

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 12.12.2013  
Date of Reporting : 13.12.2013

### 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
36091	1940	38031	50.23	28965	0	28965	50.23	767.5	39.36

\* 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	41.64	11.15		52.79	45.91	48.70	2.79	101.49	0.00
Haryana	63.12	0.42		63.54	41.95	42.61	0.66	106.16	0.02
Rajasthan	101.34	4.84	3.86	110.03	79.93	77.84	-2.09	187.88	0.00
Delhi	14.66			14.66	42.32	44.55	2.23	59.21	0.31
UP	128.09	3.50	4.80	136.39	82.87	79.74	-3.13	216.13	35.35
Uttarakhand		11.00		11.00	19.39	19.13	-0.27	30.13	1.99
HP		5.03		5.03	18.10	19.52	1.42	24.55	0.00
J & K		5.89	0.00	5.89	28.84	32.67	3.83	38.55	1.70
Chandigarh				0.00	3.11	3.44	0.33	3.44	0.00
<b>Total</b>	<b>348.86</b>	<b>41.82</b>	<b>8.66</b>	<b>399.33</b>	<b>362.43</b>	<b>368.20</b>	<b>5.77</b>	<b>767.53</b>	<b>39.36</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	4740	0	-11	-327	3321	0	179	-401	-2.84	
Haryana	5512	0	-111	-714	3793	0	250	-748	-20.84	
Rajasthan	8174	0	-280	798	7035	0	-111	605	33.19	
Delhi	3200	0	173	-637	1370	0	-10	-1343	-22.57	
UP	9732	1765	165	240	9866	0	-31	1000	4.55	
Uttarakhand	1576	75	-1	423	1037	0	-99	369	8.86	
HP	1211	0	58	173	835	0	98	320	6.26	
J&K	1760	100	106	549	1619	0	175	463	9.34	
Chandigarh	185	0	-1	0	90	0	8	-20	-0.19	
<b>Total</b>	<b>36091</b>	<b>1940</b>	<b>99</b>	<b>506</b>	<b>28965</b>	<b>0</b>	<b>459</b>	<b>244</b>	<b>15.75</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	1945	2094	2098	46.98	1957	46.68	0.30	
	Rihand I STPS	1000	817	995	842	19.58	816	19.62	-0.03	
	Rihand II STPS	1000	925	1049	808	21.83	910	21.79	0.04	
	Rihand III STPS	1000	460	517	466	11.02	459	11.03	-0.01	
	Dadri I STPS	840	815	633	493	13.39	558	13.42	-0.04	
	Dadri II STPS	980	985	1032	821	22.26	928	22.50	-0.23	
	Unchahar I TPS	420	405	447	349	9.18	382	9.28	-0.11	
	Unchahar II TPS	420	404	439	315	8.96	373	9.09	-0.13	
	Unchahar III TPS	210	201	219	148	4.40	183	4.43	-0.03	
	ISTPP (Jhajjar)	1500	1480	622	625	14.54	606	14.76	-0.22	
	Dadri GPS	830	832	366	354	7.89	329	7.95	-0.06	
	Anta GPS	419	424	223	241	5.40	225	5.73	-0.33	
	Auraiya GPS	663	664	162	164	3.88	162	3.78	0.10	
	<b>Sub Total (A)</b>	<b>11282</b>	<b>10358</b>	<b>8798</b>	<b>7724</b>	<b>189.30</b>	<b>7888</b>	<b>190.06</b>	<b>-0.76</b>	
	B. NPC	NAPS	440	321	356	360	7.69	321	7.70	-0.01
		RAPS- B	440	418	462	465	10.08	420	10.03	0.04
RAPS- C		440	430	473	474	10.21	425	10.32	-0.11	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1169</b>	<b>1291</b>	<b>1299</b>	<b>27.98</b>	<b>1166</b>	<b>28.06</b>	<b>-0.08</b>	
C. NHPC	Chamera I HPS	540	540	540	0	1.72	72	1.70	0.02	
	Chamera II HPS	300	300	99	0	1.12	47	1.15	-0.03	
	Chamera III HPS	231	231	66	0	0.72	30	0.74	-0.03	
	Bairasuil HPS	180	182	10	0	0.46	19	0.50	-0.04	
	Salal-HPS	690	127	220	35	2.86	119	3.04	-0.19	
	Tanakpur-HPS	94	31	32	45	0.75	31	0.74	0.00	
	Uri-HPS	480	88	208	30	2.33	97	2.41	-0.09	
	Uri-II HPS	120	60	121	41	1.44	60	1.44	0.00	
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00	
	Dulhasti-HPS	390	258	185	0	3.00	125	3.06	-0.06	
	Sewa-II HPS	120	0	0	0	0.00	0	0.00	0.00	
	<b>Sub Total (C)</b>	<b>3425</b>	<b>1817</b>	<b>1481</b>	<b>151</b>	<b>14.39</b>	<b>600</b>	<b>14.80</b>	<b>-0.41</b>	
	D. NJPC	Nathpa Jhakri	1500	1080	1089	0	8.50	354	8.32	0.19
<b>Sub Total (D)</b>		<b>1500</b>	<b>1080</b>	<b>1089</b>	<b>0</b>	<b>8.50</b>	<b>354</b>	<b>8.32</b>	<b>0.19</b>	
E. THDC	Tehri HPS	1000	1060	1003	0	6.51	271	6.40	0.11	
	Koteshwar HPS	400	92	102	91	2.23	93	2.20	0.03	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1152</b>	<b>1105</b>	<b>91</b>	<b>8.74</b>	<b>364</b>	<b>8.60</b>	<b>0.14</b>	
F. BBMB	Bhakra HPS	1497	778	1017	483	18.66	778	18.67	0.00	
	Dehar HPS	990	124	330	0	2.88	120	2.98	-0.10	
	Pong HPS	396	312	372	186	7.55	315	7.49	0.06	
	<b>Sub Total (F)</b>	<b>2883</b>	<b>1214</b>	<b>1719</b>	<b>669</b>	<b>29.09</b>	<b>1212</b>	<b>29.13</b>	<b>-0.04</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.48	20	0.46	0.02	
	KWHEP HPS(IPP)	1000	0	360	0	4.65	194	4.68	-0.02	
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.00	0.00	
	Shree Cement TPS	300	0	280	149	5.52	230	5.60	-0.08	
	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>640</b>	<b>149</b>	<b>10.65</b>	<b>444</b>	<b>10.74</b>	<b>-0.09</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>23472</b>	<b>16789</b>	<b>16123</b>	<b>10083</b>	<b>288.65</b>	<b>12027</b>	<b>289.70</b>	<b>-1.05</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	800	750	18.80	784
	Guru Nanak Dev TPS(Bhatinda)	440	160	160	3.75	156
	Guru Hargobind Singh TPS(L.mbt)	920	943	876	19.09	795
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	1903	1786	41.64	1735
	Total Hydro	1148	470	408	11.15	465
	<b>Total Punjab</b>	<b>3768</b>	<b>2373</b>	<b>2194</b>	<b>52.79</b>	<b>2200</b>
Haryana	Panipat TPS	1367	839	781	18.99	791
	DCRTPP (Yamuna nagar)	600	332	256	6.68	278
	Faridabad GPS (NTPC)	432	0	0	0.00	0
	RGTPP (khedar) (IPP)	1200	593	504	12.30	513
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1237	744	25.15	1048
	Thermal (Total)	4944	3001	2285	63.12	2630
	Total Hydro	62	18	21	0.42	17
	<b>Total Haryana</b>	<b>5006</b>	<b>3019</b>	<b>2306</b>	<b>63.54</b>	<b>2648</b>
	Rajasthan	kota TPS	1240	1154	1099	27.24
suratgarh TPS		1500	1119	1012	25.75	1073
Chabra TPS		500	542	463	12.71	529
Dholpur GPS		330	46	139	1.72	72
Ramgarh GPS		111	159	133	3.27	136
RAPS A (NPC)		300	175	175	4.03	168
Barsingsar (NLC)		250	160	216	4.92	205
Giral LTPS		250	0	0	0.00	0
Rajwest LTPS (IPP)		1080	375	283	8.64	360
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	500	468	13.08	545
Thermal (Total)		6956	4230	3988	101.34	4223
Total Hydro		550	138	128	4.84	202
Wind power		2191	47	192	2.45	102
Biomass		91	21	21	0.51	21
Solar		201	5	0	0.90	37
Renewable/Others (Total)		2483	68	213	3.86	161
<b>Total Rajasthan</b>		<b>9989</b>	<b>4436</b>	<b>4329</b>	<b>110.03</b>	<b>4585</b>
UP		Anpara TPS	1630	1237	1237	28.70
	Obra TPS	1288	304	311	7.50	313
	Paricha TPS	1140	695	706	16.50	688
	Panki TPS	210	54	63	1.50	63
	Harduaganj TPS	665	450	446	10.80	450
	Tanda TPS (NTPC)	440	384	399	9.68	403
	Roza TPS (IPP)	1200	810	814	19.08	795
	Anpara-C (IPP)	1200	1077	1004	25.04	1043
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	402	403	9.30	387
	Thermal (Total)	8223	5413	5383	128.09	5337
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	133	154	3.50	146
	Cogeneration	981	200	200	4.80	200
	<b>Total UP</b>	<b>10131</b>	<b>5746</b>	<b>5737</b>	<b>136.39</b>	<b>5683</b>
Uttarakhand	Total Hydro	1303	603	341	11.00	458
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>603</b>	<b>341</b>	<b>11.00</b>	<b>458</b>
Delhi	Rajghat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	82	80	1.88	78
	Pragati Gas Turbine	330	316	268	7.32	305
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	0	0	0.00	0
	Badarpur TPS (NTPC)	705	210	180	5.47	228
	Thermal (Total)	2232	608	528	14.66	611
<b>Total Delhi</b>	<b>2232</b>	<b>608</b>	<b>528</b>	<b>14.66</b>	<b>611</b>	
HP	Baspa HPS (IPP)	330	49	0	1.21	50
	Malana HPS (IPP)	86	0	0	0.19	8
	Other Hydro	589	184	108	3.64	151
	<b>Total HP</b>	<b>1005</b>	<b>233</b>	<b>108</b>	<b>5.03</b>	<b>210</b>
J & K	Baglihar HPS (IPP)	450	246	116	3.45	144
	Other Hydro	323	90	116	2.44	102
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>336</b>	<b>232</b>	<b>5.89</b>	<b>245</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>17354</b>	<b>15775</b>	<b>399.33</b>	<b>16639</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>4071</b>	<b>3698</b>	<b>95.64</b>	<b>3985</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>37548</b>	<b>29556</b>	<b>783.62</b>	<b>32651</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	5754	911	65.86	2744
State Control Area Hydro	5368	1931	1392	41.82	1743
<b>Total Regional Hydro</b>	<b>15868</b>	<b>7685</b>	<b>2303</b>	<b>107.68</b>	<b>4486</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	-100	-300	0	300	0.00	3.52	-3.52
Gwalior-Agra (D/C)	1350	1322	1565	0	28.57	0.00	28.57
Zerda-Kankroli	-21	-134	66	189	0.00	0.79	-0.79
Zerda-Bhinmal	90	-21	205	126	1.81	0.00	1.81
Malanpur-Auraiya	-115	-71	0	124	0.00	2.39	-2.39
Badod-Kota/Morak	-52	-129	0	179	0.00	2.62	-2.62
Mundra-Mohindergarh(HVDC)	1699	1699	1705	0	39.69	0.00	39.69
<b>Sub Total WR</b>	<b>2851</b>	<b>2366</b>			<b>70.07</b>	<b>9.32</b>	<b>60.74</b>
Pusauli Bypass	193	182	0	405	5.14	0.00	5.14
MZP- GKP (D/C)	204	267	482	0	6.98	0.00	6.98
Patna-Balia(D/C)	494	449	701	0	11.92	0.00	11.92
B'Sharif-Balia (D/C)	193	182	405	0	5.15	0.00	5.15
Pusauli-Balia	19	32	77	42	0.51	0.27	0.24
Gaya-Fatehpur (765 Kv)	60	136	240	0	3.39	0.00	3.39
Pusauli-Sahupuri	89	114	151	0	2.91	0.00	2.91
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)	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1220</b>	<b>1332</b>			<b>36.00</b>	<b>1.11</b>	<b>34.90</b>
<b>Total IR Exch</b>	<b>4071</b>	<b>3698</b>			<b>106.07</b>	<b>10.43</b>	<b>95.64</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
27.10	0.56	27.66	16.91	-14.57	2.80	3.92	3.71	-3.71

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
51.08	39.95	91.03	34.90	60.74	95.64	-16.18	20.79	4.61

**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	0.00	1.40	89.50	3.10	88.10	57.50	10.50

<----- 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				
50.44	6.04	49.60	7.28	50.03	0.19	0.14	50.43	49.82

**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	20:14	403	10:21	0.0	0.0	0.0	0.0
Gorakhpur	400	426	00:00	412	17:42	0.0	0.0	24.2	0.0
Barailly	400	423	00:01	404	18:20	0.0	0.0	1.2	0.0
Kanpur	400	424	03:12	401	09:18	0.0	0.0	12.9	0.0
Dadri	400	425	03:08	402	10:26	0.0	0.0	22.4	0.0
Ballabgarh	400	433	03:08	406	10:09	0.0	0.0	54.3	37.2
Bawana	400	427	03:08	405	10:07	0.0	0.0	30.0	0.0
Bassi	400	423	04:02	387	09:18	0.0	4.4	1.6	0.0
Hissar	400	416	04:03	392	09:15	0.0	0.0	0.0	0.0
Moga	400	422	04:03	397	09:15	0.0	0.0	1.4	0.0
Abdullapur	400	425	04:03	401	10:14	0.0	0.0	16.6	0.0
Nalagarh	400	425	20:52	403	09:14	0.0	0.0	15.0	0.0
Kishenpur	400	416	00:00	393	18:07	0.0	0.0	0.0	0.0
Wagoora	400	412	08:53	366	18:15	8.2	30.5	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	784	21:00	751	11:00	0.0	0.0	0.0	0.0
Balia	765	762	06:04	735	09:18	0.0	24.4	0.0	0.0
Moga	765	791	04:03	743	09:17	0.0	0.0	0.0	0.0
Agra	765	817	20:00	768	09:16	0.0	0.0	26.1	0.0
Bhiwani	765	799	03:12	756	09:17	0.0	0.0	0.0	0.0
Unnao	765	766	19:59	735	09:18	0.0	9.3	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	505.73	1339.30	497.96	1018.16	186.49	561.01
Pong	426.72	384.05	415.05	680.86	413.60	622.40	61.67	455.99
Tehri	829.79	740.04	817.95	960.00	818.65	982.26	43.72	145.00
Koteshwar	612.50	598.50	610.10	4.60	NA	NA	145.00	148.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	44.08	46.72
Rihand	268.22	252.98	261.34	379.90	262.40	442.70	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	513.50	144.00	519.02	144.00	67.34	125.30

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 12.12.2013 :**

1. Mild Fog reported in some part of punjab near Patiala , Malerkotla , Amritshar, Kishenpur, Rest is Normal.

**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 .