

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 09.09.2013

Date of Reporting : 10.09.2013

### I. Regional Availability/Demand:

Demand Met	Evening Peak (20:00 Hrs) MW			Off Peak (03:00 Hrs) MW			Day Energy (Net MU)		
	Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage
41009	2370	43379	50.16	39075	1880	40955	50.11	929.5	56.05

\* 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	51.91	20.73		72.64	111.06	111.03	-0.03	183.67	0.00
Haryana	88.08	0.69		88.77	62.36	62.47	0.11	151.24	0.02
Rajasthan	96.08	1.52	5.79	103.39	76.00	78.49	2.48	181.88	0.30
Delhi	24.02			24.02	73.85	70.75	-3.10	94.76	0.04
UP	111.42	5.00	1.00	117.42	113.44	113.54	0.10	230.96	52.06
Uttarakhand		18.56		18.56	10.09	11.62	1.53	30.18	1.94
HP		21.68		21.68	4.48	2.92	-1.56	24.60	0.00
J & K		13.69	0.00	13.69	14.08	13.70	-0.37	27.39	1.70
Chandigarh				0.00	5.39	4.84	-0.55	4.84	0.00
<b>Total</b>	<b>371.50</b>	<b>81.86</b>	<b>6.79</b>	<b>460.15</b>	<b>470.75</b>	<b>469.36</b>	<b>-1.39</b>	<b>929.51</b>	<b>56.05</b>

\* 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				Day Energy MU	
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction	STOA/PX transaction	STOA/PX transaction
Punjab	8169	0	-22	1830	7908	0	175	1879		45.36
Haryana	6996	0	-164	149	6370	0	53	-65		-1.17
Rajasthan	8071	0	-359	1106	7758	0	309	891		17.96
Delhi	4261	0	-306	156	3672	0	-64	-77		0.06
UP	9351	2075	-181	382	10397	1880	502	1845		25.44
Uttarakhand	1429	195	135	-79	1146	0	-4	-74		-1.65
HP	1161	0	-28	-903	838	0	-74	-775		-18.83
J&K	1342	100	-24	-269	826	0	-28	-303		-6.08
Chandigarh	230	0	-35	0	160	0	-18	0		0.37
<b>Total</b>	<b>41009</b>	<b>2370</b>	<b>-983</b>	<b>2372</b>	<b>39075</b>	<b>1880</b>	<b>850</b>	<b>3322</b>		<b>61.46</b>

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

### 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
<b>A. NTPC</b>								
Singrauli STPS	2000	1732	1859	1860	41.45	1727	41.56	-0.11
Rihand I STPS	1000	861	989	982	20.75	865	20.67	0.08
Rihand II STPS	1000	470	518	515	11.30	471	11.28	0.02
Rihand III STPS	500	485	479	516	11.66	486	11.64	0.03
Dadri I STPS	840	736	748	551	15.45	644	15.52	-0.07
Dadri II STPS	980	975	1017	1014	22.51	938	22.58	-0.06
Unchahar I TPS	420	390	419	408	8.97	374	9.15	-0.19
Unchahar II TPS	420	404	433	438	9.26	386	9.29	-0.02
Unchahar III TPS	210	200	218	218	4.61	192	4.62	-0.01
ISTPP (Jhajjar)	1500	1480	822	638	16.61	692	16.78	-0.17
Dadri GPS	830	776	504	284	9.14	381	9.28	-0.14
Anta GPS	419	393	0	0	0.00	0	0.37	-0.37
Auraiya GPS	663	624	152	157	3.57	149	3.78	-0.21
<b>Sub Total (A)</b>	<b>10782</b>	<b>9525</b>	<b>8158</b>	<b>7581</b>	<b>175.27</b>	<b>7303</b>	<b>176.51</b>	<b>-1.24</b>
<b>B. NPC</b>								
NAPS	440	293	337	335	7.10	296	7.03	0.06
RAPS- B	440	194	218	220	4.65	194	4.66	0.00
RAPS- C	440	410	458	460	9.80	408	9.84	-0.04
<b>Sub Total (B)</b>	<b>1320</b>	<b>897</b>	<b>1013</b>	<b>1015</b>	<b>21.54</b>	<b>898</b>	<b>21.53</b>	<b>0.01</b>
<b>C. NHPC</b>								
Chamera I HPS	540	534	540	0	6.91	288	6.93	-0.02
Chamera II HPS	300	300	301	99	4.98	208	4.92	0.06
Chamera III HPS	231	200	229	80	3.25	135	3.14	0.11
Bairasuil HPS	180	179	120	20	2.11	88	2.15	-0.04
Salal-HPS	690	439	671	0	11.02	459	10.55	0.47
Tanakpur-HPS	94	59	58	58	1.42	59	1.42	0.00
Uri-HPS	480	309	349	346	7.67	320	7.74	-0.07
Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00
Dulhasti-HPS	390	387	406	321	9.36	390	9.35	0.01
Sewa-II HPS	120	119	123	0	1.21	50	1.20	0.01
<b>Sub Total (C)</b>	<b>3305</b>	<b>2526</b>	<b>2797</b>	<b>924</b>	<b>47.92</b>	<b>1997</b>	<b>47.39</b>	<b>0.53</b>
<b>D. NJPC</b>								
Nathpa Jhakri	1500	1350	1356	1361	32.36	1348	32.40	-0.04
<b>Sub Total (D)</b>	<b>1500</b>	<b>1350</b>	<b>1356</b>	<b>1361</b>	<b>32.36</b>	<b>1348</b>	<b>32.40</b>	<b>-0.04</b>
<b>E. THDC</b>								
Tehri HPS	1000	1060	1060	0	12.24	510	12.00	0.24
Koteshwar HPS	400	391	369	0	4.20	175	4.15	0.04
<b>Sub Total (E)</b>	<b>1400</b>	<b>1451</b>	<b>1429</b>	<b>0</b>	<b>16.44</b>	<b>685</b>	<b>16.15</b>	<b>0.29</b>
<b>F. BBMB</b>								
Bhakra HPS	1497	959	1321	780	23.19	966	23.01	0.18
Dehar HPS	990	573	825	580	14.22	593	13.76	0.46
Pong HPS	396	195	306	126	4.76	198	4.67	0.09
<b>Sub Total (F)</b>	<b>2883</b>	<b>1727</b>	<b>2452</b>	<b>1486</b>	<b>42.17</b>	<b>1757</b>	<b>41.44</b>	<b>0.73</b>
<b>G. IPP(s)/JV(s)</b>								
ADHPL HPS(IPP)	192	0	174	106	2.42	101	2.02	0.40
KWHEP HPS(IPP)	1000	0	1049	798	19.06	794	20.43	-1.37
Malana Stg-II HPS	100	0	81	53	1.45	60	1.21	0.24
Shree Cement TPS	300	0	119	131	2.99	125	2.99	0.00
Budhil HPS(IPP)	70	0	50	30	0.95	39	0.96	-0.01
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1473</b>	<b>1118</b>	<b>26.86</b>	<b>1119</b>	<b>27.60</b>	<b>-0.73</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22852</b>	<b>17477</b>	<b>18678</b>	<b>13485</b>	<b>362.57</b>	<b>15107</b>	<b>363.02</b>	<b>-0.46</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	1250	1250	25.22	1051	
	Guru Nanak Dev TPS(Bhatinda)	440	334	333	6.68	278	
	Guru Hargobind Singh TPS(L.mbt)	920	924	947	20.01	834	
	Goindwal(GVK)		0	0	0.00	0	
	Thermal (Total)	2620	2508	2530	51.91	2163	
	Total Hydro	1148	887	850	20.73	864	
	<b>Total Punjab</b>	<b>3768</b>	<b>3395</b>	<b>3380</b>	<b>72.64</b>	<b>3027</b>	
Haryana	Panipat TPS	1367	1066	1030	24.98	1041	
	DCRTPP (Yamuna nagar)	600	559	543	12.72	530	
	Faridabad GPS (NTPC)	432	199	183	4.57	190	
	RGTPP (kheadar) (IPP)	1200	1100	979	24.70	1029	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Jhajjar(CLP)	1320	1114	1114	27.69	1154	
	Thermal (Total)	4944	4038	3849	88.08	3670	
	Total Hydro	62	29	29	0.69	29	
	<b>Total Haryana</b>	<b>5006</b>	<b>4067</b>	<b>3878</b>	<b>88.77</b>	<b>3699</b>	
	Rajasthan	kota TPS	1240	1124	852	23.53	980
suratgarh TPS		1500	1053	1086	24.92	1038	
Chabra TPS		500	224	221	5.39	224	
Dholpur GPS		330	109	1113	2.65	110	
Ramgarh GPS		111	61	64	1.64	69	
RAPS A (NPC)		300	180	180	3.97	165	
Barsingsar (NLC)		250	83	84	1.88	78	
Giral LTPS		250	50	50	1.31	54	
Rajwest LTPS (IPP)		1080	711	695	16.38	682	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Kalisindh Thermal		600	0	0	0.00	0	
Kawai(Adani)		660	600	602	14.43	601	
Thermal (Total)		6956	4195	4947	96.08	4004	
Total Hydro		550	181	133	1.52	63	
Wind power		2191	157	404	4.95	206	
Biomass		91	9	9	0.21	9	
Solar		201	0	0	0.64	26	
Renewable/Others (Total)		2483	166	413	5.79	241	
<b>Total Rajasthan</b>		<b>9989</b>	<b>4542</b>	<b>5493</b>	<b>103.39</b>	<b>4308</b>	
UP		Anpara TPS	1630	771	770	18.50	771
		Obra TPS	1288	461	360	9.90	413
	Paricha TPS	1140	674	656	16.20	675	
	Panki TPS	210	153	54	2.50	104	
	Harduaganj TPS	665	346	331	8.00	333	
	Tanda TPS (NTPC)	440	296	297	7.36	306	
	Roza TPS (IPP)	1200	819	810	19.32	805	
	Anpara-C (IPP)	1200	973	991	23.23	968	
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	281	280	6.42	267	
	Thermal (Total)	8223	4774	4549	111.42	4642	
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0	
	Other Hydro	527	216	246	5.00	208	
	Cogeneration	981	40	40	1.00	42	
	<b>Total UP</b>	<b>10131</b>	<b>5030</b>	<b>4835</b>	<b>117.42</b>	<b>4892</b>	
	Uttarakhand	Total Hydro	1303	776	776	18.56	773
<b>Total Uttarakhand</b>		<b>1303</b>	<b>776</b>	<b>776</b>	<b>18.56</b>	<b>773</b>	
Delhi	Rajghat TPS	135	44	41	1.07	44	
	Delhi Gas Turbine	282	80	81	1.23	51	
	Pragati Gas Turbine	330	267	203	6.39	266	
	Riithala GPS	95	0	0	0.00	0	
	Bawana GPS	686	245	248	5.87	245	
	Badarpur TPS (NTPC)	705	430	430	9.46	394	
	Thermal (Total)	2232	1066	1003	24.02	1001	
	<b>Total Delhi</b>	<b>2232</b>	<b>1066</b>	<b>1003</b>	<b>24.02</b>	<b>1001</b>	
HP	Baspa HPS (IPP)	330	333	232	6.48	270	
	Malana HPS (IPP)	86	68	63	1.36	57	
	Other Hydro	589	593	567	13.84	577	
	<b>Total HP</b>	<b>1005</b>	<b>994</b>	<b>862</b>	<b>21.68</b>	<b>903</b>	
J & K	Baglihar HPS (IPP)	450	430	436	10.49	437	
	Other Hydro	323	132	128	3.20	133	
	Gas/Diesel/Others	183	0	0	0.00	0	
	<b>Total J &amp; K</b>	<b>956</b>	<b>562</b>	<b>564</b>	<b>13.69</b>	<b>570</b>	
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>20432</b>	<b>20791</b>	<b>460.15</b>	<b>19173</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>3721</b>	<b>5790</b>	<b>125.49</b>	<b>5229</b>	
<b>Total Regional Availability(Gross)</b>		<b>57242</b>	<b>42831</b>	<b>40066</b>	<b>948.21</b>	<b>39509</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10380	9338	4728	161.82	6742
State Control Area Hydro	5368	3645	3460	81.86	3411
<b>Total Regional Hydro</b>	<b>15748</b>	<b>12983</b>	<b>8188</b>	<b>243.67</b>	<b>10153</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	0	500	500	0	10.90	0.00	10.90
Gwalior-Agra (D/C)	945	1095	1695	0	30.34	0.00	30.34
Zerda-Kankroli	85	122	164	84	1.29	0.00	1.29
Zerda-Bhinmal	150	158	243	74	2.68	0.00	2.68
Malanpur-Auraiya	-101	-32	0	107	0.00	1.56	-1.56
Badod-Kota/Morak	26	115	140	30	1.20	0.00	1.20
Mundra-Mohindergarh(HVDC)	1046	982	1280	0	24.20	0.00	24.20
<b>Sub Total WR</b>	<b>2151</b>	<b>2940</b>			<b>70.61</b>	<b>1.56</b>	<b>69.04</b>
Pusauli Bypass	-219	1	133	219	0.55	1.66	-1.11
MZP- GKP (D/C)	560	990	1055	0	19.75	0.00	19.75
Patna-Balia(D/C)	485	844	909	0	16.43	0.00	16.43
B'Sharif-Balia (D/C)	494	642	686	0	13.66	0.00	13.66
Pusauli-Balia	109	112	136	0	2.16	0.00	2.16
Gaya-Fatehpur (765 Kv)	40	173	274	0	3.19	0.00	3.19
Pusauli-Sahupuri	138	124	155	0	3.24	0.00	3.24
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-37	-36	33	0	0.00	0.87	-0.87
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>1570</b>	<b>2850</b>			<b>58.98</b>	<b>2.53</b>	<b>56.45</b>
<b>Total IR Exch</b>	<b>3721</b>	<b>5790</b>			<b>129.58</b>	<b>4.09</b>	<b>125.49</b>

**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
30.40	3.73	34.13	-0.85	18.46	14.91	4.90	4.11	-4.11

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
52.31	70.30	122.60	56.45	69.04	125.49	4.14	-1.25	2.89

**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	1.70	95.80	5.90	94.10	46.50	4.20

<----- 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)		
50.34	10.04	49.63	6.16	49.99	0.16	0.13	50.28	49.85

**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	409	00:00	401	01:32	0.0	0.0	0.0	0.0
Gorakhpur	400	426	18:06	406	00:46	0.0	0.0	2.8	0.0
Bareilly	400	416	18:05	400	11:17	0.0	0.0	0.0	0.0
Kanpur	400	417	04:01	403	11:07	0.0	0.0	0.0	0.0
Dadri	400	412	03:46	400	11:05	0.0	0.0	0.0	0.0
Ballabgarh	400	421	03:50	407	11:05	0.0	0.0	0.7	0.0
Bawana	400	413	18:04	403	19:14	0.0	0.0	0.0	0.0
Bassi	400	421	03:55	395	23:19	0.0	0.0	0.3	0.0
Hissar	400	406	03:50	394	13:55	0.0	0.0	0.0	0.0
Moga	400	410	03:49	399	19:07	0.0	0.0	0.0	0.0
Abdullapur	400	411	03:51	400	13:40	0.0	0.0	0.0	0.0
Nalagarh	400	411	03:49	400	11:42	0.0	0.0	0.0	0.0
Kishenpur	400	416	03:41	404	19:13	0.0	0.0	0.0	0.0
Wagoora	400	415	03:48	397	06:35	0.0	0.0	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	775	04:01	739	09:22	0.0	2.3	0.0	0.0
Balia	765	756	18:20	730	09:42	0.0	46.3	0.0	0.0
Moga	765	785	03:49	760	19:08	0.0	0.0	0.0	0.0
Agra	765	795	18:05	764	01:17	0.0	0.0	0.0	0.0
Bhiwani	765	790	03:59	765	11:11	0.0	0.0	0.0	0.0
Unnao	765	769	18:06	744	00:46	0.0	0.0	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	511.38	1620.46	501.19	1140.31	733.29	656.13
Pong	426.72	384.05	423.70	1066.19	418.74	834.82	585.14	261.45
Tehri	829.79	740.04	819.90	1003.00	818.65	982.26	274.89	271.00
Koteshwar	612.50	598.50	610.90	4.69	NA	NA	511.15	327.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	216.90	170.28
Rihand	268.22	252.98	NA	NA	NA	NA	NA	NA
RPS	352.80	343.81	NA	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	NA	NA	NA	NA	NA	NA
RSD	527.91	487.91	522.70	144.00	513.29	144.00	260.46	420.56

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 09.09.2013 :**

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 .