

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 18.09.2013

Date of Reporting : 19.09.2013

### 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
41259	2008	43267	50.22	38412	1655	40067	50.32	938.9	60.37

\* 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	51.12	17.20		68.32	100.86	100.55	-0.31	168.87	0.00
Haryana	88.08	0.67		88.75	72.54	71.76	-0.78	160.51	0.04
Rajasthan	95.96	1.03	6.82	103.80	82.38	77.85	-4.53	181.65	0.00
Delhi	30.47			30.47	67.95	64.20	-3.76	94.67	0.00
UP	125.37	4.63	1.00	131.00	116.52	114.87	-1.65	245.87	55.27
Uttarakhand		15.95		15.95	11.20	14.90	3.70	30.84	2.70
HP		17.31		17.31	3.41	5.16	1.75	22.46	0.67
J & K		13.63	0.00	13.63	14.23	15.63	1.40	29.26	1.70
Chandigarh				0.00	4.93	4.75	-0.18	4.75	0.00
<b>Total</b>	<b>391.00</b>	<b>70.41</b>	<b>7.82</b>	<b>469.22</b>	<b>474.03</b>	<b>469.66</b>	<b>-4.37</b>	<b>938.88</b>	<b>60.37</b>

\* 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				Day Energy MU	
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction	STOA/PX transaction	
Punjab	7709	0	-80	1635	7020	0	-14	1994	41.18	
Haryana	7119	42	111	180	6144	0	-60	383	6.65	
Rajasthan	7754	0	-219	1749	7496	0	-294	1265	36.72	
Delhi	4216	0	-288	-185	3528	0	-354	-149	-3.91	
UP	10332	1580	-553	1332	11118	1655	-1	1712	32.80	
Uttarakhand	1299	250	72	-37	1200	0	74	69	0.84	
HP	1073	37	178	-902	774	0	93	-700	-15.74	
J&K	1520	100	10	-82	975	0	13	-376	-4.70	
Chandigarh	237	0	-11	-15	157	0	-11	-12	0.24	
<b>Total</b>	<b>41259</b>	<b>2008</b>	<b>-779</b>	<b>3675</b>	<b>38412</b>	<b>1655</b>	<b>-554</b>	<b>4186</b>	<b>94.08</b>	

\* STOA figures are at sellers boundary & PX figures are at regional boundary.

### 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	2000	1740	1869	1864	41.71	1738	41.76	-0.05
	Rihand I STPS	1000	934	1017	1016	22.06	919	22.41	-0.35
	Rihand II STPS	1000	478	520	522	11.46	478	11.47	-0.01
	Rihand III STPS	500	483	489	504	11.50	479	11.58	-0.08
	Dadri I STPS	840	600	640	615	13.29	554	13.50	-0.21
	Dadri II STPS	980	975	1008	977	22.76	948	22.93	-0.17
	Unchahar I TPS	420	392	427	407	9.15	381	9.39	-0.24
	Unchahar II TPS	420	403	419	400	9.24	385	9.61	-0.36
	Unchahar III TPS	210	199	212	217	4.59	191	4.71	-0.12
	ISTPP (Jhajjar)	1500	1480	625	689	15.21	634	14.92	0.29
	Dadri GPS	830	650	370	226	7.85	327	8.35	-0.50
	Anta GPS	419	397	0	0	0.00	0	0.00	0.00
	Auraiya GPS	663	621	152	156	3.56	148	3.62	-0.06
	<b>Sub Total (A)</b>	<b>10782</b>	<b>9351</b>	<b>7748</b>	<b>7593</b>	<b>172.39</b>	<b>7183</b>	<b>174.24</b>	<b>-1.86</b>
	B. NPC	NAPS	440	296	333	339	7.09	296	7.10
RAPS- B		440	195	216	220	4.61	192	4.68	-0.07
RAPS- C		440	410	460	465	9.75	406	9.84	-0.09
<b>Sub Total (B)</b>		<b>1320</b>	<b>901</b>	<b>1009</b>	<b>1024</b>	<b>21.45</b>	<b>894</b>	<b>21.62</b>	<b>-0.17</b>
C. NHPC	Chamera I HPS	540	534	540	360	5.42	226	5.47	-0.05
	Chamera II HPS	300	242	200	100	3.12	130	3.33	-0.21
	Chamera III HPS	231	231	221	68	2.48	103	2.55	-0.07
	Bairasuil HPS	180	182	40	70	1.40	58	1.49	-0.10
	Salal-HPS	690	390	528	471	10.90	454	9.16	1.74
	Tanakpur-HPS	94	62	63	63	1.48	61	1.49	-0.01
	Uri-HPS	480	334	350	353	8.16	340	8.11	0.05
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00
	Dulhasti-HPS	390	387	407	385	9.24	385	9.29	-0.05
	Sewa-II HPS	120	119	108	0	1.09	45	1.16	-0.07
	<b>Sub Total (C)</b>	<b>3305</b>	<b>2481</b>	<b>2457</b>	<b>1870</b>	<b>43.28</b>	<b>1803</b>	<b>42.05</b>	<b>1.23</b>
D. NJPC	Natpura Jhakri	1500	1605	1618	706	23.60	983	23.50	0.10
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1618</b>	<b>706</b>	<b>23.60</b>	<b>983</b>	<b>23.50</b>	<b>0.10</b>
E. THDC	Tehri HPS	1000	1060	1065	708	9.25	385	9.00	0.25
	Koteshwar HPS	400	400	395	0	3.04	126	3.00	0.04
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1460</b>	<b>1460</b>	<b>708</b>	<b>12.28</b>	<b>512</b>	<b>12.00</b>	<b>0.28</b>
F. BBMB	Bhakra HPS	1497	819	1217	638	20.57	857	19.67	0.90
	Dehar HPS	990	433	660	320	10.61	442	10.38	0.23
	Pong HPS	396	234	312	186	5.81	242	5.62	0.19
	<b>Sub Total (F)</b>	<b>2883</b>	<b>1486</b>	<b>2189</b>	<b>1144</b>	<b>36.99</b>	<b>1541</b>	<b>35.66</b>	<b>1.33</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	65	63	1.59	66	1.53	0.05
	KWHEP HPS(IPP)	1000	0	800	397	13.31	555	12.50	0.81
	Malana Stg-II HPS	100	0	102	30	0.86	36	0.81	0.05
	Shree Cement TPS	300	0	129	124	2.95	123	3.05	-0.10
	Budhil HPS(IPP)	70	0	35	35	0.78	32	0.81	-0.04
	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1131</b>	<b>649</b>	<b>19.48</b>	<b>812</b>	<b>18.71</b>	<b>0.77</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22852</b>	<b>17284</b>	<b>17612</b>	<b>13694</b>	<b>329.47</b>	<b>13728</b>	<b>327.80</b>	<b>1.67</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)	1260	1257	1050	25.75	1073
	Guru Nanak Dev TPS(Bhatinda)	440	260	180	4.43	185
	Guru Hargobind Singh TPS(L.mbt)	920	952	955	20.94	872
	Goindwal(GVK)		0	0 0 0	0.00	0
	Thermal (Total)	2620	2469	2185	51.12	2130
	Total Hydro	1148	629	698	17.20	717
<b>Total Punjab</b>	<b>3768</b>	<b>3098</b>	<b>2883</b>	<b>68.32</b>	<b>2847</b>	
Haryana	Panipat TPS	1367	804	932	21.70	904
	DCRTPP (Yamuna nagar)	600	574	554	12.57	524
	Faridabad GPS (NTPC)	432	196	164	4.22	176
	RGTPP (khedar) (IPP)	1200	1055	869	21.26	886
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	792	744	18.93	789
	Thermal (Total)	4944	3	3263	88.08	3670
	Total Hydro	62	27	28	0.67	28
	<b>Total Haryana</b>	<b>5006</b>	<b>30</b>	<b>3291</b>	<b>88.75</b>	<b>3698</b>
	Rajasthan	kota TPS	1240	955	955	22.43
suratgarh TPS		1500	1080	954	24.53	1022
Chabra TPS		500	225	190	5.02	209
Dholpur GPS		330	77	74	1.80	75
Ramgarh GPS		111	31	33	0.90	37
RAPS A (NPC)		300	173	173	4.02	168
Barsingsar (NLC)		250	82	144	2.31	96
Giral LTPS		250	53	43	1.06	44
Rajwest LTPS (IPP)		1080	701	848	19.60	817
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	595	585	14.29	595
Thermal (Total)		6956	3972	3999	95.96	3998
Total Hydro		550	24	24	1.03	43
Wind power		2191	120	531	4.46	186
Biomass		91	34	34	0.82	34
Solar		201	0	0	1.54	64
Renewable/Others (Total)		2483	154	565	6.82	284
<b>Total Rajasthan</b>		<b>9989</b>	<b>4150</b>	<b>4588</b>	<b>103.80</b>	<b>4325</b>
UP		Anpara TPS	1630	1349	1335	28.80
	Obra TPS	1288	487	466	10.60	442
	Paricha TPS	1140	940	805	19.60	817
	Panki TPS	210	170	130	3.20	133
	Harduaganj TPS	665	405	257	7.60	317
	Tanda TPS (NTPC)	440	293	295	7.32	305
	Roza TPS (IPP)	1200	797	801	19.17	799
	Anpara-C (IPP)	1200	956	824	21.37	890
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	323	323	7.72	322
	Thermal (Total)	8223	5720	5236	125.37	5224
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	174	196	4.63	193
	Cogeneration	981	40	40	1.00	42
	<b>Total UP</b>	<b>10131</b>	<b>5934</b>	<b>5472</b>	<b>131.00</b>	<b>5458</b>
Uttarakhand	Total Hydro	1303	681	616	15.95	664
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>681</b>	<b>616</b>	<b>15.95</b>	<b>664</b>
Delhi	Raighat TPS	135	91	91	2.16	90
	Delhi Gas Turbine	282	78	79	1.76	73
	Pragati Gas Turbine	330	294	258	6.67	278
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	275	277	6.69	279
	Badarpur TPS (NTPC)	705	585	590	13.19	550
	Thermal (Total)	2232	1323	1295	30.47	1270
	<b>Total Delhi</b>	<b>2232</b>	<b>1323</b>	<b>1295</b>	<b>30.47</b>	<b>1270</b>
HP	Baspa HPS (IPP)	330	194	255	4.72	197
	Malana HPS (IPP)	86	51	0	0.72	30
	Other Hydro	589	469	450	11.87	494
	<b>Total HP</b>	<b>1005</b>	<b>714</b>	<b>705</b>	<b>17.31</b>	<b>721</b>
J & K	Baglihar HPS (IPP)	450	438	436	10.49	437
	Other Hydro	323	126	128	3.14	131
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>564</b>	<b>564</b>	<b>13.63</b>	<b>568</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>16494</b>	<b>19414</b>	<b>469.22</b>	<b>19551</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>5936</b>	<b>6672</b>	<b>153.99</b>	<b>6416</b>
<b>Total Regional Availability(Gross)</b>		<b>57242</b>	<b>40042</b>	<b>39780</b>	<b>952.69</b>	<b>39695</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10380	8691	4918	131.90	5496
State Control Area Hydro	5368	2813	2831	70.41	2934
<b>Total Regional Hydro</b>	<b>15748</b>	<b>11504</b>	<b>7749</b>	<b>202.31</b>	<b>8430</b>

**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 B/B	500	500	500	0	12.02	0.00	12.02
Gwalior-Agra (D/C)	1512	1761	1800	0	38.84	0.00	38.84
Zerda-Kankroli	83	-42	83	103	0.00	0.07	-0.07
Zerda-Bhinmal	135	-9	167	89	1.18	0.00	1.18
Malanpur-Auraiya	-78	-39	0	78	0.00	1.01	-1.01
Badod-Kota/Morak	108	95	150	0	2.54	0.00	2.54
Mundra-Mohindergarh(HVDC)	1342	965	1434	0	29.21	0.00	29.21
<b>Sub Total WR</b>	<b>3602</b>	<b>3231</b>			<b>83.80</b>	<b>1.08</b>	<b>82.72</b>
Pusauli Bypass	200	300	400	121	4.66	0.00	4.66
MZP- GKP (D/C)	724	952	1122	0	20.42	0.00	20.42
Patna-Balia(D/C)	672	976	1060	0	20.90	0.00	20.90
B'Sharif-Balia (D/C)	459	734	839	0	16.17	0.00	16.17
Pusauli-Balia	5	77	91	21	0.68	0.00	0.68
Gaya-Fatehpur (765 Kv)	163	295	386	0	5.70	0.00	5.70
Pusauli-Sahupuri	148	143	164	0	3.39	0.00	3.39
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-37	-36	0	37	0.00	0.64	-0.64
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
Sasaram - Fatehpur(765 KV)	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>2334</b>	<b>3441</b>			<b>71.91</b>	<b>0.64</b>	<b>71.27</b>
<b>Total IR Exch</b>	<b>5936</b>	<b>6672</b>			<b>155.71</b>	<b>1.72</b>	<b>153.99</b>

**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
38.94	2.83	41.77	2.06	29.24	21.76	25.49	6.36	-6.36

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
71.95	88.50	160.45	71.27	82.72	153.99	-0.68	-5.78	-6.46

**VI. Frequency Profile <----- % of Time Frequency ----->**

<48.80	<49.0	<49.20	<49.50	<49.7	49.5 - 50.2	49.7-49.8	49.7 - 50.2	> 50.00	> 50.2
0.00	0.00	0.00	0.00	0.00	90.80	1.30	90.80	67.40	9.20

<----- 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)
50.47	18.04	49.74	12.23	50.05	0.16	0.11	50.36	49.97

**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	408	00:00	401	01:30	0.0	0.0	0.0	0.0
Gorakhpur	400	419	06:33	402	01:32	0.0	0.0	0.0	0.0
Bareilly	400	416	18:03	395	23:29	0.0	0.0	0.0	0.0
Kanpur	400	418	18:06	404	23:09	0.0	0.0	0.0	0.0
Dadri	400	414	06:21	397	12:10	0.0	0.0	0.0	0.0
Ballabgarh	400	420	06:16	400	12:14	0.0	0.0	0.0	0.0
Bawana	400	417	06:16	401	14:49	0.0	0.0	0.0	0.0
Bassi	400	421	18:04	393	23:27	0.0	0.0	0.0	0.0
Hissar	400	407	18:06	388	12:10	0.0	0.8	0.0	0.0
Moga	400	409	04:03	395	12:09	0.0	0.0	0.0	0.0
Abdullapur	400	416	06:16	400	14:36	0.0	0.0	0.0	0.0
Nalagarh	400	417	06:13	401	12:23	0.0	0.0	0.0	0.0
Kishenpur	400	418	04:15	401	19:10	0.0	0.0	0.0	0.0
Wagoora	400	418	04:16	386	20:06	0.0	4.0	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	771	03:08	743	12:15	0.0	0.0	0.0	0.0
Balia	765	757	06:17	726	01:31	0.6	40.9	0.0	0.0
Moga	765	777	06:21	748	12:10	0.0	0.0	0.0	0.0
Agra	765	802	06:20	767	23:18	0.0	0.0	0.3	0.0
Bhiwani	765	791	06:22	763	19:08	0.0	0.0	0.0	0.0
Unnao	765	764	18:04	739	23:19	0.0	4.6	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 <sup>3</sup> /s)	Usage (m <sup>3</sup> /s)
Bhakra	513.59	445.62	511.62	1635.65	502.94	1219.07	679.41	618.81
Pong	426.72	384.05	423.78	1066.19	420.00	889.22	325.73	388.22
Tehri	829.79	740.04	822.05	1045.00	818.65	982.26	220.85	224.00
Koteshwar	612.50	598.50	NA	NA	NA	NA	NA	NA
Chamera-I	760.00	748.75	NA	NA	NA	NA	168.15	200.46
Rihand	268.22	252.98	NA	NA	263.50	512.00	NA	NA
RPS	352.80	343.81	352.74	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	298.70	NA	NA	NA	NA	NA
RSD	527.91	487.91	520.90	144.00	516.82	144.00	165.60	185.62

\* NA: Not Available

**X. System Constraints:**

**XI. Grid Disturbance / Any Other Significant Event:**

**XII. Weather Conditions For 18.09.2013 :**

1. Normal weather in NR.

**XIII. Synchronisation of new generating units :**

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

**XV. Tripping of lines in pooling stations :**

**XVI. Complete generation loss in a generating station :**

Vishnuprayag (400MW) and Dhauliganga (280MW) are out of operation since 16.06.2013.

Civil construction is in progress for rectification of the major damages in Plants/Dam caused due to flood  
Vishnuprayag and Dhauliganga expected by Dec, 2013 .