

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 16.04.2013  
Date of Reporting : 17.04.2013

### 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
32699	1640	34339	50.03	28909	2328	31237	50.21	717.8	57.53

\* 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	50.99	7.38		58.37	41.70	43.24	1.54	101.61	1.46
Haryana	52.47	0.64		53.11	44.38	44.48	0.10	97.59	0.21
Rajasthan	82.55	0.00	16.98	99.53	44.79	38.34	-6.45	137.87	0.00
Delhi	26.44			26.44	54.64	52.17	-2.47	78.62	0.00
UP	116.40	4.40	16.80	137.60	79.97	80.97	1.00	218.57	52.86
Uttarakhand		12.23		12.23	20.20	20.33	0.14	32.57	1.30
HP		11.28		11.28	12.47	11.79	-0.68	23.07	0.00
J & K		10.45	0.00	10.45	19.93	13.25	-6.68	23.69	1.70
Chandigarh				0.00	4.16	4.21	0.05	4.21	0.00
<b>Total</b>	<b>328.86</b>	<b>46.37</b>	<b>33.78</b>	<b>409.01</b>	<b>322.23</b>	<b>308.77</b>	<b>-13.46</b>	<b>717.78</b>	<b>57.53</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
	Demand Met	Shortage	UI	STOA/PX transaction	Demand Met	Shortage	UI	STOA/PX transaction	
Punjab	4563	80	65	-167	4529	35	157	327	-0.02
Haryana	5165	0	222	77	3913	0	10	12	-3.35
Rajasthan	6265	0	-156	452	5650	0	-45	189	7.14
Delhi	3600	0	-78	-390	2624	0	-234	-877	-14.71
UP	8797	1460	-525	-24	9435	2293	64	710	4.73
Uttarakhand	1535	0	-44	498	1211	0	61	533	12.03
HP	1029	0	-42	-374	722	0	-33	27	-2.09
J&K	1544	100	-66	-62	695	0	-374	-70	-1.36
Chandigarh	201	0	-17	-12	130	0	1	15	0.50
<b>Total</b>	<b>32699</b>	<b>1640</b>	<b>-640</b>	<b>-1</b>	<b>28909</b>	<b>2328</b>	<b>-394</b>	<b>865</b>	<b>2.88</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	1245	1368	1347	30.08	1254	29.85	0.24	
	Rihand I STPS	1000	532	775	450	12.48	520	12.66	-0.19	
	Rihand II STPS	1000	970	1030	1013	23.08	962	23.17	-0.10	
	Rihand III STPS	500	334	497	243	7.95	331	8.02	-0.07	
	Dadri I STPS	840	807	645	741	16.69	696	18.68	-1.98	
	Dadri II STPS	980	969	994	845	19.80	825	22.60	-2.80	
	Unchahar I TPS	420	405	438	419	9.32	388	9.46	-0.14	
	Unchahar II TPS	420	399	441	435	9.11	379	9.12	-0.01	
	Unchahar III TPS	210	0	0	0	0.00	0	0.00	0.00	
	ISTPP (Jhajjar)	1500	995	456	353	8.66	361	9.24	-0.58	
	Dadri GPS	830	795	387	400	8.95	373	9.54	-0.58	
	Anta GPS	419	346	256	238	4.69	195	4.97	-0.28	
	Auraiva GPS	663	628	301	321	7.15	298	7.10	0.05	
	<b>Sub Total (A)</b>	<b>10782</b>	<b>8426</b>	<b>7588</b>	<b>6805</b>	<b>157.95</b>	<b>6581</b>	<b>164.41</b>	<b>-6.45</b>	
	B. NPC	NAPS	440	130	152	163	3.04	127	3.12	-0.08
RAPS- B		440	417	459	463	9.96	415	10.01	-0.05	
RAPS- C		440	430	464	475	10.10	421	10.32	-0.22	
<b>Sub Total (B)</b>		<b>1320</b>	<b>977</b>	<b>1075</b>	<b>1101</b>	<b>23.10</b>	<b>962</b>	<b>23.45</b>	<b>-0.35</b>	
C. NHPC	Chamera I HPS	540	550	540	0	5.54	231	5.53	0.01	
	Chamera II HPS	300	310	303	0	3.27	136	3.37	-0.10	
	Chamera III HPS	231	0	0	0	0.00	0	0.00	0.00	
	Bairasuil HPS	180	182	182	30	2.67	111	2.91	-0.24	
	Salal-HPS	690	400	518	325	9.40	392	9.47	-0.07	
	Tanakpur-HPS	94	31	53	20	0.69	29	0.73	-0.04	
	Uri-HPS	480	467	480	448	11.33	472	11.64	-0.31	
	Dhauliganga-HPS	280	280	285	0	1.45	60	1.54	-0.10	
	Dulhasti-HPS	390	387	400	0	5.55	231	5.76	-0.21	
	Sewa-II HPS	120	119	125	115	2.85	119	2.77	0.08	
	<b>Sub Total (C)</b>	<b>3305</b>	<b>2726</b>	<b>2886</b>	<b>938</b>	<b>42.75</b>	<b>1781</b>	<b>43.72</b>	<b>-0.98</b>	
	D. NJPC	Natpda Jhakri	1500	1605	1513	0	16.00	667	16.59	-0.59
		<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1513</b>	<b>0</b>	<b>16.00</b>	<b>667</b>	<b>16.59</b>	<b>-0.59</b>
E. THDC	Tehri HPS	1000	530	549	0	5.93	247	6.00	-0.07	
	Koteshwar HPS	400	283	276	0	3.04	127	3.00	0.04	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>813</b>	<b>825</b>	<b>0</b>	<b>8.97</b>	<b>374</b>	<b>9.00</b>	<b>-0.03</b>	
F. BBMB	Bhakra HPS	1480	293	295	292	6.98	291	7.02	-0.04	
	Dehar HPS	990	337	825	330	8.54	356	8.08	0.46	
	Pong HPS	396	10	120	0	0.31	13	0.25	0.06	
	<b>Sub Total (F)</b>	<b>2866</b>	<b>640</b>	<b>1240</b>	<b>622</b>	<b>15.83</b>	<b>660</b>	<b>15.35</b>	<b>0.48</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	60	32	0.96	40	0.86	0.09	
	KWHEP HPS(IPP)	1000	0	600	380	8.16	340	8.16	0.00	
	Malana Stg-II HPS	100	0	0	0	0.51	21	0.46	0.05	
	Shree Cement TPS	300	0	268	270	6.46	269	6.58	-0.12	
	Budhil HPS(IPP)	70	0	34	10	0.35	15	0.41	-0.06	
	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>962</b>	<b>692</b>	<b>16.43</b>	<b>685</b>	<b>16.47</b>	<b>-0.05</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>15185</b>	<b>16089</b>	<b>10158</b>	<b>281.02</b>	<b>11709</b>	<b>288.99</b>	<b>-7.97</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	1050	23.40	975
	Guru Nanak Dev TPS(Bhatinda)	440	336	336	7.03	293
	Guru Hargobind Singh TPS(L.mbt)	920	870	917	20.57	857
	Thermal (Total)	2620	2256	2303	50.99	2125
	Total Hydro	1148	404	344	7.38	308
<b>Total Punjab</b>	<b>3768</b>	<b>2660</b>	<b>2647</b>	<b>58.37</b>	<b>2432</b>	
Haryana	Panipat TPS	1367	1139	1115	26.63	1110
	DCRTPP (Yamuna nagar)	600	563	526	12.65	527
	Faridabad GPS (NTPC)	432	184	156	3.95	165
	RGTPP (khedar) (IPP)	1200	0	0	0.00	0
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	507	372	9.24	385
	Thermal (Total)	4944	2393	2169	52.47	2186
	Total Hydro	62	24	24	0.64	27
	<b>Total Haryana</b>	<b>5006</b>	<b>2417</b>	<b>2193</b>	<b>53.11</b>	<b>2213</b>
	Rajasthan	kota TPS	1240	962	965	22.06
suratgarh TPS		1500	1082	943	23.30	971
Chabra TPS		500	392	382	9.81	409
Dholpur GPS		330	134	139	3.33	139
Ramgarh GPS		111	67	69	1.71	71
RAPS A (NPC)		300	213	205	4.67	195
Barsingsar (NLC)		250	110	111	2.60	108
Giral LTPS		250	67	62	1.35	56
Rajwest LTPS (IPP)		1080	502	597	13.71	571
VSLP LTPS (IPP)		135	0	0	0.00	0
Thermal (Total)		5696	3529	3473	82.55	3440
Total Hydro		550	0	0	0.00	0
Wind power		2191	456	928	14.74	614
Biomass		91	33	33	0.79	33
Solar		201	0	0	1.45	60
Renewable/Others (Total)		2483	489	961	16.98	707
<b>Total Rajasthan</b>		<b>8729</b>	<b>4018</b>	<b>4434</b>	<b>99.53</b>	<b>4147</b>
UP	Anpara TPS	1630	1352	1398	29.70	1238
	Obra TPS	1382	513	567	11.30	471
	Paricha TPS	890	784	791	16.90	704
	Panki TPS	210	80	75	1.70	71
	Harduaganj TPS	665	246	288	5.20	217
	Tanda TPS (NTPC)	440	400	402	9.80	408
	Roza TPS (IPP)	1200	532	532	12.79	533
	Anpara-C (IPP)	1200	877	859	20.66	861
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	365	363	8.35	348
	Thermal (Total)	8067	5149	5275	116.40	4850
	Vishnuparyag HPS (IPP)	400	108	109	2.52	105
	Other Hydro	527	48	85	1.87	78
	Cogeneration	981	700	700	16.80	700
	<b>Total UP</b>	<b>9975</b>	<b>6005</b>	<b>6169</b>	<b>137.60</b>	<b>5628</b>
Uttarakhand	Total Hydro	1303	575	381	12.23	510
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>575</b>	<b>381</b>	<b>12.23</b>	<b>510</b>
Delhi	Rajghat TPS	135	103	105	2.77	115
	Delhi Gas Turbine	282	220	212	5.42	226
	Pragati Gas Turbine	330	265	264	6.74	281
	Rithala GPS	108	0	0	0.00	0
	Bawana GPS	677	0	0	0.00	0
	Badarpur TPS (NTPC)	705	570	495	11.51	480
	Thermal (Total)	2237	1158	1076	26.44	1102
	<b>Total Delhi</b>	<b>2237</b>	<b>1158</b>	<b>1076</b>	<b>26.44</b>	<b>1102</b>
HP	Baspa HPS (IPP)	330	38	57	1.71	71
	Malana HPS (IPP)	86	18	7	0.57	24
	Other Hydro	589	348	359	9.00	375
	<b>Total HP</b>	<b>1005</b>	<b>404</b>	<b>423</b>	<b>11.28</b>	<b>470</b>
J & K	Baglihar HPS (IPP)	450	380	374	9.05	377
	Other Hydro	323	46	93	1.40	58
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>426</b>	<b>467</b>	<b>10.45</b>	<b>435</b>
<b>Total State Control Area Generation</b>		<b>32979</b>	<b>17663</b>	<b>17790</b>	<b>409.01</b>	<b>16937</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>1853</b>	<b>1852</b>	<b>32.29</b>	<b>1345</b>
<b>Total Regional Availability(Gross)</b>		<b>55815</b>	<b>35605</b>	<b>29800</b>	<b>722.32</b>	<b>29992</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	7124	1972	93.17	3882
State Control Area Hydro	5368	1881	1724	46.37	1827
<b>Total Regional Hydro</b>	<b>15731</b>	<b>9005</b>	<b>3696</b>	<b>139.54</b>	<b>5709</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	-100	100	250	100	1.84	1.37	0.47
Gwalior-Agra (D/C)	784	796	1072	0	16.26	0.00	16.26
Zerda-Kankroli	-155	-365	0	374	0.00	7.00	-7.00
Zerda-Bhinmal	-120	-347	0	399	0.00	6.14	-6.14
Malanpur-Auraiya	-126	-88	0	127	0.00	1.94	-1.94
Badod-Kota/Morak	-79	-182	0	142	0.00	3.94	-3.94
Mundra-Mohindergarh(HVDC)	863	968	1164	0	22.92	0.00	22.92
<b>Sub Total WR</b>	<b>1067</b>	<b>882</b>			<b>41.02</b>	<b>20.39</b>	<b>20.63</b>
Pusauli Bypass	150	150	150	0	3.56	0.00	3.56
MZP- GKP (D/C)	150	280	304	0	3.01	0.00	3.01
Patna-Balia(D/C)	270	360	362	0	2.05	0.00	2.05
B'Sharif-Balia (D/C)	187	141	295	21	2.96	0.00	2.96
Pusauli-Balia	-115	-59	0	115	0.00	1.78	-1.78
Gaya-Fatehpur (765 Kv)	43	4	85	61	0.00	0.07	-0.07
Pusauli-Sahupuri	137	134	149	0	2.90	0.00	2.90
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-36	-40	0	44	0.00	0.97	-0.97
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>786</b>	<b>970</b>			<b>14.48</b>	<b>2.82</b>	<b>11.66</b>
<b>Total IR Exch</b>	<b>1853</b>	<b>1852</b>			<b>55.50</b>	<b>23.21</b>	<b>32.29</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
26.78	0.53	27.31	-5.06	-10.52	2.52	1.50	-5.58	5.58

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
19.19	26.22	45.41	11.66	20.63	32.29	-7.53	-5.59	-13.12

**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	0.35	92.97	92.62	88.51	7.03

<----- 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				
50.67	18.02	49.68	20.29	50.14	0.33	0.09	50.38	49.91

**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	418	12:13	408	22:05	0.0	0.0	0.0	0.0
Gorakhpur	400	429	12:12	410	9:09	0.0	0.0	44.6	0.0
Bareilly	400	424	12:08	409	9:05	0.0	0.0	0.0	0.0
Kanpur	400	424	13:01	406	19:45	0.0	0.0	4.1	0.0
Dadri	400	422	2:36	407	19:32	0.0	0.0	3.0	0.0
Ballabgarh	400	429	2:11	411	19:31	0.0	0.0	46.8	0.0
Bawana	400	421	2:10	404	19:50	0.0	0.0	1.5	0.0
Bassi	400	428	2:36	407	19:34	0.0	0.0	45.0	0.0
Hissar	400	415	13:05	397	19:32	0.0	0.0	0.0	0.0
Moga	400	424	2:37	400	19:46	0.0	0.0	4.0	0.0
Abdullapur	400	423	3:06	405	19:33	0.0	0.0	6.4	0.0
Nalagarh	400	424	3:06	403	19:47	0.0	0.0	8.0	0.0
Kishenpur	400	426	2:38	397	19:45	0.0	0.0	12.3	0.0
Wagoora	400	423	3:40	381	19:38	0.0	9.9	5.5	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	785	13:01	732	20:59	0.0	16.0	0.0	0.0
Balia	765	766	13:00	726	9:11	0.3	10.3	0.0	0.0
Moga	765	788	2:36	747	19:45	0.0	0.0	0.0	0.0
Agra	765	798	2:36	743	1:31	0.0	0.0	0.0	0.0
Bhiwani	765	791	2:36	757	19:35	0.0	0.0	0.0	0.0
Unnao	765	766	13:00	739	9:29	0.0	4.0	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 (m³/s)	Usage (m³/s)
Bhakra	513.59	445.62	478.69	427.60	474.61	345.61	365.34	218.46
Pong	426.72	384.05	400.21	223.85	403.09	288.86	51.06	21.66
Tehri	829.79	740.04	766.35	172.00	818.65	982.26	81.12	177.00
Koteshwar	612.50	598.50	NA	NA	NA	NA	NA	NA
Chamera-I	760.00	748.75	NA	NA	NA	NA	162.95	149.75
Rihand	268.22	252.98	257.28	169.08	258.87	244.30	NA	NA
RPS	352.80	343.81	345.84	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	297.97	NA	NA	NA	NA	NA
RSD	527.91	487.91	505.93	NA	496.63	NA	141.90	230.64

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 16.04.2013 :**

1.Normal weather.

**XIII. Synchronisation of new generating units :**

**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 : 16.04.2013

पारी प्रभाती अश्विनी / SHIFT CHARGE ENGINEER