

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 27.12.2011

Date of Reporting : 28.12.2011

### I. Regional Availability/Demand:

Evening Peak (19:00 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
30516	3537	34053	49.77	26342	1005	27347	50.02	679.1	67.85

\* 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	50.03	10.31		60.34	29.60	32.18	2.58	92.53	5.80
Haryana	53.66	0.57		54.23	26.48	36.45	9.97	90.68	14.82
Rajasthan	85.13	4.29	11.76	101.18	49.34	55.57	6.23	156.75	3.16
Delhi	26.91			26.91	42.55	36.68	-5.88	63.59	0.27
UP	84.66	6.55	15.60	106.81	80.10	78.87	-1.23	185.69	38.62
Uttarakhand		9.85		9.85	17.23	17.78	0.55	27.63	2.05
HP		5.18		5.18	17.92	18.33	0.41	23.51	1.24
J & K		4.76	0.00	4.76	23.73	30.31	6.58	35.07	1.90
Chandigarh				0.00	3.44	3.63	0.19	3.63	0.00
<b>Total</b>	<b>300.39</b>	<b>41.52</b>	<b>27.36</b>	<b>369.27</b>	<b>290.39</b>	<b>309.81</b>	<b>19.42</b>	<b>679.08</b>	<b>67.85</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	
Punjab	4352	600	-82	-403	3530	0	-13	-901	-11.18
Haryana	3892	1168	242	-68	3654	0	395	-70	-1.67
Rajasthan	7128	22	903	421	6323	0	252	546	14.66
Delhi	3332	2	-220	-122	1452	0	-401	-398	-4.87
UP	7465	1565	-1057	167	8001	1005	471	167	4.01
Uttarakhand	1328	80	-151	332	1070	0	107	332	7.97
HP	1216	0	-112	8	719	0	-33	237	3.70
J&K	1603	100	-36	252	1499	0	346	254	6.10
Chandigarh	200	0	-16	0	94	0	2	-30	-0.24
<b>Total</b>	<b>30516</b>	<b>3537</b>	<b>-529</b>	<b>588</b>	<b>26342</b>	<b>1005</b>	<b>1127</b>	<b>137</b>	<b>18.47</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	1620	1721	1850	39.38	1641	38.88	0.50
	Rihand I STPS	1000	878	977	934	21.27	886	21.08	0.20
	Rihand II STPS	1000	974	1043	1044	23.59	983	23.38	0.21
	Dadri I STPS	840	771	859	635	17.63	735	17.48	0.15
	Dadri II STPS	980	967	1023	830	22.30	929	22.17	0.13
	Unchahar I TPS	440	377	441	400	9.11	380	9.05	0.06
	Unchahar II TPS	440	376	438	406	9.09	379	9.03	0.06
	Unchahar III TPS	210	187	219	201	4.53	189	4.50	0.03
	ISTPP (Jhajjar)	1000	475	505	502	10.85	452	10.85	0.00
	Dadri GPS	830	839	823	640	18.59	775	18.74	-0.15
	Anta GPS	419	276	256	245	6.36	265	6.16	0.19
	Auraiya GPS	663	655	627	626	14.29	595	14.27	0.02
	<b>Sub Total (A)</b>	<b>9822</b>	<b>8396</b>	<b>8932</b>	<b>8313</b>	<b>196.99</b>	<b>8208</b>	<b>195.60</b>	<b>1.39</b>
	B. NPC	NAPS	440	221	254	268	5.31	221	5.30
RAPS- B		440	421	465	466	10.10	421	10.10	0.00
RAPS- C		440	420	473	477	10.21	425	10.08	0.13
<b>Sub Total (B)</b>		<b>1320</b>	<b>1062</b>	<b>1192</b>	<b>1211</b>	<b>25.62</b>	<b>1068</b>	<b>25.49</b>	<b>0.14</b>
C. NHPC	Chamera I HPS	540	0	0	0	0.00	0	0.00	0.00
	Chamera II HPS	300	297	158	0	1.25	52	1.21	0.05
	Bairasuil HPS	180	179	40	0	0.43	18	0.46	-0.04
	Salal-HPS	690	108	305	31	2.50	104	2.58	-0.08
	Tanakpur-HPS	94	28	32	23	0.72	30	0.70	0.02
	Uri-HPS	480	110	210	108	2.74	114	2.80	-0.06
	Dhauliganga-HPS	280	210	136	0	1.01	42	1.03	-0.02
	Dulhasti-HPS	390	388	389	0	2.50	104	2.51	-0.01
	Sewa-II HPS	120	79	80	0	0.35	14	0.30	0.05
	<b>Sub Total (C)</b>	<b>3074</b>	<b>1399</b>	<b>1350</b>	<b>162</b>	<b>11.49</b>	<b>479</b>	<b>11.59</b>	<b>-0.10</b>
	D. NJPC	Nathpa Jhakri	1500	1069	1013	0	8.09	337	7.79
<b>Sub Total (D)</b>		<b>1500</b>	<b>1069</b>	<b>1013</b>	<b>0</b>	<b>8.09</b>	<b>337</b>	<b>7.79</b>	<b>0.30</b>
E. THDC	Tehri HPS	1000	1030	1003	0	4.98	208	5.00	-0.02
	Koteshwar HPS	200	119	203	103	2.07	86	2.00	0.07
	<b>Sub Total (E)</b>	<b>1200</b>	<b>1149</b>	<b>1206</b>	<b>103</b>	<b>7.06</b>	<b>294</b>	<b>7.00</b>	<b>0.06</b>
F. BBMB	Bhakra HPS	1480	666	944	522	16.29	679	15.97	0.32
	Dehar HPS	990	119	495	0	3.21	134	2.86	0.36
	Pong HPS	396	156	366	66	4.06	169	3.75	0.31
	<b>Sub Total (F)</b>	<b>2866</b>	<b>941</b>	<b>1805</b>	<b>588</b>	<b>23.56</b>	<b>982</b>	<b>22.58</b>	<b>0.98</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.27	11	0.25	0.01
	KWHEP HPS(IPP)	1000	0	362	0	4.08	170	3.72	0.35
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.00	0.00
	Shree Cement TPS	150	0	141	130	3.44	143	2.84	0.60
<b>Sub Total (G)</b>	<b>1442</b>	<b>0</b>	<b>503</b>	<b>130</b>	<b>7.78</b>	<b>324</b>	<b>6.82</b>	<b>0.97</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>21225</b>	<b>14015</b>	<b>16001</b>	<b>10507</b>	<b>280.59</b>	<b>11691</b>	<b>276.85</b>	<b>3.74</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	1260	23.90	996	
	Guru Nanak Dev TPS(Bhatinda)	440	216	216	4.66	194	
	Guru Hargobind Singh TPS(L.mbt)	920	963	964	21.47	895	
	Thermal (Total)	2620	2229	2440	50.03	2085	
	Total Hydro	1148	419	196	10.31	430	
	<b>Total Punjab</b>	<b>3768</b>	<b>2648</b>	<b>2636</b>	<b>60.34</b>	<b>2514</b>	
Haryana	Panipat TPS	1360	979	1034	24.39	1016	
	DCRTPP (Yamuna nagar)	600	280	279	6.60	275	
	Faridabad GPS (NTPC)	432	431	443	10.45	435	
	RGTPP (khedar) (IPP)	1200	487	450	12.21	509	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Thermal (Total)	3617	2177	2206	53.66	2236	
	Total Hydro	62	23	25	0.57	24	
		<b>Total Haryana</b>	<b>3679</b>	<b>2200</b>	<b>2231</b>	<b>54.23</b>	<b>2259</b>
Rajasthan	kota TPS	1240	1185	1184	28.60	1192	
	suratgarh TPS	1500	1151	1154	27.27	1136	
	Chabra TPS	500	226	222	5.21	217	
	Dholpur GPS	330	228	221	5.40	225	
	Ramgarh GPS	113	44	47	1.04	43	
	RAPS A (NPC)	300	180	184	4.40	183	
	Barsingar (NLC)	250	60	65	1.59	66	
	Giral LTPS (IPP)	250	0	0	0.00	0	
	Rajwest LTPS (IPP)	540	440	460	11.63	484	
	VSLP LTPS (IPP)	135	0	0	0.00	0	
	Thermal (Total)	5158	3514	3537	85.13	3547	
	Total Hydro	550	252	193	4.29	179	
	Wind power	1294	251	345	5.88	245	
	Biomass	71	59	59	1.42	59	
	Solar	50	0	0	0.17	7	
	Renewable/Others (Total)	1365	310	404	11.76	490	
		<b>Total Rajasthan</b>	<b>7073</b>	<b>4076</b>	<b>4134</b>	<b>101.18</b>	<b>4216</b>
UP	Anpara TPS	1630	1556	1512	33.00	1375	
	Obra TPS	1442	655	670	14.50	604	
	Paricha TPS	640	234	241	5.00	208	
	Panki TPS	210	135	145	3.10	129	
	Harduaganj TPS	415	302	124	4.10	171	
	Tanda TPS (NTPC)	440	401	404	9.66	403	
	Roza TPS (IPP)	900	501	477	11.75	489	
	Anpara-C (IPP)	1200	81	0	1.14	48	
	Bajaj Energy Pvt.Ltd(IPP) TPS	180	77	118	2.41	100	
	Thermal (Total)	7057	3942	3691	84.66	3528	
	Vishnuparyag HPS (IPP)	400	94	94	2.19	91	
	Other Hydro	527	182	44	4.36	182	
	Cogeneration	951	650	650	15.60	650	
		<b>Total UP</b>	<b>8935</b>	<b>4868</b>	<b>4479</b>	<b>106.81</b>	<b>4359</b>
	Uttarakhand	Total Hydro	1303	577	323	9.85	410
<b>Total Uttarakhand</b>		<b>1303</b>	<b>577</b>	<b>323</b>	<b>9.85</b>	<b>410</b>	
Delhi	Rajghat TPS	135	49	48	1.30	54	
	Delhi Gas Turbine	282	242	152	5.38	224	
	Praagati Gas Turbine	330	312	272	7.50	313	
	Rithala GPS	108	0	0	0.00	0	
	Bawana GPS	440	200	40	3.88	162	
	Badarpur TPS (NTPC)	705	465	360	8.85	369	
	Thermal (Total)	2000	1268	1014	26.91	1121	
	<b>Total Delhi</b>	<b>2000</b>	<b>1268</b>	<b>1014</b>	<b>26.91</b>	<b>1121</b>	
HP	Baspa HPS (IPP)	330	0	0	1.32	55	
	Malana HPS (IPP)	101	0	0	0.27	11	
	Other Hydro	571	244	88	3.60	150	
	<b>Total HP</b>	<b>1002</b>	<b>244</b>	<b>88</b>	<b>5</b>	<b>216</b>	
J & K	Baglihar HPS (IPP)	450	152	132	3.22	134	
	Other Hydro	323	54	78	1.54	64	
	Gas/Diesel/Others	183	0	0	0.00	0	
		<b>Total J &amp; K</b>	<b>956</b>	<b>206</b>	<b>210</b>	<b>4.76</b>	<b>198</b>
<b>Total State Control Area Generation</b>		<b>28716</b>	<b>16087</b>	<b>15115</b>	<b>369.27</b>	<b>15295</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>1124</b>	<b>2163</b>	<b>51.66</b>	<b>2152</b>	
<b>Total Regional Availability(Gross)</b>		<b>49941</b>	<b>33212</b>	<b>27785</b>	<b>701.51</b>	<b>29138</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10083	5877	983	57.98	2416
State Control Area Hydro	5365	1903	1079	39.33	1639
<b>Total Regional Hydro</b>	<b>15447</b>	<b>7780</b>	<b>2062</b>	<b>97.30</b>	<b>4054</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	400	200	400	0	6.30	0.00	6.30
Gwalior-Agra (D/C)	110	570	748	0	12.29	0.00	12.29
Zerda-Kankroli	-202	-60	30	202	0.00	1.82	-1.82
Zerda-Bhinmal	-119	40	188	146	0.44	0.00	0.44
Malanpur-Auraiya	-265	-146	0	287	0.00	3.63	-3.63
Badod-Kota/Morak	-96	-85	0	102	0.00	1.87	-1.87
<b>Sub Total WR</b>	<b>-172</b>	<b>519</b>			<b>19.03</b>	<b>7.32</b>	<b>11.71</b>
Pusauli Bypass	-56	118	273	56	2.21	0.20	2.01
MZP- GKP (D/C)	500	522	740	0	13.55	0.00	13.55
Patna-Balia(D/C)	254	310	444	0	8.33	0.00	8.33
B'Sharif-Balia (D/C)	186	288	343	0	5.60	0.00	5.60
Barh - balia(D/C)	308	373	626	0	8.54	0.00	8.54
Pusauli-Sahupuri	134	67	155	0	2.61	0.00	2.61
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>1296</b>	<b>1644</b>			<b>40.84</b>	<b>0.90</b>	<b>39.95</b>
<b>Total IR Exch</b>	<b>1124</b>	<b>2163</b>			<b>59.87</b>	<b>8.22</b>	<b>51.66</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
17.29	0.34	17.63	14.66	5.67	2.31	1.21	2.76	-2.76

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
37.37	-1.08	36.29	39.95	11.71	51.66	2.58	12.79	15.37

**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	0.60	15.80	45.70	83.90	54.00	9.30	0.30

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)
50.23	6.05	49.06	9.16	49.72	1.21	0.20	50.14	49.58

**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	404	00:00	394	14:20	0.0	0.0	0.0	0.0
Gorakhpur	400	433	20:54	404	14:32	0.0	0.0	42.3	2.2
Bareilly	400	426	20:56	396	14:26	0.0	0.0	3.4	0.0
Kanpur	400	417	20:54	396	14:07	0.0	0.0	0.0	0.0
Dadri	400	418	20:53	400	12:16	0.0	0.0	0.0	0.0
Ballabgarh	400	422	20:53	400	12:17	0.0	0.0	0.8	0.0
Bawana	400	421	20:53	400	12:19	0.0	0.0	0.3	0.0
Bassi	400	422	20:54	393	12:19	0.0	0.0	0.7	0.0
Hissar	400	413	20:53	391	12:19	0.0	0.0	0.0	0.0
Moga	400	416	02:57	393	16:24	0.0	0.0	0.0	0.0
Abdullapur	400	421	20:54	286	16:47	0.0	0.0	0.3	0.0
Nalagarh	400	424	20:43	404	10:20	0.0	0.0	2.6	0.0
Kishenpur	400	409	03:21	373	16:24	1.0	18.1	0.0	0.0
Wagoora	400	401	16:35	344	16:24	85.4	94.2	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 (m <sup>3</sup> /s)	Usage (m <sup>3</sup> /s)
Bhakra	513.59	445.62	502.90	1219.07	504.18	1272.20	173.55	451.91
Pong	426.72	384.05	414.21	644.91	417.26	768.49	42.33	246.55
Tehri	829.79	740.04	810.50	812.00	818.65	982.26	69.65	115.00
Koteshwar	612.50	598.50	608.30	3.76	NA	NA	115.00	137.00
Chamera-I	760.00	748.75	746.99	NA	746.91	NA	43.58	0.00
Rihand	268.22	252.98	263.62	520.00	257.34	172.40	NA	NA
RPS	352.80	343.81	350.18	NA	NA	NA	NA	276.09
Jawahar Sagar	298.70	295.78	297.88	NA	NA	NA	NA	22.85
RSD	527.91	487.91	511.06	NA	514.09	NA	66.54	257.57

\* NA: Not Available  
IX. System Constraints:

X. Grid Disturbance / Any Other Significant Event:

XI. Weather Conditions For 27.12.2011 :  
1. Cold & Dry Weather in NR.

XII. Synchronisation of new generating units :

XIII. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus //substation :  
1. 400 KV Allahabad - Kanpur - I LIL0 at Fatehpur at 23.01 Hrs/ 27.12.2011. Now this line 400 KV Allahabad-  
Fatehpur & Fatehpur - Kanpur.

XIV. Tripping of lines in pooling stations :

XV. Complete generation loss in a generating station :

Report for : 27.12.2011

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER