

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 20.12.2013  
Date of Reporting : 21.12.2013

### 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
35759	1963	37721	50.09	27329	0	27329	50.13	758.3	50.78

\* 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	40.34	10.66		51.00	40.00	41.54	1.53	92.54	2.66
Haryana	70.02	0.40		70.42	35.96	39.57	3.62	109.99	0.48
Rajasthan	94.57	5.22	4.06	103.85	83.12	81.42	-1.69	185.28	0.36
Delhi	19.01			19.01	40.12	41.76	1.65	60.77	1.16
UP	123.70	3.52	14.40	141.62	74.13	68.68	-5.45	210.30	42.06
Uttarakhand		10.41		10.41	19.39	20.76	1.37	31.17	2.30
HP		4.93		4.93	19.18	20.61	1.42	25.54	0.07
J & K		6.26	0.00	6.26	30.05	32.75	2.70	39.01	1.70
Chandigarh				0.00	3.18	3.71	0.53	3.71	0.00
<b>Total</b>	<b>347.64</b>	<b>41.40</b>	<b>18.46</b>	<b>407.50</b>	<b>345.13</b>	<b>350.80</b>	<b>5.68</b>	<b>758.31</b>	<b>50.78</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	4991	0	5	-318	2911	0	167	-355	-7.58	
Haryana	5627	0	41	-803	3899	0	357	-1267	-25.88	
Rajasthan	8122	0	7	1044	6775	0	31	1440	34.62	
Delhi	3190	0	118	-659	1374	0	-37	-1429	-21.96	
UP	9114	1780	-458	-303	8830	0	-139	-159	-6.88	
Uttarakhand	1590	75	46	416	1067	0	-39	360	8.46	
HP	1268	8	32	259	762	0	3	359	7.51	
J&K	1662	100	-124	631	1624	0	56	540	9.95	
Chandigarh	195	0	8	0	87	0	2	-20	-0.13	
<b>Total</b>	<b>35759</b>	<b>1963</b>	<b>-325</b>	<b>268</b>	<b>27329</b>	<b>0</b>	<b>402</b>	<b>-531</b>	<b>-1.88</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	2093	1870	46.25	1927	45.44	0.81	
	Rihand I STPS	1000	860	1003	858	20.62	859	20.00	0.61	
	Rihand II STPS	1000	930	1046	935	22.20	925	21.59	0.61	
	Rihand III STPS	1000	460	521	475	11.04	460	10.88	0.17	
	Dadri I STPS	840	815	643	489	13.34	556	13.29	0.04	
	Dadri II STPS	980	798	511	733	17.00	708	17.31	-0.32	
	Unchahar I TPS	420	407	439	392	9.33	389	9.28	0.04	
	Unchahar II TPS	420	404	441	322	9.02	376	8.95	0.07	
	Unchahar III TPS	210	201	221	155	4.47	186	4.45	0.03	
	ISTPP (Jhajjar)	1500	1480	627	629	15.89	662	16.12	-0.23	
	Dadri GPS	830	835	374	348	8.66	361	8.77	-0.11	
	Anta GPS	419	426	243	260	6.05	252	6.03	0.02	
	Auraiya GPS	663	665	159	160	3.93	164	3.81	0.12	
	<b>Sub Total (A)</b>	<b>11282</b>	<b>10226</b>	<b>8321</b>	<b>7626</b>	<b>187.82</b>	<b>7826</b>	<b>185.94</b>	<b>1.88</b>	
	B. NPC	NAPS	440	322	356	365	7.70	321	7.74	-0.04
		RAPS- B	440	420	467	466	10.13	422	10.08	0.05
RAPS- C		440	430	473	476	10.24	427	10.32	-0.08	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1172</b>	<b>1296</b>	<b>1307</b>	<b>28.07</b>	<b>1169</b>	<b>28.14</b>	<b>-0.07</b>	
C. NHPC	Chamera I HPS	540	360	360	0	1.61	67	1.56	0.06	
	Chamera II HPS	300	300	303	0	1.12	47	1.02	0.10	
	Chamera III HPS	231	231	71	0	0.67	28	0.65	0.02	
	Bairasuil HPS	180	182	50	0	0.43	18	0.42	0.01	
	Salal-HPS	690	116	115	150	3.01	126	2.84	0.17	
	Tanakpur-HPS	94	29	32	32	0.73	30	0.69	0.03	
	Uri-HPS	480	93	219	43	2.20	92	2.25	-0.05	
	Uri-II HPS	120	55	105	37	1.37	57	1.32	0.04	
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00	
	Dulhasti-HPS	390	387	408	0	2.69	112	2.63	0.06	
	Sewa-II HPS	120	119	82	0	0.40	17	0.38	0.03	
	<b>Sub Total (C)</b>	<b>3425</b>	<b>1872</b>	<b>1745</b>	<b>262</b>	<b>14.23</b>	<b>593</b>	<b>13.76</b>	<b>0.47</b>	
	D. NJPC	Nathpa Jhakri	1500	1350	1359	0	7.67	320	7.20	0.47
<b>Sub Total (D)</b>		<b>1500</b>	<b>1350</b>	<b>1359</b>	<b>0</b>	<b>7.67</b>	<b>320</b>	<b>7.20</b>	<b>0.47</b>	
E. THDC	Tehri HPS	1000	1060	1061	0	9.08	378	9.00	0.07	
	<b>Sub Total (E)</b>	<b>400</b>	<b>116</b>	<b>304</b>	<b>91</b>	<b>2.73</b>	<b>114</b>	<b>2.70</b>	<b>0.03</b>	
F. BBMB	Bhakra HPS	1497	630	1036	370	15.67	653	15.12	0.55	
	Dehar HPS	990	125	330	0	3.27	136	3.01	0.26	
	Pong HPS	396	303	372	186	7.38	308	7.26	0.12	
	<b>Sub Total (F)</b>	<b>2883</b>	<b>1058</b>	<b>1738</b>	<b>556</b>	<b>26.32</b>	<b>1097</b>	<b>25.40</b>	<b>0.92</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.51	21	0.49	0.02	
	KWHEP HPS(IPP)	1000	0	361	0	4.12	172	4.07	0.05	
	Malana Stg-II HPS	100	0	65	0	0.18	8	0.18	0.00	
	Shree Cement TPS	300	0	274	151	5.62	234	5.41	0.21	
	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>700</b>	<b>151</b>	<b>10.43</b>	<b>435</b>	<b>10.15</b>	<b>0.28</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>23472</b>	<b>16855</b>	<b>16524</b>	<b>9993</b>	<b>286.34</b>	<b>11931</b>	<b>282.28</b>	<b>4.05</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	1010	680	19.16	798
	Guru Nanak Dev TPS(Bhatinda)	440	340	250	6.83	285
	Guru Hargobind Singh TPS(L.mbt)	920	894	346	14.35	598
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	2244	1276	40.34	1681
	Total Hydro	1148	456	433	10.66	444
<b>Total Punjab</b>		<b>3768</b>	<b>2700</b>	<b>1709</b>	<b>51.00</b>	<b>2125</b>
Haryana	Panipat TPS	1367	817	797	19.13	797
	DCRTPP (Yamuna nagar)	600	549	516	12.29	512
	Faridabad GPS (NTPC)	432	187	0	1.29	54
	RGTPP (khedar) (IPP)	1200	586	449	11.90	496
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1237	744	25.41	1059
	Thermal (Total)	4944	3376	2506	70.02	2918
	Total Hydro	62	15	14	0.40	17
	<b>Total Haryana</b>	<b>5006</b>	<b>3391</b>	<b>2520</b>	<b>70.42</b>	<b>2934</b>
	Rajasthan	kota TPS	1240	1158	1093	26.44
suratgarh TPS		1500	1116	996	25.33	1055
Chabra TPS		500	572	551	13.85	577
Dholpur GPS		330	109	107	2.71	113
Ramgarh GPS		111	175	70	0.46	19
RAPS A (NPC)		300	214	175	4.07	170
Barsingsar (NLC)		250	59	215	5.51	229
Giral LTPS		250	477	59	1.30	54
Rajwest LTPS (IPP)		1080	237	142	7.69	321
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	0	473	7.22	301
Thermal (Total)		6956	4117	3881	94.57	3941
Total Hydro		550	269	112	5.22	217
Wind power		2191	71	184	2.89	120
Biomass		91	22	22	0.53	22
Solar		201	0	0	0.65	27
Renewable/Others (Total)		2483	93	206	4.06	169
<b>Total Rajasthan</b>		<b>9989</b>	<b>4479</b>	<b>4199</b>	<b>103.85</b>	<b>4327</b>
UP		Anpara TPS	1630	1621	1445	33.80
	Obra TPS	1288	276	281	6.80	283
	Paricha TPS	1140	482	768	16.60	692
	Panki TPS	210	72	54	1.30	54
	Harduaganj TPS	665	428	446	10.80	450
	Tanda TPS (NTPC)	440	402	402	9.82	409
	Roza TPS (IPP)	1200	518	415	11.49	479
	Anpara-C (IPP)	1200	1073	1076	25.15	1048
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	284	282	7.95	331
	Thermal (Total)	8223	5156	5169	123.70	5154
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	157	138	3.52	147
	Cogeneration	981	600	600	14.40	600
	<b>Total UP</b>	<b>10131</b>	<b>5913</b>	<b>5907</b>	<b>141.62</b>	<b>5901</b>
Uttarakhand	Total Hydro	1303	529	353	10.41	434
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>529</b>	<b>353</b>	<b>10.41</b>	<b>434</b>
Delhi	Raighat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	113	83	2.35	98
	Pragati Gas Turbine	330	313	265	7.29	304
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	22	0	0.06	2
	Badarpur TPS (NTPC)	705	510	360	9.31	388
	Thermal (Total)	2232	958	708	19.01	792
<b>Total Delhi</b>	<b>2232</b>	<b>958</b>	<b>708</b>	<b>19.01</b>	<b>792</b>	
HP	Baspa HPS (IPP)	330	32	0	1.24	52
	Malana HPS (IPP)	86	0	0	0.24	10
	Other Hydro	589	193	88	3.45	144
	<b>Total HP</b>	<b>1005</b>	<b>225</b>	<b>88</b>	<b>4.93</b>	<b>206</b>
J & K	Baglihar HPS (IPP)	450	294	118	3.72	155
	Other Hydro	323	102	120	2.54	106
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>396</b>	<b>238</b>	<b>6.26</b>	<b>261</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>18591</b>	<b>15722</b>	<b>407.50</b>	<b>16979</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>4112</b>	<b>3263</b>	<b>88.71</b>	<b>3696</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>39227</b>	<b>28978</b>	<b>782.55</b>	<b>32606</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	6633	909	64.84	2701
State Control Area Hydro	5368	2047	1376	41.40	1725
<b>Total Regional Hydro</b>	<b>15868</b>	<b>8680</b>	<b>2285</b>	<b>106.23</b>	<b>4426</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	-100	300	300	0.79	1.52	-0.73
Gwalior-Agra (D/C)	1058	869	1291	0	24.07	0.00	24.07
Zerda-Kankroli	68	-86	166	143	0.12	0.65	-0.53
Zerda-Bhinmal	201	36	306	46	2.92	0.00	2.92
Malanpur-Auraiya	-105	-115	0	151	0.00	3.79	-3.79
Badod-Kota/Morak	-36	-154	0	186	0.00	2.37	-2.37
Mundra-Mohindergarh(HVDC)	1356	1478	1478	0	34.24	0.00	34.24
<b>Sub Total WR</b>	<b>2592</b>	<b>1928</b>			<b>62.15</b>	<b>8.32</b>	<b>53.83</b>
Pusauli Bypass	-396	-398	0	427	0.00	7.64	-7.64
MZP- GKP (D/C)	334	398	442	0	8.17	0.00	8.17
Patna-Balia(D/C)	610	537	742	0	13.94	0.00	13.94
B'Sharif-Balia (D/C)	318	216	334	0	6.02	0.00	6.02
Pusauli-Balia	23	-8	27	96	0.00	0.29	-0.29
Gaya-Fatehpur (765 Kv)	131	138	220	0	3.50	0.00	3.50
Pusauli-Sahupuri	135	117	166	0	3.25	0.00	3.25
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)	397	365	461		8.77	0.00	8.77
<b>Sub Total ER</b>	<b>1520</b>	<b>1335</b>			<b>43.65</b>	<b>8.77</b>	<b>34.88</b>
<b>Total IR Exch</b>	<b>4112</b>	<b>3263</b>			<b>105.80</b>	<b>17.09</b>	<b>88.71</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
31.71	0.44	32.15	14.13	-18.28	0.59	-4.84	4.22	-4.22

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
51.09	29.07	80.16	34.88	53.83	88.71	-16.21	24.76	8.55

**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	0.10	4.80	96.90	9.90	92.20	31.50	3.00

<----- 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	23.02	49.49	6.54	49.94	0.22	0.14	50.29	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	03:31	401	15:13	0.0	0.0	0.0	0.0
Gorakhpur	400	431	00:00	410	06:56	0.0	0.0	36.8	1.7
Barilly	400	425	23:51	402	16:20	0.0	0.0	8.5	0.0
Kanpur	400	421	23:51	403	15:36	0.0	0.0	0.2	0.0
Dadri	400	425	04:09	403	16:20	0.0	0.0	6.8	0.0
Ballabgarh	400	433	04:01	407	10:27	0.0	0.0	40.2	1.5
Bawana	400	428	04:02	405	16:21	0.0	0.0	25.4	0.0
Bassi	400	423	20:53	388	10:08	0.0	2.9	0.7	0.0
Hissar	400	415	04:02	390	16:18	0.0	0.0	0.0	0.0
Moga	400	423	04:02	394	16:20	0.0	0.0	2.3	0.0
Abdullapur	400	422	03:31	401	06:28	0.0	0.0	4.3	0.0
Nalagarh	400	424	20:53	397	16:18	0.0	0.0	3.3	0.0
Kishenpur	400	414	03:04	387	16:07	0.0	1.9	0.0	0.0
Wagoora	400	404	09:26	363	18:09	26.5	72.2	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	776	02:59	733	06:54	0.0	7.8	0.0	0.0
Balia	765	761	00:00	725	06:54	1.2	32.0	0.0	0.0
Moga	765	790	04:03	738	16:18	0.0	1.3	0.0	0.0
Agra	765	815	03:04	765	06:27	0.0	0.0	21.7	0.0
Bhiwani	765	798	04:02	751	16:22	0.0	0.0	0.0	0.0
Unnao	765	765	23:51	730	06:54	0.0	36.4	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	504.10	1272.20	497.00	983.40	135.84	429.34
Pong	426.72	384.05	413.64	622.40	412.28	577.87	67.68	455.67
Tehri	829.79	740.04	816.15	922.25	818.65	982.26	48.99	204.00
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	261.15	369.40	262.16	428.30	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 20.12.2013 :**

1.Dense fog persist in some parts 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 : 20.12.2013

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER