

# पावर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)

## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 16.12.2013  
Date of Reporting : 17.12.2013



### 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
36447	2476	38924	50.23	28231	-140	28091	50.18	758.1	37.18

\* 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	38.73	10.16		48.89	41.24	44.50	3.26	93.39	0.00
Haryana	63.71	0.42		64.13	39.89	39.81	-0.08	103.94	0.02
Rajasthan	106.34	5.56	8.94	120.84	74.85	73.57	-1.28	194.40	0.00
Delhi	12.77			12.77	44.66	45.93	1.28	58.70	0.07
UP	118.65	3.28	11.30	133.23	85.99	79.81	-6.18	213.04	33.18
Uttarakhand		11.02		11.02	19.18	19.81	0.64	30.84	2.21
HP		5.14		5.14	18.95	18.95	0.00	24.09	0.00
J & K		5.21	0.00	5.21	30.31	31.03	0.72	36.24	1.70
Chandigarh				0.00	3.17	3.43	0.26	3.43	0.00
<b>Total</b>	<b>340.19</b>	<b>40.79</b>	<b>20.24</b>	<b>401.23</b>	<b>358.22</b>	<b>356.84</b>	<b>-1.38</b>	<b>758.07</b>	<b>37.18</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	
Punjab	5088	0	192	-299	2918	0	369	-342	-3.50
Haryana	5433	0	-175	-733	3751	0	253	-798	-20.85
Rajasthan	8457	0	-221	1247	6889	0	-231	480	27.38
Delhi	3144	0	163	-593	1306	0	10	-1286	-21.02
UP	9480	2300	-440	-24	9257	-140	88	822	6.38
Uttarakhand	1639	75	55	372	1018	0	-52	359	8.37
HP	1300	1	76	219	1393	0	648	359	7.47
J&K	1719	100	-166	631	1613	0	91	515	9.98
Chandigarh	188	0	5	0	86	0	0	-20	-0.22
<b>Total</b>	<b>36447</b>	<b>2476</b>	<b>-511</b>	<b>821</b>	<b>28231</b>	<b>-140</b>	<b>1176</b>	<b>88</b>	<b>13.99</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	Declared	Peak MW	Off Peak MW	Energy	Average	Schedule	UI
		(Effective) MW	Capacity(MW)	(Gross)	(Gross)	(Net MU)	Sentout(MW)	Net MU	Net MU
A. NTPC	Singrauli STPS	2000	1945	2084	1841	45.85	1910	45.29	0.55
	Rihand I STPS	1000	847	985	660	19.32	805	18.90	0.42
	Rihand II STPS	1000	930	1044	639	21.01	875	20.63	0.38
	Rihand III STPS	1000	460	504	327	10.50	438	10.36	0.14
	Dadri I STPS	840	815	641	478	13.23	551	12.87	0.36
	Dadri II STPS	980	985	973	715	20.72	863	20.89	-0.17
	Unchahar I TPS	420	381	438	228	8.34	347	8.23	0.11
	Unchahar II TPS	420	388	396	315	7.91	330	8.09	-0.18
	Unchahar III TPS	210	201	183	155	4.14	173	4.14	0.00
	ISTPP (Jhajjar)	1500	1480	818	643	16.95	706	17.05	-0.10
	Dadri GPS	830	832	402	257	7.47	311	8.13	-0.66
	Anta GPS	419	425	267	263	6.33	264	6.26	0.08
	Auraiya GPS	663	665	156	164	3.74	156	3.72	0.02
	<b>Sub Total (A)</b>		<b>11282</b>	<b>10354</b>	<b>8891</b>	<b>6685</b>	<b>185.49</b>	<b>7729</b>	<b>184.55</b>
B. NPC	NAPS	440	323	360	367	7.74	323	7.75	-0.01
	RAPS- B	440	420	463	466	10.10	421	10.08	0.02
	RAPS- C	440	430	475	475	10.22	426	10.32	-0.10
	<b>Sub Total (B)</b>		<b>1320</b>	<b>1173</b>	<b>1298</b>	<b>1308</b>	<b>28.06</b>	<b>1169</b>	<b>28.15</b>
C. NHPC	Chamera I HPS	540	360	360	0	1.63	68	1.63	0.00
	Chamera II HPS	300	300	200	0	1.22	51	1.27	-0.05
	Chamera III HPS	231	231	135	0	0.67	28	0.66	0.01
	Bairasuil HPS	180	182	20	0	0.46	19	0.50	-0.04
	Salal-HPS	690	106	205	33	2.58	108	2.56	0.02
	Tanakpur-HPS	94	30	12	28	0.69	29	0.72	-0.03
	Uri-HPS	480	93	215	35	2.32	97	2.41	-0.09
	Uri-II HPS	120	62	122	40	1.42	59	1.49	-0.07
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00
	Dulhasti-HPS	390	321	244	0	2.48	103	2.51	-0.04
	Sewa-II HPS	120	20	84	0	0.27	11	0.25	0.02
	<b>Sub Total (C)</b>		<b>3425</b>	<b>1705</b>	<b>1597</b>	<b>136</b>	<b>13.73</b>	<b>572</b>	<b>14.00</b>
D.NJPC	Nathpa Jhakri	1500	1350	1087	0	8.29	345	7.50	0.79
	<b>Sub Total (D)</b>		<b>1500</b>	<b>1350</b>	<b>1087</b>	<b>0</b>	<b>8.29</b>	<b>345</b>	<b>7.50</b>
E. THDC	Tehri HPS	1000	1060	675	0	6.42	268	6.40	0.02
	Koteshwar HPS	400	92	86	90	2.23	93	2.20	0.03
	<b>Sub Total (E)</b>		<b>1400</b>	<b>1152</b>	<b>761</b>	<b>90</b>	<b>8.65</b>	<b>361</b>	<b>8.60</b>
F. BBMB	Bhakra HPS	1497	761	1022	666	18.65	777	18.27	0.38
	Dehar HPS	990	128	330	0	3.18	133	3.08	0.10
	Pong HPS	396	321	372	180	7.82	326	7.71	0.11
	<b>Sub Total (F)</b>		<b>2883</b>	<b>1211</b>	<b>1724</b>	<b>846</b>	<b>29.65</b>	<b>1235</b>	<b>29.06</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	346	0	4.38	183	4.39	-0.01
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.17	-0.17
	Shree Cement TPS	300	0	266	146	5.45	227	5.34	0.11
	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>612</b>	<b>146</b>	<b>10.34</b>	<b>431</b>	<b>10.40</b>

H. Total Regional Entities (A-G)	23472	16945	15970	9211	284.21	11842	282.26	1.96
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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	1005	600	16.47	686
	Guru Nanak Dev TPS(Bhatinda)	440	310	250	5.47	228
	Guru Hargobind Singh TPS(L.mbt)	920	941	654	16.79	699
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	2256	1504	38.73	1614
	Total Hydro	1148	475	427	10.16	423
	<b>Total Punjab</b>	<b>3768</b>	<b>2731</b>	<b>1931</b>	<b>48.89</b>	<b>2037</b>
Haryana	Panipat TPS	1367	791	606	15.99	666
	DCRTPP (Yamuna nagar)	600	508	513	11.94	498
	Faridabad GPS (NTPC)	432	0	0	0.00	0
	RGTPP (khedar) (IPP)	1200	519	507	12.20	508
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1150	744	23.59	983
	Thermal (Total)	4944	2968	2370	63.71	2655
	Total Hydro	62	16	15	0.42	17
	<b>Total Haryana</b>	<b>5006</b>	<b>2984</b>	<b>2385</b>	<b>64.13</b>	<b>2672</b>
Rajasthan	kota TPS	1240	1147	1101	27.10	1129
	suratgarh TPS	1500	1120	1026	25.87	1078
	Chabra TPS	500	539	585	14.11	588
	Dholpur GPS	330	109	104	2.65	110
	Ramgarh GPS	111	128	119	3.44	143
	RAPS A (NPC)	300	175	175	4.02	168
	Barsingsar (NLC)	250	218	195	5.13	214
	Giral LTPS	250	59	55	1.04	43
	Rajwest LTPS (IPP)	1080	472	284	10.02	417
	VSLP LTPS (IPP)	135	0	0	0.00	0
	Kalisindh Thermal	600	0	0	0.00	0
	Kawai(Adani)	660	598	448	12.97	540
	Thermal (Total)	6956	4565	4092	106.34	4431
	Total Hydro	550	275	106	5.56	232
	Wind power	2191	44	107	1.84	77
	Biomass	91	26	26	0.62	26
	Solar	201	9	0	0.93	39
	Renewable/Others (Total)	2483	70	133	8.94	373
	<b>Total Rajasthan</b>	<b>9989</b>	<b>4910</b>	<b>4331</b>	<b>120.84</b>	<b>5035</b>
UP	Anpara TPS	1630	1261	1326	30.90	1288
	Obra TPS	1288	308	308	7.50	313
	Paricha TPS	1140	840	730	17.70	738
	Panki TPS	210	59	63	1.50	63
	Harduaganj TPS	665	448	446	10.70	446
	Tanda TPS (NTPC)	440	404	293	8.58	358
	Roza TPS (IPP)	1200	594	576	14.12	588
	Anpara-C (IPP)	1200	1047	793	21.06	878
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	283	282	6.59	274
	Thermal (Total)	8223	5244	4817	118.65	4944
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	118	150	3.28	137
	Cogeneration	981	470	470	11.30	471
	<b>Total UP</b>	<b>10131</b>	<b>5832</b>	<b>5437</b>	<b>133.23</b>	<b>5551</b>
Uttarakhand	Total Hydro	1303	625	229	11.02	459
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>625</b>	<b>229</b>	<b>11.02</b>	<b>459</b>
Delhi	Rajghat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	83	39	1.67	70
	Pragati Gas Turbine	330	134	259	4.93	205
	Rithala GPS	95	0	0	0.00	0
	Bawana GPS	686	0	0	0.00	0
	Badarpur TPS (NTPC)	705	305	250	6.17	257
	Thermal (Total)	2232	522	548	12.77	532
	<b>Total Delhi</b>	<b>2232</b>	<b>522</b>	<b>548</b>	<b>12.77</b>	<b>532</b>
HP	Baspa HPS (IPP)	330	30	0	1.27	53
	Malana HPS (IPP)	86	0	0	0.17	7
	Other Hydro	589	163	116	3.70	154
	<b>Total HP</b>	<b>1005</b>	<b>193</b>	<b>116</b>	<b>5.14</b>	<b>214</b>
J & K	Baglihar HPS (IPP)	450	94	118	2.67	111
	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>196</b>	<b>238</b>	<b>5.21</b>	<b>217</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>17993</b>	<b>15215</b>	<b>401.23</b>	<b>16718</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>3456</b>	<b>3071</b>	<b>83.92</b>	<b>3497</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>37419</b>	<b>27497</b>	<b>769.36</b>	<b>32057</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	5515	1072	65.21	2717
State Control Area Hydro	5368	1898	1281	40.79	1700
<b>Total Regional Hydro</b>	<b>15868</b>	<b>7413</b>	<b>2353</b>	<b>106.01</b>	<b>4417</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	-100	-200	300	400	0.89	3.76	-2.87
Gwalior-Agra (D/C)	1244	1294	1531	0	29.85	0.00	29.85
Zerda-Kankroli	-42	-242	34	342	0.00	2.03	-2.03
Zerda-Bhinmal	58	-120	176	242	0.59	0.00	0.59
Malanpur-Auraiya	-158	-93	0	140	0.00	2.55	-2.55
Badod-Kota/Morak	-82	-168	0	225	0.00	3.46	-3.46
Mundra-Mohindergarh(HVDC)	1385	1249	1403	0	30.91	0.00	30.91
<b>Sub Total WR</b>	<b>2305</b>	<b>1720</b>			<b>62.25</b>	<b>11.80</b>	<b>50.45</b>
Pusauli Bypass	-300	-141	0	433	0.00	4.58	-4.58
MZP- GKP (D/C)	242	360	525	0	8.34	0.00	8.34
Patna-Balia(D/C)	607	602	865	0	14.94	0.00	14.94
B'Sharif-Balia (D/C)	359	276	510	0	7.34	0.00	7.34
Pusauli-Balia	76	29	103	0	1.10	0.00	1.10
Gaya-Fatehpur (765 Kv)	57	139	322	0	3.91	0.00	3.91
Pusauli-Sahupuri	142	116	174	0	3.26	0.00	3.26
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)	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1151</b>	<b>1351</b>			<b>38.89</b>	<b>5.42</b>	<b>33.47</b>
<b>Total IR Exch</b>	<b>3456</b>	<b>3071</b>			<b>101.14</b>	<b>17.22</b>	<b>83.92</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
32.22	0.56	32.77	14.64	-17.35	7.27	3.14	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
58.90	34.80	93.70	33.47	50.45	83.92	-25.43	15.65	-9.78

**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	1.20	87.50	5.80	86.30	55.20	12.50

<----- Frequency (Hz) ----->				Average Frequency	Frequency Variation	Std. Dev.	Frequency in 15 Min Block	
Maximum		Minimum					MAX	MIN
Freq	Time	Freq	Time	Hz	Index	(Hz)	(Hz)	
50.52	0.02	49.64	15.28	50.02	0.23	50.37	49.79	

**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	414	0:00	399	22:30	0.2	0.2	0.0	0.0
Gorakhpur	400	427	0:00	411	15:55	0.0	0.0	52.7	0.0
Bareilly	400	432	4:02	406	12:03	0.0	0.0	36.5	0.7
Kanpur	400	425	3:55	399	9:40	0.0	0.0	4.8	0.0
Dadri	400	431	3:56	402	11:35	0.0	0.0	23.5	0.6
Ballabgarh	400	442	3:58	404	9:50	0.0	0.0	37.4	19.3
Bawana	400	434	3:55	404	9:39	0.0	0.0	28.8	2.0
Bassi	400	428	4:02	388	9:49	0.0	1.1	4.5	0.0
Hissar	400	423	4:02	390	11:55	0.0	0.0	1.1	0.0
Moga	400	425	4:02	390	11:34	0.0	0.0	2.3	0.0
Abdullapur	400	430	3:56	403	10:17	0.0	0.0	24.3	0.0
Nalagarh	400	429	3:57	402	9:21	0.0	0.0	31.1	0.0
Kishenpur	400	420	13:02	388	11:35	0.0	0.5	0.0	0.0
Wagoora	400	416	13:02	363	18:13	13.4	48.3	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	764	16:32	751	15:43	0.0	0.0	0.0	0.0
Balia	765	763	0:00	719	11:10	5.4	18.3	0.0	0.0
Moga	765	797	4:02	729	9:37	0.0	8.4	0.0	0.0
Agra	765	820	4:02	757	9:40	0.0	0.0	15.9	0.0
Bhiwani	765	796	0:01	748	11:36	0.0	0.0	0.0	0.0
Unnao	765	768	4:01	733	9:43	0.0	20.2	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	505.29	1325.82	497.66	1006.54	189.33	558.78
Pong	426.72	384.05	414.72	668.52	413.14	600.05	69.18	470.94
Tehri	829.79	740.04	817.60	955.00	818.65	982.26	43.99	144.00
Koteshwar	612.50	598.50	610.10	4.60	NA	NA	145.00	148.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	44.01	44.01
Rihand	268.22	252.98	261.31	378.10	262.34	439.10	NA	NA
RPS	352.80	343.81	NA	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	NA	NA	NA	NA	NA	NA

RSD	527.91	487.91	513.26	144.00	518.91	144.00	46.50	123.04
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\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 16.12.2013 :**

1. As reported , dense Fog persist in 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 : 16.12.2013

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER