

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 25.12.2013

Date of Reporting : 26.12.2013

### 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
35230	2491	37721	50.00	28074	-140	27934	50.17	766.1	43.70

\* 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:

UI (OD:(+ve), UD: (-ve))

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	44.60	10.20		54.80	34.67	36.78	2.11	91.58	0.00
Haryana	67.55	0.52		68.07	40.05	40.52	0.46	108.59	0.11
Rajasthan	103.57	5.18	6.06	114.81	84.04	78.91	-5.13	193.72	0.00
Delhi	20.02			20.02	41.68	40.80	-0.89	60.82	0.77
UP	119.05	3.83	14.40	137.28	73.71	73.06	-0.65	210.33	39.36
Uttarakhand		11.09		11.09	20.54	20.88	0.34	31.97	1.73
HP		5.09		5.09	19.51	20.04	0.53	25.12	0.04
J & K		6.34	0.00	6.34	32.15	34.11	1.97	40.45	1.70
Chandigarh				0.00	3.28	3.53	0.25	3.53	0.00
<b>Total</b>	<b>354.80</b>	<b>42.24</b>	<b>20.46</b>	<b>417.50</b>	<b>349.62</b>	<b>348.61</b>	<b>-1.02</b>	<b>766.10</b>	<b>43.70</b>

\* Shortage furnished by the respective constituent.\$ Others include UP Co-generation and JK Diesel

### II. B. State's Demand Met in MWs:

UI/OA/PX (OD/Import: (+ve), UD/Export: (-ve))

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	4767	0	149	-513	2909	0	144	-305	-9.13	
Haryana	5318	0	-67	-840	4385	0	-40	-779	-24.96	
Rajasthan	8580	0	-378	1496	6945	0	-11	482	32.36	
Delhi	3160	6	-73	-626	1415	0	-85	-1388	-21.13	
UP	8559	2310	-432	212	8845	-140	143	-165	-4.59	
Uttarakhand	1620	75	89	411	1106	0	-31	361	9.31	
HP	1234	0	-13	314	789	0	13	378	8.15	
J&K	1798	100	-122	628	1595	0	29	541	10.89	
Chandigarh	194	0	-3	0	85	0	-4	-12	-0.05	
<b>Total</b>	<b>35230</b>	<b>2491</b>	<b>-850</b>	<b>1081</b>	<b>28074</b>	<b>-140</b>	<b>158</b>	<b>-887</b>	<b>0.86</b>	

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

### III. Regional Entities :

UI (OG:(+ve), UG: (-ve))

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
	Rihand I STPS	1000	894	964	966	21.35	890	21.44	-0.09
	Rihand II STPS	1000	930	1052	876	22.14	923	21.86	0.29
	Rihand III STPS	1000	460	523	477	11.09	462	11.05	0.05
	Dadri I STPS	840	815	659	483	13.17	549	13.17	0.00
	Dadri II STPS	980	985	996	733	20.91	871	21.24	-0.33
	Unchahar I TPS	420	407	398	362	8.78	366	8.72	0.06
	Unchahar II TPS	420	404	409	366	8.83	368	8.76	0.07
	Unchahar III TPS	210	201	195	186	4.43	185	4.43	0.01
	ISTPP (Jhajjar)	1500	1480	622	632	15.20	633	15.29	-0.09
	Dadri GPS	830	841	395	263	8.60	358	8.95	-0.35
	Anta GPS	419	426	278	237	6.33	264	6.39	-0.06
	Auraiya GPS	663	669	163	165	3.83	159	4.14	-0.31
	<b>Sub Total (A)</b>	<b>11282</b>	<b>10458</b>	<b>8755</b>	<b>7832</b>	<b>191.91</b>	<b>7996</b>	<b>192.12</b>	<b>-0.21</b>
B. NPC	NAPS	440	321	362	366	7.76	324	7.70	0.06
	RAPS- B	440	421	464	466	10.16	423	10.10	0.06
	RAPS- C	440	430	474	472	10.22	426	10.32	-0.10
	<b>Sub Total (B)</b>	<b>1320</b>	<b>1172</b>	<b>1300</b>	<b>1304</b>	<b>28.14</b>	<b>1173</b>	<b>28.13</b>	<b>0.02</b>
C. NHPC	Chamera I HPS	540	540	360	0	1.87	78	1.70	0.17
	Chamera II HPS	300	300	200	0	1.22	51	1.10	0.12
	Chamera III HPS	231	231	51	0	0.62	26	0.57	0.05
	Bairasuil HPS	180	182	122	0	0.52	22	0.53	0.00
	Salal-HPS	690	118	224	122	2.87	120	2.80	0.08
	Tanakpur-HPS	94	28	28	32	0.98	41	0.66	0.32
	Uri-HPS	480	88	219	24	2.26	94	2.04	0.22
	Uri-II HPS	120	56	100	40	1.34	56	1.34	0.00
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00
	Dulhasti-HPS	390	387	404	0	3.20	133	2.82	0.38
	Sewa-II HPS	120	119	120	0	0.43	18	0.42	0.02
	<b>Sub Total (C)</b>	<b>3425</b>	<b>2047</b>	<b>1828</b>	<b>218</b>	<b>15.32</b>	<b>638</b>	<b>13.96</b>	<b>1.35</b>
D. NJPC	Nathpa Jhakri	1500	1605	812	0	7.54	314	6.80	0.74
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>812</b>	<b>0</b>	<b>7.54</b>	<b>314</b>	<b>6.80</b>	<b>0.74</b>
E. THDC	Tehri HPS	1000	1060	710	0	8.86	369	8.70	0.16
	Koteshwar HPS	400	133	200	91	3.25	135	3.20	0.04
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1193</b>	<b>910</b>	<b>91</b>	<b>12.11</b>	<b>504</b>	<b>11.90</b>	<b>0.21</b>
F. BBMB	Bhakra HPS	1497	658	1179	515	16.00	667	15.80	0.20
	Dehar HPS	990	108	330	0	3.12	130	2.59	0.53
	Pong HPS	396	289	372	186	7.09	295	6.93	0.16
	<b>Sub Total (F)</b>	<b>2883</b>	<b>1055</b>	<b>1881</b>	<b>701</b>	<b>26.21</b>	<b>1092</b>	<b>25.31</b>	<b>0.90</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.38	16	0.32	0.05
	KWHEP HPS(IPP)	1000	0	381	0	4.10	171	4.04	0.06
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.15	-0.15
	Shree Cement TPS	300	0	274	149	5.65	236	5.66	-0.01
	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>655</b>	<b>149</b>	<b>10.14</b>	<b>422</b>	<b>10.19</b>	<b>-0.05</b>
<b>H. Total Regional Entities (A-G)</b>		<b>23472</b>	<b>17530</b>	<b>16141</b>	<b>10295</b>	<b>291.36</b>	<b>12140</b>	<b>288.41</b>	<b>2.95</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	780	770	18.75	781
	Guru Nanak Dev TPS(Bhatinda)	440	303	250	5.91	246
	Guru Hargobind Singh TPS(L.mbt)	920	968	737	19.94	831
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	2051	1757	44.60	1858
	Total Hydro	1148	454	423	10.20	425
<b>Total Punjab</b>	<b>3768</b>	<b>2505</b>	<b>2180</b>	<b>54.80</b>	<b>2283</b>	
Haryana	Panipat TPS	1367	796	795	18.46	769
	DCRTPP (Yamuna nagar)	600	536	501	12.09	504
	Faridabad GPS (NTPC)	432	0	168	0.52	22
	RGTPP (khedar) (IPP)	1200	563	481	11.68	487
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1128	744	24.80	1033
	Thermal (Total)	4944	3023	2689	67.55	2815
	Total Hydro	62	22	21	0.52	22
	<b>Total Haryana</b>	<b>5006</b>	<b>3045</b>	<b>2710</b>	<b>68.07</b>	<b>2836</b>
	Rajasthan	kota TPS	1240	1115	1119	25.72
suratgarh TPS		1500	1060	868	23.97	999
Chabra TPS		500	228	559	10.44	435
Dholpur GPS		330	124	123	3.11	129
Ramgarh GPS		111	125	122	3.07	128
RAPS A (NPC)		300	175	175	4.03	168
Barsingsar (NLC)		250	215	215	5.07	211
Giral LTPS		250	43	43	1.77	74
Rajwest LTPS (IPP)		1080	823	824	18.68	778
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	593	0	7.72	322
Thermal (Total)		6956	4501	4048	103.57	4316
Total Hydro		550	210	160	5.18	216
Wind power		2191	145	231	5.17	216
Biomass		91	22	22	0.52	22
Solar		201	0	0	0.37	15
Renewable/Others (Total)		2483	167	253	6.06	253
<b>Total Rajasthan</b>		<b>9989</b>	<b>4878</b>	<b>4461</b>	<b>114.81</b>	<b>4784</b>
UP		Anpara TPS	1630	1441	1407	34.00
	Obra TPS	1288	469	496	11.70	488
	Paricha TPS	1140	705	683	16.70	696
	Panki TPS	210	68	63	1.60	67
	Harduaganj TPS	665	406	397	5.50	229
	Tanda TPS (NTPC)	440	406	397	9.17	382
	Roza TPS (IPP)	1200	581	711	16.30	679
	Anpara-C (IPP)	1200	605	755	17.14	714
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	171	302	6.95	290
	Thermal (Total)	8223	4852	5211	119.05	4961
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	145	146	3.83	159
	Cogeneration	981	600	600	14.40	600
	<b>Total UP</b>	<b>10131</b>	<b>5597</b>	<b>5957</b>	<b>137.28</b>	<b>5720</b>
	Uttarakhand	Total Hydro	1303	536	376	11.09
<b>Total Uttarakhand</b>		<b>1303</b>	<b>536</b>	<b>376</b>	<b>11.09</b>	<b>462</b>
Delhi	Rajghat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	82	80	1.90	79
	Pragati Gas Turbine	330	318	269	7.54	314
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	0	0	0.00	0
	Badarpur TPS (NTPC)	705	515	435	10.58	441
	Thermal (Total)	2232	915	784	20.02	834
	<b>Total Delhi</b>	<b>2232</b>	<b>915</b>	<b>784</b>	<b>20.02</b>	<b>834</b>
HP	Baspa HPS (IPP)	330	30	0	1.24	52
	Malana HPS (IPP)	86	0	0	0.24	10
	Other Hydro	589	210	95	3.61	150
	<b>Total HP</b>	<b>1005</b>	<b>240</b>	<b>95</b>	<b>5.09</b>	<b>212</b>
J & K	Baglihar HPS (IPP)	450	298	118	3.76	157
	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>242</b>	<b>6.34</b>	<b>264</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>18104</b>	<b>16805</b>	<b>417.50</b>	<b>17396</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>3981</b>	<b>2175</b>	<b>82.60</b>	<b>3442</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>38226</b>	<b>29275</b>	<b>791.46</b>	<b>32977</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	5812	1010	65.65	2735
State Control Area Hydro	5368	1995	1463	42.24	1760
<b>Total Regional Hydro</b>	<b>15868</b>	<b>7807</b>	<b>2473</b>	<b>107.89</b>	<b>4495</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	-300	400	300	1.77	1.96	-0.19
Gwalior-Agra (D/C)	1183	659	1597	0	25.44	0.00	25.44
Zerda-Kankroli	16	-321	94	361	0.00	1.95	-1.95
Zerda-Bhinmal	92	-243	171	318	0.05	0.00	0.05
Malanpur-Auraiya	-105	-125	0	143	0.00	2.50	-2.50
Badod-Kota/Morak	-60	-224	0	242	0.00	2.90	-2.90
Mundra-Mohindergarh(HVDC)	1169	1643	1643	0	27.90	0.00	27.90
<b>Sub Total WR</b>	<b>2345</b>	<b>1089</b>			<b>55.16</b>	<b>9.31</b>	<b>45.85</b>
Pusauli Bypass	100	100	300	0	2.83	0.00	2.83
MZP- GKP (D/C)	361	220	638	0	7.20	0.00	7.20
Patna-Balia(D/C)	558	463	884	0	13.55	0.00	13.55
B'Sharif-Balia (D/C)	210	107	405	0	4.42	0.00	4.42
Pusauli-Balia	-93	-91	0	104	0.00	1.92	-1.92
Gaya-Fatehpur (765 Kv)	107	13	256	85	1.83	0.00	1.83
Pusauli-Sahupuri	176	209	211	0	4.87	0.00	4.87
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)	249	95	446	72	4.81	0.00	4.81
<b>Sub Total ER</b>	<b>1636</b>	<b>1086</b>			<b>39.51</b>	<b>2.76</b>	<b>36.75</b>
<b>Total IR Exch</b>	<b>3981</b>	<b>2175</b>			<b>94.67</b>	<b>12.07</b>	<b>82.60</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
28.32	0.45	28.77	14.00	-14.95	-0.87	-2.94	4.15	-4.15

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
46.05	35.91	81.96	36.75	45.85	82.60	-9.30	9.95	0.64

**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	0.50	7.70	95.80	10.80	88.10	38.70	3.70

<----- 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				
50.35	16.04	49.46	9.17	49.94	0.29	0.16	50.28	49.62

**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	407	00:00	407	00:00	0.0	0.0	0.0	0.0
Gorakhpur	400	428	05:20	409	14:58	0.0	0.0	26.8	0.0
Bareilly	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Kanpur	400	420	03:58	397	10:23	0.0	0.0	0.0	0.0
Dadri	400	423	03:59	399	10:20	0.0	0.0	6.3	0.0
Ballabgarh	400	428	23:55	403	10:20	0.0	0.0	46.8	0.0
Bawana	400	427	04:03	402	10:21	0.0	0.0	26.8	0.0
Bassi	400	424	03:59	387	11:16	0.0	2.1	4.5	0.0
Hissar	400	414	03:59	390	10:18	0.0	0.0	0.0	0.0
Moga	400	421	03:57	400	10:08	0.0	0.0	0.7	0.0
Abdullapur	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Nalagarh	400	424	03:18	402	10:07	0.0	0.0	18.9	0.0
Kishenpur	400	420	13:01	394	07:37	0.0	0.0	0.0	0.0
Wagoora	400	411	13:01	374	07:36	8.6	36.7	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	784	23:57	779	23:07	0.0	0.0	0.0	0.0
Balia	765	767	05:05	731	10:18	0.0	26.7	0.0	0.0
Moga	765	786	04:02	747	09:16	0.0	0.0	0.0	0.0
Agra	765	812	04:00	751	12:29	0.0	0.0	29.1	0.0
Bhiwani	765	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Unnao	765	764	05:05	731	11:16	0.0	24.3	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	503.55	1245.57	496.32	948.89	179.64	422.57
Pong	426.72	384.05	413.07	600.05	411.77	555.85	102.56	415.66
Tehri	829.79	740.04	814.85	900.00	818.65	982.26	48.18	200.00
Koteshwar	612.50	598.50	610.30	4.95	NA	NA	204.00	181.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	44.62	43.74
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 25.12.2013 :**

1. Fog reported some part of 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 : 25.12.2013

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER