

# 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 26.09.2016  
Date of Reporting : 27.09.2016



### 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
47969	932	48901	50.10	43609	296	43904	50.10	1059.3	12.19

\* 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	78.33	16.69		95.01	89.37	89.94	0.56	184.95	0.00
Haryana	46.92	0.96		47.87	117.84	115.86	-1.98	163.73	0.00
Rajasthan	131.41	1.89	13.74	147.04	59.70	59.28	-0.42	206.32	0.00
Delhi	18.64			18.64	83.51	83.35	-0.16	101.99	0.01
UP	153.57	22.09		175.66	122.19	123.29	1.10	298.95	4.20
Uttarakhand	21.93			26.23	14.60	15.63	1.04	41.86	0.00
HP		13.78		13.78	9.38	10.84	1.46	24.62	0.00
J & K		14.17	0.00	14.17	20.45	17.75	-2.69	31.92	7.98
Chandigarh				0.00	5.17	4.91	-0.26	4.91	0.00
<b>Total</b>	<b>428.87</b>	<b>91.49</b>	<b>13.74</b>	<b>538.40</b>	<b>522.20</b>	<b>520.85</b>	<b>-1.36</b>	<b>1059.25</b>	<b>12.19</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	8137	0	-103	634	6841	0	223	767	8137	20:00	0
Haryana	8332	0	-183	1920	6657	0	-4	2215	8332	20:00	0
Rajasthan	9066	0	-157	320	8854	0	212	330	9532	24:00	0
Delhi	4645	0	82	347	4061	0	79	114	4952	24:00	0
UP	12877	515	-20	293	13921	45	18	1184	14385	1:00	0
Uttarakhand	1780	0	70	-64	1278	0	-19	-255	1861	19:00	0
HP	1239	0	66	-971	824	0	140	-577	1239	20:00	0
J&K	1667	417	-173	-483	1002	251	52	-598	1667	20:00	417
Chandigarh	228	0	-16	-35	170	0	16	0	251	12:00	0
<b>Total</b>	<b>47969</b>	<b>932</b>	<b>-436</b>	<b>1961</b>	<b>43609</b>	<b>296</b>	<b>717</b>	<b>3181</b>	<b>47969</b>	<b>20:00</b>	<b>932</b>

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

Diversity is 1.05

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

### III. Regional Entities :

Region	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	
A. NTPC	Singrauli STPS (5*200+2*500)	2000	1674	1457	1965	39.92	1663	39.71	0.21	
	Rihand I STPS (2*500)	1000	941	1028	1018	22.30	929	22.18	0.12	
	Rihand II STPS (2*500)	1000	953	1024	1013	22.44	935	22.28	0.16	
	Rihand III STPS (2*500)	1000	953	1006	1002	22.64	943	22.49	0.14	
	Dadri I STPS (4*210)	840	815	829	627	14.90	621	15.81	-0.91	
	Dadri II STPS (2*490)	980	970	998	869	19.91	829	21.06	-1.15	
	Unchahar I TPS (2*210)	420	151	159	138	3.40	142	3.54	-0.14	
	Unchahar II TPS (2*210)	420	400	408	388	8.65	360	9.20	-0.56	
	Unchahar III TPS (1*210)	210	200	210	182	4.21	175	4.58	-0.37	
	ISTPP (Jhajjhar) (3*500)	1500	1425	503	330	7.22	301	7.39	-0.17	
	Dadri GPS (4*130.19+2*154.51)	830	787	390	381	7.90	329	8.23	-0.33	
	Anta GPS (3*88.71+1*153.2)	419	392	250	226	5.56	232	5.49	0.07	
	Auraiya GPS (4*111.19+2*109.30)	663	623	0	0	0.00	0	0.00	0.00	
	Dadri Solar(5)	5	1	0	0	0.02	1	0.02	0.00	
	Unchahar Solar(10)	10	1	0	0	0.02	1	0.03	-0.01	
	Singrauli Solar(15)	15	1	0	0	0.02	1	0.03	-0.01	
	KHEP(4*200)	800	858	855	626	9.19	383	9.00	0.19	
	<b>Sub Total (A)</b>	<b>12112</b>	<b>11146</b>	<b>9117</b>	<b>8765</b>	<b>188</b>	<b>7845</b>	<b>191</b>	<b>-2.75</b>	
	B. NPC	NAPS (2*220)	440	190	212	211	4.55	190	4.56	-0.01
		RAPS- B (2*220)	440	370	414	418	8.89	370	8.88	0.01
RAPS- C (2*220)		440	0	0	0	-0.24	-10	0.00	-0.24	
<b>Sub Total (B)</b>		<b>1320</b>	<b>560</b>	<b>626</b>	<b>629</b>	<b>13.20</b>	<b>550</b>	<b>13.44</b>	<b>-0.24</b>	
C. NHPC	Chamera I HPS (3*180)	540	540	551	0	3.67	153	3.50	0.17	
	Chamera II HPS (3*100)	300	301	317	102	3.71	155	3.65	0.06	
	Chamera III HPS (3*77)	231	221	226	78	2.41	101	2.25	0.16	
	Bairasuli HPS(3*60)	180	179	180	0	1.43	60	1.38	0.05	
	Salal-HPS (6*115)	690	306	333	478	8.19	341	7.34	0.86	
	Tanakpur-HPS (3*31.4)	94	79	90	82	2.08	87	1.90	0.19	
	Uri-I HPS (4*120)	480	208	149	144	5.26	219	4.99	0.27	
	Uri-II HPS (4*60)	240	118	181	88	3.01	125	2.83	0.17	
	Dhauliganga-HPS (4*70)	280	280	280	70	3.10	129	3.01	0.09	
	Dulhasti-HPS (3*130)	390	383	399	390	9.24	385	9.18	0.06	
	Sewa-II HPS (3*40)	120	119	40	0	0.70	29	0.65	0.05	
	Parbati 3 (4*130)	520	520	395	0	1.64	68	1.56	0.08	
	<b>Sub Total (C)</b>	<b>4065</b>	<b>3253</b>	<b>3140</b>	<b>1432</b>	<b>44</b>	<b>1852</b>	<b>42</b>	<b>2.22</b>	
	D.SJVNL	NJPC (6*250)	1500	1605	1597	527	22.24	927	21.60	0.64
Rampur HEP (6*88.67)		412	442	447	150	6.37	266	6.02	0.35	
<b>Sub Total (D)</b>		<b>1912</b>	<b>2047</b>	<b>2044</b>	<b>677</b>	<b>28.61</b>	<b>1192</b>	<b>27.62</b>	<b>0.99</b>	
E. THDC	Tehri HPS (4*250)	1000	1071	1048	0	12.04	502	11.50	0.54	
	Koteshwar HPS (4*100)	400	158	304	91	3.86	161	3.80	0.06	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1230</b>	<b>1352</b>	<b>91</b>	<b>15.90</b>	<b>662</b>	<b>15.30</b>	<b>0.60</b>	
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	762	1196	510	18.53	772	18.28	0.25	
	Dehar HPS (6*165)	990	424	660	330	10.29	429	10.17	0.12	
	Pong HPS (6*66)	396	296	396	198	7.21	300	7.10	0.11	
	<b>Sub Total (F)</b>	<b>2765</b>	<b>1481</b>	<b>2252</b>	<b>1038</b>	<b>36.03</b>	<b>1501</b>	<b>35.55</b>	<b>0.48</b>	
	G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	98	93	1.65	69	1.63	0.02
KARCHAM WANGTOO HPS(IPP) (4*250)		1000	0	825	680	12.17	507	11.85	0.32	
Malana Stg-II HPS (2*50)		100	0	40	30	0.98	41	0.88	0.10	
Shree Cement TPS (2*150)		300	0	293	153	5.03	210	4.87	0.17	
Budhil HPS(IPP) (2*35)		70	0	35	35	0.75	31	0.95	-0.20	
<b>Sub Total (G)</b>		<b>1662</b>	<b>0</b>	<b>1291</b>	<b>991</b>	<b>20.58</b>	<b>858</b>	<b>20.18</b>	<b>0.40</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>19717</b>	<b>19822</b>	<b>13623</b>	<b>347.06</b>	<b>14461</b>	<b>345.36</b>	<b>1.70</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	1000	850	20.22	843	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	120	90	2.17	90	
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	465	405	9.39	391	
	Goindwal(GVK) (2*270)	540	0	0	-0.03	-1	
	Rajpura (2*700)	1400	1320	920	29.08	1212	
	Talwandi Saboo (3*660)	1980	700	616	17.50	729	
	<b>Thermal (Total)</b>	<b>6560</b>	<b>3605</b>	<b>2881</b>	<b>78.33</b>	<b>3264</b>	
	Total Hydro	1000	707	738	16.69	695	
	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>4312</b>	<b>3619</b>	<b>95.01</b>	<b>3959</b>	
	Haryana	Panipat TPS (2*210+2*250)	920	582	589	13.79	575
		DCRTPP (Yamuna nagar) (2*300)	600	471	466	10.99	458
Faridabad GPS (NTPC)(2*137.75+1*1156)		432	188	159	3.97	165	
RGTPP (khedar) (IPP) (2*600)		1200	763	761	18.16	757	
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>2004</b>	<b>1975</b>	<b>46.92</b>	<b>1955</b>	
Total Hydro		62	40	41	0.96	40	
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>2044</b>	<b>2016</b>	<b>47.87</b>	<b>1995</b>	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	897	863	21.49	896
		suratgarh TPS (6*250)	1500	1042	947	23.50	979
	Chabra TPS (4*250)	1000	850	743	19.57	815	
	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	140	140	3.48	145	
	RAPS A (NPC) (1*100+1*200)	300	166	167	4.14	172	
	Barsingsar (NLC) (2*125)	250	103	103	2.43	101	
	Giral LTPS (2*125)	250	0	0	0.00	0	
	Rajwest LTPS (IPP) (8*135)	1080	756	578	16.87	703	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	441	404	11.34	473	
	Kawai(Adani) (2*660)	1320	1238	1210	28.61	1192	
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5633</b>	<b>5155</b>	<b>131.41</b>	<b>5476</b>	
	Total Hydro	550	121	45	1.89	79	
	Wind power	4017	423	1013	13.41	559	
	Biomass	99	14	14	0.32	14	
	Solar	1295	0	0	0.00	0	
	Renewable/Others (Total)	5411	437	1027	13.74	572	
	<b>Total Rajasthan</b>	<b>14837</b>	<b>6191</b>	<b>6227</b>	<b>147.04</b>	<b>6127</b>	
UP	Anpara TPS (3*210+2*500)	1630	705	740	16.36	682	
	Obra TPS (2*50+2*94+5*200)	1194	250	237	6.05	252	
	Paricha TPS (2*110+2*220+2*250)	1160	777	905	19.81	825	
	Panki TPS (2*105)	210	81	153	2.73	114	
	Harduaganj TPS (1*60+1*1105+2*250)	665	516	501	12.39	516	
	Tanda TPS (NTPC) (4*110)	440	358	345	8.47	353	
	Roza TPS (IPP) (4*300)	1200	1094	1107	26.44	1102	
	Anpara-C (IPP) (2*600)	1200	869	873	21.06	878	
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	405	380	9.11	379	
	Anpara-D(2*500)	1000	716	614	11.35	473	
	Lalitpur TPS(3*660)	1980	361	490	9.40	392	
	Bara(2*660)	1320	387	383	9.21	384	
	<b>Thermal (Total)</b>	<b>12449</b>	<b>6519</b>	<b>6728</b>	<b>152.37</b>	<b>6349</b>	
	Vishnuparyag HPS (IPP)(4*110)	440	395	390	8.99	375	
	Alaknada(4*82.5)	330	168	169	5.24	219	
	Other Hydro	527	351	331	7.85	327	
	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>7483</b>	<b>7668</b>	<b>175.66</b>	<b>7319</b>		
Uttarakhand	Other Hydro	1250	821	718	21.93	914	
	Total Gas	225	158	224	4.30	179	
	Wind Power	0	0	0	0.00	0	
	Biomass	100	0	0	0.00	0	
	Solar	20	0	0	0.00	0	
	Small Hydro (< 25 MW)	150	0	0	0.00	0	
	<b>Renewable(Total)</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	
	<b>Total Uttarakhand</b>	<b>1745</b>	<b>979</b>	<b>942</b>	<b>26.23</b>	<b>1093</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.05	-2	
	Delhi Gas Turbine (6x30 + 3x34)	282	72	73	1.84	77	
	Pragati Gas Turbine (2x104+ 1x122)	330	149	151	3.64	152	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	252	252	6.05	252	
	Badarpur TPS (NTPC) (3*95+2*210)	705	330	330	7.17	299	
	<b>Thermal (Total)</b>	<b>2917</b>	<b>803</b>	<b>807</b>	<b>18.64</b>	<b>777</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>803</b>	<b>807</b>	<b>18.64</b>	<b>777</b>		

HP	Baspa HPS (IPP) (3*100)	300	119	199	4.55	190
	Malana HPS (IPP) (2*43)	86	33	31	0.89	37
	Other Hydro	878	339	323	8.22	342
	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)		0	0	0.12	5
	<b>Renewable(Total)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.12</b>	<b>5</b>
	<b>Total HP</b>	<b>1264</b>	<b>491</b>	<b>553</b>	<b>13.78</b>	<b>574</b>
	J & K	Baglihar HPS (IPP) (3*150+2*150)	750	586	438	11.40
Other Hydro/IPP		560	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)			0	0	0.00	0
<b>Renewable(Total)</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>
<b>Total J &amp; K</b>		<b>1500</b>	<b>723</b>	<b>531</b>	<b>14.17</b>	<b>590</b>
<b>Total State Control Area Generation</b>		<b>49862</b>	<b>23027</b>	<b>22363</b>	<b>538.40</b>	<b>22433</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>		<b>6682</b>	<b>9222</b>	<b>184.79</b>	<b>7700</b>	
<b>Total Regional Availability(Gross)</b>	<b>75099</b>	<b>49530</b>	<b>45208</b>	<b>1070.25</b>	<b>44594</b>	

IV. Total Hydro Generation:

Regional Entities Hydro	12234	10606	4667	148.99	6208
State Control Area Hydro	7228	3975	3740	91.49	3991
<b>Total Regional Hydro</b>	<b>19462</b>	<b>14581</b>	<b>8407</b>	<b>240.48</b>	<b>10199</b>

V. Total Renewable Generation:

Regional Entities Renewable	30	0	0	0.06	2
State Control Area Renewable	6434	437	1027	13.86	577
<b>Total Regional Renewable</b>	<b>6464</b>	<b>437</b>	<b>1027</b>	<b>13.91</b>	<b>580</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	
Vindhychall(HVDC B/B)	-500	-200	50	500	0.03	7.29	-7.26
765 KV Gwalior-Agra (D/C)	1735	2460	2495	0	46.39	0.00	46.39
400 KV Zerda-Kankroli	91	-17	141	17	1.47	0.00	1.47
400 KV Zerda-Bhinmal	68	96	183	86	1.31	0.00	1.31
220 KV Auraiya-Malanpur	-63	-57	0	86	0.00	1.33	-1.33
220 KV Badod-Kota/Morak	29	82	82	23	0.92	0.00	0.92
Mundra-Mohinderghar(HVDC Bipole)	1998	1998	2006	0.00	46.34	0.00	46.34
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	847	1208	1208	0	23.34	0.00	23.34
<b>Sub Total WR</b>	<b>4205</b>	<b>5570</b>			<b>119.80</b>	<b>8.62</b>	<b>111.18</b>
Pusauli Bypass/HVDC	0	0	0	0	0.00	0.00	0.00
400 KV MZP- GKP (D/C)	146	576	584	0	9.55	0.00	9.55
400 KV Patna-Balia(D/C) X 2	232	462	497	0	9.52	0.00	9.52
400 KV B Sharif-Balia (D/C)	85	195	259	0	3.99	0.00	3.99
765 KV Gaya-Balia	289	339	358	0	2.28	0.00	2.28
765 KV Gaya-Varanasi (D/C)	527	633	696	0	14.23	0.00	14.23
220 KV Pusauli-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV K'nasa-Sahupuri	-30	-20	0	30	0.00	-0.47	0.47
132 KV Son Ngr-Rihand	-14	-28	0	30	0.00	-0.44	0.44
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	-24	23	157	63	0.83	0.00	0.83
400 KV Barh -GKP (D/C)	272	376	383	0	7.23	0.00	7.23
400 kV B Sharif - Varanasi (D/C)	28	139	205	0	2.94	0.00	2.94
<b>Sub Total ER</b>	<b>1511</b>	<b>2695</b>			<b>50.56</b>	<b>-0.91</b>	<b>51.47</b>
+/- 800 KV BiswanathChariali-Agra	966	957	976	0.00	22.14	0.00	22.14
<b>Sub Total NER</b>	<b>966</b>	<b>957</b>			<b>22.14</b>	<b>0.00</b>	<b>22.14</b>
<b>Total IR Exch</b>	<b>6682</b>	<b>9222</b>			<b>192.51</b>	<b>7.71</b>	<b>184.79</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
46.71	3.75	50.46	36.06	9.95	6.24	0.76	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
92.75	108.24	201.00	73.61	111.18	184.79	-19.14	2.93	-16.20

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	0	0	0	21	0	0	-0.23

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	2.23	11.37	62.52	79.12	8.77	0.76	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						
50.16	14.01	49.70	19.04	49.97	0.051	0.066	50.14	49.89	20.88

## 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	406	21:41	401	19:30	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	421	6:31	405	18:42	0.0	0.0	0.2	0.0	0.2
Bareilly(PG)400kV	400	414	6:32	398	11:53	0.0	0.0	0.0	0.0	0.0
Kanpur	400	414	6:16	400	11:28	0.0	0.0	0.0	0.0	0.0
Dadri	400	411	6:07	395	11:25	0.0	0.0	0.0	0.0	0.0
Ballabgarh	400	418	6:12	398	11:25	0.0	0.0	0.0	0.0	0.0
Bawana	400	416	6:16	399	11:23	0.0	0.0	0.0	0.0	0.0
Bassi	400	417	4:01	396	11:34	0.0	0.0	0.0	0.0	0.0
Hissar	400	410	3:29	396	11:22	0.0	0.0	0.0	0.0	0.0
Moga	400	414	4:02	399	19:06	0.0	0.0	0.0	0.0	0.0
Abdullapur	400	420	4:03	404	19:04	0.0	0.0	0.0	0.0	0.0
Nalagarh	400	424	3:05	407	19:03	0.0	0.0	22.5	0.0	22.5
Kishenpur	400	421	4:03	401	18:59	0.0	0.0	1.0	0.0	1.0
Wagoora	400	418	1:39	315	10:29	8.4	24.9	0.0	0.0	8.4
Amritsar	400	425	4:21	406	18:57	0.0	0.0	16.4	0.0	16.4
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	421	4:00	406	13:48	0.0	0.0	4.4	0.0	4.4
Rishikesh	400	411	6:16	393	11:49	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	773	21:57	739	11:36	0.0	0.9	0.0	0.0	0.0
Balia	765	788	7:01	762	18:43	0.0	0.0	0.0	0.0	0.0
Moga	765	789	4:02	762	11:36	0.0	0.0	0.0	0.0	0.0
Agra	765	784	17:59	747	11:51	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	788	4:02	760	11:35	0.0	0.0	0.0	0.0	0.0
Unnao	765	0	0:00	0	0:00	100.0	100.0	0.0	0.0	100.0
Lucknow	765	787	6:16	761	12:14	0.0	0.0	0.0	0.0	0.0
Meerut	765	796	6:16	763	11:36	0.0	0.0	0.0	0.0	0.0
Jhatikara	765	788	6:31	757	11:28	0.0	0.0	0.0	0.0	0.0
Bareilly 765 kV	765	781	6:31	756	18:42	0.0	0.0	0.0	0.0	0.0
Anta	765	783	17:38	757	11:25	0.0	0.0	0.0	0.0	0.0
Phagi	765	786	17:38	754	11:37	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	502.97	1219.07	511.78	1635.65	462.22	558.38
Pong	426.72	384.05	416.85	755.83	421.24	946.20	191.73	429.79
Tehri	829.79	740.04	824.55	1098.00	822.75	1059.00	170.14	260.00
Koteswar	612.50	598.50	609.99	4.44	609.70	4.44	260.00	254.38
Chamera-I	760.00	748.75	755.38	0.00	0.00	0.00	119.92	0.00
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	518.66	6.45	514.08	5.64	109.49	233.04

\* 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	714	52	0	567	67	0	18.05	0.47	18.52
Delhi	644	-530	0	512	-164	0	15.95	-7.63	8.33
Haryana	2016	199	0	1620	300	0	41.48	4.19	45.67
HP	-621	44	0	-353	-617	0	-10.43	-4.87	-15.30
J&K	-548	-50	0	-568	85	0	-14.26	2.33	-11.93
CHD	0	0	0	0	-35	0	0.35	0.03	0.38
Rajasthan	-154	485	0	-154	474	0	-3.70	11.53	7.83
UP	694	490	0	371	-78	0	9.91	2.19	12.11
Uttarakhand	-269	15	0	-236	172	0	-5.96	5.39	-0.57
Total	2477	704	0	1758	203	0	51.38	13.64	65.03

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	941	466	73	0	0	0
Delhi	798	420	42	-679	0	0
Haryana	2059	1368	331	-298	0	0
HP	-211	-658	44	-643	0	0
J&K	-548	-648	233	-115	0	0
CHD	44	0	30	-40	0	0
Rajasthan	-154	-154	493	456	0	0
UP	719	263	784	-78	0	0
Uttarakhand	-236	-357	506	1	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

<b>WR</b>	<b>0.00%</b>
<b>ER</b>	<b>0.00%</b>
<b>Simultaneous</b>	<b>0.00%</b>

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

<b>WR</b>	<b>0.00%</b>
<b>ER</b>	<b>0.00%</b>
<b>Simultaneous</b>	<b>0.00%</b>

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

<b>Rihand - Dadri</b>	<b>0.00%</b>
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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	9
Haryana	7
Rajasthan	19
Delhi	14
UP	12
Uttarakhand	85
HP	19
J & K	30
Chandigarh	37

**XIII. System Constraints:****XIV. Grid Disturbance / Any Other Significant Event:****XV. Weather Conditions For 26.09.2016 :**

Normal

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

1. 765KV Bhiwani-II Main Bay (702) at Phagi first time charged at 1854 Hrs/26.09.2016.
2. 400 kV Bus –II at Fatehabad(UP) first time charged at 14.25 Hrs/26.09.2016.

**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.