

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 31.01.2014  
Date of Reporting : 01.02.2014

### 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
36638	989	37627	49.97	27024	29	27052	50.09	772.8	27.69

\* 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	46.10	8.57		54.67	30.52	31.57	1.05	86.24	0.00
Haryana	53.03	0.45		53.48	48.45	49.52	1.06	103.00	0.08
Rajasthan	111.47	0.00	5.74	117.21	68.83	69.22	0.39	186.43	0.00
Delhi	24.11			24.11	43.02	41.39	-1.63	65.50	0.05
UP	125.97	2.83	16.80	145.60	86.78	82.74	-4.04	228.34	25.04
Uttarakhand		7.34		7.34	23.74	26.41	2.67	33.74	0.76
HP		4.08		4.08	20.46	21.08	0.63	25.16	0.07
J & K		5.78	0.00	5.78	33.24	34.84	1.60	40.63	1.70
Chandigarh				0.00	3.09	3.80	0.71	3.80	0.00
<b>Total</b>	<b>360.68</b>	<b>29.04</b>	<b>22.54</b>	<b>412.27</b>	<b>358.13</b>	<b>360.57</b>	<b>2.43</b>	<b>772.83</b>	<b>27.69</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	4514	0	37	-418	2840	0	35	-29	-7.44	
Haryana	5628	10	62	-316	3375	29	280	-597	-13.74	
Rajasthan	7908	0	145	203	6812	0	5	546	23.47	
Delhi	3443	4	86	-805	1318	0	-122	-1603	-23.43	
UP	10319	795	-345	883	9012	0	-219	586	13.03	
Uttarakhand	1711	80	124	516	1155	0	-9	579	13.39	
HP	1161	0	-43	398	804	0	17	427	9.60	
J&K	1760	100	-9	532	1616	0	25	683	13.28	
Chandigarh	194	0	3	0	91	0	16	-10	-0.10	
<b>Total</b>	<b>36638</b>	<b>989</b>	<b>61</b>	<b>994</b>	<b>27024</b>	<b>29</b>	<b>27</b>	<b>583</b>	<b>28.06</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	1950	2096	1900	46.58	1941	46.30	0.28	
	Rihand I STPS	1000	945	1028	745	21.05	877	20.92	0.13	
	Rihand II STPS	1000	985	1042	752	22.22	926	22.09	0.13	
	Rihand III STPS	1000	-20	0	0	0.00	0	-0.34	0.34	
	Dadri I STPS	840	815	875	626	18.03	751	18.14	-0.10	
	Dadri II STPS	980	985	1020	726	21.56	898	21.75	-0.19	
	Unchahar I TPS	420	406	443	322	8.66	361	8.69	-0.03	
	Unchahar II TPS	420	405	441	308	8.58	358	8.61	-0.02	
	Unchahar III TPS	210	202	219	155	4.29	179	4.30	-0.02	
	ISTPP (Jhajjar)	1500	1500	833	638	15.16	632	15.35	-0.19	
	Dadri GPS	830	849	413	271	8.26	344	8.36	-0.10	
	Anta GPS	419	427	273	208	5.98	249	6.07	-0.09	
	Auraiya GPS	663	679	328	147	4.68	195	4.74	-0.05	
	<b>Sub Total (A)</b>	<b>11282</b>	<b>10129</b>	<b>9011.11</b>	<b>6798</b>	<b>185.04</b>	<b>7710</b>	<b>184.96</b>	<b>0.08</b>	
	B. NPC	NAPS	440	299	337	340	7.17	299	7.18	-0.01
		RAPS- B	440	422	463	464	10.09	420	10.13	-0.04
RAPS- C		440	430	475	475	10.28	428	10.32	-0.04	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1151</b>	<b>1275</b>	<b>1279</b>	<b>27.53</b>	<b>1147</b>	<b>27.62</b>	<b>-0.09</b>	
C. NHPC	Chamera I HPS	540	541	360	0	1.69	71	1.65	0.04	
	Chamera II HPS	300	225	200	0	1.16	48	1.06	0.10	
	Chamera III HPS	231	0	0	0	0.00	0	0.00	0.00	
	Bairasuil HPS	180	122	122	0	0.61	25	0.60	0.00	
	Salal-HPS	690	112	230	35	2.78	116	2.58	0.20	
	Tanakpur-HPS	94	0	0	0	0.00	0	0.00	0.00	
	Uri-HPS	480	134	306	44	3.22	134	3.16	0.06	
	Uri-II HPS	180	82	121	60	1.91	80	2.05	-0.14	
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00	
	Dulhasti-HPS	390	258	273	0	2.58	107	2.36	0.21	
	Sewa-II HPS	120	119	125	0	0.70	29	0.65	0.05	
	<b>Sub Total (C)</b>	<b>3485</b>	<b>1593</b>	<b>1737</b>	<b>139</b>	<b>14.64</b>	<b>610</b>	<b>14.12</b>	<b>0.53</b>	
D. NJPC	Nathpa Jhakri	1500	1605	1341	0	6.68	278	6.92	-0.24	
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1341</b>	<b>0</b>	<b>6.68</b>	<b>278</b>	<b>6.92</b>	<b>-0.24</b>	
E. THDC	Tehri HPS	1000	960	960	0	6.79	283	6.70	0.09	
	Koteshwar HPS	400	106	201	90	2.57	107	2.54	0.04	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1066</b>	<b>1161</b>	<b>90</b>	<b>9.37</b>	<b>390</b>	<b>9.24</b>	<b>0.13</b>	
F. BBMB	Bhakra HPS	1497	664	1001	510	16.26	678	15.94	0.32	
	Dehar HPS	990	104	330	0	2.63	110	2.49	0.14	
	Pong HPS	396	171	312	60	4.21	175	4.11	0.10	
	<b>Sub Total (F)</b>	<b>2883</b>	<b>939</b>	<b>1643</b>	<b>570</b>	<b>23.10</b>	<b>963</b>	<b>22.54</b>	<b>0.56</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	1	0	0.34	14	0.32	0.01	
	KWHEP HPS(IPP)	1000	0	373	0	3.60	150	3.60	0.00	
	Malana Stg-II HPS	100	0	0	0	0.12	5	0.11	0.01	
	Shree Cement TPS	300	0	235	239	6.10	254	6.18	-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>609</b>	<b>239</b>	<b>10.16</b>	<b>423</b>	<b>10.21</b>	<b>-0.06</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>23532</b>	<b>16482</b>	<b>16777</b>	<b>9115</b>	<b>276.52</b>	<b>11522</b>	<b>275.62</b>	<b>0.90</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	640	640	14.38	599
	Guru Nanak Dev TPS(Bhatinda)	440	80	80	1.75	73
	Guru Hargobind Singh TPS(L.mbt)	920	951	650	18.15	756
	Goindwal(GVK)		0	0	0.00	0
	Rajpura	700	354	601	11.81	492
	Talwandi Saboo	660	0	0	0.00	0
	Thermal (Total)	3980	2025	1971	46.10	1921
	<b>Total Hydro</b>	1148	400	235	8.57	357
<b>Total Punjab</b>	<b>5128</b>	<b>2425</b>	<b>2206</b>	<b>54.67</b>	<b>2278</b>	
Haryana	Panipat TPS	1367	434	619	11.18	466
	DCRTPP (Yamuna nagar)	600	259	251	5.93	247
	Faridabad GPS (NTPC)	432	0	0	0.00	0
	RGTPP (khedar) (IPP)	1200	594	510	12.39	516
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1167	744	23.54	981
	Thermal (Total)	4944	2454	2124	53.03	2210
	<b>Total Hydro</b>	62	17	17	0.45	19
<b>Total Haryana</b>	<b>5006</b>	<b>2471</b>	<b>2141</b>	<b>53.48</b>	<b>2229</b>	
Rajasthan	kota TPS	1240	1150	1078	27.10	1129
	suratgarh TPS	1500	1054	1004	25.19	1049
	Chabra TPS	750	446	383	10.39	433
	Dholpur GPS	330	104	104	2.50	104
	Ramgarh GPS	221	111	110	2.46	102
	RAPS A (NPC)	300	175	175	4.15	173
	Barsingsar (NLC)	250	108	106	2.48	103
	Giral LTPS	250	0	0	1.55	65
	Rajwest LTPS (IPP)	1080	359	288	7.78	324
	VSLP LTPS (IPP)	135	0	0	0.00	0
	Kalisindh Thermal	600	0	0	0.00	0
	Kawai(Adani)	1320	1196	1089	27.88	1162
	Thermal (Total)	7976	4703	4337	111.47	4644
	Total Hydro	550	0	0	0.00	0
	Wind power	2191	148	331	4.79	200
	Biomass	91	24	24	0.58	24
	Solar	201	4	0	0.37	15
	Renewable/Others (Total)	2483	172	355	5.74	239
<b>Total Rajasthan</b>	<b>11009</b>	<b>4875</b>	<b>4692</b>	<b>117.21</b>	<b>4884</b>	
UP	Anpara TPS	1630	1531	1634	33.60	1400
	Obra TPS	1288	546	561	12.10	504
	Paricha TPS	1140	975	942	18.50	771
	Panki TPS	210	90	70	1.90	79
	Harduaganj TPS	665	431	483	10.20	425
	Tanda TPS (NTPC)	440	401	403	9.81	409
	Roza TPS (IPP)	1200	1080	779	23.07	961
	Anpara-C (IPP)	1200	545	374	11.57	482
	Bajaj Energy Pvt.Ltd.(IPP) TPS	450	284	197	5.22	217
	Thermal (Total)	8223	5883	5443	125.97	5249
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	83	141	2.83	118
	Cogeneration	981	700	700	16.80	700
	<b>Total UP</b>	<b>10131</b>	<b>6666</b>	<b>6284</b>	<b>145.60</b>	<b>6067</b>
Uttarakhand	Total Hydro	1303	467	205	7.34	306
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>467</b>	<b>205</b>	<b>7.34</b>	<b>306</b>
Delhi	Rajghat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	162	152	3.71	155
	Pragati Gas Turbine	330	318	268	7.46	311
	Rithala GPS	95	0	0	0.00	0
	Bawana GPS	686	32	0	0.00	0
	Badarpur TPS (NTPC)	705	620	500	12.94	539
	Thermal (Total)	2232	1132	920	24.11	1004
<b>Total Delhi</b>	<b>2232</b>	<b>1132</b>	<b>920</b>	<b>24.11</b>	<b>1004</b>	
HP	Baspa HPS (IPP)	330	0	0	0.90	38
	Malana HPS (IPP)	86	0	0	0.18	8
	Other Hydro	589	157	55	3.00	125
	<b>Total HP</b>	<b>1005</b>	<b>157</b>	<b>55</b>	<b>4.08</b>	<b>170</b>
J & K	Baglihar HPS (IPP)	450	150	118	3.20	133
	Other Hydro	323	89	129	2.58	108
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>239</b>	<b>247</b>	<b>5.78</b>	<b>241</b>
<b>Total State Control Area Generation</b>		<b>36770</b>	<b>18432</b>	<b>16750</b>	<b>412.27</b>	<b>17178</b>
<b>J. Net Inter Regional Exchange</b> [[import (+ve)]/Export (-ve)]			<b>3234</b>	<b>2463</b>	<b>106.94</b>	<b>4456</b>
<b>Total Regional Availability(Gross)</b>		<b>60303</b>	<b>38443</b>	<b>28328</b>	<b>795.73</b>	<b>33155</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10560	6256	799	57.85	2410
State Control Area Hydro	5368	1363	900	29.04	1210
<b>Total Regional Hydro</b>	<b>15928</b>	<b>7619</b>	<b>1699</b>	<b>86.89</b>	<b>3620</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	-200	500	200	5.59	1.23	4.35
Gwalior-Agra (D/C)	1103	1372	1729	0	33.07	0.00	33.07
Zerda-Kankroli	-93	-176	102	194	0.00	1.12	-1.12
Zerda-Bhinmal	8	-62	307	134	1.88	0.00	1.88
Malanpur-Auraiya	-153	-110	0	186	0.00	1.97	-1.97
Badod-Kota/Morak	-43	-78	48	105	0.00	0.90	-0.90
Mundra-Mohindergarh(HVDC)	1998	1200	2005	0	42.03	0.00	42.03
<b>Sub Total WR</b>	<b>2970</b>	<b>1946</b>			<b>82.57</b>	<b>5.22</b>	<b>77.35</b>
Pusauli Bypass	-405	-312	0	560	0.00	8.59	-8.59
MZP- GKP (D/C)	138	292	446	0	6.36	0.00	6.36
Patna-Balia(D/C)	150	136	214	0	15.92	0.00	15.92
B'Sharif-Balia (D/C)	96	81	211	0	4.91	0.00	4.91
Pusauli-Balia	5	-5	58	93	0.00	0.09	-0.09
Gaya-Fatehpur (765 Kv)	-22	-31	213	85	1.21	0.00	1.21
Pusauli-Sahupuri	151	154	230	0	3.92	0.00	3.92
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-35	-26	0	35	0.00	0.61	-0.61
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
Sasaram - Fatehpur(765 KV)	186	228	487	0	6.55	0.00	6.55
<b>Sub Total ER</b>	<b>264</b>	<b>517</b>			<b>38.87</b>	<b>9.28</b>	<b>29.59</b>
<b>Total IR Exch</b>	<b>3234</b>	<b>2463</b>			<b>121.44</b>	<b>14.50</b>	<b>106.94</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
31.55	0.21	31.76	15.71	3.19	-2.05	5.95	0.06	-0.06

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
45.49	58.84	104.33	29.59	77.35	106.94	-15.90	18.51	2.62

**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	0.07	87.78	0.49	87.71	75.14	12.22

<----- 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)		
50.42	21.58	49.69	11.17	50.08	0.18	0.11	50.37	49.87

**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	412	02:24	400	11:11	0.0	0.0	0.0	0.0
Gorakhpur	400	420	22:28	404	14:06	0.0	0.0	0.0	0.0
Barailly	400	424	02:28	402	11:18	0.0	0.0	16.7	0.0
Kanpur	400	419	02:27	399	11:15	0.0	0.0	0.0	0.0
Dadri	400	428	04:02	404	11:17	0.0	0.0	26.6	0.0
Ballabgarh	400	434	04:02	409	06:47	0.0	0.0	60.4	10.1
Bawana	400	431	02:28	409	06:43	0.0	0.0	50.8	1.2
Bassi	400	428	04:02	395	06:54	0.0	0.0	19.4	0.0
Hissar	400	418	02:28	396	06:42	0.0	0.0	0.0	0.0
Moga	400	419	23:14	398	06:24	0.0	0.0	0.0	0.0
Abdullapur	400	423	23:12	395	06:08	0.0	0.0	0.1	0.0
Nalagarh	400	427	02:28	409	11:17	0.0	0.0	46.1	0.0
Kishenpur	400	414	23:12	392	06:24	0.0	0.0	0.0	0.0
Wagoora	400	395	13:03	370	18:20	41.4	96.7	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	779	23:43	738	11:17	0.0	2.5	0.0	0.0
Balia	765	762	04:02	733	11:17	0.0	22.6	0.0	0.0
Moga	765	795	23:14	758	06:24	0.0	0.0	0.0	0.0
Agra	765	815	04:02	768	11:17	0.0	0.0	44.5	0.0
Bhiwani	765	811	04:02	769	06:48	0.0	0.0	36.5	0.0
Unnao	765	763	03:46	729	11:18	0.0	18.1	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	496.82	971.87	489.10	709.72	163.33	373.30
Pong	426.72	384.05	408.74	454.47	407.17	407.15	79.57	319.61
Tehri	829.79	740.04	802.10	646.42	818.65	982.26	64.60	169.00
Koteshwar	612.50	598.50	610.59	4.95	609.40	4.21	169.00	171.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	47.83	46.95
Rihand	268.22	252.98	260.21	316.40	260.48	331.50	NA	NA
RPS	352.80	343.81	509.53	NA	512.19	NA	130.09	NA
Jawahar Sagar	298.70	295.78	297.94	NA	NA	NA	NA	NA
RSD	527.91	487.91	509.44	14.40	512.12	14.40	73.26	109.61

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 31.01.2014 :**

1. Fog persist in some part of Northern Region.

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

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

- 1: 63MVAR Line Reactor (NEW) first time charged at 22:31hrs dt 31.01.2014 with 400kV Patna-Balia ckt-4 at Balia.
- 2: 63MVAR Line Reactor (NEW) first time charged at 23:25hrs dt 31.01.2014 with 400kV Patna-Balia ckt-3 at Balia.

**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 .