

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 24.11.2013

Date of Reporting : 25.11.2013

### I. Regional Availability/Demand:

Demand Met	Evening Peak (19:00 Hrs) MW			Demand Met	Off Peak (03:00 Hrs) MW			Day Energy (Net MU)	
	Shortage	Requirement	Freq* (Hz)		Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage
31993	2427	34419	50.19	27611	1375	28986	50.17	705.9	62.55

\* 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	43.45	10.27		53.72	31.02	33.16	2.15	86.89	1.34
Haryana	66.95	0.61		67.56	24.63	28.62	3.99	96.18	0.47
Rajasthan	97.71	4.71	3.95	106.37	72.80	70.34	-2.46	176.71	0.18
Delhi	15.53			15.53	39.51	38.42	-1.10	53.94	1.18
UP	120.66	3.27	1.20	125.13	71.79	76.69	4.90	201.82	55.34
Uttarakhand		8.01		8.01	19.81	21.09	1.28	29.10	1.93
HP		6.59		6.59	15.49	15.08	-0.41	21.67	0.43
J & K		7.10	0.00	7.10	27.70	29.58	1.89	36.68	1.70
Chandigarh				0.00	3.09	2.95	-0.14	2.95	0.00
<b>Total</b>	<b>344.30</b>	<b>40.55</b>	<b>5.15</b>	<b>390.01</b>	<b>305.82</b>	<b>315.92</b>	<b>10.10</b>	<b>705.93</b>	<b>62.55</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	3979	0	-7	-481	3383	0	202	-631	-10.99
Haryana	5024	50	254	-1030	3899	0	655	-1041	-29.27
Rajasthan	7432	0	-285	660	6715	0	-61	1162	32.50
Delhi	2858	0	-64	-584	1377	0	-52	-1185	-20.74
UP	8290	2190	-373	-259	8970	1375	593	-259	-7.33
Uttarakhand	1494	75	40	458	1086	0	48	414	9.47
HP	1081	12	-63	-5	738	0	64	246	3.63
J&K	1674	100	-110	466	1358	0	2	383	7.63
Chandigarh	162	0	-13	0	85	0	-6	-5	-0.05
<b>Total</b>	<b>31993</b>	<b>2427</b>	<b>-622</b>	<b>-775</b>	<b>27611</b>	<b>1375</b>	<b>1445</b>	<b>-916</b>	<b>-15.16</b>

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

### III. Regional Entities :

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
<b>A. NTPC</b>								
Singrauli STPS	2000	1945	2080	2082	46.57	1941	46.68	-0.11
Rihand I STPS	1000	868	982	933	20.86	869	20.82	0.03
Rihand II STPS	1000	911	1044	963	22.01	917	21.87	0.14
Rihand III STPS	1000	447	503	473	10.79	450	10.73	0.07
Dadri I STPS	840	814	647	470	12.70	529	12.91	-0.22
Dadri II STPS	980	985	938	735	21.59	900	21.98	-0.39
Unchahar I TPS	420	405	435	408	9.47	395	9.50	-0.02
Unchahar II TPS	420	404	431	436	9.48	395	9.45	0.02
Unchahar III TPS	210	201	217	177	4.55	189	4.57	-0.02
ISTPP (Jhajjar)	1500	1480	717	631	15.15	631	15.38	-0.23
Dadri GPS	830	823	165	167	4.39	183	4.67	-0.28
Anta GPS	419	414	266	232	6.11	255	6.22	-0.11
Auraiya GPS	663	656	157	162	3.69	154	3.84	-0.15
<b>Sub Total (A)</b>	<b>11282</b>	<b>10353</b>	<b>8582</b>	<b>7869</b>	<b>187.35</b>	<b>7806</b>	<b>188.62</b>	<b>-1.28</b>
<b>B. NPC</b>								
NAPS	440	316	352	358	7.66	319	7.58	0.08
RAPS- B	440	417	461	464	10.07	420	10.01	0.06
RAPS- C	440	430	476	478	10.21	425	10.32	-0.11
<b>Sub Total (B)</b>	<b>1320</b>	<b>1163</b>	<b>1289</b>	<b>1300</b>	<b>27.94</b>	<b>1164</b>	<b>27.91</b>	<b>0.03</b>
<b>C. NHPC</b>								
Chamera I HPS	540	541	360	0	2.08	87	2.05	0.03
Chamera II HPS	300	300	199	0	1.19	49	1.37	-0.18
Chamera III HPS	231	231	92	0	0.77	32	0.80	-0.03
Bairasuil HPS	180	182	20	0	0.55	23	0.57	-0.02
Salal-HPS	690	119	306	115	3.10	129	2.85	0.25
Tanakpur-HPS	94	36	43	33	0.91	38	0.89	0.02
Uri-HPS	480	110	209	45	3.00	125	2.98	0.02
Uri-II HPS	120	65	101	40	1.74	72	1.57	0.17
Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00
Dulhasti-HPS	390	387	397	0	3.33	139	3.34	-0.02
Sewa-II HPS	120	119	105	0	0.28	12	0.38	-0.10
<b>Sub Total (C)</b>	<b>3425</b>	<b>2090</b>	<b>1832</b>	<b>233</b>	<b>16.94</b>	<b>706</b>	<b>16.80</b>	<b>0.13</b>
<b>D. NJPC</b>								
Nathpa Jhakri	1500	1605	1601	0	9.08	378	9.20	-0.12
<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1601</b>	<b>0</b>	<b>9.08</b>	<b>378</b>	<b>9.20</b>	<b>-0.12</b>
<b>E. THDC</b>								
Tehri HPS	1000	1060	1005	0	7.52	313	7.40	0.12
Koteshwar HPS	400	92	90	90	2.24	93	2.20	0.04
<b>Sub Total (E)</b>	<b>1400</b>	<b>1152</b>	<b>1095</b>	<b>90</b>	<b>9.76</b>	<b>407</b>	<b>9.60</b>	<b>0.16</b>
<b>F. BBMB</b>								
Bhakra HPS	1497	583	956	377	14.06	586	13.98	0.08
Dehar HPS	990	159	330	0	4.03	168	3.82	0.21
Pong HPS	396	235	306	120	5.73	239	5.63	0.10
<b>Sub Total (F)</b>	<b>2883</b>	<b>976</b>	<b>1592</b>	<b>497</b>	<b>23.82</b>	<b>993</b>	<b>23.43</b>	<b>0.39</b>
<b>G. IPP(s)/JV(s)</b>								
ADHPL HPS(IPP)	192	0	0	0	0.57	24	0.55	0.02
KWHEP HPS(IPP)	1000	0	297	0	4.88	203	4.92	-0.04
Malana Stg-II HPS	100	0	0	0	0.00	0	0.00	0.00
Shree Cement TPS	300	0	115	85	2.56	107	2.49	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>412</b>	<b>85</b>	<b>8.02</b>	<b>334</b>	<b>7.96</b>	<b>0.06</b>
<b>H. Total Regional Entities (A-G)</b>	<b>23472</b>	<b>17339</b>	<b>16403</b>	<b>10074</b>	<b>282.90</b>	<b>11787</b>	<b>283.52</b>	<b>-0.63</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	790	1050	20.57	857
	Guru Nanak Dev TPS(Bhatinda)	440	170	230	4.07	170
	Guru Hargobind Singh TPS(L.mbt)	920	658	926	18.81	784
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	1618	2206	43.45	1811
	Total Hydro	1148	293	453	10.27	428
<b>Total Punjab</b>	<b>3768</b>	<b>1911</b>	<b>2659</b>	<b>53.72</b>	<b>2239</b>	
Haryana	Panipat TPS	1367	453	424	10.52	438
	DCRTPP (Yamuna nagar)	600	526	495	12.17	507
	Faridabad GPS (NTPC)	432	201	167	4.60	192
	RGTPP (khedar) (IPP)	1200	592	508	13.46	561
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1114	744	26.21	1092
	Thermal (Total)	4944	2886	2338	66.95	2790
	Total Hydro	62	24	29	0.61	25
	<b>Total Haryana</b>	<b>5006</b>	<b>2910</b>	<b>2367</b>	<b>67.56</b>	<b>2815</b>
	Rajasthan	kota TPS	1240	1100	1153	26.85
suratgarh TPS		1500	1028	1134	25.61	1067
Chabra TPS		500	382	223	6.53	272
Dholpur GPS		330	103	102	2.54	106
Ramgarh GPS		111	161	164	3.56	148
RAPS A (NPC)		300	175	175	4.00	167
Barsingsar (NLC)		250	217	221	5.21	217
Giral LTPS		250	0	0	0.00	0
Rajwest LTPS (IPP)		1080	399	336	10.20	425
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	494	490	13.22	551
Thermal (Total)		6956	4059	3998	97.71	4071
Total Hydro		550	166	171	4.71	196
Wind power		2191	88	119	2.53	105
Biomass		91	29	29	0.71	29
Solar		201	5	0	0.72	30
Renewable/Others (Total)		2483	117	148	3.95	165
<b>Total Rajasthan</b>		<b>9989</b>	<b>4342</b>	<b>4317</b>	<b>106.37</b>	<b>4432</b>
UP		Anpara TPS	1630	1327	1386	29.50
	Obra TPS	1288	322	319	7.00	292
	Paricha TPS	1140	690	734	15.30	638
	Panki TPS	210	0	0	0.17	7
	Harduaganj TPS	665	234	489	9.30	388
	Tanda TPS (NTPC)	440	297	397	8.11	338
	Roza TPS (IPP)	1200	1080	1085	25.96	1082
	Anpara-C (IPP)	1200	563	877	15.89	662
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	403	404	9.44	393
	Thermal (Total)	8223	4916	5691	120.66	5028
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	123	143	3.27	136
	Cogeneration	981	50	50	1.20	50
	<b>Total UP</b>	<b>10131</b>	<b>5089</b>	<b>5884</b>	<b>125.13</b>	<b>5214</b>
	Uttarakhand	Total Hydro	1303	410	224	8.01
<b>Total Uttarakhand</b>		<b>1303</b>	<b>410</b>	<b>224</b>	<b>8.01</b>	<b>334</b>
Delhi	Rajghat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	82	81	1.75	73
	Pragati Gas Turbine	330	270	264	7.08	295
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	0	0	0.00	0
	Badarpur TPS (NTPC)	705	280	320	6.70	279
	Thermal (Total)	2232	632	665	15.53	647
<b>Total Delhi</b>	<b>2232</b>	<b>632</b>	<b>665</b>	<b>15.53</b>	<b>647</b>	
HP	Baspa HPS (IPP)	330	60	30	1.58	66
	Malana HPS (IPP)	86	0	0	0.21	9
	Other Hydro	589	248	128	4.80	200
	<b>Total HP</b>	<b>1005</b>	<b>308</b>	<b>158</b>	<b>6.59</b>	<b>275</b>
J & K	Baglihar HPS (IPP)	450	294	126	4.52	188
	Other Hydro	323	90	115	2.58	107
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>384</b>	<b>241</b>	<b>7.10</b>	<b>296</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>15986</b>	<b>16515</b>	<b>390.01</b>	<b>16250</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>1947</b>	<b>1863</b>	<b>46.81</b>	<b>1950</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>34336</b>	<b>28452</b>	<b>719.72</b>	<b>29988</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	6417	820	65.05	2710
State Control Area Hydro	5368	1708	1419	40.55	1690
<b>Total Regional Hydro</b>	<b>15868</b>	<b>8125</b>	<b>2239</b>	<b>105.60</b>	<b>4400</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	-150	-150	0	500	0.00	5.00	-5.00
Gwalior-Agra (D/C)	509	98	624	0	0.95	0.00	0.95
Zerda-Kankroli	-233	-298	0	389	0.00	5.88	-5.88
Zerda-Bhinmal	-124	-163	5	343	0.00	3.03	-3.03
Malanpur-Auraiya	-167	-150	0	194	0.00	3.89	-3.89
Badod-Kota/Morak	-147	-187	0	257	0.00	4.52	-4.52
Mundra-Mohindergarh(HVDC)	1099	1101	1106	0	26.63	0.00	26.63
<b>Sub Total WR</b>	<b>787</b>	<b>251</b>			<b>27.58</b>	<b>22.32</b>	<b>5.26</b>
Pusauli Bypass	-200	-200	0	200	0.00	4.84	-4.84
MZP- GKP (D/C)	302	527	658	0	12.46	0.00	12.46
Patna-Balia(D/C)	504	578	805	0	14.89	0.00	14.89
B'Sharif-Balia (D/C)	310	304	621	0	9.44	0.00	9.44
Pusauli-Balia	48	58	167	0	1.83	0.00	1.83
Gaya-Fatehpur (765 Kv)	114	264	396	0	6.11	0.00	6.11
Pusauli-Sahupuri	116	110	135	0	2.62	0.00	2.62
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-34	-29	0	38	0.00	0.95	-0.95
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>1160</b>	<b>1612</b>			<b>47.34</b>	<b>5.79</b>	<b>41.55</b>
<b>Total IR Exch</b>	<b>1947</b>	<b>1863</b>			<b>74.92</b>	<b>28.11</b>	<b>46.81</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
33.90	0.91	34.82	3.56	-30.11	12.32	-5.81	2.95	-2.94

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
53.64	-14.17	39.47	41.55	5.26	46.81	-12.09	19.43	7.34

**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	0.00	0.10	97.81	0.10	97.81	77.30	2.09

<----- 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				
50.39	17.06	49.78	7.30	50.09	0.19	0.08	50.30	49.92

**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	411	21:32	403	07:30	0.0	0.0	0.0	0.0
Gorakhpur	400	431	21:46	416	10:50	0.0	0.0	61.7	1.6
Barailly	400	424	21:34	409	00:04	0.0	0.0	5.2	0.0
Kanpur	400	426	20:57	407	09:43	0.0	0.0	8.3	0.0
Dadri	400	426	03:02	409	10:14	0.0	0.0	25.6	0.0
Ballabgarh	400	433	03:02	414	10:13	0.0	0.0	73.5	7.4
Bawana	400	427	04:01	408	11:00	0.0	0.0	0.0	0.0
Bassi	400	428	20:56	397	09:40	0.0	0.0	14.1	0.0
Hissar	400	419	03:04	399	10:14	0.0	0.0	0.0	0.0
Moga	400	425	03:02	406	09:48	0.0	0.0	8.5	0.0
Abdullapur	400	425	03:17	408	09:31	0.0	0.0	10.6	0.0
Nalagarh	400	428	20:55	413	18:10	0.0	0.0	39.3	0.0
Kishenpur	400	423	03:00	399	18:08	0.0	0.0	1.8	0.0
Wagoora	400	421	13:01	380	18:23	0.0	21.4	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	778	20:00	749	09:00	0.0	0.0	0.0	0.0
Balia	765	768	20:56	733	10:19	0.0	19.2	0.0	0.0
Moga	765	796	03:04	760	09:50	0.0	0.0	0.0	0.0
Agra	765	816	20:56	773	09:43	0.0	0.0	21.2	0.0
Bhiwani	765	803	03:16	768	10:15	0.0	0.0	3.7	0.0
Unnao	765	771	20:56	0	10:06	44.5	44.5	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	508.67	1485.27	50.13	1153.36	202.69	390.04
Pong	426.72	384.05	417.72	781.19	416.46	730.66	61.93	336.15
Tehri	829.79	740.04	821.25	1028.66	818.65	982.26	81.28	165.00
Koteshwar	612.50	598.50	609.10	4.10	NA	NA	165.00	148.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	58.37	63.65
Rihand	268.22	252.98	261.82	407.50	262.98	478.20	NA	NA
RPS	352.80	343.81	352.88	NA	NA	NA	243.01	12.15
Jawahar Sagar	298.70	295.78	298.61	NA	NA	NA	253.41	163.81
RSD	527.91	487.91	516.48	144.00	520.95	144.00	86.28	222.34

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 24.11.2013 :**

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 .