

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 14.09.2011  
Date of Reporting : 15.09.2011

### 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
33550	3236	36786	49.74	32935	955	33890	49.99	787.8	32.05

\* 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	51.55	20.28		71.82	94.21	92.07	-2.15	163.89	1.80
Haryana	58.50	0.86		59.37	47.68	50.91	3.23	110.28	3.46
Rajasthan	62.66	1.67	2.26	66.59	35.00	44.11	9.11	110.70	2.36
Delhi	24.67			24.67	70.17	72.19	2.02	96.85	0.31
UP	62.17	18.65	0.60	81.42	133.61	142.25	8.64	223.67	22.98
Uttarakhand		21.58		21.58	7.93	7.12	-0.81	28.70	1.15
HP		23.56		23.56	1.47	-0.61	-2.08	22.96	0.00
J & K		13.58	0.00	13.58	16.30	11.52	-4.78	25.09	0.00
Chandigarh				0.00	5.70	5.63	-0.08	5.63	0.00
<b>Total</b>	<b>259.54</b>	<b>100.19</b>	<b>2.86</b>	<b>362.59</b>	<b>412.06</b>	<b>425.18</b>	<b>13.11</b>	<b>787.76</b>	<b>32.05</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	6711	600	-129	980	6702	0	-144	1043	23.82
Haryana	4780	762	29	412	4655	131	545	412	9.03
Rajasthan	4775	215	426	-445	4664	44	448	-508	-11.81
Delhi	4400	34	189	329	3589	0	-48	329	8.65
UP	9101	1315	265	1575	10281	780	872	1575	37.80
Uttarakhand	1104	310	-178	-200	1150	0	-78	-200	-4.80
HP	1061	0	-12	-1421	823	0	-169	-1411	-33.40
J&K	1358	0	-25	-375	882	0	-292	-275	-8.10
Chandigarh	260	0	-10	30	189	0	-1	30	0.72
<b>Total</b>	<b>33550</b>	<b>3236</b>	<b>555</b>	<b>885</b>	<b>32935</b>	<b>955</b>	<b>1133</b>	<b>995</b>	<b>21.90</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	1568	1790	1648	37.94	1581	37.64	0.30
	Rihand I STPS	1000	943	1014	1038	22.76	948	22.63	0.14
	Rihand II STPS	1000	480	518	515	11.65	485	11.52	0.13
	Dadri I STPS	840	673	650	601	14.97	624	15.07	-0.10
	Dadri II STPS	980	970	1025	780	22.98	957	22.91	0.07
	Unchahar I TPS	440	341	306	443	8.00	333	7.88	0.12
	Unchahar II TPS	440	354	362	430	8.43	351	7.94	0.49
	Unchahar III TPS	210	177	181	219	4.44	185	4.07	0.38
	ISTPP (Jhajjar)	500	470	0	0	0.00	0	0.00	0.00
	Dadri GPS	830	788	726	572	15.22	634	15.44	-0.22
	Anta GPS	419	389	386	401	8.70	362	8.17	0.52
	Auraiya GPS	663	617	609	551	12.70	529	12.54	0.16
	<b>Sub Total (A)</b>	<b>9322</b>	<b>7770</b>	<b>7567</b>	<b>7198</b>	<b>167.78</b>	<b>6991</b>	<b>165.79</b>	<b>1.99</b>
	B. NPC	NAPS	440	186	220	226	4.44	185	4.46
RAPS- B		440	196	214	217	4.61	192	4.70	-0.10
RAPS- C		440	420	469	471	10.11	421	10.08	0.03
<b>Sub Total (B)</b>		<b>1320</b>	<b>802</b>	<b>903</b>	<b>914</b>	<b>19.16</b>	<b>798</b>	<b>19.25</b>	<b>-0.09</b>
C. NHPC	Chamera I HPS	540	534	540	540	12.91	538	12.79	0.12
	Chamera II HPS	300	297	300	299	7.16	298	7.13	0.03
	Bairasuil HPS	180	137	120	60	1.99	83	1.74	0.26
	Salal-HPS	690	627	625	625	14.98	624	15.05	-0.07
	Tanakpur-HPS	94	94	95	94	2.27	95	2.24	0.03
	Uri-HPS	480	329	383	285	8.26	344	7.90	0.37
	Dhauliganga-HPS	280	277	280	280	6.71	280	6.77	-0.06
	Dulhasti-HPS	390	387	408	411	9.29	387	8.75	0.54
	Sewa-II HPS	120	119	122	0	1.43	60	1.37	0.06
	<b>Sub Total (C)</b>	<b>3074</b>	<b>2800</b>	<b>2873</b>	<b>2594</b>	<b>65.01</b>	<b>2709</b>	<b>63.74</b>	<b>1.27</b>
D.NJPC	Natpha Jhakri	1500	1600	1605	1607	38.37	1599	38.40	-0.03
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1600</b>	<b>1605</b>	<b>1607</b>	<b>38.37</b>	<b>1599</b>	<b>38.40</b>	<b>-0.03</b>
E. THDC	Tehri HPS	1000	817	1060	802	21.05	877	20.50	0.55
	Koteshwar HPS	100	89	92	88	2.11	88	2.09	0.02
	<b>Sub Total (E)</b>	<b>1100</b>	<b>906</b>	<b>1152</b>	<b>890</b>	<b>23.16</b>	<b>965</b>	<b>22.59</b>	<b>0.58</b>
F. BBMB	Bhakra HPS	1480	1227	1255	1255	30.19	1258	29.45	0.74
	Dehar HPS	990	589	825	590	14.71	613	14.13	0.58
	Pong HPS	396	239	306	186	6.00	250	5.74	0.26
	<b>Sub Total (F)</b>	<b>2866</b>	<b>2055</b>	<b>2386</b>	<b>2031</b>	<b>50.90</b>	<b>2121</b>	<b>49.32</b>	<b>1.59</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	82	82	1.99	83	1.91	0.08
	KWHEP HPS(IPP)	1000	0	700	700	16.80	700	16.80	0.01
	Malana Stg-II HPS	100	0	86	77	1.88	78	0.00	1.88
	Shree Cement TPS	150	0	0	0	0.00	0	0.00	0.00
<b>Sub Total (G)</b>	<b>1442</b>	<b>0</b>	<b>868</b>	<b>859</b>	<b>20.67</b>	<b>861</b>	<b>18.70</b>	<b>1.96</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>20625</b>	<b>15933</b>	<b>17354</b>	<b>16093</b>	<b>385.05</b>	<b>16044</b>	<b>377.79</b>	<b>7.26</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	1235.00	1235.00	27.59	1150	
	Guru Nanak Dev TPS(Bhatinda)	440	140.00	110.00	3.00	125	
	Guru Hargobind Singh TPS(L.mbt)	920	949.00	950.00	20.96	873	
	Thermal (Total)	2620	2324.00	2295.00	51.55	2148	
	Total Hydro	1148	880.00	714.00	20.28	845	
	<b>Total Punjab</b>	<b>3768</b>	<b>3204</b>	<b>3009</b>	<b>71.82</b>	<b>2993</b>	
Haryana	Panipat TPS	1360	732.00	756.00	17.62	734	
	DCRTPP (Yamuna nagar)	600	531.00	514.00	11.91	496	
	Faridabad GPS (NTPC)	432	389.00	193.00	6.67	278	
	RGTPP (khedar) (IPP)	1200	863.00	831.00	22.31	929	
	Magnum Diesel (IPP)	25	0.00	0.00	0.00	0	
	Thermal (Total)	3617	2515.00	2294.00	58.50	2438	
	Total Hydro	62	33.00	32.00	0.86	36	
		<b>Total Haryana</b>	<b>3679</b>	<b>2548</b>	<b>2326</b>	<b>59.37</b>	<b>2474</b>
Rajasthan	kota TPS	1240	759.00	676.00	18.29	762	
	suratgarh TPS	1500	1115.00	1150.00	25.93	1081	
	Chabra TPS	500	225.00	223.00	5.24	218	
	Dholpur GPS	330	263.00	252.00	6.34	264	
	Ramgarh GPS	113	62.00	62.00	1.62	67	
	RAPS A (NPC)	300	171.00	211.00	4.28	178	
	Barsingsar (NLC)	250	25.00	70.00	0.95	40	
	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	2620.00	2644.00	62.66	2611	
	Total Hydro	550	104.00	61.00	1.67	70	
	Wind power	1294	102.00	100.00	1.92	80	
	Biomass	71	14.00	14.00	0.34	14	
	Renewable/Others (Total)	1365	116	114	2.26	94	
		<b>Total Rajasthan</b>	<b>6668</b>	<b>2840</b>	<b>2819</b>	<b>66.59</b>	<b>2774</b>
	UP	Anpara TPS	1630	979	1420	25.10	1046
Obra TPS		1442	641	608	13.40	558	
Paricha TPS		640	389	395	8.60	358	
Panki TPS		210	45	6	0.50	21	
Harduaganj TPS		375	42	44	0.70	29	
Tanda TPS (NTPC)		440	281	284	7.10	296	
Roza TPS (IPP)		600	284	284	6.77	282	
Anpara-C (IPP)		600	0	0	0.00	0	
Thermal (Total)		5937	2661	3041	62.17	2590	
Vishnuparyag HPS (IPP)		400	436	436	10.46	436	
Other Hydro		527	363	0	8.20	342	
Cogeneration		951	25	25	0.60	25	
		<b>Total UP</b>	<b>7815</b>	<b>3485</b>	<b>3502</b>	<b>81.42</b>	<b>2957</b>
Uttarakhand		Total Hydro	1303	900	908	21.58	899
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>900</b>	<b>908</b>	<b>21.58</b>	<b>899</b>	
Delhi	Rajghat TPS	135	106	106	2.72	113	
	Delhi Gas Turbine	282	131	108	2.87	120	
	Pragati Gas Turbine	330	289	298	7.26	303	
	Rithala GPS	108	25	29	0.63	26	
	Bawana GPS	440	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	536	550	11.19	466	
	Thermal (Total)	2000	1087	1091	24.67	1028	
		<b>Total Delhi</b>	<b>2000</b>	<b>1087</b>	<b>1091</b>	<b>24.67</b>	<b>1028</b>
HP	Baspa HPS (IPP)	330	330	330	7.92	330	
	Malana HPS (IPP)	101	85	62	1.77	74	
	Other Hydro	571	873	581	13.88	578	
		<b>Total HP</b>	<b>1002</b>	<b>1288</b>	<b>973</b>	<b>24</b>	<b>982</b>
J & K	Baglihar HPS (IPP)	450	442	441	10.20	425	
	Other Hydro	323	119	166	3.38	141	
	Gas/Diesel/Others	183	0	0	0.00	0	
		<b>Total J &amp; K</b>	<b>956</b>	<b>561</b>	<b>607</b>	<b>13.58</b>	<b>566</b>
<b>Total State Control Area Generation</b>		<b>27191</b>	<b>15913</b>	<b>15235</b>	<b>362.59</b>	<b>14672</b>	
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>2031</b>	<b>1848</b>	<b>54.17</b>	<b>2257</b>	
<b>Total Regional Availability(Gross)</b>		<b>47816</b>	<b>35298</b>	<b>33176</b>	<b>801.81</b>	<b>32973</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	9983	8884	7981	198.11	8255
State Control Area Hydro	5365	4129	3295	89.73	3739
<b>Total Regional Hydro</b>	<b>15347</b>	<b>13013</b>	<b>11276</b>	<b>287.84</b>	<b>11993</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	400	-100	400	500	4.58	3.15	1.43
Gwalior-Agra (D/C)	389	735	1057	0	17.49	0.00	17.49
Zerda-Kankroli	91	214	272	0	3.88	0.00	3.88
Zerda-Bhinmal	116	211	335	0	3.88	0.00	3.88
Malanpur-Auraiya	-92	-1	0	126	0.00	0.69	-0.69
Badod-Kota/Morak	0	0	0	0	0.00	0.00	0.00
<b>Sub Total WR</b>	<b>904</b>	<b>1059</b>			<b>29.83</b>	<b>3.84</b>	<b>25.99</b>
Pusauli Bypass	-33	-238	50	238	0.20	1.72	-1.53
MZP- GKP (D/C)	680	404	876	0	16.37	0.00	16.37
Patna-Balia(D/C)	183	290	393	0	5.34	0.00	5.34
B'Sharif-Balia (D/C)	189	202	302	0	4.73	0.00	4.73
Barh - balia(D/C)	0	0	0	0	0.00	0.00	0.00
Pusauli-Sahupuri	144	163	187	0	3.83	0.00	3.83
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-36	-32	0	38	0.00	0.57	-0.57
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1127</b>	<b>789</b>			<b>30.47</b>	<b>2.29</b>	<b>28.18</b>
<b>Total IR Exch</b>	<b>2031</b>	<b>1848</b>			<b>60.30</b>	<b>6.13</b>	<b>54.17</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
19.97	3.59	23.56	2.27	20.31	1.85	-0.12	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
27.68	19.44	47.12	28.18	25.99	54.17	0.50	6.55	7.05

**VI. Frequency Profile**

----- % of Time Frequency ----->							
<48.80	<49.0	<49.20	<49.50	<49.7	49.5 - 50.2	49.7 - 50.2	> 50.00
0.00	0.00	1.10	11.40	45.40	88.40	54.40	2.60

----- 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				
50.26	6.02	49.06	18.49	49.71	1.18	0.18	50.11	0.00

**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	415	07:03	407	13:39	0.0	0.0	0.0	0.0
Gorakhpur	400	432	07:06	414	00:00	0.0	0.0	74.5	1.8
Bareilly	400	414	08:00	399	00:32	0.0	0.0	0.0	0.0
Kanpur	400	417	09:00	407	00:05	0.0	0.0	0.0	0.0
Dadri	400	412	07:05	394	13:41	0.0	0.0	0.0	0.0
Ballabgarh	400	414	08:22	395	12:57	0.0	0.0	0.0	0.0
Bawana	400	414	08:03	394	12:15	0.0	0.0	0.0	0.0
Bassi	400	430	06:05	404	13:43	0.0	0.0	51.8	0.0
Hissar	400	410	08:04	393	12:14	0.0	0.0	0.0	0.0
Moga	400	416	03:03	401	12:15	0.0	0.0	0.0	0.0
Abdullapur	400	407	08:03	365	12:21	0.1	0.1	0.0	0.0
Nalagarh	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Kishenpur	400	415	06:02	402	12:15	0.0	0.0	0.0	0.0
Wagoora	400	409	03:06	386	19:31	0.0	17.4	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	512.23	1667.20	512.34	1667.20	1161.78	913.44
Pong	426.72	384.05	423.24	1051.02	408.28	435.19	536.58	334.39
Tehri	829.79	740.04	817.65	962.25	NA	NA	475.64	518.00
Koteshwar	612.50	598.50	609.00	3.98	NA	NA	613.00	138.00
Chamera-I	760.00	748.75	756.70	12.81	756.20	NA	305.32	347.54
Rihand	268.22	252.98	265.54	652.40	257.19	165.90	NA	NA
RPS	352.80	343.81	349.14	NA	349.41	NA	23.76	NA
Jawahar Sagar	298.70	295.78	298.00	NA	297.27	NA	44.46	NA
RSD	527.91	487.91	524.41	NA	523.83	NA	364.61	322.25

**IX. System Constraints:**

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

**XI. Weather Conditions For 14.09.2011 :**  
Normal weather in Northern Region.

**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 : 14.09.2011

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER