

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 08.12.2013  
Date of Reporting : 09.12.2013

### 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
33755	1876	35631	50.23	28042	413	28454	50.25	740.5	47.52

\* 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	39.96	9.87		49.82	43.33	45.52	2.19	95.35	0.00
Haryana	60.62	0.43		61.05	39.18	40.34	1.16	101.39	0.03
Rajasthan	101.04	4.92	2.97	108.93	80.07	76.60	-3.47	185.53	0.00
Delhi	16.68			16.68	39.51	38.83	-0.68	55.51	0.00
UP	126.89	3.49	1.20	131.59	78.59	77.67	-0.92	209.25	44.14
Uttarakhand		9.80		9.80	19.07	19.38	0.31	29.18	1.25
HP		5.05		5.05	18.51	17.96	-0.55	23.01	0.40
J & K		5.94	0.00	5.94	29.60	32.31	2.71	38.25	1.70
Chandigarh				0.00	3.05	3.01	-0.04	3.01	0.00
<b>Total</b>	<b>345.20</b>	<b>39.50</b>	<b>4.17</b>	<b>388.86</b>	<b>350.91</b>	<b>351.62</b>	<b>0.71</b>	<b>740.49</b>	<b>47.52</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	4234	0	-224	-179	3289	0	204	-315	-2.56	
Haryana	5230	0	-178	-792	3453	23	288	-805	-22.22	
Rajasthan	7775	0	-413	576	6990	0	-194	897	34.33	
Delhi	2890	0	-202	-820	1371	0	-148	-1268	-24.61	
UP	9093	1700	-199	115	9471	390	58	1004	4.70	
Uttarakhand	1454	75	-68	412	1051	0	-3	354	8.71	
HP	1133	1	-54	174	769	0	35	300	6.50	
J&K	1789	100	119	549	1562	0	71	457	9.10	
Chandigarh	157	0	-14	0	87	0	7	-31	-0.22	
<b>Total</b>	<b>33755</b>	<b>1876</b>	<b>-1232</b>	<b>36</b>	<b>28042</b>	<b>413</b>	<b>317</b>	<b>595</b>	<b>13.73</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	1455	1589	1560	35.04	1460	34.92	0.12	
	Rihand I STPS	1000	839	991	778	19.82	826	19.79	0.03	
	Rihand II STPS	1000	895	1035	750	20.98	874	20.92	0.06	
	Rihand III STPS	1000	447	517	424	10.60	442	10.59	0.00	
	Dadri I STPS	840	815	637	480	11.93	497	13.11	-1.18	
	Dadri II STPS	980	985	939	708	20.62	859	21.07	-0.45	
	Unchahar I TPS	420	405	428	374	8.93	372	8.96	-0.03	
	Unchahar II TPS	420	404	422	370	8.60	358	8.83	-0.23	
	Unchahar III TPS	210	201	215	153	4.23	176	4.24	-0.01	
	ISTPP (Jhajjar)	1500	1480	620	629	14.40	600	14.53	-0.13	
	Dadri GPS	830	826	277	406	8.70	363	8.74	-0.04	
	Anta GPS	419	422	201	251	6.02	251	6.15	-0.12	
	Auraiya GPS	663	665	157	164	3.72	155	3.79	-0.07	
	<b>Sub Total (A)</b>	<b>11282</b>	<b>9839</b>	<b>8028</b>	<b>7047</b>	<b>173.59</b>	<b>7233</b>	<b>175.64</b>	<b>-2.05</b>	
	B. NPC	NAPS	440	359	355	360	7.74	322	8.62	-0.88
		RAPS- B	440	418	460	466	10.09	421	10.03	0.06
RAPS- C		440	430	475	477	10.25	427	10.32	-0.07	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1207</b>	<b>1290</b>	<b>1303</b>	<b>28.08</b>	<b>1170</b>	<b>28.97</b>	<b>-0.89</b>	
C. NHPC	Chamera I HPS	540	360	180	0	1.81	75	1.75	0.06	
	Chamera II HPS	300	300	78	0	1.14	47	1.19	-0.05	
	Chamera III HPS	231	231	128	0	0.66	27	0.65	0.01	
	Bairasuil HPS	180	182	20	0	0.43	18	0.50	-0.07	
	Salal-HPS	690	120	230	60	2.31	96	2.88	-0.57	
	Tanakpur-HPS	94	31	29	34	0.78	33	0.74	0.04	
	Uri-HPS	480	87	225	28	2.40	100	2.47	-0.07	
	Uri-II HPS	120	61	101	40	1.42	59	1.46	-0.04	
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00	
	Dulhasti-HPS	390	258	83	0	2.98	124	3.04	-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>1630</b>	<b>1074</b>	<b>162</b>	<b>13.93</b>	<b>580</b>	<b>14.67</b>	<b>-0.75</b>	
	D. NJPC	Nathpa Jhakri	1500	1350	1087	0	8.54	356	8.69	-0.15
<b>Sub Total (D)</b>		<b>1500</b>	<b>1350</b>	<b>1087</b>	<b>0</b>	<b>8.54</b>	<b>356</b>	<b>8.69</b>	<b>-0.15</b>	
E. THDC	Tehri HPS	1000	1060	1008	0	6.47	270	6.40	0.07	
	Koteshwar HPS	400	92	100	90	2.21	92	2.20	0.01	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1152</b>	<b>1108</b>	<b>90</b>	<b>8.68</b>	<b>362</b>	<b>8.60</b>	<b>0.08</b>	
F. BBMB	Bhakra HPS	1497	739	1011	510	18.00	750	17.73	0.27	
	Dehar HPS	990	139	330	0	3.45	144	3.33	0.13	
	Pong HPS	396	311	372	186	7.72	322	7.46	0.26	
	<b>Sub Total (F)</b>	<b>2883</b>	<b>1188</b>	<b>1713</b>	<b>696</b>	<b>29.17</b>	<b>1215</b>	<b>28.52</b>	<b>0.65</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	3	0	0.43	18	0.42	0.02	
	KWHEP HPS(IPP)	1000	0	347	0	4.54	189	4.56	-0.02	
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.00	0.00	
	Shree Cement TPS	300	0	279	156	5.48	228	5.02	0.46	
	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>629</b>	<b>156</b>	<b>10.45</b>	<b>435</b>	<b>10.00</b>	<b>0.45</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>23472</b>	<b>16366</b>	<b>14929</b>	<b>9454</b>	<b>272.44</b>	<b>11352</b>	<b>275.09</b>	<b>-2.64</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	750	750	17.98	749	
	Guru Nanak Dev TPS(Bhatinda)	440	160	160	3.58	149	
	Guru Hargobind Singh TPS(L.mbt)	920	930	735	18.40	767	
	Goindwal(GVK)		0	0	0.00	0	
	Thermal (Total)	2620	1840	1645	39.96	1665	
	Total Hydro	1148	419	430	9.87	411	
	<b>Total Punjab</b>	<b>3768</b>	<b>2259</b>	<b>2075</b>	<b>49.82</b>	<b>2076</b>	
Haryana	Panipat TPS	1367	1831	611	16.69	696	
	DCRTPP (Yamuna nagar)	600	279	254	6.06	252	
	Faridabad GPS (NTPC)	432	201	166	4.21	175	
	RGTPP (khedar) (IPP)	1200	587	503	12.13	505	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Jhajjar(CLP)	1320	1103	746	21.54	898	
	Thermal (Total)	4944	4001	2280	60.62	2526	
	Total Hydro	62	18	17	0.43	18	
	<b>Total Haryana</b>	<b>5006</b>	<b>4019</b>	<b>2297</b>	<b>61.05</b>	<b>2544</b>	
	Rajasthan	kota TPS	1240	1096	1092	26.90	1121
		suratgarh TPS	1500	1020	1000	24.86	1036
Chabra TPS		500	506	473	11.74	489	
Dholpur GPS		330	105	105	2.67	111	
Ramgarh GPS		111	154	162	3.46	144	
RAPS A (NPC)		300	175	175	4.03	168	
Barsingsar (NLC)		250	221	219	5.16	215	
Giral LTPS		250	58	58	1.15	48	
Rajwest LTPS (IPP)		1080	303	301	8.18	341	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Kalisindh Thermal		600	0	0	0.00	0	
Kawai(Adani)		660	478	481	12.90	537	
Thermal (Total)		6956	4116	4066	101.04	4210	
Total Hydro		550	285	89	4.92	205	
Wind power		2191	27	68	1.85	77	
Biomass		91	13	13	0.31	13	
Solar		201	8	0	0.81	34	
Renewable/Others (Total)		2483	40	81	2.97	124	
<b>Total Rajasthan</b>		<b>9989</b>	<b>4441</b>	<b>4236</b>	<b>108.93</b>	<b>4539</b>	
UP		Anpara TPS	1630	1150	1265	28.80	1200
	Obra TPS	1288	291	295	7.30	304	
	Paricha TPS	1140	744	727	18.30	763	
	Panki TPS	210	54	63	1.50	63	
	Harduaganj TPS	665	446	455	10.90	454	
	Tanda TPS (NTPC)	440	398	360	9.67	403	
	Roza TPS (IPP)	1200	1071	1080	23.98	999	
	Anpara-C (IPP)	1200	1023	528	17.82	743	
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	402	401	8.62	359	
	Thermal (Total)	8223	5579	5174	126.89	5287	
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0	
	Other Hydro	527	148	170	3.49	146	
	Cogeneration	981	50	50	1.20	50	
	<b>Total UP</b>	<b>10131</b>	<b>5777</b>	<b>5394</b>	<b>131.59</b>	<b>5483</b>	
	Uttarakhand	Total Hydro	1303	559	266	9.80	408
<b>Total Uttarakhand</b>		<b>1303</b>	<b>559</b>	<b>266</b>	<b>9.80</b>	<b>408</b>	
Delhi	Raighat TPS	135	0	0	0.00	0	
	Delhi Gas Turbine	282	83	81	1.92	80	
	Pragati Gas Turbine	330	316	262	7.00	292	
	Riithala GPS	95	0	0	0.00	0	
	Bawana GPS	686	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	385	355	7.76	323	
	Thermal (Total)	2232	784	698	16.68	695	
	<b>Total Delhi</b>	<b>2232</b>	<b>784</b>	<b>698</b>	<b>16.68</b>	<b>695</b>	
HP	Baspa HPS (IPP)	330	56	0	1.13	47	
	Malana HPS (IPP)	86	0	0	0.22	9	
	Other Hydro	589	188	115	3.71	155	
	<b>Total HP</b>	<b>1005</b>	<b>244</b>	<b>115</b>	<b>5.05</b>	<b>211</b>	
J & K	Baglihar HPS (IPP)	450	248	120	3.50	146	
	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>338</b>	<b>236</b>	<b>5.94</b>	<b>247</b>	
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>18421</b>	<b>15317</b>	<b>388.86</b>	<b>16203</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>2221</b>	<b>4087</b>	<b>86.64</b>	<b>3610</b>	
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>35571</b>	<b>28858</b>	<b>747.94</b>	<b>31164</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	5332	948	65.29	2720
State Control Area Hydro	5368	2011	1323	39.50	1646
<b>Total Regional Hydro</b>	<b>15868</b>	<b>7343</b>	<b>2271</b>	<b>104.79</b>	<b>4366</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	0	200	0.00	4.91	-4.91
Gwalior-Agra (D/C)	670	1148	1366	0	21.41	0.00	21.41
Zerda-Kankroli	-92	-158	64	228	0.00	1.93	-1.93
Zerda-Bhinmal	16	-34	236	150	0.83	0.00	0.83
Malanpur-Auraiya	-102	-79	0	170	0.00	2.84	-2.84
Badod-Kota/Morak	-96	-148	0	196	0.00	2.84	-2.84
Mundra-Mohindergarh(HVDC)	1402	1701	1704	0	38.35	0.00	38.35
<b>Sub Total WR</b>	<b>1598</b>	<b>2230</b>			<b>60.59</b>	<b>12.52</b>	<b>48.07</b>
Pusauli Bypass	200	200	200	0	4.80	0.00	4.80
MZP- GKP (D/C)	54	400	661	0	8.56	0.00	8.56
Patna-Balia(D/C)	250	620	735	0	13.97	0.00	13.97
B'Sharif-Balia (D/C)	47	417	388	0	5.30	0.00	5.30
Pusauli-Balia	-104	-29	0	104	0.00	1.04	-1.04
Gaya-Fatehpur (765 Kv)	81	164	407	0	5.22	0.00	5.22
Pusauli-Sahupuri	127	115	135	0	2.60	0.00	2.60
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>623</b>	<b>1857</b>			<b>40.45</b>	<b>1.88</b>	<b>38.57</b>
<b>Total IR Exch</b>	<b>2221</b>	<b>4087</b>			<b>101.04</b>	<b>14.40</b>	<b>86.64</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
33.24	0.66	33.90	15.50	-16.58	6.26	2.84	4.11	-4.11

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
59.77	35.40	95.17	38.57	48.07	86.64	-21.20	12.67	-8.54

**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	1.30	86.60	5.30	85.30	62.80	13.40

<----- Frequency (Hz) ----->				Average Frequency Hz	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block	
Maximum		Minimum					MAX (Hz)	MIN (Hz)
Freq	Time	Freq	Time	Hz	Index			
50.45	4.06	49.62	9.24	50.04	0.23	0.15	50.42	49.78

**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	417	21:56	407	07:13	0.0	0.0	0.0	0.0
Gorakhpur	400	428	07:08	409	12:35	0.0	0.0	42.5	0.0
Barilly	400	426	20:45	403	14:49	0.0	0.0	22.5	0.0
Kanpur	400	427	21:56	412	17:53	0.0	0.0	57.7	0.0
Dadri	400	427	04:03	405	11:18	0.0	0.0	29.8	0.0
Ballabgarh	400	436	04:05	410	10:18	0.0	0.0	62.8	11.3
Bawana	400	430	04:03	407	12:10	0.0	0.0	40.1	0.0
Bassi	400	424	20:44	407	15:38	0.0	0.0	21.7	0.0
Hissar	400	419	04:05	394	12:12	0.0	0.0	0.0	0.0
Moga	400	423	04:05	397	12:10	0.0	0.0	6.8	0.0
Abdullapur	400	426	03:03	405	12:12	0.0	0.0	13.2	0.0
Nalagarh	400	430	03:01	404	12:10	0.0	0.0	28.8	0.0
Kishenpur	400	419	23:54	395	12:09	0.0	0.0	0.0	0.0
Wagoora	400	409	15:03	374	18:47	7.3	41.6	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	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Balia	765	767	04:05	730	10:18	0.0	23.2	0.0	0.0
Moga	765	793	04:05	746	12:10	0.0	0.0	0.0	0.0
Agra	765	821	04:07	767	10:18	0.0	0.0	35.9	0.1
Bhiwani	765	804	04:05	759	12:10	0.0	0.0	2.0	0.0
Unnao	765	772	21:56	740	11:16	0.0	0.7	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	507.14	1411.35	499.33	1064.89	172.73	519.90
Pong	426.72	384.05	416.19	718.14	414.64	656.23	55.67	445.54
Tehri	829.79	740.04	819.30	986.00	818.65	982.26	48.96	144.00
Koteshwar	612.50	598.50	609.05	4.56	NA	NA	144.00	148.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	55.46	48.42
Rihand	268.22	252.98	261.52	390.50	262.65	457.50	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	514.28	144.00	520.13	144.00	63.74	122.36

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 08.12.2013 :**

1. Normal weather in 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 .

Report for : 08.12.2013

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER