

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 23.12.2011  
Date of Reporting : 24.12.2011

### 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
30119	4439	34559	49.77	25421	650	26071	0.00	648.6	72.38

\* 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	14.05	12.61		26.66	30.80	38.14	7.34	64.80	9.03
Haryana	54.36	0.57		54.94	26.53	34.12	7.59	89.06	15.34
Rajasthan	78.98	5.34	17.41	101.73	50.75	55.46	4.71	157.19	4.27
Delhi	24.49			24.49	43.17	38.53	-4.64	63.02	0.32
UP	80.44	7.37	15.60	103.41	79.60	79.67	0.07	183.08	39.37
Uttarakhand		9.95		9.95	17.37	18.76	1.38	28.71	1.47
HP		5.17		5.17	17.05	18.84	1.79	24.02	0.69
J & K		5.50	0.00	5.50	21.20	29.71	8.51	35.21	1.90
Chandigarh				0.00	3.39	3.53	0.15	3.53	0.00
<b>Total</b>	<b>252.33</b>	<b>46.52</b>	<b>33.01</b>	<b>331.86</b>	<b>289.86</b>	<b>316.76</b>	<b>26.90</b>	<b>648.62</b>	<b>72.38</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	4103	600	247	-253	3408	0	638	-751	-7.58	
Haryana	3993	1442	308	-56	3318	0	96	-70	-1.61	
Rajasthan	6348	332	490	431	6284	0	-34	546	14.72	
Delhi	3263	20	-32	-122	1416	0	-382	-398	-4.87	
UP	7751	1865	-359	167	7679	650	415	167	4.01	
Uttarakhand	1393	80	29	332	1034	0	103	332	7.97	
HP	1217	0	-165	-42	766	0	198	187	2.50	
J&K	1852	100	337	116	1428	0	393	154	3.52	
Chandigarh	200	0	-15	0	88	0	-2	-30	-0.24	
<b>Total</b>	<b>30119</b>	<b>4439</b>	<b>840</b>	<b>574</b>	<b>25421</b>	<b>650</b>	<b>1425</b>	<b>137</b>	<b>18.41</b>	

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

### III. Regional Entities :

A. NTPC	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
	Singrauli STPS	2000	1735	1867	1863	41.99	1750	41.64	0.35
	Rihand I STPS	1000	873	973	926	21.16	882	20.96	0.20
	Rihand II STPS	1000	977	1045	1039	23.68	987	23.45	0.23
	Dadri I STPS	840	793	847	648	18.09	754	17.92	0.17
	Dadri II STPS	980	967	1080	802	22.48	937	22.13	0.35
	Unchahar I TPS	440	350	424	326	8.49	354	8.34	0.15
	Unchahar II TPS	440	350	424	328	8.49	354	8.27	0.21
	Unchahar III TPS	210	175	213	163	4.25	177	4.13	0.12
	ISTPP (Jhajjar)	1000	475	498	513	10.79	450	10.69	0.09
	Dadri GPS	830	844	844	599	18.38	766	18.47	-0.10
	Anta GPS	419	278	276	242	6.28	261	6.15	0.13
	Auraiya GPS	663	647	620	463	13.78	574	13.56	0.22
	<b>Sub Total (A)</b>	<b>9822</b>	<b>8465</b>	<b>9111</b>	<b>7912</b>	<b>197.85</b>	<b>8244</b>	<b>195.71</b>	<b>2.14</b>
B. NPC	NAPS	440	220	250	252	5.25	219	5.28	-0.03
	RAPS- B	440	419	467	461	10.08	420	10.06	0.02
	RAPS- C	440	420	472	474	10.22	426	10.08	0.14
	<b>Sub Total (B)</b>	<b>1320</b>	<b>1059</b>	<b>1189</b>	<b>1187</b>	<b>25.55</b>	<b>1064</b>	<b>25.42</b>	<b>0.13</b>
C. NHPC	Chamera I HPS	540	0	0	0	0.00	0	0.00	0.00
	Chamera II HPS	300	297	138	0	1.05	44	1.17	-0.12
	Bairasuil HPS	180	179	179	0	0.50	21	0.42	0.07
	Salal-HPS	690	123	251	111	2.93	122	2.95	-0.02
	Tanakpur-HPS	94	31	38	23	0.77	32	0.76	0.00
	Uri-HPS	480	130	213	44	3.07	128	3.02	0.05
	Dhauliganga-HPS	280	210	208	0	1.09	45	1.08	0.00
	Dulhasti-HPS	390	259	399	0	3.35	139	3.05	0.30
	Sewa-II HPS	120	0	0	0	0.00	0	0.00	0.00
	<b>Sub Total (C)</b>	<b>3074</b>	<b>1229</b>	<b>1426</b>	<b>178</b>	<b>12.75</b>	<b>531</b>	<b>12.46</b>	<b>0.29</b>
D.NJPC	Nathpa Jhakri	1500	1133	1223	0	7.54	314	7.44	0.10
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1133</b>	<b>1223</b>	<b>0</b>	<b>7.54</b>	<b>314</b>	<b>7.44</b>	<b>0.10</b>
E. THDC	Tehri HPS	1000	1040	744	0	6.52	272	6.50	0.02
	Koteshwar HPS	200	66	100	100	2.04	85	0.83	1.22
	<b>Sub Total (E)</b>	<b>1200</b>	<b>1106</b>	<b>844</b>	<b>100</b>	<b>8.56</b>	<b>357</b>	<b>7.33</b>	<b>1.24</b>
F. BBMB	Bhakra HPS	1480	651	943	515	15.93	664	15.62	0.31
	Dehar HPS	990	136	495	0	3.38	141	3.27	0.11
	Pong HPS	396	159	306	126	4.09	170	3.81	0.28
	<b>Sub Total (F)</b>	<b>2866</b>	<b>946</b>	<b>1744</b>	<b>641</b>	<b>23.40</b>	<b>975</b>	<b>22.69</b>	<b>0.71</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.29	12	0.27	0.01
	KWHEP HPS(IPP)	1000	0	125	0	3.88	162	3.84	0.04
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.00	0.00
	Shree Cement TPS	150	0	134	118	3.12	130	2.79	0.33
	<b>Sub Total (G)</b>	<b>1442</b>	<b>0</b>	<b>259</b>	<b>118</b>	<b>7.29</b>	<b>304</b>	<b>6.90</b>	<b>0.39</b>
<b>H. Total Regional Entities (A-G)</b>		<b>21225</b>	<b>13937</b>	<b>15796</b>	<b>10136</b>	<b>282.94</b>	<b>11789</b>	<b>277.94</b>	<b>4.99</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	770	1050	2.05	85	
	Guru Nanak Dev TPS(Bhatinda)	440	215	215	4.65	194	
	Guru Hargobind Singh TPS(L.mbt)	920	466	262	7.36	307	
	Thermal (Total)	2620	1451	1527	14.05	586	
	Total Hydro	1148	662	227	12.61	525	
	<b>Total Punjab</b>	<b>3768</b>	<b>2113</b>	<b>1754</b>	<b>26.66</b>	<b>1111</b>	
Haryana	Panipat TPS	1360	1058	1010	25.18	1049	
	DCRTPP (Yamuna nagar)	600	273	270	6.81	284	
	Faridabad GPS (NTPC)	432	430	440	10.46	436	
	RGTPP (khedar) (IPP)	1200	454	486	11.92	497	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Thermal (Total)	3617	2215	2206	54.36	2265	
	Total Hydro	62	22	22	0.57	24	
	<b>Total Haryana</b>	<b>3679</b>	<b>2237</b>	<b>2228</b>	<b>54.94</b>	<b>2289</b>	
	Rajasthan	kota TPS	1240	1179	1183	27.72	1155
suratgarh TPS		1500	694	1151	21.23	885	
Chabra TPS		500	167	220	4.23	176	
Dholpur GPS		330	218	225	5.31	221	
Ramgarh GPS		113	65	65	1.67	70	
RAPS A (NPC)		300	180	181	4.47	186	
Barsingsar (NLC)		250	78	113	2.42	101	
Giral LTPS (IPP)		250	140	102	2.44	102	
Rajwest LTPS (IPP)		540	380	365	9.48	395	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Thermal (Total)		5158	3101	3605	78.98	3291	
Total Hydro		550	208	143	5.34	223	
Wind power		1294	351	620	10.77	449	
Biomass		71	47	47	1.13	47	
Solar		50	0	0	0.17	7	
Renewable/Others (Total)		1365	398	667	17.41	725	
<b>Total Rajasthan</b>		<b>7073</b>	<b>3707</b>	<b>4415</b>	<b>101.73</b>	<b>4239</b>	
UP		Anpara TPS	1630	1383	1428	33.10	1379
		Obra TPS	1442	466	589	13.10	546
	Paricha TPS	640	212	199	4.90	204	
	Panki TPS	210	167	158	3.70	154	
	Harduaganj TPS	415	47	61	2.30	96	
	Tanda TPS (NTPC)	440	402	401	9.82	409	
	Roza TPS (IPP)	600	440	527	11.70	488	
	Anpara-C (IPP)	1200	0	0	0.00	0	
	Bajaj Energy Pvt.Ltd(IPP) TPS	180	78	78	1.82	76	
	Thermal (Total)	6757	3195	3441	80.44	3352	
	Vishnuparyag HPS (IPP)	400	99	94	2.24	94	
	Other Hydro	527	271	0	5.13	214	
	Cogeneration	951	650	650	15.60	650	
	<b>Total UP</b>	<b>8635</b>	<b>4215</b>	<b>4185</b>	<b>103.41</b>	<b>4215</b>	
	Uttarakhand	Total Hydro	1303	483	276	9.95	415
		<b>Total Uttarakhand</b>	<b>1303</b>	<b>483</b>	<b>276</b>	<b>9.95</b>	<b>415</b>
Delhi	Rajghat TPS	135	93	89	2.20	91	
	Delhi Gas Turbine	282	200	150	4.40	183	
	Praagati Gas Turbine	330	315	278	7.44	310	
	Rithala GPS	108	0	0	0.00	0	
	Bawana GPS	440	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	485	415	10.46	436	
	Thermal (Total)	2000	1093	932	24.49	1021	
	<b>Total Delhi</b>	<b>2000</b>	<b>1093</b>	<b>932</b>	<b>24.49</b>	<b>1021</b>	
HP	Baspa HPS (IPP)	330	0	0	1.32	55	
	Malana HPS (IPP)	101	46	0	0.27	11	
	Other Hydro	571	227	122	3.59	150	
	<b>Total HP</b>	<b>1002</b>	<b>273</b>	<b>122</b>	<b>5</b>	<b>216</b>	
J & K	Baglihar HPS (IPP)	450	262	152	3.96	165	
	Other Hydro	323	54	100	1.54	64	
	Gas/Diesel/Others	183	0	0	0.00	0	
	<b>Total J &amp; K</b>	<b>956</b>	<b>316</b>	<b>252</b>	<b>5.50</b>	<b>229</b>	
<b>Total State Control Area Generation</b>		<b>28416</b>	<b>14437</b>	<b>14164</b>	<b>331.86</b>	<b>13734</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>1992</b>	<b>2444</b>	<b>54.10</b>	<b>2254</b>	
<b>Total Regional Availability(Gross)</b>		<b>49641</b>	<b>32225</b>	<b>26744</b>	<b>668.89</b>	<b>27777</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10083	5496	1037	59.54	2481
State Control Area Hydro	5365	2235	1042	44.28	1845
<b>Total Regional Hydro</b>	<b>15447</b>	<b>7731</b>	<b>2079</b>	<b>103.82</b>	<b>4326</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	0	0	0	0	0.00	0.00	0.00
Gwalior-Agra (D/C)	636	870	1007	0	19.13	0.00	19.13
Zerda-Kankroli	-79	13	123	141	0.23	0.00	0.23
Zerda-Bhinmal	-10	67	252	95	1.83	0.00	1.83
Malanpur-Auraiya	-109	-72	0	154	0.00	2.24	-2.24
Badod-Kota/Morak	-67	-87	16	112	0.00	1.23	-1.23
<b>Sub Total WR</b>	<b>371</b>	<b>791</b>			<b>21.19</b>	<b>3.47</b>	<b>17.72</b>
Pusauli Bypass	104	200	200	160	2.24	0.59	1.65
MZP- GKP (D/C)	525	454	722	0	12.22	0.00	12.22
Patna-Balia(D/C)	310	303	431	0	6.99	0.00	6.99
B'Sharif-Balia (D/C)	291	268	348	0	6.06	0.00	6.06
Barh - balia(D/C)	371	362	408	0	7.96	0.00	7.96
Pusauli-Sahupuri	50	100	140	0	2.19	0.00	2.19
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-30	-34	0	48	0.00	0.69	-0.69
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1621</b>	<b>1653</b>			<b>37.66</b>	<b>1.28</b>	<b>36.38</b>
<b>Total IR Exch</b>	<b>1992</b>	<b>2444</b>			<b>58.85</b>	<b>4.75</b>	<b>54.10</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
16.77	0.50	17.27	12.99	5.67	2.53	1.55	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
35.68	-0.69	35.00	36.38	17.72	54.10	0.69	18.41	19.10

**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	1.20	3.40	26.30	57.60	73.70	42.40	2.60	0.00

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				
50.17	6.03	48.84	9.19	49.63	1.85	0.22	50.02	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	408	21:55	399	10:15	0.0	0.0	0.0	0.0
Gorakhpur	400	435	16:03	409	12:16	0.0	0.0	62.9	6.0
Bareilly	400	424	20:34	394	09:32	0.0	0.0	6.8	0.0
Kanpur	400	420	20:28	397	10:13	0.0	0.0	0.0	0.0
Dadri	400	417	21:47	396	12:36	0.0	0.0	0.0	0.0
Ballabgarh	400	417	02:02	401	09:28	0.0	0.0	0.0	0.0
Bawana	400	420	21:44	398	12:36	0.0	0.0	0.0	0.0
Bassi	400	425	20:28	392	12:15	0.0	0.0	2.3	0.0
Hissar	400	413	19:30	390	12:37	0.0	0.0	0.0	0.0
Moga	400	420	19:23	394	12:37	0.0	0.0	0.0	0.0
Abdullapur	400	421	20:13	398	12:39	0.0	0.0	0.1	0.0
Nalagarh	400	424	20:30	399	12:38	0.0	0.0	10.6	0.0
Kishenpur	400	406	02:02	382	12:37	0.0	15.2	0.0	0.0
Wagoora	400	386	02:03	357	18:23	89.7	100.0	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	503.72	1258.87	504.93	1312.37	174.15	437.35
Pong	426.72	384.05	414.62	656.23	417.88	794.52	47.77	278.41
Tehri	829.79	740.04	812.40	850.25	818.65	982.26	68.80	149.00
Koteshwar	612.50	598.50	607.25	3.32	NA	NA	149.00	146.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	42.61	0.00
Rihand	268.22	252.98	263.96	542.00	257.56	181.70	NA	NA
RPS	352.80	343.81	350.41	NA	NA	NA	NA	234.69
Jawahar Sagar	298.70	295.78	297.73	NA	NA	NA	NA	243.47
RSD	527.91	487.91	514.04	NA	515.83	NA	75.63	117.85

\* NA: Not Available

**IX. System Constraints:**

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

**XI. Weather Conditions For 23.12.2011 :**

1. Light fog in some parts of Haryana,UP.

**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 : 23.12.2011

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER