

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 27.12.2013

Date of Reporting : 28.12.2013

### 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
35919	2355	38274	49.91	28051	467	28518	50.17	775.6	47.34

\* 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	42.60	10.07		52.67	35.68	37.59	1.91	90.26	1.19
Haryana	71.45	0.40		71.84	33.40	36.04	2.64	107.88	0.37
Rajasthan	108.46	4.79	5.67	118.92	78.45	74.37	-4.09	193.28	0.00
Delhi	19.77			19.77	43.65	44.87	1.22	64.64	0.30
UP	122.58	4.53	14.40	141.52	77.83	76.18	-1.65	217.70	41.84
Uttarakhand		10.55		10.55	19.87	21.64	1.77	32.19	1.94
HP		4.67		4.67	19.68	21.04	1.36	25.71	0.00
J & K		6.55	0.00	6.55	30.79	33.67	2.88	40.21	1.70
Chandigarh				0.00	3.23	3.72	0.49	3.72	0.00
<b>Total</b>	<b>364.86</b>	<b>41.55</b>	<b>20.07</b>	<b>426.48</b>	<b>342.59</b>	<b>349.11</b>	<b>6.52</b>	<b>775.59</b>	<b>47.34</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	4725	0	21	-510	2955	0	189	-260	-9.25	
Haryana	5123	0	-165	-1047	3923	157	209	-765	-25.99	
Rajasthan	8485	0	-492	1314	7083	0	-124	853	32.69	
Delhi	3377	0	53	-481	1433	0	26	-1318	-18.76	
UP	9281	2180	-89	194	8996	310	6	-165	-2.16	
Uttarakhand	1647	75	118	403	1144	0	6	363	8.98	
HP	1287	0	53	314	777	0	14	358	8.16	
J&K	1794	100	17	629	1650	0	95	538	11.08	
Chandigarh	201	0	10	0	90	0	2	-10	-0.08	
<b>Total</b>	<b>35919</b>	<b>2355</b>	<b>-474</b>	<b>816</b>	<b>28051</b>	<b>467</b>	<b>423</b>	<b>-406</b>	<b>4.68</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	2107	2057	46.77	1949	46.54	0.23	
	Rihand I STPS	1000	636	165	944	14.61	609	14.73	-0.11	
	Rihand II STPS	1000	930	1050	827	21.23	885	21.21	0.02	
	Rihand III STPS	1000	460	518	462	11.10	462	11.05	0.05	
	Dadri I STPS	840	815	654	480	13.35	556	13.52	-0.16	
	Dadri II STPS	980	985	1031	710	21.19	883	21.57	-0.39	
	Unchahar I TPS	420	407	445	352	9.10	379	9.14	-0.05	
	Unchahar II TPS	420	403	445	312	8.58	357	8.62	-0.04	
	Unchahar III TPS	210	201	210	155	4.30	179	4.32	-0.03	
	ISTPP (Jhajjar)	1500	1480	1002	615	18.58	774	18.87	-0.29	
	Dadri GPS	830	841	422	419	8.96	373	10.27	-1.31	
	Anta GPS	419	427	283	259	6.56	274	6.69	-0.12	
	Auraiya GPS	663	671	165	166	3.86	161	4.13	-0.26	
	<b>Sub Total (A)</b>	<b>11282</b>	<b>10201</b>	<b>8497</b>	<b>7758</b>	<b>188.19</b>	<b>7841</b>	<b>190.65</b>	<b>-2.46</b>	
	B. NPC	NAPS	440	323	363	369	7.79	325	7.75	0.04
		RAPS- B	440	423	465	464	10.13	422	10.15	-0.02
RAPS- C		440	430	473	477	10.22	426	10.32	-0.11	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1176</b>	<b>1301</b>	<b>1310</b>	<b>28.14</b>	<b>1172</b>	<b>28.22</b>	<b>-0.09</b>	
C. NHPC	Chamera I HPS	540	360	360	0	1.88	79	1.80	0.08	
	Chamera II HPS	300	300	201	0	0.89	37	0.86	0.03	
	Chamera III HPS	231	231	158	0	0.57	24	0.58	-0.01	
	Bairasuil HPS	180	182	122	0	0.48	20	0.46	0.03	
	Salal-HPS	690	120	225	120	2.76	115	2.88	-0.12	
	Tanakpur-HPS	94	29	30	12	0.64	27	0.69	-0.05	
	Uri-HPS	480	81	220	28	2.36	98	2.15	0.21	
	Uri-II HPS	120	56	106	33	1.40	58	1.35	0.05	
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00	
	Dulhasti-HPS	390	387	400	0	2.90	121	2.91	-0.01	
	Sewa-II HPS	120	119	122	0	0.36	15	0.35	0.01	
	<b>Sub Total (C)</b>	<b>3425</b>	<b>1865</b>	<b>1944</b>	<b>193</b>	<b>14.24</b>	<b>593</b>	<b>14.02</b>	<b>0.22</b>	
	D. NJPC	Nathpa Jhakri	1500	1605	954	0	7.72	322	7.19	0.53
<b>Sub Total (D)</b>		<b>1500</b>	<b>1605</b>	<b>954</b>	<b>0</b>	<b>7.72</b>	<b>322</b>	<b>7.19</b>	<b>0.53</b>	
E. THDC	Tehri HPS	1000	1050	722	0	8.89	371	8.70	0.19	
	Koteshwar HPS	400	125	303	91	3.02	126	3.00	0.02	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1175</b>	<b>1025</b>	<b>91</b>	<b>11.92</b>	<b>497</b>	<b>11.70</b>	<b>0.22</b>	
F. BBMB	Bhakra HPS	1497	680	1008	510	16.59	691	16.31	0.28	
	Dehar HPS	990	108	330	0	2.92	122	2.59	0.33	
	Pong HPS	396	275	372	120	6.70	279	6.59	0.11	
	<b>Sub Total (F)</b>	<b>2883</b>	<b>1062</b>	<b>1710</b>	<b>630</b>	<b>26.21</b>	<b>1092</b>	<b>25.49</b>	<b>0.72</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.40	17	0.37	0.03	
	KWHEP HPS(IPP)	1000	0	360	0	4.02	167	3.97	0.05	
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.16	-0.16	
	Shree Cement TPS	300	0	277	152	5.66	236	5.46	0.20	
	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>637</b>	<b>152</b>	<b>10.07</b>	<b>420</b>	<b>9.96</b>	<b>0.11</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>23472</b>	<b>17084</b>	<b>16068</b>	<b>10134</b>	<b>286.48</b>	<b>11937</b>	<b>287.23</b>	<b>-0.75</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	840	640	16.59	691
	Guru Nanak Dev TPS(Bhatinda)	440	342	250	6.48	270
	Guru Hargobind Singh TPS(L.mbt)	920	961	676	19.53	814
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	2143	1566	42.60	1775
	Total Hydro	1148	440	400	10.07	420
<b>Total Punjab</b>		<b>3768</b>	<b>2583</b>	<b>1966</b>	<b>52.67</b>	<b>2195</b>
Haryana	Panipat TPS	1367	795	792	19.40	808
	DCRTPP (Yamuna nagar)	600	561	507	12.89	537
	Faridabad GPS (NTPC)	432	0	0	0.00	0
	RGTPP (khedar) (IPP)	1200	592	493	13.30	554
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1199	744	25.85	1077
	Thermal (Total)	4944	3147	2536	71.45	2977
	Total Hydro	62	15	17	0.40	16
	<b>Total Haryana</b>	<b>5006</b>	<b>3162</b>	<b>2553</b>	<b>71.84</b>	<b>2993</b>
	Rajasthan	kota TPS	1240	1189	1093	27.23
suratgarh TPS		1500	1032	996	24.70	1029
Chabra TPS		500	528	485	11.86	494
Dholpur GPS		330	123	124	3.10	129
Ramgarh GPS		111	143	127	3.33	139
RAPS A (NPC)		300	175	175	4.04	168
Barsingsar (NLC)		250	213	216	5.08	212
Giral LTPS		250	74	74	1.62	67
Rajwest LTPS (IPP)		1080	550	435	14.51	604
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	586	501	13.00	542
Thermal (Total)		6956	4613	4226	108.46	4519
Total Hydro		550	211	116	4.79	199
Wind power		2191	110	355	4.40	183
Biomass		91	21	21	0.51	21
Solar		201	7	0	0.76	32
Renewable/Others (Total)		2483	131	376	5.67	236
<b>Total Rajasthan</b>		<b>9989</b>	<b>4955</b>	<b>4718</b>	<b>118.92</b>	<b>4955</b>
UP		Anpara TPS	1630	1601	1623	34.30
	Obra TPS	1288	518	500	11.10	463
	Paricha TPS	1140	758	604	15.80	658
	Panki TPS	210	100	100	2.20	92
	Harduaganj TPS	665	253	250	5.50	229
	Tanda TPS (NTPC)	440	400	403	9.81	409
	Roza TPS (IPP)	1200	630	792	18.10	754
	Anpara-C (IPP)	1200	777	752	18.05	752
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	294	362	7.72	322
	Thermal (Total)	8223	5331	5386	122.58	5108
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	199	204	4.53	189
	Cogeneration	981	600	600	14.40	600
	<b>Total UP</b>	<b>10131</b>	<b>6130</b>	<b>6190</b>	<b>141.52</b>	<b>5897</b>
	Uttarakhand	Total Hydro	1303	565	375	10.55
<b>Total Uttarakhand</b>		<b>1303</b>	<b>565</b>	<b>375</b>	<b>10.55</b>	<b>439</b>
Delhi	Rajghat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	80	80	1.74	72
	Pragati Gas Turbine	330	321	272	7.58	316
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	0	0	0.00	0
	Badarpur TPS (NTPC)	705	500	415	10.46	436
	Thermal (Total)	2232	901	767	19.77	824
	<b>Total Delhi</b>	<b>2232</b>	<b>901</b>	<b>767</b>	<b>19.77</b>	<b>824</b>
HP	Baspa HPS (IPP)	330	32	0	1.18	49
	Malana HPS (IPP)	86	0	0	0.24	10
	Other Hydro	589	198	82	3.25	135
	<b>Total HP</b>	<b>1005</b>	<b>230</b>	<b>82</b>	<b>4.67</b>	<b>195</b>
J & K	Baglihar HPS (IPP)	450	298	120	3.97	165
	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>244</b>	<b>6.55</b>	<b>273</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>18914</b>	<b>16895</b>	<b>426.48</b>	<b>17770</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>3816</b>	<b>2278</b>	<b>76.89</b>	<b>3204</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>38798</b>	<b>29307</b>	<b>789.85</b>	<b>32910</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	5993	914	64.50	2687
State Control Area Hydro	5368	2048	1438	41.55	1731
<b>Total Regional Hydro</b>	<b>15868</b>	<b>8041</b>	<b>2352</b>	<b>106.04</b>	<b>4418</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	50	-200	300	200	1.23	3.33	-2.10
Gwalior-Agra (D/C)	1299	798	1614	0	26.41	0.00	26.41
Zerda-Kankroli	-83	-305	15	315	0.00	3.14	-3.14
Zerda-Bhinmal	-10	-206	149	238	0.00	3.14	-3.14
Malanpur-Auraiya	-104	-112	0	141	0.00	1.91	-1.91
Badod-Kota/Morak	-77	-201	0	233	0.00	3.14	-3.14
Mundra-Mohindergarh(HVDC)	1453	1451	1456	0	31.56	0.00	31.56
<b>Sub Total WR</b>	<b>2528</b>	<b>1225</b>			<b>59.20</b>	<b>14.66</b>	<b>44.54</b>
Pusauli Bypass	300	300	300	478	6.53	0.91	5.62
MZP- GKP (D/C)	98	128	362	0	3.76	0.00	3.76
Patna-Balia(D/C)	521	444	811	0	13.04	0.00	13.04
B'Sharif-Balia (D/C)	166	91	360	0	3.67	0.00	3.67
Pusauli-Balia	-116	-108	0	139	0.00	2.30	-2.30
Gaya-Fatehpur (765 Kv)	59	15	252	55	1.94	0.00	1.94
Pusauli-Sahupuri	167	114	172	0	3.28	0.00	3.28
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)	125	99	382	17	4.17	0.00	4.17
<b>Sub Total ER</b>	<b>1288</b>	<b>1053</b>			<b>36.40</b>	<b>4.05</b>	<b>32.35</b>
<b>Total IR Exch</b>	<b>3816</b>	<b>2278</b>			<b>95.60</b>	<b>18.71</b>	<b>76.89</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
29.29	0.44	29.73	14.43	-15.08	-1.31	1.21	3.98	-3.98

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
46.83	29.00	75.82	32.35	44.54	76.89	-14.48	15.54	1.07

**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	0.20	2.80	92.60	5.80	89.80	52.60	7.40

<----- 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				
50.48	16.05	49.50	18.24	50.00	0.21	0.15	50.36	49.76

**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	23:58	403	00:00	0.0	0.0	0.0	0.0
Gorakhpur	400	427	05:51	405	10:27	0.0	0.0	58.3	0.0
Bareilly	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Kanpur	400	420	22:43	397	10:19	0.0	0.0	0.0	0.0
Dadri	400	423	03:37	397	11:18	0.0	0.0	14.9	0.0
Ballabgarh	400	431	04:02	403	10:16	0.0	0.0	45.8	0.9
Bawana	400	425	04:02	400	11:20	0.0	0.0	32.2	0.0
Bassi	400	423	04:03	384	10:54	0.0	5.9	3.3	0.0
Hissar	400	411	03:55	408	00:00	0.0	0.0	0.0	0.0
Moga	400	422	04:03	394	10:33	0.0	0.0	2.3	0.0
Abdullapur	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Nalagarh	400	427	00:24	398	11:51	0.0	0.0	24.4	0.0
Kishenpur	400	414	01:02	388	10:18	0.0	0.6	0.0	0.0
Wagoora	400	400	13:01	367	07:41	34.3	82.2	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	787	22:47	738	10:53	0.0	2.4	0.0	0.0
Balia	765	767	19:37	721	09:17	2.7	23.5	0.0	0.0
Moga	765	786	04:03	736	10:33	0.0	3.3	0.0	0.0
Agra	765	813	22:41	759	10:18	0.0	0.0	31.1	0.0
Bhiwani	765	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Unnao	765	763	22:43	729	09:18	0.0	14.9	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	503.01	1219.07	495.74	926.03	171.63	475.30
Pong	426.72	384.05	412.62	588.94	411.33	534.70	91.12	417.84
Tehri	829.79	740.04	813.85	882.26	818.65	982.26	48.33	203.00
Koteshwar	612.50	598.50	609.58	4.21	NA	NA	203.00	200.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	45.35	60.63
Rihand	268.22	252.98	261.03	362.32	262.01	419.10	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 27.12.2013 :**

1. Shallow fog in NCR Delhi and Eastern Uttar pradesh.

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

0.00

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

1. 400 kV Uri stage-I to Uri Stage-II line 1st time synchronises with grid at 20:18 hrs of 27.12.2013.

**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 .