

# 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 29.09.2016

Date of Reporting : 30.09.2016



### 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
46826	2115	48941	50.08	43228	1746	44974	50.12	1040.9	45.43

\* 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	91.67	15.58		107.48	72.20	73.81	1.62	181.29	0.00
Haryana	52.83	0.94		53.76	118.29	115.82	-2.47	169.58	0.02
Rajasthan	140.48	1.46	11.02	152.97	51.78	52.26	0.48	205.23	0.91
Delhi	21.11			21.11	85.53	87.77	2.24	108.87	0.71
UP	132.56	21.60		154.16	113.79	118.72	4.93	272.88	35.48
Uttarakhand		16.56		21.92	15.09	16.53	1.44	38.45	0.00
HP		14.67		14.67	8.10	11.63	3.52	26.30	0.06
J & K		16.83	0.00	16.83	18.70	16.19	-2.51	33.02	8.26
Chandigarh				0.00	4.83	5.29	0.46	5.29	0.00
<b>Total</b>	<b>438.65</b>	<b>87.64</b>	<b>11.02</b>	<b>542.90</b>	<b>488.31</b>	<b>498.01</b>	<b>9.71</b>	<b>1040.91</b>	<b>45.43</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	8004	0	-223	783	6907	0	140	136	8264	21:00	0
Haryana	8569	0	-533	2113	7105	0	238	1240	8569	20:00	0
Rajasthan	9034	0	18	338	8901	0	248	373	9627	24:00	0
Delhi	4898	37	3	676	4394	0	360	6	5212	24:00	0
UP	11314	1655	-168	293	12324	1475	421	1541	12821	1:00	1650
Uttarakhand	1831	0	79	151	1429	0	109	64	1881	19:00	0
HP	1237	0	66	-966	906	0	215	-651	1305	8:00	0
J&K	1692	423	-157	-215	1083	271	-159	-413	1723	21:00	431
Chandigarh	248	0	-5	-20	179	0	17	0	262	15:00	0
<b>Total</b>	<b>46826</b>	<b>2115</b>	<b>-920</b>	<b>3153</b>	<b>43228</b>	<b>1746</b>	<b>1589</b>	<b>2296</b>	<b>46945</b>	<b>21:00</b>	<b>1648</b>

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

Diversity is 1.06

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

### III. Regional Entities :

Entity	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	894	1050	921	22.50	937	21.45	1.05
	Rihand I STPS (2*500)	1000	571	522	615	13.75	573	13.71	0.03
	Rihand II STPS (2*500)	1000	600	503	642	14.37	599	14.27	0.10
	Rihand III STPS (2*500)	1000	615	671	644	15.10	629	14.67	0.42
	Dadri I STPS (4*210)	840	815	788	794	18.82	784	19.46	-0.64
	Dadri II STPS (2*490)	980	970	924	988	22.36	932	22.98	-0.62
	Unchahar I TPS (2*210)	420	153	169	149	3.52	147	3.64	-0.12
	Unchahar II TPS (2*210)	420	400	375	372	8.46	352	9.47	-1.01
	Unchahar III TPS (1*210)	210	200	158	172	3.93	164	4.72	-0.79
	ISTPP (Jhajjar) (3*500)	1500	1425	348	0	6.37	265	6.54	-0.17
	Dadri GPS (4*130.19+2*154.51)	830	779	389	389	8.86	369	9.15	-0.30
	Anta GPS (3*88.71+1*153.2)	419	393	243	236	5.63	234	5.55	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	0.01	0	0.03	-0.03
	Singrauli Solar(15)	15	1	0	0	0.00	0	0.03	-0.03
	KHEP(4*200)	800	858	858	0	6.75	281	6.75	0.00
	<b>Sub Total (A)</b>	<b>12112</b>	<b>9298</b>	<b>6998</b>	<b>5922</b>	<b>150</b>	<b>6268</b>	<b>152</b>	<b>-2.02</b>
B. NPC	NAPS (2*220)	440	190	210	215	4.59	191	4.56	0.03
	RAPS- B (2*220)	440	366	417	420	8.94	372	8.78	0.15
	RAPS- C (2*220)	440	0	0	0	-0.25	-10	0.00	-0.25
	<b>Sub Total (B)</b>	<b>1320</b>	<b>556</b>	<b>627</b>	<b>635</b>	<b>13.28</b>	<b>553</b>	<b>13.34</b>	<b>-0.06</b>
C. NHPC	Chamera I HPS (3*180)	540	540	554	0	3.65	152	3.50	0.15
	Chamera II HPS (3*100)	300	301	201	103	3.38	141	3.23	0.16
	Chamera III HPS (3*77)	231	221	227	76	2.35	98	2.20	0.15
	Bairasuli HPS(3*60)	180	179	185	61	1.37	57	1.30	0.07
	Salal-HPS (6*115)	690	465	558	430	11.80	492	11.17	0.63
	Tanakpur-HPS (3*31.4)	94	70	0	0	0.00	0	1.69	-1.69
	Uri-I HPS (4*120)	480	184	219	154	4.64	194	4.42	0.23
	Uri-II HPS (4*60)	240	107	178	123	2.66	111	2.56	0.09
	Dhauliganga-HPS (4*70)	280	234	283	71	3.20	133	3.15	0.05
	Dulhasti-HPS (3*130)	390	383	393	393	9.28	387	9.18	0.10
	Sewa-II HPS (3*40)	120	119	72	0	0.69	29	0.65	0.04
	Parbati 3 (4*130)	520	520	392	0	1.40	58	1.37	0.04
	<b>Sub Total (C)</b>	<b>4065</b>	<b>3323</b>	<b>3262</b>	<b>1411</b>	<b>44</b>	<b>1851</b>	<b>44</b>	<b>0.03</b>
	D.SJVNL	NJPC (6*250)	1500	1605	1617	506	22.47	936	22.38
Rampur HEP (6*88.67)		412	442	447	145	6.40	267	6.23	0.17
<b>Sub Total (D)</b>		<b>1912</b>	<b>2047</b>	<b>2064</b>	<b>651</b>	<b>28.87</b>	<b>1203</b>	<b>28.61</b>	<b>0.26</b>
E. THDC	Tehri HPS (4*250)	1000	1071	1070	260	8.42	351	8.10	0.32
	Koteshwar HPS (4*100)	400	116	301	91	2.73	114	2.70	0.03
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1188</b>	<b>1371</b>	<b>351</b>	<b>11.16</b>	<b>465</b>	<b>10.80</b>	<b>0.36</b>
F. BBMB	Bhakra HPS (2*108+3*126+5*157)	1379	715	1226	3	17.13	714	17.17	-0.05
	Dehar HPS (6*165)	990	461	825	330	11.24	468	11.08	0.16
	Pong HPS (6*66)	396	279	396	198	6.85	285	6.70	0.15
	<b>Sub Total (F)</b>	<b>2765</b>	<b>1456</b>	<b>2447</b>	<b>531</b>	<b>35.21</b>	<b>1467</b>	<b>34.94</b>	<b>0.27</b>
G. IPP(s)/JV(s)	ALLAIN DUHANGAN HPS(IPP) (2*96)	192	0	53	53	1.48	62	1.41	0.07
	KARCHAM WANGTOO HPS(IPP) (4*250)	1000	0	890	600	12.41	517	12.29	0.12
	Malana Stg-II HPS (2*50)	100	0	52	45	1.21	50	1.14	0.07
	Shree Cement TPS (2*150)	300	0	291	290	6.78	283	6.84	-0.05
	Budhil HPS(IPP) (2*35)	70	0	35	35	0.82	34	0.95	-0.12
	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1320</b>	<b>1022</b>	<b>22.71</b>	<b>946</b>	<b>22.62</b>	<b>0.09</b>
<b>H. Total Regional Entities (A-G)</b>	<b>25237</b>	<b>17868</b>	<b>18089</b>	<b>10523</b>	<b>306.09</b>	<b>12754</b>	<b>307.17</b>	<b>-1.08</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	840	18.33	764	
	Guru Nanak Dev TPS(Bhatinda) (2*110+2*120)	460	120	120	2.53	106	
	Guru Hargobind Singh TPS(L.mbt) (2*210+2*250)	920	462	463	10.30	429	
	Goindwal(GVK) (2*270)	540	0	0	-0.03	-1	
	Rajpura (2*700)	1400	1320	1320	31.38	1307	
	Talwandi Saboo (3*660)	1980	1228	1228	29.17	1215	
	<b>Thermal (Total)</b>	<b>6560</b>	<b>3970</b>	<b>3971</b>	<b>91.67</b>	<b>3820</b>	
	Total Hydro	1000	637	641	15.58	649	
	Wind Power	0	0	0	0.00	0	
	Biomass	73	7	7	0.16	7	
	Solar	494	3	3	0.06	3	
	<b>Renewable(Total)</b>	<b>567</b>	<b>9</b>	<b>9</b>	<b>0.23</b>	<b>9</b>	
	<b>Total Punjab</b>	<b>8127</b>	<b>4616</b>	<b>4621</b>	<b>107.48</b>	<b>4478</b>	
	Haryana	Panipat TPS (2*210+2*250)	920	824	233	12.75	531
		DCRTPP (Yamuna nagar) (2*300)	600	555	556	12.33	514
Faridabad GPS (NTPC)(2*137.75+1*1156)		432	192	164	4.32	180	
RGTPP (khedar) (IPP) (2*600)		1200	1085	1113	23.42	976	
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>2656</b>	<b>2066</b>	<b>52.83</b>	<b>2201</b>	
Total Hydro		62	37	41	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>2693</b>	<b>2107</b>	<b>53.76</b>	<b>2240</b>	
Rajasthan		kota TPS (2*110+2*195+3*210)	1240	1047	947	23.04	960
		suratgarh TPS (6*250)	1500	1112	1081	25.24	1052
	Chabara TPS (4*250)	1000	717	896	20.53	856	
	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	142	144	3.51	146	
	RAPS A (NPC) (1*100+1*200)	300	168	167	4.19	175	
	Barsingar (NLC) (2*125)	250	42	0	0.07	3	
	Giral LTPS (2*125)	250	0	0	0.00	0	
	Rajwest LTPS (IPP) (8*135)	1080	933	934	21.68	903	
	VS LIGNITE LTPS (IPP) (1*135)	135	0	0	0.00	0	
	Kalisindh Thermal(2*600)	1200	464	549	12.78	533	
	Kawai(Adani) (2*660)	1320	1227	1230	29.44	1227	
	<b>Thermal (Total)</b>	<b>8876</b>	<b>5852</b>	<b>5948</b>	<b>140.48</b>	<b>5853</b>	
	Total Hydro	550	73	45	1.46	61	
	Wind power	4017	306	640	10.22	426	
	Biomass	99	18	18	0.43	18	
	Solar	1295	1	0	0.37	16	
	Renewable/Others (Total)	5411	325	658	11.02	459	
	<b>Total Rajasthan</b>	<b>14837</b>	<b>6250</b>	<b>6651</b>	<b>152.97</b>	<b>6374</b>	
UP	Anpara TPS (3*210+2*500)	1630	376	517	10.20	425	
	Obra TPS (2*50+2*94+5*200)	1194	249	237	6.20	258	
	Paricha TPS (2*110+2*220+2*250)	1160	658	800	18.00	750	
	Panki TPS (2*105)	210	153	153	3.60	150	
	Harduaganj TPS (1*60+1*105+2*250)	665	526	482	12.70	529	
	Tanda TPS (NTPC) (4*110)	440	350	375	8.36	348	
	Roza TPS (IPP) (4*300)	1200	1107	1107	26.40	1100	
	Anpara-C (IPP) (2*600)	1200	900	896	21.00	875	
	Bajaj Energy Pvt.Ltd(IPP) TPS (10*45)	450	405	405	9.50	396	
	Anpara-D(2*500)	1000	208	476	7.60	317	
	Lalitpur TPS(3*660)	1980	355	358	7.80	325	
	Bara(2*660)	1320	0	0	0.00	0	
	<b>Thermal (Total)</b>	<b>12449</b>	<b>5287</b>	<b>5806</b>	<b>131.36</b>	<b>5473</b>	
	Vishnuparyag HPS (IPP)(4*110)	440	435	435	9.60	400	
	Alaknada(4*82.5)	330	165	169	5.20	217	
	Other Hydro	527	316	275	6.80	283	
	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>6253</b>	<b>6735</b>	<b>154.16</b>	<b>6423</b>		
Uttarakhand	Other Hydro	1250	735	604	16.56	690	
	Total Gas	225	223	230	5.37	224	
	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>958</b>	<b>834</b>	<b>21.92</b>	<b>913</b>	
Delhi	Rajghat TPS (2*67.5)	135	0	0	-0.03	-1	
	Delhi Gas Turbine (6x30 + 3x34)	282	72	74	1.84	76	
	Pragati Gas Turbine (2x104+ 1x122)	330	146	150	3.62	151	
	Rithala GPS (3*36)	95	0	0	0.00	0	
	Bawana GPS (4*216+2*253)	1370	296	305	7.24	302	
	Badarpur TPS (NTPC) (3*95+2*210)	705	359	354	8.44	352	
	<b>Thermal (Total)</b>	<b>2917</b>	<b>873</b>	<b>883</b>	<b>21.11</b>	<b>879</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>873</b>	<b>883</b>	<b>21.11</b>	<b>879</b>		

HP	Baspa HPS (IPP) (3*100)	300	92	226	4.93	206
	Malana HPS (IPP) (2*43)	86	46	47	1.18	49
	Other Hydro	372	161	143	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	213	204	5.01	209
	<b>Renewable(Total)</b>	<b>486</b>	<b>213</b>	<b>204</b>	<b>5.01</b>	<b>209</b>
	<b>Total HP</b>	<b>1244</b>	<b>512</b>	<b>620</b>	<b>14.67</b>	<b>611</b>
	J & K	Baglihar HPS (IPP) (3*150+3*150)	900	586	586	14.06
Other Hydro/IPP(including 98 MW Small Hydro)		308	138	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>724</b>	<b>679</b>	<b>17</b>	<b>701</b>
<b>Total State Control Area Generation</b>		<b>49797</b>	<b>22879</b>	<b>23130</b>	<b>542.90</b>	<b>22621</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>		<b>7771</b>	<b>9709</b>	<b>205.63</b>	<b>8568</b>	
<b>Total Regional Availability(Gross)</b>	<b>75034</b>	<b>48739</b>	<b>43362</b>	<b>1054.62</b>	<b>43943</b>	

**IV. Total Hydro Generation:**

<b>Regional Entities Hydro</b>	<b>12234</b>	<b>10996</b>	<b>3641</b>	<b>141.52</b>	<b>5897</b>
<b>State Control Area Hydro</b>	<b>7163</b>	<b>3857</b>	<b>3739</b>	<b>87.64</b>	<b>3875</b>
<b>Total Regional Hydro</b>	<b>19397</b>	<b>14853</b>	<b>7380</b>	<b>229.16</b>	<b>9772</b>

**V. Total Renewable Generation:**

<b>Regional Entities Renewable</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>1</b>
<b>State Control Area Renewable</b>	<b>7075</b>	<b>547</b>	<b>872</b>	<b>16.26</b>	<b>678</b>
<b>Total Regional Renewable</b>	<b>7105</b>	<b>547</b>	<b>872</b>	<b>16.29</b>	<b>679</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)	250	250	500	0	4.94	0.00	4.94
765 KV Gwalior-Agra (D/C)	2149	2860	2860	0	59.20	0.00	59.20
400 KV Zerda-Kankroli	-27	119	165	78	0.36	0.00	0.36
400 KV Zerda-Bhinmal	-13	122	254	56	1.29	0.00	1.29
220 KV Auraiya-Malanpur	-40	-41	0	75	0.00	0.84	-0.84
220 KV Badod-Kota/Morak	40	133	142	-2	1.54	0.00	1.54
Mundra-Mohindergerh(HVDC Bipole)	2298	2302	2306	0.00	55.63	0.00	55.63
400 KV Vindhychal - Rihand	0	0	0	0	0.00	0.00	0.00
765 kV Phagi-Gwalior (D/C)	769	306	1080	0	9.68	0.00	9.68
<b>Sub Total WR</b>	<b>5426</b>	<b>6051</b>			<b>132.65</b>	<b>0.84</b>	<b>131.81</b>
Pusauli Bypass/HVDC	-88	-32	0	88	0.00	1.28	-1.28
400 KV MZP- GKP (D/C)	168	467	609	0	10.30	0.00	10.30
400 KV Patna-Balia(D/C) X 2	210	443	512	0	7.45	0.00	7.45
400 KV B Sharif-Balia (D/C)	137	153	314	0	4.60	0.00	4.60
765 KV Gaya-Balia	327	376	409	0	4.36	0.00	4.36
765 KV Gaya-Varanasi (D/C)	576	836	852	0	17.90	0.00	17.90
220 KV Pusauli-Sahupuri	0	0	0	0	0.00	0.00	0.00
132 KV K'nasa-Sahupuri	-30	0	0	26	0.00	0.43	-0.43
132 KV Son Ngr-Rihand	-31	-12	0	22	0.00	0.37	-0.37
132 KV Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
765 KV Sasaram - Fatehpur	54	151	183	0	3.14	0.00	3.14
400 KV Barh -GKP (D/C)	240	376	396	0	7.59	0.00	7.59
400 kV B Sharif - Varanasi (D/C)	82	200	231	0	4.28	0.00	4.28
<b>Sub Total ER</b>	<b>1645</b>	<b>2958</b>			<b>59.61</b>	<b>2.08</b>	<b>57.54</b>
+/- 800 KV BiswanathChariali-Agra	700	700	700	0.00	16.29	0.00	16.29
<b>Sub Total NER</b>	<b>700</b>	<b>700</b>			<b>16.29</b>	<b>0.00</b>	<b>16.29</b>
<b>Total IR Exch</b>	<b>7771</b>	<b>9709</b>			<b>208.55</b>	<b>2.92</b>	<b>205.63</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
49.92	3.57	53.49	11.50	2.24	14.85	14.43	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
79.84	117.78	197.62	73.83	131.81	205.63	-6.01	14.02	8.01

**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	-29	0	0	29	0	0	-0.28

**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	0.00	3.54	68.70	73.95	17.41	5.74	0.05	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						
50.21	13.02	49.81	6.15	50.01	0.036	0.060	50.19	50.00	26.05

## 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	3:41	406	0:41	0.0	0.0	0.0	0.0	0.0
Gorakhpur	400	423	6:02	403	22:08	0.0	0.0	5.3	0.0	5.3
Bareilly(PG)400kV	400	416	3:59	400	11:25	0.0	0.0	0.0	0.0	0.0
Kanpur	400	419	3:56	404	0:12	0.0	0.0	0.0	0.0	0.0
Dadri	400	413	3:57	399	11:21	0.0	0.0	0.0	0.0	0.0
Ballabgarh	400	420	4:02	400	11:22	0.0	0.0	0.0	0.0	0.0
Bawana	400	417	4:00	396	12:36	0.0	0.0	0.0	0.0	0.0
Bassi	400	418	4:00	397	0:09	0.0	0.0	0.0	0.0	0.0
Hissar	400	413	3:59	397	19:07	0.0	0.0	0.0	0.0	0.0
Moga	400	415	3:56	400	19:03	0.0	0.0	0.0	0.0	0.0
Abdullapur	400	422	4:00	404	19:05	0.0	0.0	1.2	0.0	1.2
Nalagarh	400	424	4:03	408	19:06	0.0	0.0	11.1	0.0	11.1
Kishenpur	400	419	3:53	400	18:44	0.0	0.0	0.0	0.0	0.0
Wagoora	400	417	5:31	373	18:46	7.9	34.6	0.0	0.0	7.9
Amritsar	400	423	3:56	403	20:20	0.0	0.0	3.3	0.0	3.3
Kashipur	400	0	0:00	0	0:00	0.0	0.0	0.0	0.0	0.0
Hamirpur	400	418	2:59	402	19:00	0.0	0.0	0.0	0.0	0.0
Rishikesh	400	413	4:01	394	0:17	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	790	3:59	753	9:23	0.0	0.0	0.0	0.0	0.0
Balia	765	792	3:55	762	22:12	0.0	0.0	0.0	0.0	0.0
Moga	765	796	4:00	766	20:08	0.0	0.0	0.0	0.0	0.0
Agra	765	794	3:58	761	11:24	0.0	0.0	0.0	0.0	0.0
Bhiwani	765	796	3:55	768	11:21	0.0	0.0	0.0	0.0	0.0
Unnao	765	776	17:03	748	0:17	0.0	0.0	0.0	0.0	0.0
Lucknow	765	793	17:03	764	22:20	0.0	0.0	0.0	0.0	0.0
Meerut	765	803	3:58	769	11:24	0.0	0.0	0.8	0.0	0.8
Jhatikara	765	798	3:58	766	11:25	0.0	0.0	0.0	0.0	0.0
Bareilly 765 kV	765	786	17:03	757	0:31	0.0	0.0	0.0	0.0	0.0
Anta	765	777	3:42	761	0:05	0.0	0.0	0.0	0.0	0.0
Phagi	765	788	4:01	759	0:13	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	502.80	1219.07	511.73	1635.65	483.03	508.32
Pong	426.72	384.05	416.56	743.22	421.17	946.20	142.91	410.74
Tehri	829.79	740.04	824.50	1097.37	822.70	1065.64	166.40	182.00
Koteswar	612.50	598.50	610.20	4.65	610.57	4.69	182.00	180.20
Chamera-I	760.00	748.75	755.94	0.00	0.00	0.00	115.10	99.26
Rihand	268.22	252.98	0.00	0.00	0.00	0.00	0.00	0.00
RPS	352.80	343.81	1157.00	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	518.07	5.81	514.17	6.68	107.76	244.75

\* 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	287	-151	0	780	3	0	10.07	-0.67	9.40
Delhi	372	-366	0	513	163	0	11.12	-0.06	11.06
Haryana	1117	123	0	1856	258	0	27.17	0.19	27.36
HP	-688	38	0	-384	-582	0	-11.31	-3.77	-15.08
J&K	-548	134	0	-548	333	0	-13.73	6.37	-7.36
CHD	0	0	0	0	-20	0	0.35	0.05	0.41
Rajasthan	-139	511	0	-139	476	0	-3.33	11.28	7.95
UP	470	1072	0	371	-78	0	7.71	11.40	19.12
Uttarakhand	-236	300	0	-236	387	0	-5.67	9.85	4.18
Total	635	1661	0	2213	940	0	22.39	34.63	57.03

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

State	Bilateral (MW)		IEX (MW)		PXIL (MW)	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Punjab	886	159	25	-353	0	0
Delhi	710	337	468	-425	0	0
Haryana	1856	804	327	-831	0	0
HP	-236	-688	216	-611	0	0
J&K	-548	-618	397	85	0	0
CHD	44	0	49	-35	0	0
Rajasthan	-139	-139	534	42	0	0
UP	521	154	1294	-78	0	0
Uttarakhand	-236	-236	643	139	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>10.76%</b>
<b>ER</b>	<b>0.00%</b>
<b>Simultaneous</b>	<b>31.60%</b>

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

<b>WR</b>	<b>54.17%</b>
<b>ER</b>	<b>0.00%</b>
<b>Simultaneous</b>	<b>80.56%</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. Zero Crossing Violations**

State	No. of violations(Maximum 8 in a day)	Maximum number of continuous blocks without sign change
Punjab	3	22
Haryana	4	18
Rajasthan	2	18
Delhi	5	45
UP	1	14
Uttarakhand	3	27
HP	5	41
J & K	2	29
Chandigarh	7	71

**XIII. System Constraints:****XIV. Grid Disturbance / Any Other Significant Event:**

**XV. Weather Conditions For 29.09.2016 :**  
Normal

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

1. Unchahar-Fatehpur 1 first time charged at 13:44 hrs/30-09-2016 from fatehpur end
2. Rappc-Kakroli line L.L.Oed at chittorgarh, Kakroli chittorgarh section charged at 16:31 hrs/30-09-2016
3. 400 kV Rappc-Chhittorgarh section charged at 22:04 hrs/30-09-2016
4. 765 kV Fatehpur lalitpur ckt charged at 22:04 hrs/30-09-2016
5. New 765kV Phagi-Bhiwani- 2 line first time charged on 20.28 hrs dt 29.09.16.
6. Bassi Bus Reactor first time charged at 21:08/29-09-2016.
7. 765 kV Fatehabad (UP) Bus-1 first time charged at 23:22 hrs/29-09-2016

**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.

Report for : 29.09.2016

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER