

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 16.05.2013  
Date of Reporting : 17.05.2013

### I. Regional Availability/Demand:

Evening Peak (20:00 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
36947	1490	38437	50.11	34074	1204	35278	50.05	854.7	42.21

\* 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	46.25	9.27		55.52	81.02	81.49	0.47	137.01	0.00
Haryana	48.71	0.61		49.33	73.80	78.01	4.22	127.34	2.10
Rajasthan	86.14	0.00	12.17	98.31	58.17	51.35	-6.82	149.66	0.00
Delhi	30.44			30.44	67.73	64.00	-3.73	94.44	0.00
UP	134.85	8.23	8.40	151.48	101.86	100.42	-1.44	251.90	36.66
Uttarakhand		13.53		13.53	19.39	20.12	0.73	33.65	1.75
HP		15.04		15.04	9.15	9.16	0.00	24.20	0.00
J & K		13.21	0.00	13.21	18.26	18.08	-0.18	31.29	1.70
Chandigarh				0.00	4.90	5.18	0.28	5.18	0.00
<b>Total</b>	<b>346.39</b>	<b>59.89</b>	<b>20.57</b>	<b>426.86</b>	<b>434.28</b>	<b>427.81</b>	<b>-6.48</b>	<b>854.66</b>	<b>42.21</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 (20:00 Hrs) MW				Off Peak (03:00 Hrs) MW				Day Energy MU STOA/PX transaction
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction	
Punjab	6201	0	60	937	4737	0	36	1121	26.77
Haryana	5745	0	-7	438	5009	94	163	-6	1.32
Rajasthan	6634	0	-434	288	6362	0	-171	139	9.30
Delhi	4083	0	-96	-361	3635	0	-87	-338	-6.89
UP	10034	1390	107	48	10821	1070	196	930	9.05
Uttarakhand	1577	0	56	309	1375	40	30	310	6.00
HP	947	0	-139	-697	833	0	37	-372	-14.11
J&K	1486	100	7	-115	1127	0	73	-244	-4.13
Chandigarh	240	0	-8	0	175	0	17	10	0.35
<b>Total</b>	<b>36947</b>	<b>1490</b>	<b>-453</b>	<b>845</b>	<b>34074</b>	<b>1204</b>	<b>294</b>	<b>1550</b>	<b>27.67</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
A. NTPC	Singrauli STPS	2000	1891	2057	2014	45.81	1909	45.38	0.44
	Rihand I STPS	1000	915	941	973	21.96	915	21.72	0.24
	Rihand II STPS	1000	862	976	1044	20.41	850	20.41	0.00
	Rihand III STPS	500	480	510	409	11.49	479	11.28	0.21
	Dadri I STPS	840	807	875	694	17.36	723	17.33	0.03
	Dadri II STPS	980	969	914	860	20.33	847	21.01	-0.68
	Unchahar I TPS	420	397	385	414	9.04	377	8.94	0.10
	Unchahar II TPS	420	400	333	396	8.41	351	8.17	0.25
	Unchahar III TPS	210	200	168	204	4.28	178	4.28	0.00
	ISTPP (Jhajjar)	1500	871	411	407	9.45	394	8.59	0.86
	Dadri GPS	830	798	370	361	8.26	344	8.42	-0.16
	Anta GPS	419	389	197	0	2.91	121	3.39	-0.48
	Auraiya GPS	663	620	148	248	4.25	177	4.26	-0.01
	<b>Sub Total (A)</b>	<b>10782</b>	<b>9599</b>	<b>8285</b>	<b>8024</b>	<b>183.97</b>	<b>7666</b>	<b>183.18</b>	<b>0.80</b>
	B. NPC	NAPS	440	301	330	343	7.13	297	7.22
RAPS- B		440	401	440	450	9.58	399	9.62	-0.04
RAPS- C		440	430	463	468	9.98	416	10.32	-0.34
<b>Sub Total (B)</b>		<b>1320</b>	<b>1132</b>	<b>1233</b>	<b>1261</b>	<b>26.69</b>	<b>1112</b>	<b>27.17</b>	<b>-0.48</b>
C. NHPC	Chamera I HPS	540	540	540	0	7.28	303	7.10	0.17
	Chamera II HPS	300	303	282	96	5.51	230	5.64	-0.13
	Chamera III HPS	231	231	221	0	3.81	159	3.84	-0.03
	Bairasuil HPS	180	182	120	120	2.19	91	2.09	0.10
	Salal-HPS	690	438	669	453	10.65	444	10.69	-0.04
	Tanakpur-HPS	94	31	45	37	0.83	35	0.75	0.08
	Uri-HPS	480	476	478	480	11.59	483	11.61	-0.02
	Dhauliganga-HPS	280	280	282	0	3.03	126	3.02	0.01
	Dulhasti-HPS	390	387	384	409	9.30	388	9.36	-0.06
	Sewa-II HPS	120	101	122	88	2.21	92	2.19	0.02
	<b>Sub Total (C)</b>	<b>3305</b>	<b>2969</b>	<b>3143</b>	<b>1683</b>	<b>56.40</b>	<b>2350</b>	<b>56.29</b>	<b>0.11</b>
	D.NJPC	Nathpa Jhakri	1500	1605	1597	254	27.91	1163	27.78
<b>Sub Total (D)</b>		<b>1500</b>	<b>1605</b>	<b>1597</b>	<b>254</b>	<b>27.91</b>	<b>1163</b>	<b>27.78</b>	<b>0.14</b>
E. THDC	Tehri HPS	1000	545	488	0	6.61	276	6.60	0.01
	Koteshwar HPS	400	262	242	0	2.65	111	2.65	0.00
	<b>Sub Total (E)</b>	<b>1400</b>	<b>807</b>	<b>730</b>	<b>0</b>	<b>9.27</b>	<b>386</b>	<b>9.25</b>	<b>0.02</b>
F. BBMB	Bhakra HPS	1480	781	1092	663	19.14	798	18.73	0.41
	Dehar HPS	990	377	825	280	9.07	378	9.05	0.02
	Pong HPS	396	183	296	120	4.46	186	0.25	4.21
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1340</b>	<b>2213</b>	<b>1063</b>	<b>32.67</b>	<b>1361</b>	<b>28.03</b>	<b>4.64</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	48	61	1.52	63	1.46	0.06
	KWHEP HPS(IPP)	1000	0	699	368	15.91	663	16.10	-0.19
	Malana Stg-II HPS	100	0	45	103	0.83	35	0.80	0.03
	Shree Cement TPS	300	0	130	266	5.11	213	5.38	-0.27
	Budhil HPS(IPP)	70	0	69	34	0.63	26	0.62	0.01
	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>991</b>	<b>832</b>	<b>24.00</b>	<b>1000</b>	<b>24.37</b>	<b>-0.36</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>17451</b>	<b>18192</b>	<b>13117</b>	<b>360.92</b>	<b>15038</b>	<b>356.06</b>	<b>4.86</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	1050	850	21.13	880	
	Guru Nanak Dev TPS(Bhatinda)	440	312	295	6.40	267	
	Guru Hargobind Singh TPS(L.mbt)	920	851	690	18.72	780	
	Thermal (Total)	2620	2213	1835	46.25	1927	
	Total Hydro	1148	377	353	9.27	386	
	<b>Total Punjab</b>	<b>3768</b>	<b>2590</b>	<b>2188</b>	<b>55.52</b>	<b>2313</b>	
Haryana	Panipat TPS	1367	955	979	23.23	968	
	DCRTPP (Yamuna nagar)	600	290	285	6.62	276	
	Faridabad GPS (NTPC)	432	172	160	4.08	170	
	RGTPP (kheadar) (IPP)	1200	0	0	0.00	0	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Jhajjar(CLP)	1320	582	580	14.79	616	
	Thermal (Total)	4944	1999	2004	48.71	2030	
	Total Hydro	62	22	24	0.61	26	
	<b>Total Haryana</b>	<b>5006</b>	<b>2021</b>	<b>2028</b>	<b>49.33</b>	<b>2055</b>	
	Rajasthan	kota TPS	1240	1060	1076	25.89	1079
suratgarh TPS		1500	1133	927	25.59	1066	
Chabra TPS		500	200	195	4.81	200	
Dholpur GPS		330	117	124	2.97	124	
Ramgarh GPS		111	132	137	3.53	147	
RAPS A (NPC)		300	180	180	4.29	179	
Barsingsar (NLC)		250	91	97	2.32	97	
Giral LTPS		250	0	0	0.00	0	
Rajwest LTPS (IPP)		1080	687	694	16.75	698	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Thermal (Total)		5696	3600	3430	86.14	3589	
Total Hydro		550	0	0	0.00	0	
Wind power		2191	205	850	9.68	403	
Biomass		91	31	31	0.75	31	
Solar		201	0	0	1.74	73	
Renewable/Others (Total)		2483	236	881	12.17	507	
<b>Total Rajasthan</b>		<b>8729</b>	<b>3836</b>	<b>4311</b>	<b>98.31</b>	<b>4096</b>	
UP		Anpara TPS	1630	1134	1339	27.20	1133
		Obra TPS	1288	501	366	9.00	375
	Paricha TPS	1140	711	879	18.50	771	
	Panki TPS	210	135	140	3.00	125	
	Harduaganj TPS	665	379	386	7.90	329	
	Tanda TPS (NTPC)	440	401	403	9.82	409	
	Roza TPS (IPP)	1200	997	1008	34.08	1420	
	Anpara-C (IPP)	1200	567	807	16.16	673	
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	320	403	9.19	383	
	Thermal (Total)	8223	5145	5731	134.85	5619	
	Vishnuparyag HPS (IPP)	400	242	199	4.76	198	
	Other Hydro	527	229	164	3.47	145	
	Cogeneration	981	350	350	8.40	350	
	<b>Total UP</b>	<b>10131</b>	<b>5966</b>	<b>6444</b>	<b>151.48</b>	<b>6113</b>	
	Uttarakhand	Total Hydro	1303	536	551	13.53	564
<b>Total Uttarakhand</b>		<b>1303</b>	<b>536</b>	<b>551</b>	<b>13.53</b>	<b>564</b>	
Delhi	Rajghat TPS	135	99	98	2.34	97	
	Delhi Gas Turbine	282	101	105	2.55	106	
	Pragati Gas Turbine	330	283	261	6.73	281	
	Rithala GPS	95	0	0	0.00	0	
	Bawana GPS	686	226	220	5.50	229	
	Badarpur TPS (NTPC)	705	600	595	13.32	555	
	Thermal (Total)	2232	1309	1279	30.44	1268	
	<b>Total Delhi</b>	<b>2232</b>	<b>1309</b>	<b>1279</b>	<b>30.44</b>	<b>1268</b>	
	HP	Baspa HPS (IPP)	330	58	212	3.71	155
Malana HPS (IPP)		86	20	23	0.77	32	
Other Hydro		589	419	462	10.57	440	
<b>Total HP</b>		<b>1005</b>	<b>497</b>	<b>697</b>	<b>15.04</b>	<b>627</b>	
J & K	Baglihar HPS (IPP)	450	438	436	10.49	437	
	Other Hydro	323	95	118	2.72	114	
	Gas/Diesel/Others	183	0	0	0.00	0	
	<b>Total J &amp; K</b>	<b>956</b>	<b>533</b>	<b>554</b>	<b>13.21</b>	<b>550</b>	
<b>Total State Control Area Generation</b>		<b>33130</b>	<b>17288</b>	<b>18052</b>	<b>426.86</b>	<b>17587</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>3449</b>	<b>3929</b>	<b>82.64</b>	<b>3443</b>	
<b>Total Regional Availability(Gross)</b>		<b>55966</b>	<b>38929</b>	<b>35098</b>	<b>870.41</b>	<b>36069</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	8475	3532	144.51	6021
State Control Area Hydro	5368	2194	2343	59.89	2297
<b>Total Regional Hydro</b>	<b>15731</b>	<b>10669</b>	<b>5875</b>	<b>204.40</b>	<b>8318</b>

**V(A). Inter Regional Exchange [Import (+ve)/Export (-ve)] [Linkwise]**

Element	Peak(20:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	Import	Export	Import	Export	
Vindhychal B/B	-200	-200	0	300	0.76	2.34	-1.58
Gwalior-Agra (D/C)	1166	1253	1913	0	23.54	0.00	23.54
Zerda-Kankroli	7	-162	21	240	0.00	3.32	-3.32
Zerda-Bhinmal	48	-121	61	225	0.00	1.48	-1.48
Malanpur-Auraiya	0	0	0	0	0.00	0.00	0.00
Badod-Kota/Morak	-52	-91	0	159	0.00	2.32	-2.32
Mundra-Mohindergarh(HVDC)	1432	1437	1438	0	34.71	0.00	34.71
<b>Sub Total WR</b>	<b>2401</b>	<b>2116</b>			<b>59.01</b>	<b>9.46</b>	<b>49.56</b>
Pusauli Bypass	-150	-100	0	150	0.00	3.04	-3.04
MZP- GKP (D/C)	462	720	748	0	14.94	0.00	14.94
Patna-Balia(D/C)	387	648	670	0	11.92	0.00	11.92
B'Sharif-Balia (D/C)	154	236	236	0	3.85	0.00	3.85
Pusauli-Balia	-44	-3	8	86	0.00	0.94	-0.94
Gaya-Fatehpur (765 Kv)	142	190	229	0	4.12	0.00	4.12
Pusauli-Sahupuri	133	162	171	0	3.30	0.00	3.30
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-36	-40	0	44	0.00	1.07	-1.07
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1048</b>	<b>1813</b>			<b>38.13</b>	<b>5.05</b>	<b>33.08</b>
<b>Total IR Exch</b>	<b>3449</b>	<b>3929</b>			<b>97.14</b>	<b>14.50</b>	<b>82.64</b>

**V(B). Inter Regional Schedule & Actual Exchanges [Import (+ve)/Export (-ve)] [Corridor wise]**

ER	ISGS/LT Schedule (MU)		Bilateral Schedule (MU)		Power Exchange ShdI (MU)		Wheeling (MU)	
	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
31.42	1.05	32.47	0.65	6.43	7.35	-8.51	-0.81	0.81

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
39.66	49.32	88.98	33.08	49.56	82.64	-6.58	0.24	-6.34

**VI. Frequency Profile** <----- % of Time Frequency ----->

<48.80	<49.0	<49.20	<49.50	<49.7	49.5 - 50.2	49.7 - 50.2	> 50.00	> 50.2
0.00	0.00	0.00	0.00	0.20	96.60	96.40	51.00	3.40

<----- 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				
50.41	6.04	49.68	17.12	50.00	0.11	0.11	50.36	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	405	0:00	400	10:32	0.0	0.0	0.0	0.0
Gorakhpur	400	425	22:05	400	11:16	0.0	0.0	18.7	0.0
Bareilly	400	420	0:00	401	0:00	0.0	0.0	0.0	0.0
Kanpur	400	416	4:01	399	17:12	0.0	0.0	0.0	0.0
Dadri	400	416	4:05	396	17:13	0.0	0.0	0.0	0.0
Ballabgarh	400	422	4:01	402	17:12	0.0	0.0	3.5	0.0
Bawana	400	421	4:05	401	10:27	0.0	0.0	0.2	0.0
Bassi	400	428	4:05	402	23:23	0.0	0.0	10.5	0.0
Hissar	400	414	4:04	392	10:27	0.0	0.0	0.0	0.0
Moga	400	424	4:05	400	10:27	0.0	0.0	7.1	0.0
Abdullapur	400	419	4:01	399	10:28	0.0	0.0	0.0	0.0
Nalagarh	400	423	3:59	399	11:41	0.0	0.0	7.7	0.0
Kishenpur	400	415	4:01	397	20:18	0.0	0.0	0.0	0.0
Wagoora	400	413	4:06	388	20:11	0.0	4.1	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	760	18:45	726	17:12	0.0	0.0	100.0	100.0
Balia	765	785	19:16	705	11:14	0.0	0.0	100.0	100.0
Moga	765	791	4:05	749	10:27	0.0	0.0	100.0	100.0
Agra	765	781	18:02	745	5:42	0.0	0.0	0.0	0.0
Bhiwani	765	793	13:29	762	5:40	0.0	0.0	0.0	0.0
Unnao	765	758	18:17	730	5:42	0.0	37.1	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	474.79	350.94	470.41	272.43	516.19	668.08
Pong	426.72	384.05	399.94	216.87	402.54	281.22	46.75	311.20
Tehri	829.79	740.04	755.55	88.00	818.65	982.26	101.12	212.00
Koteshwar	612.50	598.50	604.00	1.88	611.20	6.20	200.00	176.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	189.11	197.03
Rihand	268.22	252.98	256.58	140.00	257.10	162.00	NA	NA
RPS	352.80	343.81	346.59	NA	349.12	NA	NA	NA
Jawahar Sagar	298.70	295.78	297.88	NA	298.25	NA	NA	NA
RSD	527.91	487.91	507.38	NA	500.39	NA	186.07	172.02

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 16.05.2013 :**

1. Hot weather

**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 :**

Report for : 16.05.2013

पारी प्रभाती अश्विनी / SHIFT CHARGE ENGINEER