

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 28.12.2013  
Date of Reporting : 29.12.2013

### 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
36278	1855	38133	50.03	28060	45	28105	50.24	778.2	45.10

\* 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	42.09	9.78		51.87	38.16	39.85	1.69	91.72	1.19
Haryana	71.14	0.42		71.56	36.16	36.99	0.83	108.54	0.00
Rajasthan	108.06	4.79	4.32	117.17	79.81	78.36	-1.45	195.53	0.00
Delhi	19.59			19.59	43.95	41.90	-2.05	61.49	0.30
UP	120.71	4.37	14.40	139.48	79.96	79.00	-0.96	218.47	39.97
Uttarakhand		10.78		10.78	20.43	21.30	0.87	32.08	1.94
HP		4.52		4.52	20.33	21.13	0.80	25.64	0.00
J & K		6.55	0.00	6.55	31.39	34.60	3.21	41.15	1.70
Chandigarh				0.00	3.30	3.61	0.31	3.61	0.00
<b>Total</b>	<b>361.58</b>	<b>41.20</b>	<b>18.72</b>	<b>421.51</b>	<b>353.47</b>	<b>356.72</b>	<b>3.25</b>	<b>778.23</b>	<b>45.10</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	4703	0	-44	-514	2955	0	188	-217	-7.75	
Haryana	5125	0	-333	-743	3962	0	91	-770	-22.06	
Rajasthan	8467	0	-281	877	7112	0	-68	545	29.88	
Delhi	3267	0	-105	-528	1454	0	88	-1403	-19.68	
UP	9512	1680	-430	551	8934	45	45	-165	-2.40	
Uttarakhand	1665	75	5	501	1125	0	-29	385	9.36	
HP	1275	0	-91	314	806	0	43	358	8.63	
J&K	2065	100	199	629	1622	0	68	538	11.08	
Chandigarh	199	0	-2	0	90	0	-1	0	-0.07	
<b>Total</b>	<b>36278</b>	<b>1855</b>	<b>-1081</b>	<b>1087</b>	<b>28060</b>	<b>45</b>	<b>425</b>	<b>-730</b>	<b>6.99</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	2092	2067	47.02	1959	46.68	0.34	
	Rihand I STPS	1000	876	957	874	20.66	861	21.02	-0.36	
	Rihand II STPS	1000	930	1047	940	22.36	932	22.32	0.04	
	Rihand III STPS	1000	460	523	469	11.03	460	11.05	-0.02	
	Dadri I STPS	840	815	656	490	13.16	549	13.27	-0.11	
	Dadri II STPS	980	985	992	723	23.12	963	21.78	1.34	
	Unchahar I TPS	420	407	382	396	9.10	379	9.16	-0.07	
	Unchahar II TPS	420	404	416	352	8.79	366	8.89	-0.10	
	Unchahar III TPS	210	201	213	197	4.45	185	4.48	-0.03	
	ISTPP (Jhajjar)	1500	1480	1018	628	16.60	692	16.96	-0.35	
	Dadri GPS	830	841	425	432	9.96	415	10.20	-0.24	
	Anta GPS	419	427	282	260	6.58	274	6.60	-0.03	
	Auraiya GPS	663	671	161	166	3.79	158	3.95	-0.16	
	<b>Sub Total (A)</b>	<b>11282</b>	<b>10442</b>	<b>9164</b>	<b>7994</b>	<b>196.62</b>	<b>8192</b>	<b>196.35</b>	<b>0.26</b>	
	B. NPC	NAPS	440	323	359	362	7.75	323	7.75	0.00
		RAPS- B	440	422	462	467	10.16	423	10.13	0.03
		RAPS- C	440	430	475	475	10.22	426	10.32	-0.10
<b>Sub Total (B)</b>		<b>1320</b>	<b>1175</b>	<b>1296</b>	<b>1304</b>	<b>28.14</b>	<b>1172</b>	<b>28.20</b>	<b>-0.06</b>	
C. NHPC	Chamera I HPS	540	360	360	0	1.64	68	1.62	0.02	
	Chamera II HPS	300	300	298	0	0.99	41	1.12	-0.14	
	Chamera III HPS	231	231	148	0	0.56	23	0.62	-0.06	
	Bairasuil HPS	180	182	120	0	0.49	21	0.45	0.04	
	Salal-HPS	690	115	224	120	2.94	122	2.74	0.20	
	Tanakpur-HPS	94	24	29	22	0.58	24	0.58	0.00	
	Uri-HPS	480	91	202	41	2.60	108	2.37	0.23	
	Uri-II HPS	120	57	91	35	1.50	62	1.40	0.10	
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00	
	Dulhasti-HPS	390	387	401	0	2.86	119	2.90	-0.04	
	Sewa-II HPS	120	119	123	0	0.42	18	0.44	-0.01	
	<b>Sub Total (C)</b>	<b>3425</b>	<b>1865</b>	<b>1996</b>	<b>218</b>	<b>14.57</b>	<b>607</b>	<b>14.24</b>	<b>0.33</b>	
	D. NJPC	Nathpa Jhakri	1500	1605	786	0	7.37	307	7.14	0.23
<b>Sub Total (D)</b>		<b>1500</b>	<b>1605</b>	<b>786</b>	<b>0</b>	<b>7.37</b>	<b>307</b>	<b>7.14</b>	<b>0.23</b>	
E. THDC	Tehri HPS	1000	1050	1005	0	8.67	361	8.70	-0.03	
	Koteshwar HPS	400	125	302	91	3.05	127	3.00	0.05	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1175</b>	<b>1307</b>	<b>91</b>	<b>11.71</b>	<b>488</b>	<b>11.70</b>	<b>0.01</b>	
F. BBMB	Bhakra HPS	1497	709	1003	511	17.11	713	17.02	0.09	
	Dehar HPS	990	120	330	0	2.90	121	2.87	0.03	
	Pong HPS	396	269	372	126	6.63	276	6.45	0.18	
	<b>Sub Total (F)</b>	<b>2883</b>	<b>1098</b>	<b>1705</b>	<b>637</b>	<b>26.64</b>	<b>1110</b>	<b>26.35</b>	<b>0.30</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.45	19	0.42	0.03	
	KWHEP HPS(IPP)	1000	0	360	0	4.02	167	3.84	0.18	
	Malana Stg-II HPS	100	0	0	0	3.86	161	0.15	3.71	
	Shree Cement TPS	300	0	245	140	5.32	222	5.13	0.19	
	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>605</b>	<b>140</b>	<b>13.65</b>	<b>569</b>	<b>9.55</b>	<b>4.10</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>23472</b>	<b>17360</b>	<b>16859</b>	<b>10384</b>	<b>298.70</b>	<b>12446</b>	<b>293.53</b>	<b>5.17</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	16.53	689
	Guru Nanak Dev TPS(Bhatinda)	440	342	250	6.46	269
	Guru Hargobind Singh TPS(L.mbt)	920	966	675	19.10	796
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	2148	1565	42.09	1754
	Total Hydro	1148	313	421	9.78	408
<b>Total Punjab</b>	<b>3768</b>	<b>2461</b>	<b>1986</b>	<b>51.87</b>	<b>2161</b>	
Haryana	Panipat TPS	1367	826	789	19.27	803
	DCRTPP (Yamuna nagar)	600	577	504	12.79	533
	Faridabad GPS (NTPC)	432	0	0	0.00	0
	RGTPP (khedar) (IPP)	1200	577	504	13.16	548
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1237	744	25.92	1080
	Thermal (Total)	4944	3217	2541	71.14	2964
	Total Hydro	62	19	18	0.42	17
	<b>Total Haryana</b>	<b>5006</b>	<b>3236</b>	<b>2559</b>	<b>71.56</b>	<b>2981</b>
	Rajasthan	kota TPS	1240	1049	1129	25.58
suratgarh TPS		1500	1005	1004	24.90	1037
Chabra TPS		500	556	401	11.86	494
Dholpur GPS		330	125	123	3.10	129
Ramgarh GPS		111	39	143	1.53	64
RAPS A (NPC)		300	175	175	4.06	169
Barsingsar (NLC)		250	213	216	5.05	210
Giral LTPS		250	33	74	1.72	72
Rajwest LTPS (IPP)		1080	714	501	15.78	657
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	604	602	14.49	604
Thermal (Total)		6956	4513	4368	108.06	4502
Total Hydro		550	211	116	4.79	199
Wind power		2191	106	203	2.93	122
Biomass		91	27	27	0.64	27
Solar		201	7	0	0.76	32
Renewable/Others (Total)		2483	133	230	4.32	180
<b>Total Rajasthan</b>		<b>9989</b>	<b>4857</b>	<b>4714</b>	<b>117.17</b>	<b>4882</b>
UP		Anpara TPS	1630	1453	1409	34.10
	Obra TPS	1288	458	438	10.00	417
	Paricha TPS	1140	660	680	15.46	644
	Panki TPS	210	54	86	1.60	67
	Harduaganj TPS	665	227	226	5.90	246
	Tanda TPS (NTPC)	440	401	402	9.73	405
	Roza TPS (IPP)	1200	594	720	17.33	722
	Anpara-C (IPP)	1200	790	747	18.76	782
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	278	258	7.83	326
	Thermal (Total)	8223	4915	4966	120.71	5030
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	201	194	4.37	182
	Cogeneration	981	600	600	14.40	600
	<b>Total UP</b>	<b>10131</b>	<b>5716</b>	<b>5760</b>	<b>139.48</b>	<b>5812</b>
	Uttarakhand	Total Hydro	1303	549	381	10.78
<b>Total Uttarakhand</b>		<b>1303</b>	<b>549</b>	<b>381</b>	<b>10.78</b>	<b>449</b>
Delhi	Rajghat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	80	80	1.90	79
	Pragati Gas Turbine	330	322	269	7.60	317
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	0	0	0.00	0
	Badarpur TPS (NTPC)	705	505	430	10.09	420
	Thermal (Total)	2232	907	779	19.59	816
	<b>Total Delhi</b>	<b>2232</b>	<b>907</b>	<b>779</b>	<b>19.59</b>	<b>816</b>
HP	Baspa HPS (IPP)	330	30	0	1.08	45
	Malana HPS (IPP)	86	0	0	0.26	11
	Other Hydro	589	179	81	3.18	132
	<b>Total HP</b>	<b>1005</b>	<b>209</b>	<b>81</b>	<b>4.52</b>	<b>188</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>18323</b>	<b>16504</b>	<b>421.51</b>	<b>17563</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>3473</b>	<b>2014</b>	<b>81.44</b>	<b>3393</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>38655</b>	<b>28902</b>	<b>801.65</b>	<b>33402</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	6154	946	68.63	2859
State Control Area Hydro	5368	1890	1455	41.20	1717
<b>Total Regional Hydro</b>	<b>15868</b>	<b>8044</b>	<b>2401</b>	<b>109.83</b>	<b>4576</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	-500	500	500	2.11	3.38	-1.27
Gwalior-Agra (D/C)	1103	938	1639	0	25.09	0.00	25.09
Zerda-Kankroli	-53	-257	0	309	0.00	3.07	-3.07
Zerda-Bhinmal	33	-164	101	231	0.00	0.49	-0.49
Malanpur-Auraiya	-94	-62	0	120	0.00	2.02	-2.02
Badod-Kota/Morak	-46	-174	0	194	0.00	2.82	-2.82
Mundra-Mohindergarh(HVDC)	1643	1453	1643	0	38.32	0.00	38.32
<b>Sub Total WR</b>	<b>2536</b>	<b>1234</b>			<b>65.52</b>	<b>11.78</b>	<b>53.73</b>
Pusauli Bypass	-404	-394	0	489	0.00	8.89	-8.89
MZP- GKP (D/C)	196	222	388	0	5.80	0.00	5.80
Patna-Balia(D/C)	498	453	786	0	13.14	0.00	13.14
B'Sharif-Balia (D/C)	164	154	419	0	5.08	0.00	5.08
Pusauli-Balia	-38	4	51	44	0.00	0.21	-0.21
Gaya-Fatehpur (765 Kv)	77	11	253	5	2.44	0.00	2.44
Pusauli-Sahupuri	138	156	198	0	3.52	0.00	3.52
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)	338	204	493	0	7.66	0.00	7.66
<b>Sub Total ER</b>	<b>937</b>	<b>780</b>			<b>37.65</b>	<b>9.94</b>	<b>27.71</b>
<b>Total IR Exch</b>	<b>3473</b>	<b>2014</b>			<b>103.16</b>	<b>21.72</b>	<b>81.44</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
31.25	0.40	31.65	14.22	-14.93	5.89	-3.16	2.66	-2.66

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
54.42	26.41	80.83	27.71	53.73	81.44	-26.71	27.32	0.61

**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	0.20	91.90	3.30	91.70	53.70	8.10

<----- 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				
50.53	5.04	49.68	9.21	50.02	0.17	0.13	50.46	49.89

**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	00:00	402	23:07	0.0	0.0	0.0	0.0
Gorakhpur	400	427	05:46	412	12:35	0.0	0.0	46.3	0.0
Bareilly	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Kanpur	400	423	05:04	400	09:35	0.0	0.0	1.4	0.0
Dadri	400	424	03:03	399	09:36	0.0	0.0	14.0	0.0
Ballabgarh	400	432	05:04	403	09:36	0.0	0.0	37.6	1.8
Bawana	400	427	03:02	402	09:35	0.0	0.0	27.0	0.0
Bassi	400	422	04:02	382	09:34	0.0	8.0	0.9	0.0
Hissar	400	410	23:54	399	18:53	0.0	0.0	0.0	0.0
Moga	400	424	03:02	396	09:35	0.0	0.0	12.9	0.0
Abdullapur	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Nalagarh	400	426	03:01	401	09:36	0.0	0.0	20.7	0.0
Kishenpur	400	420	13:01	390	09:20	0.0	0.0	0.0	0.0
Wagoora	400	415	13:02	366	18:15	39.8	71.3	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	05:04	752	09:34	0.0	0.0	0.0	0.0
Balia	765	770	05:07	734	09:09	0.0	15.3	0.0	0.0
Moga	765	791	03:31	739	09:35	0.0	1.0	0.0	0.0
Agra	765	817	05:06	767	09:37	0.0	0.0	32.6	0.0
Bhiwani	765	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Unnao	765	770	05:06	737	09:35	0.0	6.3	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	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 28.12.2013 :**

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 .