

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 31.07.2013  
Date of Reporting : 01.08.2013

### 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
40614	3095	43709	50.14	39289	2100	41389	50.16	932.1	64.45

\* 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	52.88	19.51		72.39	126.59	126.02	-0.57	198.40	21.48
Haryana	44.24	0.72		44.96	118.56	114.25	-4.31	159.21	0.00
Rajasthan	62.56	5.16	13.33	81.04	58.97	54.84	-4.13	135.88	0.86
Delhi	22.07			22.07	78.68	74.81	-3.87	96.88	0.02
UP	117.47	4.03	1.20	122.70	131.68	128.18	-3.50	250.88	37.64
Uttarakhand		13.35		13.35	15.80	15.52	-0.28	28.87	2.75
HP		24.20		24.20	1.54	0.52	-1.02	24.73	0.00
J & K		13.76	0.00	13.76	18.40	17.22	-1.18	30.99	1.70
Chandigarh				0.00	6.37	6.27	-0.11	6.27	0.00
<b>Total</b>	<b>299.22</b>	<b>80.73</b>	<b>14.53</b>	<b>394.48</b>	<b>556.58</b>	<b>537.62</b>	<b>-18.96</b>	<b>932.10</b>	<b>64.45</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 IOD/Import: (+ve), UD/Export: (-ve)

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	STOA/PX transaction
Punjab	8647	1015	13	1924	8355	600	-16	1923	46.16
Haryana	7078	0	-476	1724	6840	0	174	1368	38.18
Rajasthan	5724	0	-171	-34	5565	0	-394	-22	-0.87
Delhi	4214	0	-113	263	3745	0	-202	-46	5.03
UP	10750	1900	-134	1278	11483	1300	-158	2104	26.62
Uttarakhand	1322	80	90	193	977	200	-71	-44	1.16
HP	998	0	-134	-1127	921	0	14	-1261	-25.99
J&K	1594	100	-49	-93	1181	0	-166	-192	-6.65
Chandigarh	288	0	8	0	222	0	-17	0	0.22
<b>Total</b>	<b>40614</b>	<b>3095</b>	<b>-967</b>	<b>4128</b>	<b>39289</b>	<b>2100</b>	<b>-835</b>	<b>3831</b>	<b>83.85</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
A. NTPC	Singrauli STPS	2000	1735	1872	1875	41.57	1732	41.36	0.21
	Rihand I STPS	1000	935	971	933	20.47	853	21.50	-1.03
	Rihand II STPS	1000	475	518	483	10.55	440	10.82	-0.27
	Rihand III STPS	500	438	484	411	9.05	377	9.96	-0.91
	Dadri I STPS	840	810	859	645	15.33	639	15.84	-0.51
	Dadri II STPS	980	975	996	818	19.84	827	20.32	-0.48
	Unchahar I TPS	420	391	385	324	7.73	322	7.85	-0.12
	Unchahar II TPS	420	403	434	312	7.80	325	7.90	-0.10
	Unchahar III TPS	210	201	196	154	3.62	151	3.71	-0.09
	ISTPP (Jhajhar)	1500	1470	662	643	15.61	650	14.63	0.98
	Dadri GPS	830	789	576	569	12.96	540	13.32	-0.37
	Anta GPS	419	401	873	331	8.83	368	8.97	-0.14
	Auraiya GPS	663	458	301	303	7.06	294	7.11	-0.05
	<b>Sub Total (A)</b>	<b>10782</b>	<b>9479</b>	<b>9127</b>	<b>7801</b>	<b>180.42</b>	<b>7518</b>	<b>183.29</b>	<b>-2.87</b>
B. NPC	INAPS	440	156	179	180	3.69	154	3.74	-0.06
	RAPS- B	440	382	426	431	8.59	358	9.18	-0.59
	RAPS- C	440	210	230	235	4.95	206	5.04	-0.09
	<b>Sub Total (B)</b>	<b>1320</b>	<b>748</b>	<b>835</b>	<b>846</b>	<b>17.22</b>	<b>717</b>	<b>17.96</b>	<b>-0.74</b>
C. NHPC	Chamera I HPS	540	517	540	540	12.06	503	12.44	-0.38
	Chamera II HPS	300	300	304	292	7.03	293	7.27	-0.24
	Chamera III HPS	231	231	236	230	5.47	228	5.54	-0.07
	Bairasul HPS	180	119	179	130	1.58	66	1.86	-0.28
	Salal-HPS	690	670	668	668	16.01	667	16.08	-0.07
	Tanakpur-HPS	94	94	90	93	2.16	90	2.18	-0.03
	Uri-HPS	480	234	240	202	5.55	231	5.46	0.10
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00
	Dulhasti-HPS	390	387	404	398	9.28	387	9.34	-0.06
	Sewa-II HPS	120	119	117	0	1.37	57	1.38	-0.01
<b>Sub Total (C)</b>	<b>3305</b>	<b>2671</b>	<b>2778</b>	<b>2553</b>	<b>60.51</b>	<b>2521</b>	<b>61.54</b>	<b>-1.03</b>	
D. NJPC	Nathpa Jhakri	1500	1605	1624	1619	38.72	1613	38.52	0.20
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1624</b>	<b>1619</b>	<b>38.72</b>	<b>1613</b>	<b>38.52</b>	<b>0.20</b>
E. THDC	Tehri HPS	1000	1050	1050	1054	25.11	1046	25.00	0.11
	Koteswar HPS	400	380	378	288	8.37	349	8.40	-0.03
<b>Sub Total (E)</b>	<b>1400</b>	<b>1430</b>	<b>1428</b>	<b>1342</b>	<b>33.48</b>	<b>1395</b>	<b>33.40</b>	<b>0.08</b>	
F. BBMB	Bhakra HPS	1480	1317	1371	1326	32.32	1347	31.60	0.72
	Dehar HPS	990	611	825	605	14.77	615	14.67	0.11
	Pong HPS	396	366	372	372	8.96	373	8.78	0.18
	<b>Sub Total (F)</b>	<b>2866</b>	<b>2294</b>	<b>2568</b>	<b>2303</b>	<b>56.05</b>	<b>2335</b>	<b>55.05</b>	<b>1.00</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	209	186	1.18	49	4.04	-2.86
	KWHEP HPS(IPP)	1000	0	1197	1199	28.47	1186	28.51	-0.04
	Malana Stg-II HPS	100	0	113	113	2.71	113	2.52	0.18
	Shree Cement TPS	300	0	153	144	3.85	160	3.98	-0.13
	Budhil HPS(IPP)	70	0	0	73	0.58	24	1.69	-1.11
	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1672</b>	<b>1715</b>	<b>36.78</b>	<b>1532</b>	<b>40.74</b>	<b>-3.96</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>18227</b>	<b>20032</b>	<b>18179</b>	<b>423.18</b>	<b>17632</b>	<b>430.50</b>	<b>-7.32</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	1260	1260	27.68	1153	
	Guru Nanak Dev TPS(Bhatinda)	440	204	202	4.32	180	
	Guru Hargobind Singh TPS(L.mbt)	920	938	946	20.89	870	
	Goindwal(GVK)		0	0	0.00	0	
	Thermal (Total)	2620	2402	2408	52.88	2203	
	Total Hydro	1148	902	752	19.51	813	
	<b>Total Punjab</b>	<b>3768</b>	<b>3304</b>	<b>3160</b>	<b>72.39</b>	<b>3016</b>	
Haryana	Panipat TPS	1367	680	377	12.06	503	
	DCRTPP (Yamuna nagar)	600	278	258	6.17	257	
	Faridabad GPS (NTPC)	432	193	166	4.12	172	
	RGTPP (khedar) (IPP)	1200	466	370	9.92	413	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Jhajjar(CLP)	1320	485	557	11.98	499	
	Thermal (Total)	4944	2102	1728	44.24	1843	
	Total Hydro	62	27	30	0.72	30	
		<b>Total Haryana</b>	<b>5006</b>	<b>2129</b>	<b>1758</b>	<b>44.96</b>	<b>1873</b>
	Rajasthan	kota TPS	1240	581	499	13.30	554
suratgarh TPS		1500	855	794	19.18	799	
Chabra TPS		500	0	0	0.00	0	
Dholpur GPS		330	114	116	2.81	117	
Ramgarh GPS		111	129	24	1.42	59	
RAPS A (NPC)		300	176	176	4.31	180	
Barsingar (NLC)		250	88	92	2.07	86	
Giral LTPS		250	0	0	0.00	0	
Rajwest LTPS (IPP)		1080	438	473	11.96	498	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Kalisindh Thermal		600	0	0	0.00	0	
Kawai(Adani)		660	0	590	7.52	313	
Thermal (Total)		6956	2381	2764	62.56	2606	
Total Hydro		550	205	224	5.16	215	
Wind power		2191	550	673	11.21	467	
Biomass		91	24	24	0.58	24	
Solar		201	0	0	1.53	64	
Renewable/Others (Total)		2483	574	697	13.33	555	
		<b>Total Rajasthan</b>	<b>9989</b>	<b>3160</b>	<b>3685</b>	<b>81.04</b>	<b>3377</b>
UP		Anpara TPS	1630	1370	1324	28.80	1200
	Obra TPS	1288	457	429	9.40	392	
	Paricha TPS	1140	818	803	14.90	621	
	Panki TPS	210	135	55	1.80	75	
	Harduaganj TPS	665	361	359	7.90	329	
	Tanda TPS (NTPC)	440	388	390	9.65	402	
	Roza TPS (IPP)	1200	1004	1000	24.01	1000	
	Anpara-C (IPP)	1200	619	635	14.56	607	
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	248	281	6.45	269	
	Thermal (Total)	8223	5400	5276	117.47	4895	
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0	
	Other Hydro	527	149	204	4.03	168	
	Cogeneration	981	50	50	1.20	50	
		<b>Total UP</b>	<b>10131</b>	<b>5599</b>	<b>5530</b>	<b>122.70</b>	<b>5113</b>
	Uttarakhand	Total Hydro	1303	435	496	13.35	556
		<b>Total Uttarakhand</b>	<b>1303</b>	<b>435</b>	<b>496</b>	<b>13.35</b>	<b>556</b>
Delhi	Rajghat TPS	135	0	0	0.00	0	
	Delhi Gas Turbine	282	119	143	2.96	123	
	Pragati Gas Turbine	330	299	267	6.83	284	
	Rithala GPS	95	0	0	0.00	0	
	Bawana GPS	686	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	570	575	12.29	512	
	Thermal (Total)	2232	988	985	22.07	920	
		<b>Total Delhi</b>	<b>2232</b>	<b>988</b>	<b>985</b>	<b>22.07</b>	<b>920</b>
HP	Baspa HPS (IPP)	330	337	306	7.46	311	
	Malana HPS (IPP)	86	107	108	2.50	104	
	Other Hydro	589	606	590	14.25	594	
		<b>Total HP</b>	<b>1005</b>	<b>1050</b>	<b>1004</b>	<b>24.20</b>	<b>1008</b>
J & K	Baglihar HPS (IPP)	450	440	436	10.52	438	
	Other Hydro	323	136	140	3.24	135	
	Gas/Diesel/Others	183	0	0	0.00	0	
		<b>Total J &amp; K</b>	<b>956</b>	<b>576</b>	<b>576</b>	<b>13.76</b>	<b>573</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>17241</b>	<b>17194</b>	<b>394.48</b>	<b>16437</b>	
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>5313</b>	<b>4926</b>	<b>114.87</b>	<b>4786</b>	
<b>Total Regional Availability(Gross)</b>		<b>57226</b>	<b>42586</b>	<b>40299</b>	<b>932.52</b>	<b>38855</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	9917	9315	221.11	9213
State Control Area Hydro	5368	3344	3286	80.73	3364
<b>Total Regional Hydro</b>	<b>15731</b>	<b>13261</b>	<b>12601</b>	<b>301.84</b>	<b>12577</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	400	350	500	0	8.67	0.00	8.67
Gwalior-Agra (D/C)	1586	1632	1965	0	36.48	0.00	36.48
Zerda-Kankroli	91	-14	104	124	0.00	0.78	-0.78
Zerda-Bhinmal	121	-7	146	163	0.00	0.08	-0.08
Malanpur-Auraiya	-36	-42	0	87	0.00	0.98	-0.98
Badod-Kota/Morak	102	65	150	35	1.19	0.00	1.19
Mundra-Mohindergarh(HVDC)	1446	1435	1449	0	32.36	0.00	32.36
<b>Sub Total WR</b>	<b>3710</b>	<b>3419</b>			<b>78.70</b>	<b>1.84</b>	<b>76.86</b>
Pusaali Bypass	400	400	400	0	9.64	0.00	9.64
MZP- GKP (D/C)	474	481	682	0	12.21	0.00	12.21
Patna-Balia(D/C)	460	404	616	0	10.66	0.00	10.66
B Sharif-Balia (D/C)	190	161	319	0	4.51	0.00	4.51
Pusaali-Balia	-147	-147	0	175	0.00	3.18	-3.18
Gaya-Fatehpur (765 Kv)	62	44	138	21	1.92	0.00	1.92
Pusaali-Sahupuri	140	160	167	0	1.23	0.00	1.23
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-38	-40	0	45	0.00	0.90	-0.90
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
Sasaram - Fatehpur(765 KV)	62	44	138	21	1.92	0.00	1.92
<b>Sub Total ER</b>	<b>1603</b>	<b>1507</b>			<b>42.08</b>	<b>4.07</b>	<b>38.01</b>
<b>Total IR Exch</b>	<b>5313</b>	<b>4926</b>			<b>120.78</b>	<b>5.92</b>	<b>114.87</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
35.86	3.66	39.52	9.08	42.74	2.26	-5.77	2.43	-2.43

  

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
53.28	90.01	143.30	38.01	76.86	114.87	-15.27	-13.15	-28.43

**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	0.10	73.10	0.06	73.00	82.80	26.90

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				
50.45	18.04	49.65	0.09	50.11	0.28	0.12	50.42	49.95

**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	411	07:07	402	00:00	0.0	0.0	0.0	0.0
Gorakhpur	400	423	21:07	402	11:15	0.0	0.0	2.5	0.0
Bareilly	400	421	05:11	398	13:50	0.0	0.0	0.2	0.0
Kanpur	400	419	05:05	399	19:37	0.0	0.0	0.0	0.0
Dadri	400	415	05:05	399	14:40	0.0	0.0	0.0	0.0
Ballabgarh	400	424	05:04	405	13:55	0.0	0.0	14.6	0.0
Bawana	400	418	05:10	401	14:40	0.0	0.0	0.0	0.0
Bassi	400	427	05:05	408	19:44	0.0	0.0	38.8	0.0
Hissar	400	411	18:04	394	12:08	0.0	0.0	0.0	0.0
Moga	400	416	06:05	402	19:33	0.0	0.0	0.0	0.0
Abdullapur	400	413	05:05	402	00:10	0.0	0.0	0.0	0.0
Nalagarh	400	413	05:10	399	14:32	0.0	0.0	0.0	0.0
Kishenpur	400	421	06:05	406	19:32	0.0	0.0	0.2	0.0
Wagoora	400	423	23:10	398	19:32	0.0	0.0	3.7	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	771	18:15	728	19:44	0.0	9.7	0.0	0.0
Balia	765	771	18:12	720	19:36	7.2	35.2	0.0	0.0
Moga	765	789	06:05	761	19:36	0.0	0.0	0.0	0.0
Agra	765	807	05:11	762	19:44	0.0	0.0	2.2	0.0
Bhiwani	765	795	05:05	738	17:50	3.3	3.3	0.0	0.0
Unnao	765	769	07:03	735	19:40	0.0	5.4	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	502.05	1179.55	477.76	407.63	1291.67	1033.56
Pong	426.72	384.05	415.01	680.86	394.51	116.59	740.91	398.67
Tehri	829.79	740.04	810.55	822.28	818.65	982.26	730.41	572.00
Koteshwar	612.50	598.50	608.90	5.98	NA	NA	572.00	566.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	265.14	267.78
Rihand	268.22	252.98	254.87	71.40	255.00	76.20	NA	NA
RPS	352.80	343.81	350.04	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	297.42	NA	NA	NA	NA	NA
RSD	527.91	487.91	512.38	144.00	500.13	144.00	412.80	298.01

\* NA: Not Available

**X. System Constraints:**

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

1. Rihand - Dadri ( HVDC POLE - I ) under breakdown due to failure of Y -phase converter transformer at Rihand end. Replacement with spare transformer is being arranged and restoration of Pole - I expected on 01.08.2013.

**XII. Weather Conditions For 31.07.2013 :**

1. Normal

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

**XIV. Synchronisation of new 220 / 400 / 765 KV lines and energising of bus / substation :**

- 1: 50 MVAR Line Reactor of 400kV Agra-Sikar ckt.-1 first time test charged at 21.26 hrs dt 31.07.2013 at Sikar (PG).
- 1: 50 MVAR Line Reactor of 400kV Agra-Sikar ckt.-2 first time test charged at 22.11 hrs dt 31.07.2013 at Sikar (PG).

**XV. Tripping of lines in pooling stations :**

**XVI. Complete generation loss in a generating station :**

1. Dhauliganga (280 MW) closed down till 30.09.2013 due to flooding of power house.
2. Vishnuprayg( UPPCL ) ( 400 MW ) Closed due to High Silt level in river water.

Report for : 31.07.2013

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER