

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 23.12.2013  
Date of Reporting : 24.12.2013

### 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
36125	1607	37732	49.97	25797	0	25797	50.33	732.9	48.17

\* 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	44.33	8.88		53.21	35.04	36.57	1.53	89.79	0.08
Haryana	66.76	0.45		67.21	31.97	31.81	-0.15	99.03	0.08
Rajasthan	99.28	4.86	8.73	112.87	73.54	68.93	-4.61	181.81	0.00
Delhi	20.50			20.50	43.29	41.24	-2.04	61.74	0.03
UP	114.24	4.36	14.40	133.00	72.86	70.10	-2.76	203.10	44.65
Uttarakhand		11.38		11.38	19.76	20.65	0.89	32.03	1.63
HP		5.37		5.37	18.41	19.07	0.66	24.44	0.02
J & K		6.34	0.00	6.34	30.37	30.97	0.60	37.31	1.70
Chandigarh				0.00	3.18	3.67	0.49	3.67	0.00
<b>Total</b>	<b>345.10</b>	<b>41.65</b>	<b>23.13</b>	<b>409.88</b>	<b>328.41</b>	<b>323.03</b>	<b>-5.38</b>	<b>732.91</b>	<b>48.17</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	
Punjab	4738	0	47	-514	2737	0	338	-331	-7.54	
Haryana	5670	0	-27	-862	3525	0	134	-1105	-28.44	
Rajasthan	8291	0	-267	1265	6367	0	-480	1085	31.20	
Delhi	3261	2	-68	-433	1294	0	-71	-1569	-20.90	
UP	9464	1430	-127	173	8802	0	-29	-165	-5.44	
Uttarakhand	1631	75	76	410	1046	0	-60	359	9.42	
HP	1195	0	8	273	706	0	-1	277	6.99	
J&K	1680	100	-162	629	1235	0	-297	538	10.41	
Chandigarh	195	0	-2	0	86	0	0	-10	-0.09	
<b>Total</b>	<b>36125</b>	<b>1607</b>	<b>-522</b>	<b>939</b>	<b>25797</b>	<b>0</b>	<b>-467</b>	<b>-921</b>	<b>-4.38</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	
										UI (OG:(+ve), UG: (-ve))
A. NTPC	Singrauli STPS	2000	1666	2083	1418	38.93	1622	38.83	0.10	
	Rihand I STPS	1000	877	998	669	19.61	817	19.27	0.34	
	Rihand II STPS	1000	930	1050	696	20.77	865	20.30	0.46	
	Rihand III STPS	1000	460	518	355	10.49	437	10.44	0.05	
	Dadri I STPS	840	815	730	475	12.89	537	12.97	-0.08	
	Dadri II STPS	980	985	988	658	21.23	885	21.41	-0.18	
	Unchahar I TPS	420	407	443	327	9.02	376	9.09	-0.07	
	Unchahar II TPS	420	402	444	305	8.48	353	8.53	-0.05	
	Unchahar III TPS	210	201	221	151	4.26	178	4.29	-0.03	
	ISTPP (Jhajjar)	1500	1480	644	629	14.81	617	14.86	-0.05	
	Dadri GPS	830	838	347	351	7.64	318	7.73	-0.10	
	Anta GPS	419	427	253	250	5.97	249	5.84	0.13	
	Auraiya GPS	663	668	157	164	3.71	155	3.69	0.03	
	<b>Sub Total (A)</b>	<b>11282</b>	<b>10155</b>	<b>8876</b>	<b>6448</b>	<b>177.82</b>	<b>7409</b>	<b>177.26</b>	<b>0.56</b>	
	B. NPC	NAPS	440	322	353	360	7.71	321	7.73	-0.02
		RAPS- B	440	420	462	466	10.12	422	10.08	0.04
RAPS- C		440	430	475	473	10.24	427	10.32	-0.08	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1172</b>	<b>1290</b>	<b>1299</b>	<b>28.07</b>	<b>1170</b>	<b>28.13</b>	<b>-0.06</b>	
C. NHPC	Chamera I HPS	540	360	270	0	1.62	67	1.54	0.08	
	Chamera II HPS	300	300	202	0	1.05	44	1.13	-0.08	
	Chamera III HPS	231	231	70	0	0.58	24	0.55	0.03	
	Bairasuil HPS	180	182	120	0	0.58	24	0.49	0.08	
	Salal-HPS	690	126	224	123	3.05	127	2.97	0.08	
	Tanakpur-HPS	94	16	0	26	0.25	10	0.27	-0.02	
	Uri-HPS	480	87	222	21	2.17	90	2.04	0.13	
	Uri-II HPS	120	41	0	35	1.09	45	1.00	0.09	
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00	
	Dulhasti-HPS	390	387	410	0	2.63	109	2.54	0.09	
	Sewa-II HPS	120	119	124	0	0.42	17	0.40	0.02	
	<b>Sub Total (C)</b>	<b>3425</b>	<b>1849</b>	<b>1642</b>	<b>205</b>	<b>13.42</b>	<b>559</b>	<b>12.92</b>	<b>0.50</b>	
	D. NJPC	Nathpa Jhakri	1500	1605	1083	0	7.52	313	7.38	0.14
<b>Sub Total (D)</b>		<b>1500</b>	<b>1605</b>	<b>1083</b>	<b>0</b>	<b>7.52</b>	<b>313</b>	<b>7.38</b>	<b>0.14</b>	
E. THDC	Tehri HPS	1000	1060	699	0	8.07	336	8.00	0.07	
	Koteshwar HPS	400	125	200	85	3.06	127	3.00	0.06	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1185</b>	<b>899</b>	<b>85</b>	<b>11.12</b>	<b>463</b>	<b>11.00</b>	<b>0.12</b>	
F. BBMB	Bhakra HPS	1497	584	1037	373	14.85	619	14.01	0.84	
	Dehar HPS	990	130	330	0	3.46	144	3.12	0.35	
	Pong HPS	396	276	372	60	6.80	283	6.62	0.18	
	<b>Sub Total (F)</b>	<b>2883</b>	<b>989</b>	<b>1739</b>	<b>433</b>	<b>25.11</b>	<b>1046</b>	<b>23.74</b>	<b>1.37</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.35	15	0.34	0.01	
	KWHEP HPS(IPP)	1000	0	358	0	3.99	166	3.96	0.03	
	Malana Stg-II HPS	100	0	54	0	0.15	6	0.15	0.00	
	Shree Cement TPS	300	0	277	147	5.45	227	5.50	-0.05	
	Budhil HPS(IPP)	70	0	0	0	0.00	0	0.00	0.00	
	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>689</b>	<b>147</b>	<b>9.94</b>	<b>414</b>	<b>9.95</b>	<b>-0.01</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>23472</b>	<b>16956</b>	<b>16218</b>	<b>8617</b>	<b>273.01</b>	<b>11375</b>	<b>270.37</b>	<b>2.63</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	1010	800	19.61	817
	Guru Nanak Dev TPS(Bhatinda)	440	333	250	6.05	252
	Guru Hargobind Singh TPS(L.mbt)	920	957	675	18.68	778
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	2300	1725	44.33	1847
	Total Hydro	1148	451	238	8.88	370
<b>Total Punjab</b>	<b>3768</b>	<b>2751</b>	<b>1963</b>	<b>53.21</b>	<b>2217</b>	
Haryana	Panipat TPS	1367	829	771	18.56	773
	DCRTPP (Yamuna nagar)	600	561	503	12.01	500
	Faridabad GPS (NTPC)	432	165	165	3.90	162
	RGTPP (khedar) (IPP)	1200	588	458	10.99	458
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1197	744	21.31	888
	Thermal (Total)	4944	3340	2641	66.76	2782
	Total Hydro	62	17	23	0.45	19
	<b>Total Haryana</b>	<b>5006</b>	<b>3357</b>	<b>2664</b>	<b>67.21</b>	<b>2800</b>
	Rajasthan	kota TPS	1240	1053	1081	24.83
suratgarh TPS		1500	917	838	21.07	878
Chabra TPS		500	421	504	11.71	488
Dholpur GPS		330	201	98	2.87	120
Ramgarh GPS		111	130	126	1.99	83
RAPS A (NPC)		300	175	175	4.07	170
Barsingsar (NLC)		250	214	175	4.69	195
Giral LTPS		250	62	62	1.42	59
Rajwest LTPS (IPP)		1080	578	450	14.06	586
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	507	492	12.57	524
Thermal (Total)		6956	4258	4001	99.28	4137
Total Hydro		550	287	110	4.86	203
Wind power		2191	248	543	8.07	336
Biomass		91	12	12	0.28	12
Solar		201	4	0	0.38	16
Renewable/Others (Total)		2483	260	555	8.73	364
<b>Total Rajasthan</b>		<b>9989</b>	<b>4805</b>	<b>4666</b>	<b>112.87</b>	<b>4703</b>
UP		Anpara TPS	1630	1306	1644	21.00
	Obra TPS	1288	483	524	11.30	471
	Paricha TPS	1140	639	694	14.70	613
	Panki TPS	210	0	70	1.00	42
	Harduaganj TPS	665	507	506	10.90	454
	Tanda TPS (NTPC)	440	394	401	9.78	407
	Roza TPS (IPP)	1200	833	680	19.20	800
	Anpara-C (IPP)	1200	797	724	18.15	756
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	404	281	8.22	342
	Thermal (Total)	8223	5363	5524	114.24	4760
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	169	205	4.36	182
	Cogeneration	981	600	600	14.40	600
	<b>Total UP</b>	<b>10131</b>	<b>6132</b>	<b>6329</b>	<b>133.00</b>	<b>5542</b>
	Uttarakhand	Total Hydro	1303	575	380	11.38
<b>Total Uttarakhand</b>		<b>1303</b>	<b>575</b>	<b>380</b>	<b>11.38</b>	<b>474</b>
Delhi	Rajghat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	81	164	2.89	121
	Pragati Gas Turbine	330	316	267	7.22	301
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	0	18	0.36	15
	Badarpur TPS (NTPC)	705	500	435	10.02	417
	Thermal (Total)	2232	897	884	20.50	854
	<b>Total Delhi</b>	<b>2232</b>	<b>897</b>	<b>884</b>	<b>20.50</b>	<b>854</b>
HP	Baspa HPS (IPP)	330	30	0	1.21	50
	Malana HPS (IPP)	86	0	0	0.18	7
	Other Hydro	589	183	125	3.99	166
	<b>Total HP</b>	<b>1005</b>	<b>213</b>	<b>125</b>	<b>5.37</b>	<b>224</b>
J & K	Baglihar HPS (IPP)	450	298	118	3.76	157
	Other Hydro	323	90	124	2.58	108
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>388</b>	<b>242</b>	<b>6.34</b>	<b>264</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>19118</b>	<b>17253</b>	<b>409.88</b>	<b>17079</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>4150</b>	<b>1569</b>	<b>84.21</b>	<b>3509</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>39486</b>	<b>27439</b>	<b>767.10</b>	<b>31963</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	5775	723	61.66	2569
State Control Area Hydro	5368	2100	1323	41.65	1735
<b>Total Regional Hydro</b>	<b>15868</b>	<b>7875</b>	<b>2046</b>	<b>103.31</b>	<b>4305</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	-200	350	200	0.87	3.99	-3.12
Gwalior-Agra (D/C)	1441	523	1844	0	26.40	0.00	26.40
Zerda-Kankroli	21	-398	36	436	0.00	2.91	-2.91
Zerda-Bhinmal	122	-324	166	396	0.00	0.93	-0.93
Malanpur-Auraiya	-93	-149	0	152	0.00	2.73	-2.73
Badod-Kota/Morak	-110	-313	0	321	0.00	4.72	-4.72
Mundra-Mohindergarh(HVDC)	1251	1199	1503	0	30.45	0.00	30.45
<b>Sub Total WR</b>	<b>2432</b>	<b>338</b>			<b>57.72</b>	<b>15.29</b>	<b>42.43</b>
Pusaui Bypass	100	100	100	0	2.44	0.00	2.44
MZP- GKP (D/C)	318	282	506	0	8.16	0.00	8.16
Patna-Balia(D/C)	614	515	818	0	15.26	0.00	15.26
B'Sharif-Balia (D/C)	262	167	368	0	6.09	0.00	6.09
Pusaui-Balia	-87	-65	51	100	0.00	1.66	-1.66
Gaya-Fatehpur (765 Kv)	90	2	288	40	2.38	0.00	2.38
Pusaui-Sahupuri	190	115	207	0	3.67	0.00	3.67
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-32	-30	0	37	0.00	0.84	-0.84
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
Sasaram - Fatehpur(765 KV)	263	145	502	0	6.30	0.00	6.30
<b>Sub Total ER</b>	<b>1718</b>	<b>1231</b>			<b>44.29</b>	<b>2.50</b>	<b>41.79</b>
<b>Total IR Exch</b>	<b>4150</b>	<b>1569</b>			<b>102.00</b>	<b>17.79</b>	<b>84.21</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
31.62	0.44	32.06	14.65	-16.24	-0.59	-7.71	4.17	-4.17

Total IR Schedule (MU)			Total IR Actual (MU)			Net IR UI (MU)		
Through ER	Through WR Inclds Mndra	Total	Through ER	Through WR	Total	Through ER	Through WR	Total
50.30	27.57	77.87	41.79	42.43	84.21	-8.51	14.85	6.34

**VI. Frequency Profile <----- % of Time Frequency ----->**

<48.80	<49.0	<49.20	<49.50	<49.7	49.5 - 50.2	49.7-49.8	49.7 - 50.2	> 50.00	> 50.2
0.00	0.00	0.00	0.60	5.70	94.10	9.60	89.00	44.00	5.30

<----- 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				
50.39	3.05	49.33	6.15	49.96	0.27	0.16	50.38	49.70

**VII. Voltage profile 400 kV**

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	413	00:01	402	16:35	0.0	0.0	0.0	0.0
Gorakhpur	400	427	05:30	404	18:03	0.0	0.0	45.2	0.0
Barilly	400	428	01:30	403	18:21	0.0	0.0	29.1	0.0
Kanpur	400	425	01:32	402	18:09	0.0	0.0	18.7	0.0
Dadri	400	428	01:27	405	09:45	0.0	0.0	26.1	0.0
Ballabgarh	400	427	22:55	421	00:00	0.0	0.0	100.0	0.0
Bawana	400	431	01:32	408	09:45	0.0	0.0	33.8	0.3
Bassi	400	421	04:06	382	09:45	0.0	3.5	0.4	0.0
Hissar	400	419	03:05	394	09:45	0.0	0.0	0.0	0.0
Moga	400	427	01:28	400	09:48	0.0	0.0	15.9	0.0
Abdullapur	400	427	23:06	404	18:12	0.0	0.0	23.3	0.0
Nalagarh	400	427	01:28	401	16:36	0.0	0.0	30.7	0.0
Kishenpur	400	425	01:27	392	18:28	0.0	0.0	0.7	0.0
Wagoora	400	412	13:26	363	18:40	34.2	64.2	0.0	0.0

**VIII. Voltage profile 765 kV**

Station	Voltage Level (kV)	Maximum		Minimum		Voltage (in % of Time)			
		Voltage(KV)	Time	Voltage (KV)	Time	<728 kV	<742 kV	>800 kV	>820 kV
Fatehpur	765	780	00:51	752	14:40	0.0	0.0	0.0	0.0
Balia	765	767	06:33	719	16:38	7.3	30.1	0.0	0.0
Moga	765	797	01:28	747	09:45	0.0	0.0	0.0	0.0
Agra	765	820	03:05	766	09:52	0.0	0.0	37.9	0.0
Bhiwani	765	805	04:08	758	09:45	0.0	0.0	4.8	0.0
Unnao	765	777	06:34	735	19:19	0.0	15.8	0.0	0.0

**IX. 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	504.10	1272.20	497.00	983.40	135.84	429.34
Pong	426.72	384.05	413.64	622.40	412.28	577.87	67.68	455.67
Tehri	829.79	740.04	816.15	922.25	818.65	982.26	48.99	204.00
Koteshwar	612.50	598.50	610.30	4.95	NA	NA	204.00	181.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	44.62	43.74
Rihand	268.22	252.98	261.15	369.40	262.16	428.30	NA	NA
RPS	352.80	343.81	349.28	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	298.28	NA	NA	NA	NA	NA
RSD	527.91	487.91	512.54	144.00	518.15	144.00	54.85	137.22

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 23.12.2013 :**

1. Fog reported some part of Northern Region.

**XIII. Synchronisation of new generating units :**  
0.00

**XIV. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus //substation :**

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

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

Vishnuprayag (400MW) and Dhauliganga (280MW) are out of operation since 16.06.2013.  
Civil construction is in progress for rectification of the major damages in Plants/Dam caused due to flood  
Vishnuprayag and Dhauliganga expected by Mar, 2014 .