

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 31.08.2011  
Date of Reporting : 01.09.2011

### 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
35594	3272	38866	49.77	35207	1149	36356	49.98	835.7	36.15

\* Half hourly (two 15 minutes block--one block each before and after the designated time) average frequency

### II. A. State's Load Energy 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	51.03	14.35		65.38	108.78	109.58	0.80	174.97	7.05
Haryana	59.72	0.98		60.70	61.14	68.70	7.56	129.40	2.81
Rajasthan	66.66	1.82	5.04	73.52	41.30	44.31	3.01	117.83	1.96
Delhi	26.30			26.30	72.93	68.15	-4.78	94.44	0.01
UP	51.50	16.57	0.00	68.07	148.09	164.73	16.64	232.80	24.22
Uttarakhand		23.08		23.08	11.47	6.37	-5.10	29.45	0.00
HP		23.51		23.51	-1.12	-1.46	-0.35	22.05	0.10
J & K		14.59	0.00	14.59	16.46	15.02	-1.44	29.61	0.00
Chandigarh				0.00	6.04	5.14	-0.90	5.14	0.00
<b>Total</b>	<b>255.22</b>	<b>94.90</b>	<b>5.04</b>	<b>355.15</b>	<b>465.09</b>	<b>480.53</b>	<b>15.44</b>	<b>835.68</b>	<b>36.15</b>

\* Shortage furnished by the respective constituent.

### 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	
Punjab	7611	1350	-98	1857	7242	0	-125	1894	43.69
Haryana	5362	572	217	561	5427	0	403	561	12.37
Rajasthan	4933	0	241	-283	4951	99	199	-272	-6.59
Delhi	4179	0	-323	554	3721	0	-316	547	13.25
UP	9553	1350	854	1699	10595	1050	1174	1699	40.78
Uttarakhand	1304	0	-163	-100	1231	0	-219	-100	-2.40
HP	972	0	69	-1804	810	0	-77	-1799	-41.38
J&K	1425	0	1	-375	1038	0	-150	-375	-9.24
Chandigarh	255	0	-25	54	192	0	-33	54	1.54
<b>Total</b>	<b>35594</b>	<b>3272</b>	<b>773</b>	<b>2163</b>	<b>35207</b>	<b>1149</b>	<b>856</b>	<b>2209</b>	<b>52.01</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	1855	2016	2025	44.98	1874	44.52	0.46
	Rihand I STPS	1000	930	1013	1017	22.48	937	22.32	0.16
	Rihand II STPS	1000	480	521	516	11.66	486	11.52	0.14
	Dadri I STPS	840	596	601	569	12.96	540	12.56	0.39
	Dadri II STPS	980	970	958	1012	21.92	913	21.95	-0.04
	Unchahar I TPS	440	363	427	355	8.80	366	8.71	0.08
	Unchahar II TPS	440	363	426	361	8.80	366	8.70	0.10
	Unchahar III TPS	210	183	215	182	4.43	185	4.39	0.04
	ISTPP (Jhajjar)	500	412	389	355	7.82	326	8.00	-0.18
	Dadri GPS	830	775	752	627	16.41	684	16.75	-0.34
	Anta GPS	419	389	383	308	8.40	350	8.36	0.04
	Auraiya GPS	663	526	453	421	10.39	433	10.61	-0.22
	<b>Sub Total (A)</b>	<b>9322</b>	<b>7842</b>	<b>8154</b>	<b>7748</b>	<b>179.04</b>	<b>7460</b>	<b>178.40</b>	<b>0.64</b>
	B. NPC	NAPS	440	183	219	226	4.43	185	4.39
RAPS- B		440	190	215	217	4.58	191	4.56	0.02
RAPS- C		440	420	473	477	10.13	422	10.08	0.05
<b>Sub Total (B)</b>		<b>1320</b>	<b>793</b>	<b>907</b>	<b>920</b>	<b>19.14</b>	<b>797</b>	<b>19.03</b>	<b>0.11</b>
C. NHPC	Chamera I HPS	540	536	540	540	12.87	536	12.82	0.05
	Chamera II HPS	300	297	302	299	7.16	298	7.18	-0.02
	Bairasuil HPS	180	169	120	70	2.46	102	2.26	0.20
	Salal-HPS	690	626	626	626	15.06	627	15.07	-0.02
	Tanakpur-HPS	94	94	94	94	2.15	89	2.24	-0.10
	Uri-HPS	480	300	321	210	7.24	302	7.02	0.22
	Dhauliganga-HPS	280	277	277	274	6.68	278	6.66	0.02
	Dulhasti-HPS	390	387	406	389	9.00	375	8.83	0.17
	Sewa-II HPS	120	119	123	119	2.91	121	2.89	0.01
	<b>Sub Total (C)</b>	<b>3074</b>	<b>2804</b>	<b>2809</b>	<b>2621</b>	<b>65.51</b>	<b>2730</b>	<b>64.98</b>	<b>0.53</b>
D.NJPC	Natpha Jhakri	1500	1600	1616	1617	38.50	1604	38.39	0.11
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1600</b>	<b>1616</b>	<b>1617</b>	<b>38.50</b>	<b>1604</b>	<b>38.39</b>	<b>0.11</b>
E. THDC	Tehri HPS	1000	1060	1061	996	24.94	1039	24.75	0.18
	Koteshwar HPS	100	90	89	92	2.13	89	2.13	0.00
<b>Sub Total (E)</b>	<b>1100</b>	<b>1150</b>	<b>1150</b>	<b>1088</b>	<b>27.06</b>	<b>1128</b>	<b>26.88</b>	<b>0.18</b>	
F. BBMB	Bhakra HPS	1480	1221	1258	1259	29.95	1248	29.30	0.65
	Dehar HPS	990	599	825	640	15.04	627	14.37	0.67
	Pong HPS	396	354	366	366	8.83	368	8.50	0.33
	<b>Sub Total (F)</b>	<b>2866</b>	<b>2174</b>	<b>2449</b>	<b>2265</b>	<b>53.82</b>	<b>2243</b>	<b>52.17</b>	<b>1.65</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	128	88	2.36	99	3.30	-0.93
	KWHEP HPS(IPP)	500	0	700	700	13.74	572	14.40	-0.66
	Malana Stg-II HPS	50	0	0	0	0.00	0	0.00	0.00
	Shree Cement TPS	150	0	0	0	0.00	0	0.00	0.00
<b>Sub Total (G)</b>	<b>892</b>	<b>0</b>	<b>828</b>	<b>788</b>	<b>16.10</b>	<b>671</b>	<b>17.70</b>	<b>-1.60</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>20075</b>	<b>16362</b>	<b>17913</b>	<b>17047</b>	<b>399.18</b>	<b>16632</b>	<b>397.56</b>	<b>1.62</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	1245.00	1250.00	27.81	1159
	Guru Nanak Dev TPS(Bhatinda)	440	297.00	297.00	6.14	256
	Guru Hargobind Singh TPS(L.mbt)	920	913.00	688.00	17.09	712
	Thermal (Total)	2620	2455.00	2235.00	51.03	2126
	Total Hydro	1148	729.00	548.00	14.35	598
	<b>Total Punjab</b>	<b>3768</b>	<b>3184</b>	<b>2783</b>	<b>65.38</b>	<b>2724</b>
Haryana	Panipat TPS	1360	1161.00	1182.00	27.87	1161
	DCRTPP (Yamuna nagar)	600	581.00	578.00	12.89	537
	Faridabad GPS (NTPC)	432	364.00	364.00	9.06	377
	RGTPP (khedar) (IPP)	1200	440.00	356.00	9.90	413
	Magnum Diesel (IPP)	25	0.00	0.00	0.00	0
	Thermal (Total)	3617	2546.00	2480.00	59.72	2488
	Total Hydro	62	40.00	36.00	0.98	41
	<b>Total Haryana</b>	<b>3679</b>	<b>2586</b>	<b>2516</b>	<b>60.70</b>	<b>2529</b>
Rajasthan	kota TPS	1240	967.00	966.00	22.79	950
	suratgarh TPS	1500	1134.00	1133.00	26.05	1086
	Chabra TPS	500	235.00	230.00	5.44	227
	Dholpur GPS	330	250.00	270.00	5.29	221
	Ramgarh GPS	113	62.00	62.00	1.59	66
	RAPS A (NPC)	300	181.00	185.00	4.32	180
	Barsingsar (NLC)	250	58.00	37.00	1.17	49
	Giral LTPS (IPP)	250	0.00	0.00	0.00	0
	Rajwst LTPS (IPP)	135	0.00	0.00	0.00	0
	VSLP LTPS (IPP)	135	0.00	0.00	0.00	0
	Thermal (Total)	4753	2887.00	2883.00	66.66	2778
	Total Hydro	550	88.00	46.00	1.82	76
	Wind power	1294	251.00	80.00	4.58	191
	Biomass	71	20.00	20.00	0.45	19
	Renewable/Others (Total)	1365	271	100	5.04	210
	<b>Total Rajasthan</b>	<b>6668</b>	<b>3246</b>	<b>3029</b>	<b>73.52</b>	<b>3063</b>
	UP	Anpara TPS	1630	788	770	16.80
Obra TPS		1442	428	449	9.50	396
Paricha TPS		640	382	381	8.30	346
Panki TPS		210	86	76	1.60	67
Harduaganj TPS		375	42	0	0.70	29
Tanda TPS (NTPC)		440	294	296	7.15	298
Roza TPS (IPP)		600	140	535	7.45	311
Anpara-C (IPP)		600	0	0	0.00	0
Thermal (Total)		5937	2160	2507	51.50	2146
Vishnuparyag HPS (IPP)		400	436	436	9.80	408
Other Hydro		527	300	0	6.77	282
Cogeneration		951	0	0	0.00	0
<b>Total UP</b>		<b>7815</b>	<b>2896</b>	<b>2943</b>	<b>68.07</b>	<b>2428</b>
Uttarakhand		Total Hydro	1303	950	973	23.08
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>950</b>	<b>973</b>	<b>23.08</b>	<b>962</b>
Delhi	Rajghat TPS	135	47	47	1.10	46
	Delhi Gas Turbine	282	148	149	3.51	146
	Pragati Gas Turbine	330	290	297	7.09	295
	Rithala GPS	108	51	29	1.23	51
	Bawana GPS	440	0	0	0.00	0
	Badarpur TPS (NTPC)	705	660	575	13.37	557
	Thermal (Total)	2000	1196	1097	26.30	1096
	<b>Total Delhi</b>	<b>2000</b>	<b>1196</b>	<b>1097</b>	<b>26.30</b>	<b>1096</b>
HP	Baspa HPS (IPP)	330	330	330	7.92	330
	Malana HPS (IPP)	101	98	96	2.05	86
	Other Hydro	571	579	581	13.54	564
	<b>Total HP</b>	<b>1002</b>	<b>1007</b>	<b>1007</b>	<b>24</b>	<b>980</b>
J & K	Baglihar HPS (IPP)	450	438	438	10.52	438
	Other Hydro	323	165	187	4.07	170
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>603</b>	<b>625</b>	<b>14.59</b>	<b>608</b>
<b>Total State Control Area Generation</b>		<b>27191</b>	<b>15668</b>	<b>14973</b>	<b>355.15</b>	<b>14390</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>3091</b>	<b>3835</b>	<b>92.01</b>	<b>3834</b>
<b>Total Regional Availability(Gross)</b>		<b>47266</b>	<b>36672</b>	<b>35855</b>	<b>846.33</b>	<b>34855</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	9433	8852	8379	201.00	8375
State Control Area Hydro	5365	3717	3235	85.10	3546
<b>Total Regional Hydro</b>	<b>14797</b>	<b>12569</b>	<b>11614</b>	<b>286.09</b>	<b>11921</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	300	350	500	0	9.26	0.00	9.26
Gwalior-Agra (D/C)	893	1118	1460	0	28.01	0.00	28.01
Zerda-Kankroli	198	0	278	0	2.58	0.00	2.58
Zerda-Bhinmal	237	410	549	0	6.52	0.00	6.52
Malanpur-Auraiya	-42	40	89	42	0.83	0.00	0.83
Badod-Kota/Morak	0	0	16	0	0.02	0.00	0.02
<b>Sub Total WR</b>	<b>1586</b>	<b>1918</b>			<b>47.21</b>	<b>0.00</b>	<b>47.21</b>
Pusauli Bypass	6	100	200	0	2.85	0.00	2.85
MZP- GKP (D/C)	826	824	1260	0	21.94	0.00	21.94
Patna-Balia(D/C)	317	272	433	0	7.16	0.00	7.16
B'Sharif-Balia (D/C)	242	277	346	0	6.29	0.00	6.29
Barh-Balia (D/C)	0	306	362	0	3.52	0.00	3.52
Pusauli-Sahupuri	149	168	172	0	3.63	0.00	3.63
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-35	-30	0	35	0.00	0.60	-0.60
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1505</b>	<b>1917</b>			<b>45.39</b>	<b>0.60</b>	<b>44.79</b>
<b>Total IR Exch</b>	<b>3091</b>	<b>3835</b>			<b>92.60</b>	<b>0.60</b>	<b>92.01</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
20.05	3.66	23.71	18.38	33.34	-0.16	6.85	0.00	0.00

Total IR Schedule (MU)			Total IR Actual (MU)			Net IR UI (MU)		
Through ER	Through WR	Total	Through ER	Through WR	Total	Through ER	Through WR	Total
41.93	39.52	81.45	44.79	47.21	92.01	2.87	7.69	10.56

**VI. Frequency Profile**

----- % of Time Frequency ----->							
<48.80	<49.0	<49.20	<49.50	<49.7	49.5 - 50.2	49.7 - 50.2	> 50.0
0.00	0.00	0.00	3.90	23.30	94.40	75.00	10.80

<----- Frequency (Hz) ----->				Average Frequency	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block	
Maximum		Minimum					MAX (Hz)	MIN (Hz)
Freq	Time	Freq	Time	Hz				
50.33	17.09	49.26	19.22	49.81	0.64	0.17	50.37	49.52

**VII. Voltage profile**

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	411	07:04	400	00:00	0.0	0.0	0.0	0.0
Gorakhpur	400	434	18:07	406	00:00	0.2	0.2	31.4	4.0
Bareilly	400	420	08:00	383	12:16	0.0	0.8	0.0	0.0
Kanpur	400	415	09:00	390	12:10	0.0	0.0	0.0	0.0
Dadri	400	413	07:05	390	12:11	0.0	0.0	0.0	0.0
Ballabgarh	400	416	04:00	391	12:13	0.0	0.0	0.0	0.0
Bawana	400	414	07:04	391	12:13	0.0	0.0	0.0	0.0
Bassi	400	422	04:00	391	12:14	0.0	0.0	2.7	0.0
Hissar	400	409	03:38	389	12:15	0.0	0.1	0.0	0.0
Moga	400	417	04:00	400	12:12	0.0	0.0	0.0	0.0
Abdullapur	400	410	07:04	392	12:15	0.0	0.0	0.0	0.0
Nalagarh	400	409	02:00	396	12:00	0.0	0.0	0.0	0.0
Kishenpur	400	407	02:54	394	08:16	0.0	0.0	0.0	0.0
Wagoora	400	407	02:41	382	06:46	0.0	31.2	0.0	0.0

**VIII. 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 (m³/s)	Usage (m³/s)
Bhakra	513.59	445.62	510.48	1575.10	511.20	1605.30	1201.48	921.03
Pong	426.72	384.05	421.86	975.89	421.80	975.89	508.49	497.50
Tehri	829.79	740.04	818.10	962.25	NA	NA	771.41	554.00
Koteshwar	612.50	598.50	607.90	3.54	NA	NA	661.00	149.00
Chamera-I	760.00	748.75	757.51	12.91	757.00	NA	339.30	349.85
Rihand	268.22	252.98	263.68	524.00	256.79	149.00	NA	NA
RPS	352.80	343.81	348.45	NA	348.36	NA	NA	NA
Jawahar Sagar	298.70	295.78	297.48	NA	297.82	NA	36.27	0.00
RSD	527.91	487.91	522.16	NA	522.13	NA	391.68	163.56

**IX. System Constraints:**

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

HVDC Pusauli in HVDC mode from 20:35 hrs of dt.30.08.2011 to  
17:20 hrs of dt. 31.08.2011

**XI. Weather Conditions For 31.08.2011 :**

1. Hot & Humid Weather in NR.

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

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

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

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

Report for : 31.08.2011

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER