

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 31.07.2012

Date of Reporting : 01.08.2012

### 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
22668	4343	27010	49.99	32871	3714	36585	50.13	609.2	107.30

\* 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	31.47	11.47		42.94	102.31	88.53	-13.77	131.47	55.52
Haryana	26.12	0.72		26.84	50.35	49.72	-0.63	76.56	12.93
Rajasthan	54.86	0.47	17.58	72.92	31.37	38.16	6.79	111.08	1.54
Delhi	28.20			28.20	54.44	46.07	-8.37	74.27	0.00
UP	47.51	10.57	0.90	58.98	82.09	88.98	6.89	147.97	28.60
Uttarakhand		13.29		13.29	8.52	8.23	-0.28	21.52	1.66
HP		19.38		19.38	2.05	-0.12	-2.17	19.26	4.10
J & K		12.43	0.00	12.43	15.60	10.11	-5.50	22.54	2.96
Chandigarh				0.00	6.25	4.52	-1.73	4.52	0.00
<b>Total</b>	<b>188.16</b>	<b>68.34</b>	<b>18.48</b>	<b>274.98</b>	<b>352.98</b>	<b>334.21</b>	<b>-18.77</b>	<b>609.19</b>	<b>107.30</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	STOA/PX transaction	
Punjab	5337	4109	-383	1954	7181	500	336	2381	54.35	
Haryana	2374	84	-160	626	4113	1548	376	641	17.35	
Rajasthan	4211	0	543	-123	5271	0	340	-87	-0.67	
Delhi	3685	0	876	629	3756	0	-329	265	12.47	
UP	3770	0	-251	1392	9200	1416	593	1793	22.81	
Uttarakhand	888	0	70	22	1210	150	65	-5	0.08	
HP	865	0	-64	-992	945	0	-45	-960	-21.95	
J&K	1292	150	39	-147	981	100	-244	-147	-4.14	
Chandigarh	246	0	-21	78	214	0	-8	21	1.69	
<b>Total</b>	<b>22668</b>	<b>4343</b>	<b>650</b>	<b>3440</b>	<b>32871</b>	<b>3714</b>	<b>1084</b>	<b>3902</b>	<b>82.00</b>	

\* STOA figures are at sellers boundary & PX figures are at regional boundary.

### III. Regional Entities :

Station/ Constituent	Inst. Capacity (Effective) MW	Declared Capacity(MW)	Peak MW (Gross)	Off Peak MW (Gross)	Energy (Net MU)	Average Sentout(MW)	UI [OG:(+ve), UG: (-ve)]	
							Schedule Net MU	UI Net MU
<b>A. NTPC</b>								
Singrauli STPS	2000	859	866	1342	21.48	895	20.62	0.86
Rihand I STPS	1000	-12	0	0	0.00	0	-0.28	0.28
Rihand II STPS	1000	526	0	1015	12.27	511	12.63	-0.36
Rihand III STPS	500	0	0	0	0.00	0		0.00
Dadri I STPS	840	356	625	608	10.36	432	8.27	2.09
Dadri II STPS	980	441	100	694	12.11	505	10.59	1.52
Unchahar I TPS	420	205	0	356	4.94	206	4.93	0.02
Unchahar II TPS	420	206	0	361	5.28	220	4.94	0.34
Unchahar III TPS	210	120	0	179	2.72	113	2.87	-0.16
ISTPP (Jhajjar)	1000	230	0	400	4.51	188	4.84	-0.33
Dadri GPS	830	775	505	744	13.04	543	16.70	-3.66
Anta GPS	419	389	311	356	7.42	309	8.32	-0.91
Auraiya GPS	663	391	299	307	5.86	244	7.54	-1.69
<b>Sub Total (A)</b>	<b>10282</b>	<b>4486</b>	<b>2706</b>	<b>6362</b>	<b>99.99</b>	<b>4166</b>	<b>101.97</b>	<b>-1.98</b>
<b>B. NPC</b>								
NAPS	440	260	303	304	5.71	238	6.24	-0.53
RAPS- B	440	0	0	0	0.00	0	0.00	0.00
RAPS- C	440	0	0	0	0.00	0	0.00	0.00
<b>Sub Total (B)</b>	<b>1320</b>	<b>260</b>	<b>303</b>	<b>304</b>	<b>5.71</b>	<b>238</b>	<b>6.24</b>	<b>-0.53</b>
<b>C. NHPC</b>								
Chamera I HPS	540	356	360	360	7.21	300	8.54	-1.33
Chamera II HPS	300	300	301	302	5.83	243	7.22	-1.40
Chamera III HPS	231	231	78	78	4.43	184	5.54	-1.11
Bairasuil HPS	180	182	120	110	2.04	85	2.63	-0.59
Salal-HPS	690	660	665	665	14.21	592	15.90	-1.69
Tanakpur-HPS	94	94	94	94	1.75	73	2.24	-0.49
Uri-HPS	480	375	278	478	7.74	322	9.01	-1.28
Dhauliganga-HPS	280	277	278	278	5.12	213	6.68	-1.57
Dulhasi-HPS	390	387	404	404	7.55	315	9.25	-1.70
Sewa-II HPS	120	80	60	56	0.65	27	0.65	0.00
<b>Sub Total (C)</b>	<b>3305</b>	<b>2940</b>	<b>2638</b>	<b>2825</b>	<b>56.51</b>	<b>2355</b>	<b>67.67</b>	<b>-11.16</b>
<b>D. NJPC</b>								
Nathpa Jhakri	1500	1605	1618	1624	32.42	1351	38.52	-6.10
<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1618</b>	<b>1624</b>	<b>32.42</b>	<b>1351</b>	<b>38.52</b>	<b>-6.10</b>
<b>E. THDC</b>								
Tehri HPS	1000	800	559	140	6.25	260	5.59	0.66
Koteshwar HPS	400	300	242	125	1.98	82	2.05	-0.07
<b>Sub Total (E)</b>	<b>1400</b>	<b>1100</b>	<b>801</b>	<b>265</b>	<b>8.22</b>	<b>343</b>	<b>7.64</b>	<b>0.58</b>
<b>F. BBMB</b>								
Bhakra HPS	1480	763	1214	680	17.80	742	18.32	-0.52
Dehar HPS	990	603	560	620	12.25	510	14.47	-2.22
Pong HPS	396	234	324	222	5.40	225	5.01	0.39
<b>Sub Total (F)</b>	<b>2866</b>	<b>1600</b>	<b>2098</b>	<b>1522</b>	<b>35.45</b>	<b>1477</b>	<b>37.79</b>	<b>-2.34</b>
<b>G. IPP(s)/JV(s)</b>								
ADHPL HPS(IPP)	192	0	194	232	4.29	179	4.27	0.01
KWHEP HPS(IPP)	1000	0	1200	1200	24.13	1006	28.63	-4.50
Malana Stg-II HPS	100	0	110	108	2.09	87	2.09	0.01
Shree Cement TPS	300	0	160	111	3.19	133	4.75	-1.56
Budhil HPS(IPP)	70	35	35	34	0.66	27		0.66
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1699</b>	<b>1685</b>	<b>34.36</b>	<b>1432</b>	<b>39.74</b>	<b>-5.38</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22336</b>	<b>11992</b>	<b>11863</b>	<b>14587</b>	<b>272.66</b>	<b>11361</b>	<b>299.57</b>	<b>-26.91</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	635	1055	16.08	670	
	Guru Nanak Dev TPS(Bhatinda)	440	10	203	2.92	122	
	Guru Hargobind Singh TPS(L.mbt)	920	635	628	12.47	520	
	Thermal (Total)	2620	1280	1886	31.47	1311	
	Total Hydro	1148	458	528	11.47	478	
	<b>Total Punjab</b>	<b>3768</b>	<b>1738</b>	<b>2414</b>	<b>42.94</b>	<b>1789</b>	
Haryana	Panipat TPS	1367	422	647	10.82	451	
	DCRTPP (Yamuna nagar)	600	0	0	0.00	0	
	Faridabad GPS (NTPC)	432	211	394	7.20	300	
	RGTPP (kheadar) (IPP)	1200	0	233	3.11	130	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Jhajjar(CLP)	1320	0	372	4.99	208	
	Thermal (Total)	4944	633	1646	26.12	1088	
	Total Hydro	62	22	24	0.72	30	
	<b>Total Haryana</b>	<b>5006</b>	<b>655</b>	<b>1670</b>	<b>26.84</b>	<b>1118</b>	
	Rajasthan	kota TPS	1240	1165	1073	27.77	1157
suratgarh TPS		1500	147	892	14.46	603	
Chabra TPS		500	197	199	3.63	151	
Dholpur GPS		330	171	146	3.15	131	
Ramgarh GPS		111	28	56	1.10	46	
RAPS A (NPC)		300	0	0	0.00	0	
Barsingsar (NLC)		250	0	0	0.00	0	
Giral LTPS		250	0	30	0.31	13	
Rajwest LTPS (IPP)		540	35	280	4.45	185	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Thermal (Total)		5156	1743	2676	54.86	2286	
Total Hydro		550	0	0	0.47	20	
Wind power		1843	865	884	16.45	685	
Biomass		91	20	20	0.48	20	
Solar		128	0	0	0.18	8	
Renewable/Others (Total)		2062	885	904	17.58	732	
<b>Total Rajasthan</b>		<b>7767</b>	<b>2628</b>	<b>3580</b>	<b>72.92</b>	<b>3038</b>	
UP		Anpara TPS	1630	0	1012	11.60	483
		Obra TPS	1382	20	311	5.80	242
		Paricha TPS	890	0	505	6.30	263
	Panki TPS	210	65	125	2.10	88	
	Harduaganj TPS	665	36	36	0.60	25	
	Tanda TPS (NTPC)	440	143	292	4.62	193	
	Roza TPS (IPP)	1200	117	810	12.69	529	
	Anpara-C (IPP)	1200	0	0	0.00	0	
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	85	230	3.81	159	
	Thermal (Total)	8067	466	3321	47.51	1980	
	Vishnuparyag HPS (IPP)	400	396	436	8.39	350	
	Other Hydro	527	131	22	2.18	91	
	Cogeneration	981	50	50	0.90	38	
	<b>Total UP</b>	<b>9975</b>	<b>1043</b>	<b>3829</b>	<b>58.98</b>	<b>2108</b>	
	Uttarakhand	Total Hydro	1303	522	751	13.29	554
<b>Total Uttarakhand</b>		<b>1303</b>	<b>522</b>	<b>751</b>	<b>13.29</b>	<b>554</b>	
Delhi	Rajghat TPS	135	48	50	0.93	39	
	Delhi Gas Turbine	282	188	226	4.31	179	
	Pragati Gas Turbine	330	218	289	5.61	234	
	Rithala GPS	108	40	31	0.58	24	
	Bawana GPS	677	516	275	7.21	300	
	Badarpur TPS (NTPC)	705	490	575	9.57	399	
	Thermal (Total)	2237	1500	1446	28.20	1175	
	<b>Total Delhi</b>	<b>2237</b>	<b>1500</b>	<b>1446</b>	<b>28.20</b>	<b>1175</b>	
HP	Baspa HPS (IPP)	330	323	323	6.49	271	
	Malana HPS (IPP)	86	107	107	2.07	86	
	Other Hydro	589	490	577	10.82	451	
	<b>Total HP</b>	<b>1005</b>	<b>920</b>	<b>1007</b>	<b>19</b>	<b>808</b>	
J & K	Baglihar HPS (IPP)	450	437	434	8.73	364	
	Other Hydro	323	150	210	3.70	154	
	Gas/Diesel/Others	183	0	0	0.00	0	
	<b>Total J &amp; K</b>	<b>956</b>	<b>587</b>	<b>644</b>	<b>12.43</b>	<b>518</b>	
<b>Total State Control Area Generation</b>		<b>32017</b>	<b>9593</b>	<b>15341</b>	<b>274.98</b>	<b>11108</b>	
<b>J. Net Inter Regional Exchange (Import (+ve)/Export (-ve))</b>			<b>704</b>	<b>3928</b>	<b>50.94</b>	<b>2123</b>	
<b>Total Regional Availability(Gross)</b>		<b>54353</b>	<b>22160</b>	<b>33856</b>	<b>598.58</b>	<b>24591</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	8659	7776	163.12	6797
State Control Area Hydro	5368	2640	2976	68.34	2498
<b>Total Regional Hydro</b>	<b>15731</b>	<b>11299</b>	<b>10752</b>	<b>231.45</b>	<b>9294</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	0	500	500	0	7.63	0.00	7.63
Gwalior-Agra (D/C)	307	606	1061	0	10.62	0.00	10.62
Zerda-Kankroli	0	149	190	194	0.33	0.00	0.33
Zerda-Bhinmal	150	59	390	129	1.83	0.00	1.83
Malanpur-Auraiya	-75	60	0	138	0.00	0.20	-0.20
Badod-Kota/Morak	80	208	337	0	3.88	0.00	3.88
Mundra-Mohindergarh(HVDC)	287	580	587	0	6.52	0.00	6.52
<b>Sub Total WR</b>	<b>749</b>	<b>2162</b>			<b>30.81</b>	<b>0.20</b>	<b>30.60</b>
Pusauli Bypass	0	-27	93	94	0.42	0.36	0.07
MZP- GKP (D/C)	0	830	1164	0	10.66	0.00	10.66
Patna-Balia(D/C)	0	464	464	0	4.41	0.00	4.41
B'Sharif-Balia (D/C)	0	359	424	0	4.36	0.00	4.36
Barh - Balia(D/C)	0	0	0	0	0.00	0.00	0.00
Pusauli-Balia	0	0	0	0	0.00	0.00	0.00
Gayaa-Fatehpur (765 Kv)	0	0	0	0	0.00	0.00	0.00
Pusauli-Sahupuri	0	165	171	0	1.81	0.00	1.81
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-45	-25	0	48	0.00	0.97	-0.97
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>-45</b>	<b>1766</b>			<b>21.66</b>	<b>1.32</b>	<b>20.34</b>
<b>Total IR Exch</b>	<b>704</b>	<b>3928</b>			<b>52.47</b>	<b>1.53</b>	<b>50.94</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
15.25	3.71	18.97	1.02	35.67	4.11	3.04	0.00	0.05

  

Total IR Schedule (MU)			Total IR Actual (MU)			Net IR UI (MU)		
Through ER	Through WR	Total	Through ER	Through WR	Total	Through ER	Through WR	Total
24.09	41.56	65.65	20.34	30.60	50.94	-3.75	-10.96	-14.71

**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	0.10	3.40	14.10	86.20	75.50	43.70	10.40

<----- 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				
51.21	13.02	49.14	15.51	49.95	0.55	0.23	50.35	47.69

**VII. Voltage profile**

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	7:06	0	12:17	26.0	26.0	0.0	0.0
Gorakhpur	400	430	8:02	381	22:16	0.0	0.7	11.5	0.0
Bareilly	400	424	17:18	0	13:02	12.0	12.3	0.8	0.0
Kanpur	400	422	19:23	0	13:05	7.3	7.6	2.4	0.0
Dadri	400	417	23:55	0	13:02	33.5	33.5	0.0	0.0
Ballabgarh	400	440	14:46	0	13:02	3.9	4.2	2.6	0.8
Bawana	400	444	14:47	0	13:57	3.1	3.1	2.5	1.5
Bassi	400	440	17:33	0	13:02	18.8	18.8	14.6	0.1
Hissar	400	418	23:59	0	13:07	9.0	9.7	0.0	0.0
Moga	400	432	15:42	0	13:02	10.4	10.7	0.5	0.0
Abdullapur	400	422	16:28	383	15:20	0.0	0.2	0.1	0.0
Nalagarh	400	434	16:20	0	13:02	13.8	13.8	0.3	0.0
Kishenpur	400	454	15:05	0	13:02	6.4	6.8	0.5	0.0
Wagoora	400	429	13:32	0	13:02	4.3	18.0	0.5	0.0

**VIII. 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	477.76	407.63	497.49	994.96	1110.70	664.14
Pong	426.72	384.05	394.51	116.59	414.40	656.23	535.56	365.86
Tehri	829.79	740.04	775.70	270.00	818.65	982.26	665.57	144.00
Koteswar	612.50	598.50	600.50	0.80	NA	NA	144.00	123.00
Chamera-I	760.00	748.75	NA	7.85	NA	NA	291.36	233.31
Rihand	268.22	252.98	254.75	60.80	258.68	234.80	NA	NA
RPS	352.80	343.81	349.97	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	298.33	NA	NA	NA	NA	NA
RSD	527.91	487.91	499.14	NA	509.22	NA	200.14	473.71

\* NA: Not Available

**IX. System Constraints:**

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

1. Major grid disturbance in NR occurred at 13.02 hrs/31.07.2012 load & Generation loss of About 35000 mw, Susequently restoration taken very Quickly.

**XI. Weather Conditions For 31.07.2012 :**

- 1: Rains in NCR region, UP , HP , J & K , Uttranchal .

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

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

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

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

Report for : 31.07.2012

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER