.0
Wagoora	400	413	2:00	372	19:11	6.9	18.5	0.0	0.0	6.9
Amritsar	400	422	3:56	404	14:35	0.0	0.0	4.4	0.0	4.4
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	419	2:57	402	14:40	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	413	7:03	397	0:08	0.0	0.0	0.0	0.0	0.0

## VIII(B). Voltage profile 765 kV

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)				Voltage Deviat
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV	
Fatehpur	765	788	13:00	752	12:08	0.0	0.0	0.0	0.0	0.0
Balia	765	794	6:00	770	0:09	0.0	0.0	0.0	0.0	0.0
Moga	765	790	4:01	764	12:08	0.0	0.0	0.0	0.0	0.0
Agra	765	796	7:05	761	9:43	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	791	7:03	763	12:06	0.0	0.0	0.0	0.0	0.0
Unnao	765	776	7:05	752	0:10	0.0	0.0	0.0	0.0	0.0
Lucknow	765	795	7:06	767	0:08	0.0	0.0	0.0	0.0	0.0
Meerut	765	802	7:05	768	12:08	0.0	0.0	0.5	0.0	0.5
Jhatikara	765	796	7:06	763	12:08	0.0	0.0	0.0	0.0	0.0
Bareilly 765 kV	765	787	7:05	758	0:12	8.8	8.8	0.0	0.0	8.8
Anta	765	780	4:02	762	0:08	0.0	0.0	0.0	0.0	0.0
Phagi	765	787	4:01	764	0:06	0.0	0.0	0.0	0.0	0.0

Note : \*0" in Max / Min Col -&gt; Telemetry Outage

## 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 <sup>3</sup> /s)	Usage (m <sup>3</sup> /s)
Bhakra	513.59	445.62	502.81	1219.07	511.80	1635.65	397.34	584.60
Pong	426.72	384.05	416.67	743.22	421.19	946.20	178.08	393.83
Tehri	829.79	740.04	824.45	1096.31	822.75	1065.64	169.31	201.00
Kotesshwar	612.50	598.50	610.12	4.60	610.58	4.69	201.00	201.90
Chamera-I	760.00	748.75	755.76	0.00	0.00	0.00	115.50	99.67
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	518.28	5.92	514.39	5.71	91.26	267.88

\* 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	801	-201	0	311	-89	0	14.55	-1.05	13.50
Delhi	586	-225	0	360	66	0	13.55	-1.80	11.75
Haryana	1647	137	0	856	300	0	26.86	-3.44	23.41
HP	-659	136	0	-384	-709	0	-11.10	-4.92	-16.02
J&K	-546	134	0	-546	233	0	-13.70	7.11	-6.59
CHD	0	0	0	0	0	0	0.35	0.05	0.41
Rajasthan	-154	-217	0	-154	-219	0	-3.70	0.76	-2.94
UP	731	785	0	365	421	0	9.98	5.41	15.39
Uttarakhand	-236	291	0	-236	345	0	-5.67	8.00	2.34
Total	2170	839	0	573	348	0	31.13	10.11	41.24

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	1070	172	45	-252	0	0
Delhi	676	337	429	-441	0	0
Haryana	1977	822	318	-792	0	0
HP	-236	-688	160	-723	0	0
J&K	-546	-617	432	85	0	0
CHD	44	0	30	0	0	0
Rajasthan	-154	-154	538	-818	0	0
UP	746	253	1294	-78	0	0
Uttarakhand	-236	-236	567	86	0	0

**XI. System Reliability Indices(Violation of TTC and ATC):**

(i)%age of times N-1 Criteria was violated in the inter - regional corridors

WR	0.00%
ER	0.00%
Simultaneous	1.04%

(ii)%age of times ATC violated on the inter-regional corridors

WR	7.99%
ER	0.00%
Simultaneous	38.19%

(iii)%age of times Angular Difference on Important Buses was beyond permissible limits(40 deg.)

Rihand - Dadri	0.00%
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**XII Number of times of Non Compliance of Sign Change in UI in consecutive 12 blocks in the day(1 block = 15 min)**

Punjab	4
Haryana	1
Rajasthan	14
Delhi	13
UP	0
Uttarakhand	16
HP	35
J & K	9
Chandigarh	33

**XIII. System Constraints:**

XIV. Grid Disturbance / Any Other Significant Event:

XV. Weather Conditions For 28.09.2016 :  
Normal

XVI. Synchronisation of new generating units :

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

XVIII. Tripping of lines in pooling stations :

XIX. Complete generation loss in a generating station :

Note: Data(regarding drawal,generation, shortage , inter-regional flows and reservoir levels)of the constituents filled in the report are as per last furnished data by the respective state/constituent to NRLDC.

Report for : 28.09.2016

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER