

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 10.12.2011  
Date of Reporting : 11.12.2011

### I. Regional Availability/Demand:

Demand Met	Evening Peak (19:00 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
28557	3555	32112	49.80	24261	650	24911	50.02	638.9	50.04

\* 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	49.32	11.04		60.37	25.89	23.71	-2.18	84.08	5.80
Haryana	40.93	0.70		41.62	26.79	44.20	17.41	85.83	11.88
Rajasthan	83.63	5.53	7.54	96.69	49.05	57.57	8.52	154.26	1.39
Delhi	24.46			24.46	34.02	30.37	-3.65	54.83	0.14
UP	87.90	4.90	14.40	107.20	78.65	66.31	-12.34	173.51	28.37
Uttarakhand		8.23		8.23	16.30	18.45	2.15	26.68	0.56
HP		5.42		5.42	17.25	17.62	0.37	23.05	0.00
J & K		5.56	0.00	5.56	24.24	27.75	3.51	33.31	1.90
Chandigarh				0.00	3.40	3.36	-0.04	3.36	0.00
<b>Total</b>	<b>286.23</b>	<b>41.38</b>	<b>21.94</b>	<b>349.55</b>	<b>275.59</b>	<b>289.36</b>	<b>13.76</b>	<b>638.90</b>	<b>50.04</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 (19:00 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	3960	600	-295	-403	2939	0	-216	-753	-10.25	
Haryana	3754	1400	635	-67	3175	0	674	-70	-1.66	
Rajasthan	6248	109	333	379	6523	0	714	494	13.48	
Delhi	2868	1	-46	-122	1392	0	-287	-598	-6.27	
UP	7712	1265	-715	267	7246	650	-109	267	6.41	
Uttarakhand	1355	80	70	384	946	0	65	384	9.22	
HP	1203	0	-137	78	739	0	123	237	4.39	
J&K	1277	100	-306	252	1212	0	158	254	6.08	
Chandigarh	180	0	-11	0	89	0	-3	-30	-0.24	
<b>Total</b>	<b>28557</b>	<b>3555</b>	<b>-471</b>	<b>768</b>	<b>24261</b>	<b>650</b>	<b>1119</b>	<b>185</b>	<b>21.15</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	Off Peak MW	Energy	Average	Schedule	UI
				(Gross)	(Gross)	(Net MU)	Sentout(MW)	Net MU	Net MU
A. NTPC	Singrauli STPS	2000	1841	1870	2063	44.37	1849	44.18	0.19
	Rihand I STPS	1000	817	995	873	19.76	823	19.60	0.17
	Rihand II STPS	1000	977	1041	1046	23.53	981	23.45	0.08
	Dadri I STPS	840	585	651	516	13.64	568	13.71	-0.07
	Dadri II STPS	980	496	490	475	11.86	494	11.88	-0.02
	Unchahar I TPS	440	374	432	362	9.00	375	8.82	0.18
	Unchahar II TPS	440	374	441	341	8.89	371	8.70	0.19
	Unchahar III TPS	210	187	220	183	4.45	186	4.41	0.04
	ISTPP (Jhajjar)	1000	465	509	432	10.80	450	11.04	-0.23
	Dadri GPS	830	813	739	531	13.89	579	15.66	-1.77
	Anta GPS	419	272	225	223	5.67	236	5.44	0.23
	Auraiya GPS	663	640	558	476	13.19	550	12.35	0.84
	<b>Sub Total (A)</b>	<b>9822</b>	<b>7843</b>	<b>8171</b>	<b>7521</b>	<b>179.06</b>	<b>7461</b>	<b>179.23</b>	<b>-0.18</b>
	B. NPC	NAPS	440	200	245	248	5.14	214	4.80
RAPS- B		440	271	232	468	6.40	266	6.50	-0.10
RAPS- C		440	420	473	475	10.19	425	10.08	0.11
<b>Sub Total (B)</b>		<b>1320</b>	<b>891</b>	<b>950</b>	<b>1191</b>	<b>21.73</b>	<b>905</b>	<b>21.38</b>	<b>0.35</b>
C. NHPC	Chamera I HPS	540	0	0	0	0.00	0	0.00	0.00
	Chamera II HPS	300	297	235	0	1.54	64	1.62	-0.08
	Bairasuil HPS	180	120	60	0	0.56	23	0.50	0.06
	Salal-HPS	690	138	260	150	3.14	131	3.18	-0.04
	Tanakpur-HPS	94	36	47	30	0.84	35	0.88	-0.04
	Uri-HPS	480	143	214	19	2.94	123	3.62	-0.68
	Dhauliganga-HPS	280	277	208	0	1.36	57	1.39	-0.03
	Dulhasti-HPS	390	388	402	0	3.15	131	3.34	-0.20
	Sewa-II HPS	120	0	0	0	0.00	0	0.00	0.00
	<b>Sub Total (C)</b>	<b>3074</b>	<b>1398</b>	<b>1426</b>	<b>199</b>	<b>13.53</b>	<b>564</b>	<b>14.54</b>	<b>-1.01</b>
	D. NJPC	Nathpa Jhakri	1500	1233	1361	0	8.33	347	8.67
<b>Sub Total (D)</b>		<b>1500</b>	<b>1233</b>	<b>1361</b>	<b>0</b>	<b>8.33</b>	<b>347</b>	<b>8.67</b>	<b>-0.34</b>
E. THDC	Tehri HPS	1000	780	916	0	6.87	286	7.00	-0.13
	Koteshwar HPS	200	115	100	0	2.03	84	1.90	0.13
	<b>Sub Total (E)</b>	<b>1200</b>	<b>895</b>	<b>1016</b>	<b>0</b>	<b>8.90</b>	<b>371</b>	<b>8.90</b>	<b>0.00</b>
F. BBMB	Bhakra HPS	1480	645	944	522	15.83	660	15.49	0.34
	Dehar HPS	990	164	495	0	4.21	175	3.93	0.28
	Pong HPS	396	274	366	186	6.88	287	6.58	0.30
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1083</b>	<b>1805</b>	<b>708</b>	<b>26.92</b>	<b>1122</b>	<b>26.00</b>	<b>0.92</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	32	0	0.25	10	0.23	0.02
	KWHEP HPS(IPP)	1000	0	178	0	4.56	190	4.45	0.11
	Malana Stg-II HPS	100	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>1442</b>	<b>0</b>	<b>210</b>	<b>0</b>	<b>4.81</b>	<b>200</b>	<b>4.68</b>	<b>0.13</b>
<b>H. Total Regional Entities (A-G)</b>	<b>21225</b>	<b>13343</b>	<b>14939</b>	<b>9619</b>	<b>263.28</b>	<b>10970</b>	<b>263.40</b>	<b>-0.12</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	1050	1050	23.70	987	
	Guru Nanak Dev TPS(Bhatinda)	440	215	215	4.55	190	
	Guru Hargobind Singh TPS(L.mbt)	920	963	957	21.07	878	
	Thermal (Total)	2620	2228	2222	49.32	2055	
	Total Hydro	1148	380	392	11.04	460	
	<b>Total Punjab</b>	<b>3768</b>	<b>2608</b>	<b>2614</b>	<b>60.37</b>	<b>2515</b>	
Haryana	Panipat TPS	1360	405	284	10.73	447	
	DCRTPP (Yamuna nagar)	600	273	253	6.51	271	
	Faridabad GPS (NTPC)	432	424	447	10.11	421	
	RGTPP (khedar) (IPP)	1200	519	519	13.58	566	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Thermal (Total)	3617	1621	1503	40.93	1705	
	Total Hydro	62	23	24	0.70	29	
	<b>Total Haryana</b>	<b>3679</b>	<b>1644</b>	<b>1527</b>	<b>41.62</b>	<b>1734</b>	
	Rajasthan	kota TPS	1240	1171	1177	27.69	1154
suratgarh TPS		1500	1156	1145	27.40	1142	
Chabra TPS		500	428	418	10.03	418	
Dholpur GPS		330	163	190	3.86	161	
Ramgarh GPS		113	65	65	1.69	70	
RAPS A (NPC)		300	175	179	4.40	183	
Barsingar (NLC)		250	0	60	0.85	35	
Giral LTPS (IPP)		250	103	105	2.10	87	
Rajwest LTPS (IPP)		540	230	355	5.63	235	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Thermal (Total)		5158	3491	3694	83.63	3485	
Total Hydro		550	203	142	5.53	230	
Wind power		1294	106	61	1.15	48	
Biomass		71	36	36	0.86	36	
Solar		50	0	0	0.00	0	
Renewable/Others (Total)		1365	142	97	7.54	314	
<b>Total Rajasthan</b>		<b>7073</b>	<b>3836</b>	<b>3933</b>	<b>96.69</b>	<b>4029</b>	
UP		Anpara TPS	1630	1399	1419	33.30	1388
		Obra TPS	1442	468	456	10.90	454
	Paricha TPS	640	348	320	8.20	342	
	Panki TPS	210	108	144	2.70	113	
	Harduaganj TPS	415	38	42	0.90	38	
	Tanda TPS (NTPC)	440	389	357	9.45	394	
	Roza TPS (IPP)	600	450	468	10.50	438	
	Anpara-C (IPP)	1200	549	171	9.69	404	
	Bajaj Energy Pvt.Ltd(IPP) TPS	180	78	113	2.26	94	
	Thermal (Total)	6757	3827	3490	87.90	3663	
	Vishnuparyag HPS (IPP)	400	119	109	2.67	111	
	Other Hydro	527	32	22	2.23	93	
	Cogeneration	951	600	600	14.40	600	
	<b>Total UP</b>	<b>8635</b>	<b>4578</b>	<b>4221</b>	<b>107.20</b>	<b>4355</b>	
	Uttarakhand	Total Hydro	1303	417	271	8.23	343
		<b>Total Uttarakhand</b>	<b>1303</b>	<b>417</b>	<b>271</b>	<b>8.23</b>	<b>343</b>
Delhi	Rajghat TPS	135	93	93	2.23	93	
	Delhi Gas Turbine	282	200	175	4.71	196	
	Praagati Gas Turbine	330	309	262	7.19	300	
	Rithala GPS	108	0	0	0.00	0	
	Bawana GPS	440	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	485	420	10.33	430	
	Thermal (Total)	2000	1087	950	24.46	1019	
<b>Total Delhi</b>	<b>2000</b>	<b>1087</b>	<b>950</b>	<b>24.46</b>	<b>1019</b>		
HP	Baspa HPS (IPP)	330	0	0	1.33	55	
	Malana HPS (IPP)	101	34	0	0.27	11	
	Other Hydro	571	183	97	3.83	159	
	<b>Total HP</b>	<b>1002</b>	<b>217</b>	<b>97</b>	<b>5</b>	<b>226</b>	
J & K	Baglihar HPS (IPP)	450	238	124	4.13	172	
	Other Hydro	323	54	100	1.43	60	
	Gas/Diesel/Others	183	0	0	0.00	0	
	<b>Total J &amp; K</b>	<b>956</b>	<b>292</b>	<b>224</b>	<b>5.56</b>	<b>231</b>	
<b>Total State Control Area Generation</b>		<b>28416</b>	<b>14679</b>	<b>13837</b>	<b>349.55</b>	<b>14453</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>1217</b>	<b>2033</b>	<b>54.32</b>	<b>2263</b>	
<b>Total Regional Availability(Gross)</b>		<b>49641</b>	<b>30835</b>	<b>25489</b>	<b>667.15</b>	<b>27687</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10083	5818	907	62.49	2604
State Control Area Hydro	5365	1564	1172	38.71	1613
<b>Total Regional Hydro</b>	<b>15447</b>	<b>7382</b>	<b>2079</b>	<b>101.20</b>	<b>4217</b>

**V(A). Inter Regional Exchange [Import (+ve)/Export (-ve)] [Linkwise]**

Element	Peak(19:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	Import	Export	Import	Export	
Vindhychal B/B	-200	-300	0	300	0.00	5.66	-5.66
Gwalior-Agra (D/C)	488	686	1073	0	17.43	0.00	17.43
Zerda-Kankroli	-86	18	129	112	0.62	0.00	0.62
Zerda-Bhinmal	-5	114	314	70	3.13	0.00	3.13
Malanpur-Auraiya	-165	-109	0	178	0.00	2.74	-2.74
Badod-Kota/Morak	-57	-51	0	68	0.00	0.49	-0.49
<b>Sub Total WR</b>	<b>-25</b>	<b>358</b>			<b>21.18</b>	<b>8.89</b>	<b>12.29</b>
Pusauli Bypass	300	300	300	0	7.24	0.00	7.24
MZP- GKP (D/C)	488	463	894	0	13.93	0.00	13.93
Patna-Balia(D/C)	81	239	313	0	3.64	0.00	3.64
B'Sharif-Balia (D/C)	166	288	425	0	8.11	0.00	8.11
Barh - balia(D/C)	141	334	425	0	6.84	0.00	6.84
Pusauli-Sahupuri	98	87	152	0	2.73	0.00	2.73
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-32	-36	0	48	0.00	0.46	-0.46
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1242</b>	<b>1675</b>			<b>42.49</b>	<b>0.46</b>	<b>42.03</b>
<b>Total IR Exch</b>	<b>1217</b>	<b>2033</b>			<b>63.67</b>	<b>9.35</b>	<b>54.32</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
18.64	0.64	19.28	15.31	8.14	-0.75	-3.59	2.90	-2.90

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
36.74	-3.88	32.86	42.03	12.29	54.32	5.29	16.17	21.46

**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	> 50.2
0.00	0.00	0.00	11.10	39.90	87.10	58.30	11.30	1.80

←----- 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)		
50.30	5.00	49.22	11.02	49.81	1.02	0.20	50.27	49.46

**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	407	04:09	396	12:18	0.0	0.0	0.0	0.0
Gorakhpur	400	429	19:20	407	06:39	0.0	0.0	44.4	0.0
Bareilly	400	422	04:04	387	11:53	0.0	0.5	1.0	0.0
Kanpur	400	415	04:02	391	11:53	0.0	0.0	0.0	0.0
Dadri	400	417	04:03	389	11:52	0.0	0.4	0.0	0.0
Ballabgarh	400	419	04:03	388	11:58	0.0	0.7	0.0	0.0
Bawana	400	421	20:32	391	11:53	0.0	0.0	0.1	0.0
Bassi	400	420	19:58	383	11:53	0.0	5.5	0.0	0.0
Hissar	400	414	20:31	384	10:42	0.0	7.1	0.0	0.0
Moga	400	417	02:04	396	10:44	0.0	0.0	0.0	0.0
Abdullapur	400	424	20:28	392	11:53	0.0	0.0	2.4	0.0
Nalagarh	400	427	20:32	398	07:25	0.0	0.0	9.8	0.0
Kishenpur	400	413	04:02	388	14:54	0.0	0.3	0.0	0.0
Wagoora	400	394	04:02	363	14:52	74.9	95.7	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 (m <sup>3</sup> /s)	Usage (m <sup>3</sup> /s)
Bhakra	513.59	445.62	505.58	1339.30	507.48	1426.07	210.39	433.05
Pong	426.72	384.05	146.09	718.14	418.97	848.35	69.63	413.31
Tehri	829.79	740.04	814.00	882.26	818.65	982.26	71.91	159.00
Koteshwar	612.50	598.50	605.95	3.10	NA	NA	141.00	152.00
Chamera-I	760.00	748.75	747.99	NA	747.07	NA	48.55	NA
Rihand	268.22	252.98	264.20	558.40	257.62	184.40	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	515.90	NA	517.33	NA	16.00	178.34

\* NA: Not Available

**IX. System Constraints:**

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

**XI. Weather Conditions For 10.12.2011 :**

Scattered rains in J&K and Punjab.

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

**XIII. Synchronisation of new 220 / 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 : 10.12.2011

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER