

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरसिस्टम की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 21.11.2013  
Date of Reporting : 22.11.2013

### I. Regional Availability/Demand:

Demand Met	Evening Peak (19:00 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
33662	2318	35980	50.02	26423	980	27403	50.10	729.2	45.13

\* 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	46.16	10.20		56.36	34.97	36.63	1.66	92.98	0.00
Haryana	62.33	0.66		62.99	37.68	38.19	0.51	101.18	0.22
Rajasthan	100.50	5.61	7.46	113.57	69.88	66.98	-2.91	180.55	0.10
Delhi	16.86			16.86	41.77	40.45	-1.33	57.30	0.00
UP	127.66	3.10	1.20	131.96	74.16	71.65	-2.51	203.61	40.55
Uttarakhand		8.56		8.56	19.80	20.79	0.99	29.35	2.66
HP		6.52		6.52	16.65	17.26	0.61	23.79	0.00
J & K		6.77	0.00	6.77	27.46	30.43	2.97	37.20	1.60
Chandigarh				0.00	3.11	3.24	0.13	3.24	0.00
<b>Total</b>	<b>353.51</b>	<b>41.40</b>	<b>8.66</b>	<b>403.57</b>	<b>325.49</b>	<b>325.62</b>	<b>0.13</b>	<b>729.19</b>	<b>45.13</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 (19:00 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	4311	0	-137	-382	3262	0	197	-385	-8.87	
Haryana	5246	78	261	-969	3488	0	90	-996	-23.64	
Rajasthan	7939	0	-168	502	6901	0	-330	927	29.56	
Delhi	3115	0	9	-696	1394	0	-24	-1245	-20.72	
UP	8304	2030	-688	-211	8025	980	-110	-235	-6.68	
Uttarakhand	1556	110	69	466	1064	0	96	373	9.29	
HP	1182	0	-3	4	768	0	66	251	4.64	
J&K	1830	100	64	368	1436	0	104	385	7.15	
Chandigarh	179	0	-4	0	86	0	0	-5	-0.02	
<b>Total</b>	<b>33662</b>	<b>2318</b>	<b>-597</b>	<b>-918</b>	<b>26423</b>	<b>980</b>	<b>89</b>	<b>-930</b>	<b>-9.28</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	1945	2090	2087	46.91	1955	46.68	0.23
	Rihand I STPS	1000	865	963	850	20.46	853	20.35	0.11
	Rihand II STPS	1000	910	1033	845	21.51	896	21.30	0.21
	Rihand III STPS	1000	401	523	343	9.50	396	9.45	0.05
	Dadri I STPS	840	814	651	472	12.85	535	12.97	-0.12
	Dadri II STPS	980	985	1018	739	21.51	896	21.54	-0.02
	Unchahar I TPS	420	398	445	340	8.96	373	9.05	-0.09
	Unchahar II TPS	420	404	440	338	9.17	382	8.93	0.23
	Unchahar III TPS	210	201	218	155	4.46	186	4.44	0.02
	ISTPP (Jhajjar)	1500	1480	729	632	16.40	683	15.43	0.97
	Dadri GPS	830	818	382	317	8.67	361	8.80	-0.13
	Anta GPS	419	415	245	257	6.04	252	6.09	-0.06
	Auraiya GPS	663	600	162	157	3.80	158	4.04	-0.23
	<b>Sub Total (A)</b>	<b>11282</b>	<b>10236</b>	<b>8899</b>	<b>7532</b>	<b>190.24</b>	<b>7927</b>	<b>189.07</b>	<b>1.17</b>
B. NPC	NAPS	440	317	351	354	7.63	318	7.61	0.02
	RAPS- B	440	419	460	464	10.06	419	10.06	0.00
	RAPS- C	440	430	472	475	10.24	427	10.32	-0.08
	<b>Sub Total (B)</b>	<b>1320</b>	<b>1166</b>	<b>1283</b>	<b>1293</b>	<b>27.92</b>	<b>1164</b>	<b>27.98</b>	<b>-0.06</b>
C. NHPC	Chamera I HPS	540	541	360	0	2.06	86	1.90	0.16
	Chamera II HPS	300	300	87	0	1.42	59	1.30	0.12
	Chamera III HPS	231	231	97	0	0.90	38	0.83	0.07
	Bairasuil HPS	180	182	60	0	0.61	25	0.60	0.01
	Salal-HPS	690	129	302	115	3.20	134	3.00	0.20
	Tanakpur-HPS	94	38	48	39	0.92	38	0.92	0.00
	Uri-HPS	480	118	224	43	3.08	128	2.99	0.09
	Uri-II HPS	120	18	60	60	1.80	75	0.42	1.38
	Dhauliganga-HPS	280	0	0	0	0.00	0	0.00	0.00
	Dulhasti-HPS	390	387	386	0	3.54	148	3.42	0.13
	Sewa-II HPS	120	119	122	0	0.38	16	0.35	0.03
	<b>Sub Total (C)</b>	<b>3425</b>	<b>2063</b>	<b>1746</b>	<b>257</b>	<b>17.92</b>	<b>747</b>	<b>15.73</b>	<b>2.19</b>
D. NJPC	Nathpa Jhakri	1500	1605	1617	0	9.82	409	9.49	0.33
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1617</b>	<b>0</b>	<b>9.82</b>	<b>409</b>	<b>9.49</b>	<b>0.33</b>
E. THDC	Tehri HPS	1000	1060	1020	0	6.65	277	6.40	0.25
	Koteshwar HPS	400	92	100	91	2.24	93	2.20	0.04
<b>Sub Total (E)</b>	<b>1400</b>	<b>1152</b>	<b>1120</b>	<b>91</b>	<b>8.89</b>	<b>371</b>	<b>8.60</b>	<b>0.29</b>	
F. BBMB	Bhakra HPS	1497	554	1079	398	14.15	590	13.29	0.86
	Dehar HPS	990	143	165	0	3.56	148	3.43	0.13
	Pong HPS	396	237	306	126	5.79	241	5.68	0.11
	<b>Sub Total (F)</b>	<b>2883</b>	<b>933</b>	<b>1550</b>	<b>524</b>	<b>23.50</b>	<b>979</b>	<b>22.40</b>	<b>1.10</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	72	0	0.65	27	0.62	0.03
	KWHEP HPS(IPP)	1000	0	300	0	5.58	233	5.44	0.14
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.00	0.00
	Shree Cement TPS	300	0	0	0	0.00	0	0.61	-0.61
	Budhil HPS(IPP)	70	0	0	0	0.00	0	0.00	0.00
	<b>Sub Total (G)</b>	<b>1662</b>	<b>0</b>	<b>372</b>	<b>0</b>	<b>6.23</b>	<b>260</b>	<b>6.68</b>	<b>-0.45</b>
<b>H. Total Regional Entities (A-G)</b>	<b>23472</b>	<b>17155</b>	<b>16587</b>	<b>9697</b>	<b>284.53</b>	<b>11855</b>	<b>279.95</b>	<b>4.57</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	952	810	21.28	887
	Guru Nanak Dev TPS(Bhatinda)	440	175	170	4.34	181
	Guru Hargobind Singh TPS(L.mbt)	920	953	859	20.54	856
	Goindwal(GVK)		0	0	0.00	0
	Thermal (Total)	2620	2080	1839	46.16	1923
	Total Hydro	1148	304	408	10.20	425
<b>Total Punjab</b>	<b>3768</b>	<b>2384</b>	<b>2247</b>	<b>56.36</b>	<b>2348</b>	
Haryana	Panipat TPS	1367	464	423	10.48	437
	DCRTPP (Yamuna nagar)	600	280	248	6.25	260
	Faridabad GPS (NTPC)	432	329	275	7.86	328
	RGTPP (khedar) (IPP)	1200	570	481	12.78	533
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	1055	695	24.97	1040
	Thermal (Total)	4944	2698	2122	62.33	2597
	Total Hydro	62	24	29	0.66	27
	<b>Total Haryana</b>	<b>5006</b>	<b>2722</b>	<b>2151</b>	<b>62.99</b>	<b>2625</b>
	Rajasthan	kota TPS	1240	1156	1096	27.17
suratgarh TPS		1500	1139	1025	26.11	1088
Chabra TPS		500	224	300	7.03	293
Dholpur GPS		330	87	101	2.26	94
Ramgarh GPS		111	162	160	3.72	155
RAPS A (NPC)		300	175	175	4.03	168
Barsingsar (NLC)		250	223	222	5.23	218
Giral LTPS		250	0	0	0.00	0
Rajwest LTPS (IPP)		1080	491	399	10.69	445
VSLP LTPS (IPP)		135	0	0	0.00	0
Kalisindh Thermal		600	0	0	0.00	0
Kawai(Adani)		660	622	587	14.26	594
Thermal (Total)		6956	4279	4065	100.50	4187
Total Hydro		550	286	171	5.61	234
Wind power		2191	145	603	6.22	259
Biomass		91	24	24	0.58	24
Solar		201	0	0	0.67	28
Renewable/Others (Total)		2483	169	627	7.46	311
<b>Total Rajasthan</b>		<b>9989</b>	<b>4734</b>	<b>4863</b>	<b>113.57</b>	<b>4732</b>
UP		Anpara TPS	1630	1401	1435	30.20
	Obra TPS	1288	369	202	7.70	321
	Paricha TPS	1140	734	699	15.40	642
	Panki TPS	210	80	60	1.60	67
	Harduaganj TPS	665	496	357	9.80	408
	Tanda TPS (NTPC)	440	346	402	10.79	450
	Roza TPS (IPP)	1200	842	1067	25.24	1052
	Anpara-C (IPP)	1200	644	825	19.72	822
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	257	255	7.21	301
	Thermal (Total)	8223	5169	5302	127.66	5319
	Vishnuparyag HPS (IPP)	400	0	0	0.00	0
	Other Hydro	527	141	128	3.10	129
	Cogeneration	981	50	50	1.20	50
	<b>Total UP</b>	<b>10131</b>	<b>5360</b>	<b>5480</b>	<b>131.96</b>	<b>5498</b>
Uttarakhand	Total Hydro	1303	494	208	8.56	356
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>494</b>	<b>208</b>	<b>8.56</b>	<b>356</b>
Delhi	Raighat TPS	135	0	0	0.00	0
	Delhi Gas Turbine	282	82	82	1.92	80
	Pragati Gas Turbine	330	313	267	6.91	288
	Riithala GPS	95	0	0	0.00	0
	Bawana GPS	686	0	0	0.00	0
	Badarpur TPS (NTPC)	705	295	440	8.03	334
	Thermal (Total)	2232	690	789	16.86	702
	<b>Total Delhi</b>	<b>2232</b>	<b>690</b>	<b>789</b>	<b>16.86</b>	<b>702</b>
HP	Baspa HPS (IPP)	330	31	31	1.60	67
	Malana HPS (IPP)	86	12	0	0.30	12
	Other Hydro	589	237	159	4.63	193
	<b>Total HP</b>	<b>1005</b>	<b>280</b>	<b>190</b>	<b>6.52</b>	<b>272</b>
J & K	Baglihar HPS (IPP)	450	294	126	4.19	175
	Other Hydro	323	90	115	2.58	107
	Gas/Diesel/Others	183	0	0	0.00	0
	<b>Total J &amp; K</b>	<b>956</b>	<b>384</b>	<b>241</b>	<b>6.77</b>	<b>282</b>
<b>Total State Control Area Generation</b>		<b>34390</b>	<b>17048</b>	<b>16169</b>	<b>403.57</b>	<b>16816</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>2269</b>	<b>2266</b>	<b>64.16</b>	<b>2673</b>
<b>Total Regional Availability(Gross)</b>		<b>57862</b>	<b>35904</b>	<b>28132</b>	<b>752.25</b>	<b>31344</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10500	6405	872	66.37	2765
State Control Area Hydro	5368	1913	1375	41.40	1725
<b>Total Regional Hydro</b>	<b>15868</b>	<b>8318</b>	<b>2247</b>	<b>107.77</b>	<b>4490</b>

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

Element	Peak(19:00 Hrs)	Off Peak(03:00 Hrs)	Maximum Interchange (MW)		Energy (MU)		Net Energy MU
	MW	MW	Import	Export	Import	Export	
Vindhychal B/B	50	-400	50	400	0.35	5.67	-5.32
Gwalior-Agra (D/C)	32	679	994	0	9.62	0.00	9.62
Zerda-Kankroli	-291	-428	0	481	0.00	6.80	-6.80
Zerda-Bhinmal	-198	-347	35	430	0.00	4.28	-4.28
Malanpur-Auraiya	-170	-109	0	174	0.00	3.22	-3.22
Badod-Kota/Morak	-142	-214	0	257	0.00	4.14	-4.14
Mundra-Mohindergarh(HVDC)	1451	1453	1453	0	35.13	0.00	35.13
<b>Sub Total WR</b>	<b>732</b>	<b>634</b>			<b>45.10</b>	<b>24.11</b>	<b>20.99</b>
Pusauli Bypass	300	300	300	0	7.14	0.00	7.14
MZP- GKP (D/C)	335	356	672	0	10.25	0.00	10.25
Patna-Balia(D/C)	491	530	694	0	11.50	0.00	11.50
B'Sharif-Balia (D/C)	275	227	596	0	7.95	0.00	7.95
Pusauli-Balia	-76	-79	47	0	0.00	0.88	-0.88
Gaya-Fatehpur (765 Kv)	132	199	349	0	5.12	0.00	5.12
Pusauli-Sahupuri	114	128	147	0	3.04	0.00	3.04
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-34	-29	0	38	0.00	0.95	-0.95
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
Sasaram - Fatehpur(765 KV)	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1537</b>	<b>1632</b>			<b>45.00</b>	<b>1.83</b>	<b>43.17</b>
<b>Total IR Exch</b>	<b>2269</b>	<b>2266</b>			<b>90.10</b>	<b>25.94</b>	<b>64.16</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
38.83	0.96	39.78	5.04	-28.73	7.70	3.12	2.95	-2.95

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
55.47	7.35	62.83	43.17	20.99	64.16	-12.31	13.64	1.33

**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	3.60	97.50	13.60	93.90	32.10	2.50

<----- 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				
50.32	16.03	49.57	12.10	49.94	0.22	0.13	50.28	0.00

**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	21:57	403	09:23	0.0	0.0	0.0	0.0
Gorakhpur	400	426	21:50	404	10:40	0.0	0.0	0.0	0.0
Barailly	400	423	21:58	400	11:14	0.0	0.0	1.5	0.0
Kanpur	400	422	21:58	403	09:23	0.0	0.0	3.0	0.0
Dadri	400	424	21:56	402	11:15	0.0	0.0	14.2	0.0
Ballabgarh	400	429	20:55	407	09:27	0.0	0.0	32.7	0.0
Bawana	400	426	20:52	404	11:26	0.0	0.0	31.3	0.0
Bassi	400	423	20:41	391	09:25	0.0	0.0	3.3	0.0
Hissar	400	418	20:43	394	11:14	0.0	0.0	0.0	0.0
Moga	400	423	20:57	400	09:21	0.0	0.0	2.5	0.0
Abdullapur	400	425	20:57	406	18:10	0.0	0.0	13.0	0.0
Nalagarh	400	429	20:43	404	09:21	0.0	0.0	23.7	0.0
Kishenpur	400	417	16:02	397	18:10	0.0	0.0	0.0	0.0
Wagoora	400	412	13:02	379	18:07	1.2	19.1	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	776	21:58	740	10:08	0.0	2.6	0.0	0.0
Balia	765	763	21:58	729	10:38	0.0	40.4	0.0	0.0
Moga	765	792	20:55	749	09:21	0.0	0.0	0.0	0.0
Agra	765	811	20:51	762	09:25	0.0	0.0	14.9	0.0
Bhiwani	765	799	20:45	767	12:19	0.0	0.0	0.0	0.0
Unnao	765	762	21:58	734	10:14	0.0	23.5	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	509.42	1515.08	502.38	1192.70	241.46	417.79
Pong	426.72	384.05	418.46	821.32	417.48	781.19	77.73	312.79
Tehri	829.79	740.04	822.25	1050.00	818.65	982.26	79.47	137.00
Koteshwar	612.50	598.50	610.50	4.50	NA	NA	137.00	148.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	58.37	63.65
Rihand	268.22	252.98	261.82	407.50	262.98	478.20	NA	NA
RPS	352.80	343.81	352.88	NA	NA	NA	243.01	12.15
Jawahar Sagar	298.70	295.78	298.61	NA	NA	NA	253.41	163.81
RSD	527.91	487.91	516.48	144.00	520.95	144.00	86.28	222.34

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 21.11.2013 :**

1. Normal weather in Northern Region.

**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 :**

Vishnuprayag (400MW) and Dhauliganga (280MW) are out of operation since 16.06.2013.  
Civil construction is in progress for rectification of the major damages in Plants/Dam caused due to flood  
Vishnuprayag and Dhauliganga expected by Mar, 2014 .

Report for : 21.11.2013

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER