

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 20.08.2013  
Date of Reporting : 21.08.2013

### I. Regional Availability/Demand:

Demand Met	Evening Peak (20:00 Hrs) MW			Off Peak (03:00 Hrs) MW			Day Energy (Net MU)		
	Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage	Requirement	Freq* (Hz)	Demand Met	Shortage
34029	2510	36539	50.29	31944	1117	33061	50.24	784.0	36.23

\* 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	14.30	20.76		35.06	115.11	115.83	0.72	150.89	0.00
Haryana	50.94	0.59		51.52	69.73	69.87	0.14	121.39	0.00
Rajasthan	46.45	7.89	14.07	68.41	53.76	48.99	-4.76	117.40	0.00
Delhi	18.87			18.87	62.59	61.77	-0.82	80.64	0.08
UP	103.09	4.69	0.96	108.74	118.24	116.83	-1.41	225.57	34.11
Uttarakhand		18.36		18.36	13.37	13.46	0.09	31.82	0.35
HP		23.02		23.02	0.52	0.00	-0.52	23.02	0.00
J & K		13.68	0.00	13.68	13.94	14.49	0.54	28.17	1.70
Chandigarh				0.00	5.34	5.07	-0.27	5.07	0.00
<b>Total</b>	<b>233.64</b>	<b>88.97</b>	<b>15.03</b>	<b>337.65</b>	<b>452.60</b>	<b>446.31</b>	<b>-6.29</b>	<b>783.96</b>	<b>36.23</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	STOA/PX transaction
Punjab	6779	0	93	1853	5752	0	53	2064	47.95	
Haryana	5483	0	-216	520	5256	0	172	551	12.09	
Rajasthan	5145	0	-290	46	4801	0	-420	174	2.81	
Delhi	3501	0	98	-25	3148	7	-82	-143	-2.58	
UP	9257	2270	-39	646	9766	1110	-24	957	17.05	
Uttarakhand	1296	140	78	2	1335	0	-112	3	-1.73	
HP	951	0	-61	-1168	854	0	-29	-1190	-27.00	
J&K	1417	100	84	-368	854	0	-33	-651	-10.88	
Chandigarh	200	0	-43	-30	178	0	11	-35	-0.15	
<b>Total</b>	<b>34029</b>	<b>2510</b>	<b>-296</b>	<b>1475</b>	<b>31944</b>	<b>1117</b>	<b>-464</b>	<b>1729</b>	<b>37.56</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)	Schedule Net MU	UI Net MU
<b>A. NTPC</b>								
Singrauli STPS	2000	1940	2080	1466	40.16	1673	40.58	-0.43
Rihand I STPS	1000	920	960	730	17.48	728	17.87	-0.39
Rihand II STPS	1000	470	487	363	9.07	378	9.32	-0.26
Rihand III STPS	500	485	508	370	9.75	406	10.09	-0.34
Dadri I STPS	840	600	476	477	10.32	430	10.72	-0.41
Dadri II STPS	980	975	781	719	17.77	741	18.26	-0.49
Unchahar I TPS	420	391	333	298	7.35	306	7.45	-0.09
Unchahar II TPS	420	404	326	311	7.10	296	7.18	-0.08
Unchahar III TPS	210	201	163	153	3.53	147	3.59	-0.06
ISTPP (Jhajjar)	1500	1470	376	321	7.00	292	7.19	-0.19
Dadri GPS	830	523	194	188	4.41	184	4.83	-0.42
Anta GPS	419	405	241	241	5.77	241	5.95	-0.18
Auraiya GPS	663	625	154	156	3.61	151	4.03	-0.42
<b>Sub Total (A)</b>	<b>10782</b>	<b>9408</b>	<b>7079</b>	<b>5793</b>	<b>143.31</b>	<b>5971</b>	<b>147.06</b>	<b>-3.75</b>
<b>B. NPC</b>								
NAPS	440	294	332	331	7.01	292	7.06	-0.04
RAPS- B	440	399	442	441	9.64	402	9.58	0.06
RAPS- C	440	410	468	471	9.92	413	9.84	0.08
<b>Sub Total (B)</b>	<b>1320</b>	<b>1103</b>	<b>1242</b>	<b>1243</b>	<b>26.57</b>	<b>1107</b>	<b>26.47</b>	<b>0.09</b>
<b>C. NHPC</b>								
Chamera I HPS	540	534	540	540	12.92	538	12.82	0.10
Chamera II HPS	300	279	299	302	6.43	268	6.70	-0.27
Chamera III HPS	231	231	235	234	5.55	231	5.55	0.00
Bairasuil HPS	180	179	179	179	4.32	180	4.26	0.06
Salal-HPS	690	667	668	668	15.92	663	15.98	-0.06
Tanakpur-HPS	94	94	92	94	2.23	93	2.24	-0.02
Uri-HPS	480	238	260	186	5.04	210	4.46	0.58
Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00
Dulhasti-HPS	390	387	379	398	8.87	369	8.78	0.09
Sewa-II HPS	120	119	126	124	2.92	122	2.93	-0.01
<b>Sub Total (C)</b>	<b>3305</b>	<b>2728</b>	<b>2778</b>	<b>2725</b>	<b>64.18</b>	<b>2674</b>	<b>63.71</b>	<b>0.47</b>
<b>D. NJPC</b>								
Nathpa Jhakri	1500	1568	1612	1622	37.58	1566	37.56	0.02
<b>Sub Total (D)</b>	<b>1500</b>	<b>1568</b>	<b>1612</b>	<b>1622</b>	<b>37.58</b>	<b>1566</b>	<b>37.56</b>	<b>0.02</b>
<b>E. THDC</b>								
Tehri HPS	1000	1060	1065	1045	25.28	1054	25.25	0.03
Koteshwar HPS	400	358	371	370	8.56	357	8.57	0.00
<b>Sub Total (E)</b>	<b>1400</b>	<b>1418</b>	<b>1436</b>	<b>1415</b>	<b>33.85</b>	<b>1410</b>	<b>33.82</b>	<b>0.03</b>
<b>F. BBMB</b>								
Bhakra HPS	1480	1181	1344	1097	28.97	1207	28.34	0.63
Dehar HPS	990	605	660	620	14.79	616	14.51	0.28
Pong HPS	396	366	372	372	8.99	375	8.78	0.21
<b>Sub Total (F)</b>	<b>2866</b>	<b>2152</b>	<b>2376</b>	<b>2089</b>	<b>52.75</b>	<b>2198</b>	<b>51.64</b>	<b>1.11</b>
<b>G. IPP(s)/JV(s)</b>								
ADHPL HPS(IPP)	192	0	231	231	5.43	226	4.61	0.83
KWHEP HPS(IPP)	1000	0	1196	1197	28.16	1173	28.51	-0.35
Malana Stg-II HPS	100	0	113	113	2.71	113	2.52	0.19
Shree Cement TPS	300	0	92	82	2.03	85	2.11	-0.09
Budhil HPS(IPP)	70	0	35	35	0.84	35	1.17	-0.33
<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>1667</b>	<b>1658</b>	<b>39.17</b>	<b>1632</b>	<b>38.93</b>	<b>0.24</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>18376</b>	<b>18190</b>	<b>16545</b>	<b>397.41</b>	<b>16559</b>	<b>399.18</b>	<b>-1.78</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	360	170	5.46	227	
	Guru Nanak Dev TPS(Bhatinda)	440	90	90	1.83	76	
	Guru Hargobind Singh TPS(L.mbt)	920	430	210	7.01	292	
	Goindwal(GVK)		0	0	0.00	0	
	Thermal (Total)	2620	880	470	14.30	596	
	Total Hydro	1148	864	862	20.76	865	
	<b>Total Punjab</b>	<b>3768</b>	<b>1744</b>	<b>1332</b>	<b>35.06</b>	<b>1461</b>	
Haryana	Panipat TPS	1367	366	367	8.43	351	
	DCRTPP (Yamuna nagar)	600	0	0	0.00	0	
	Faridabad GPS (NTPC)	432	163	161	3.94	164	
	RGTPP (khedar) (IPP)	1200	757	731	18.59	774	
	Magnum Diesel (IPP)	25	1086	0	0.00	0	
	Jhajjar(CLP)	1320	1086	744	19.97	832	
	Thermal (Total)	4944	3458	2003	50.94	2122	
	Total Hydro	62	22	22	0.59	24	
	<b>Total Haryana</b>	<b>5006</b>	<b>3480</b>	<b>2025</b>	<b>51.52</b>	<b>2147</b>	
	Rajasthan	kota TPS	1240	474	444	10.60	442
		suratgarh TPS	1500	764	693	17.14	714
Chabra TPS		500	203	193	4.53	189	
Dholpur GPS		330	118	0	0.32	13	
Ramgarh GPS		111	89	40	1.21	50	
RAPS A (NPC)		300	176	176	4.00	167	
Barsingsar (NLC)		250	89	90	2.08	87	
Giral LTPS		250	0	0	0.00	0	
Rajwest LTPS (IPP)		1080	274	274	6.58	274	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Kalisindh Thermal		600	0	0	0.00	0	
Kawai(Adani)		660	0	0	0.00	0	
Thermal (Total)		6956	2187	1910	46.45	1935	
Total Hydro		550	322	300	7.89	329	
Wind power		2191	349	1064	12.88	536	
Biomass		91	28	28	0.67	28	
Solar		201	0	0	0.53	22	
Renewable/Others (Total)		2483	377	1092	14.07	586	
<b>Total Rajasthan</b>		<b>9989</b>	<b>2886</b>	<b>3302</b>	<b>68.41</b>	<b>2851</b>	
UP		Anpara TPS	1630	1213	1238	28.70	1196
		Obra TPS	1288	301	225	6.80	283
	Paricha TPS	1140	833	734	18.80	783	
	Panki TPS	210	72	126	2.20	92	
	Harduaganj TPS	665	133	155	3.40	142	
	Tanda TPS (NTPC)	440	391	383	9.58	399	
	Roza TPS (IPP)	1200	819	1004	22.24	927	
	Anpara-C (IPP)	1200	478	486	11.38	474	
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	0	0	0.00	0	
	Thermal (Total)	8223	4240	4351	103.09	4296	
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0	
	Other Hydro	527	245	230	4.69	195	
	Cogeneration	981	40	40	0.96	40	
	<b>Total UP</b>	<b>10131</b>	<b>4525</b>	<b>4621</b>	<b>108.74</b>	<b>4531</b>	
	Uttarakhand	Total Hydro	1303	594	822	18.36	765
<b>Total Uttarakhand</b>		<b>1303</b>	<b>594</b>	<b>822</b>	<b>18.36</b>	<b>765</b>	
Delhi	Raighat TPS	135	46	45	1.01	42	
	Delhi Gas Turbine	282	81	82	1.92	80	
	Pragati Gas Turbine	330	292	264	6.42	267	
	Riithala GPS	95	0	0	0.00	0	
	Bawana GPS	686	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	430	420	9.52	397	
	Thermal (Total)	2232	849	811	18.87	786	
	<b>Total Delhi</b>	<b>2232</b>	<b>849</b>	<b>811</b>	<b>18.87</b>	<b>786</b>	
HP	Baspa HPS (IPP)	330	311	311	7.61	317	
	Malana HPS (IPP)	86	68	57	1.53	64	
	Other Hydro	589	592	585	13.88	578	
	<b>Total HP</b>	<b>1005</b>	<b>971</b>	<b>953</b>	<b>23.02</b>	<b>959</b>	
J & K	Baglihar HPS (IPP)	450	436	436	10.47	436	
	Other Hydro	323	132	137	3.21	134	
	Gas/Diesel/Others	183	0	0	0.00	0	
	<b>Total J &amp; K</b>	<b>956</b>	<b>568</b>	<b>573</b>	<b>13.68</b>	<b>570</b>	
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>15617</b>	<b>14439</b>	<b>337.65</b>	<b>14069</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>2689</b>	<b>2691</b>	<b>57.42</b>	<b>2392</b>	
<b>Total Regional Availability(Gross)</b>		<b>57226</b>	<b>36496</b>	<b>33675</b>	<b>792.47</b>	<b>33020</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	9742	9392	224.66	9361
State Control Area Hydro	5368	3586	3762	88.97	3707
<b>Total Regional Hydro</b>	<b>15731</b>	<b>13328</b>	<b>13154</b>	<b>313.64</b>	<b>13068</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	-30	0	450	0.00	8.75	-8.75
Gwalior-Agra (D/C)	1258	1085	1258	0	24.79	0.00	24.79
Zerda-Kankroli	11	-218	11	234	0.00	2.93	-2.93
Zerda-Bhinmal	58	-235	97	268	0.00	2.05	-2.05
Malanpur-Auraiya	-35	-19	0	73	0.00	0.88	-0.88
Badod-Kota/Morak	24	-35	45	59	0.00	0.26	-0.26
Mundra-Mohindergarh(HVDC)	997	782	997	0	18.90	0.00	18.90
<b>Sub Total WR</b>	<b>2113</b>	<b>1330</b>			<b>43.69</b>	<b>14.87</b>	<b>28.82</b>
Pusauli Bypass	100	100	100	0	2.41	0.00	2.41
MZP- GKP (D/C)	204	556	634	0	10.80	0.00	10.80
Patna-Balia(D/C)	202	398	474	0	8.27	0.00	8.27
B'Sharif-Balia (D/C)	74	222	270	0	4.01	0.00	4.01
Pusauli-Balia	-100	-43	0	104	0.00	1.53	-1.53
Gaya-Fatehpur (765 Kv)	-63	-36	62	76	0.00	0.31	-0.31
Pusauli-Sahupuri	134	143	159	0	3.42	0.00	3.42
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-37	-38	0	45	0.00	0.80	-0.80
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
Sasaram - Fatehpur(765 KV)	62	59	187	0	2.34	0.00	2.34
<b>Sub Total ER</b>	<b>576</b>	<b>1361</b>			<b>31.24</b>	<b>2.64</b>	<b>28.60</b>
<b>Total IR Exch</b>	<b>2689</b>	<b>2691</b>			<b>74.93</b>	<b>17.52</b>	<b>57.42</b>

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

ER	ISGS/LT Schedule (MU)		Bilateral Schedule (MU)		Power Exchange Shdl (MU)		Wheeling (MU)	
	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
30.36	3.75	34.10	-8.83	39.02	-5.12	-21.69	3.23	-3.23

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
23.39	44.41	67.80	28.60	28.82	57.42	5.21	-15.59	-10.39

**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	70.40	0.60	70.30	81.00	29.60

<----- Frequency (Hz) ----->				Average Frequency	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block	
Maximum		Minimum					MAX	MIN
Freq	Time	Freq	Time	Hz	(Hz)	(Hz)		
50.54	17.07	49.65	22.08	50.13	0.37	0.14	50.51	49.98

**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	417	07:10	409	00:01	0.0	0.0	0.0	0.0
Gorakhpur	400	0	00:00	9999	00:00	0.0	0.0	0.0	0.0
Barilly	400	421	07:18	403	14:23	0.0	0.0	0.2	0.0
Kanpur	400	419	17:04	405	23:35	0.0	0.0	0.0	0.0
Dadri	400	423	07:13	407	12:32	0.0	0.0	3.2	0.0
Ballabgarh	400	431	07:11	413	12:24	0.0	0.0	52.7	0.1
Bawana	400	424	07:06	409	12:09	0.0	0.0	7.7	0.0
Bassi	400	430	07:11	409	19:37	0.0	0.0	59.5	0.0
Hissar	400	415	07:06	398	19:36	0.0	0.0	0.0	0.0
Moga	400	414	07:01	401	19:34	0.0	0.0	0.0	0.0
Abdullapur	400	419	07:22	401	12:08	0.0	0.0	0.0	0.0
Nalagarh	400	412	04:06	398	12:14	0.0	0.0	0.0	0.0
Kishenpur	400	418	03:04	407	19:36	0.0	0.0	0.0	0.0
Wagoora	400	418	23:17	397	09:54	0.0	0.0	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	778	07:11	746	19:19	0.0	0.0	0.0	0.0
Balia	765	761	07:21	734	02:12	0.0	17.6	0.0	0.0
Moga	765	789	17:04	757	19:36	0.0	0.0	0.0	0.0
Agra	765	811	07:10	772	19:20	0.0	0.0	8.8	0.0
Bhiwani	765	800	17:04	773	19:36	0.0	0.0	0.0	0.0
Unnao	765	755	04:21	741	14:28	0.0	7.1	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	508.18	1455.60	490.03	738.95	1325.68	873.83
Pong	426.72	384.05	421.52	961.02	409.81	494.27	1099.20	508.37
Tehri	829.79	740.04	819.05	982.26	818.65	982.26	649.20	563.00
Koteswar	612.50	598.50	NA	NA	NA	NA	NA	NA
Chamera-I	760.00	748.75	NA	NA	NA	NA	563.20	349.83
Rihand	268.22	252.98	257.89	196.40	260.12	311.30	NA	NA
RPS	352.80	343.81	345.25	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	NA	NA	NA	NA	NA	NA
RSD	527.91	487.91	521.67	144.00	502.54	144.00	926.24	134.45

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 20.08.2013 :**

1. Rain in NCR , PUNJAB , Raj , Haryana , HP , J & K , Uttranchal, UP.

**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 :**

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.