

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 20.12.2011  
Date of Reporting : 21.12.2011

### 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
29837	4916	34753	49.39	24212	650	24862	50.14	652.3	64.38

\* 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	49.17	12.58		61.75	25.80	28.11	2.31	89.87	6.31
Haryana	43.31	0.61		43.93	26.85	30.81	3.96	74.73	13.55
Rajasthan	87.37	4.91	7.89	100.17	50.69	54.38	3.69	154.55	4.39
Delhi	23.74			23.74	43.07	37.23	-5.83	60.97	0.12
UP	78.09	6.55	15.60	100.24	81.78	82.52	0.74	182.76	36.55
Uttarakhand		9.99		9.99	16.61	18.37	1.76	28.36	1.12
HP		5.18		5.18	16.70	18.33	1.64	23.51	0.45
J & K		4.88	0.00	4.88	23.53	29.17	5.64	34.05	1.90
Chandigarh				0.00	3.37	3.53	0.16	3.53	0.00
<b>Total</b>	<b>281.68</b>	<b>44.71</b>	<b>23.49</b>	<b>349.88</b>	<b>288.39</b>	<b>302.45</b>	<b>14.06</b>	<b>652.33</b>	<b>64.38</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	4411	600	-38	-403	3347	0	156	-901		-11.18
Haryana	3452	1527	87	-68	3054	0	-187	-70		-1.67
Rajasthan	6614	594	386	410	6331	0	399	546		14.65
Delhi	3194	0	-158	-202	1368	0	-180	-398		-5.49
UP	7845	2015	-581	267	6918	650	-190	267		6.41
Uttarakhand	1314	80	-44	277	1062	0	61	332		7.17
HP	1134	0	-262	8	734	0	154	237		3.70
J&K	1672	100	56	252	1310	0	171	254		6.08
Chandigarh	201	0	10	0	88	0	-3	-30		-0.24
<b>Total</b>	<b>29837</b>	<b>4916</b>	<b>-543</b>	<b>541</b>	<b>24212</b>	<b>650</b>	<b>381</b>	<b>237</b>		<b>19.43</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		UI	
								Net MU	Net MU	Net MU	Net MU
A. NTPC	Singrauli STPS	2000	1735	1851	1851	42.04	1752	41.64		0.40	
	Rihand I STPS	1000	862	973	892	20.87	870	20.70		0.18	
	Rihand II STPS	1000	977	1043	1032	23.52	980	23.45		0.07	
	Dadri I STPS	840	793	868	637	17.95	748	17.80		0.15	
	Dadri II STPS	980	967	1027	795	22.18	924	22.27		-0.09	
	Unchahar I TPS	440	326	436	348	7.90	329	7.79		0.11	
	Unchahar II TPS	440	324	445	350	7.49	312	7.71		-0.22	
	Unchahar III TPS	210	162	222	179	3.92	163	3.87		0.05	
	ISTPP (Jhajjar)	1000	475	502	492	11.27	470	11.24		0.03	
	Dadri GPS	830	843	821	528	17.87	744	17.90		-0.04	
	Anta GPS	419	277	267	216	6.15	256	5.86		0.29	
	Auraiya GPS	663	653	621	358	12.79	533	12.82		-0.02	
	<b>Sub Total (A)</b>	<b>9822</b>	<b>8395</b>	<b>9076</b>	<b>7678</b>	<b>193.93</b>	<b>8080</b>	<b>193.04</b>		<b>0.89</b>	
	B. NPC	NAPS	440	222	252	262	5.28	220	5.33		-0.05
RAPS- B		440	421	462	467	10.05	419	10.10		-0.05	
RAPS- C		440	420	472	475	10.20	425	10.08		0.12	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1063</b>	<b>1186</b>	<b>1204</b>	<b>25.53</b>	<b>1064</b>	<b>25.51</b>		<b>0.02</b>	
C. NHPC	Chamera I HPS	540	0	0	0	0.00	0	0.00		0.00	
	Chamera II HPS	300	297	222	0	1.40	59	1.36		0.05	
	Bairasuil HPS	180	179	120	0	0.53	22	0.47		0.06	
	Salal-HPS	690	101	223	30	2.43	101	2.39		0.04	
	Tanakpur-HPS	94	31	40	19	0.77	32	0.78		-0.02	
	Uri-HPS	480	120	217	30	2.77	116	2.90		-0.13	
	Dhauliganga-HPS	280	210	210	0	1.07	45	1.09		-0.01	
	Dulhasti-HPS	390	303	405	0	3.15	131	2.99		0.17	
	Sewa-II HPS	120	0	0	0	0.00	0	0.00		0.00	
	<b>Sub Total (C)</b>	<b>3074</b>	<b>1241</b>	<b>1437</b>	<b>79</b>	<b>12.12</b>	<b>505</b>	<b>11.97</b>		<b>0.15</b>	
	D. NJPC	Nathpa Jhakri	1500	956	983	0	6.42	268	6.44		-0.02
<b>Sub Total (D)</b>		<b>1500</b>	<b>956</b>	<b>983</b>	<b>0</b>	<b>6.42</b>	<b>268</b>	<b>6.44</b>		<b>-0.02</b>	
E. THDC	Tehri HPS	1000	1040	776	0	6.33	264	6.50		-0.17	
	Koteshwar HPS	200	119	206	0	1.78	74	1.90		-0.12	
	<b>Sub Total (E)</b>	<b>1200</b>	<b>1159</b>	<b>982</b>	<b>0</b>	<b>8.11</b>	<b>338</b>	<b>8.40</b>		<b>-0.29</b>	
F. BBMB	Bhakra HPS	1480	674	944	522	16.20	675	16.17		0.03	
	Dehar HPS	990	126	495	0	3.17	132	3.03		0.15	
	Pong HPS	396	226	306	186	5.58	232	5.41		0.16	
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1025</b>	<b>1745</b>	<b>708</b>	<b>24.95</b>	<b>1040</b>	<b>24.61</b>		<b>0.34</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.32	13	0.29		0.03	
	KWHEP HPS(IPP)	1000	0	300	0	3.88	162	3.66		0.22	
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.00		0.00	
	Shree Cement TPS	150	0	136	140	3.34	139	2.86		0.47	
<b>Sub Total (G)</b>	<b>1442</b>	<b>0</b>	<b>436</b>	<b>140</b>	<b>7.53</b>	<b>314</b>	<b>6.81</b>		<b>0.72</b>		
<b>H. Total Regional Entities (A-G)</b>	<b>21225</b>	<b>13840</b>	<b>15845</b>	<b>9809</b>	<b>278.60</b>	<b>11608</b>	<b>276.79</b>		<b>1.82</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	959	23.46	977	
	Guru Nanak Dev TPS(Bhatinda)	440	215	215	4.59	191	
	Guru Hargobind Singh TPS(L.mbt)	920	960	940	21.13	880	
	Thermal (Total)	2620	2225	2114	49.17	2049	
	Total Hydro	1148	563	266	12.58	524	
	<b>Total Punjab</b>	<b>3768</b>	<b>2788</b>	<b>2380</b>	<b>61.75</b>	<b>2573</b>	
Haryana	Panipat TPS	1360	1118	959	22.38	933	
	DCRTPP (Yamuna nagar)	600	271	273	6.54	272	
	Faridabad GPS (NTPC)	432	432	427	10.50	438	
	RGTPP (khedar) (IPP)	1200	0	524	3.89	162	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Thermal (Total)	3617	1821	2183	43.31	1805	
	Total Hydro	62	23	23	0.61	26	
		<b>Total Haryana</b>	<b>3679</b>	<b>1844</b>	<b>2206</b>	<b>43.93</b>	<b>1830</b>
Rajasthan	kota TPS	1240	1178	1171	27.50	1146	
	suratgarh TPS	1500	1146	1156	27.27	1136	
	Chabra TPS	500	414	437	8.79	366	
	Dholpur GPS	330	225	220	5.28	220	
	Ramgarh GPS	113	65	65	1.71	71	
	RAPS A (NPC)	300	177	181	4.44	185	
	Barsingsar (NLC)	250	125	115	2.64	110	
	Giral LTPS (IPP)	250	45	45	1.11	46	
	Rajwest LTPS (IPP)	540	352	360	8.64	360	
	VSLP LTPS (IPP)	135	0	0	0.00	0	
	Thermal (Total)	5158	3727	3750	87.37	3641	
	Total Hydro	550	205	140	4.91	205	
	Wind power	1294	82	27	1.97	82	
	Biomass	71	35	35	0.84	35	
	Solar	50	0	0	0.17	7	
	Renewable/Others (Total)	1365	117	62	7.89	329	
		<b>Total Rajasthan</b>	<b>7073</b>	<b>4049</b>	<b>3952</b>	<b>100.17</b>	<b>4174</b>
UP	Anpara TPS	1630	1547	1562	33.30	1388	
	Obra TPS	1442	647	667	14.10	588	
	Paricha TPS	640	234	230	4.80	200	
	Panki TPS	210	190	185	4.10	171	
	Harduaganj TPS	415	44	44	0.90	38	
	Tanda TPS (NTPC)	440	400	292	8.41	350	
	Roza TPS (IPP)	600	414	450	10.76	448	
	Anpara-C (IPP)	1200	0	0	0.00	0	
	Bajaj Energy Pvt.Ltd(IPP) TPS	180	39	117	1.72	72	
	Thermal (Total)	6757	3515	3547	78.09	3254	
	Vishnuparyag HPS (IPP)	400	98	99	2.30	96	
	Other Hydro	527	295	43	4.25	177	
	Cogeneration	951	650	650	15.60	650	
		<b>Total UP</b>	<b>8635</b>	<b>4558</b>	<b>4339</b>	<b>100.24</b>	<b>4081</b>
	Uttarakhand	Total Hydro	1303	501	342	9.99	416
<b>Total Uttarakhand</b>		<b>1303</b>	<b>501</b>	<b>342</b>	<b>9.99</b>	<b>416</b>	
Delhi	Rajghat TPS	135	92	94	2.63	110	
	Delhi Gas Turbine	282	200	76	3.57	149	
	Praagati Gas Turbine	330	313	266	7.53	314	
	Rithala GPS	108	0	0	0.00	0	
	Bawana GPS	440	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	495	385	10.01	417	
	Thermal (Total)	2000	1100	821	23.74	989	
	<b>Total Delhi</b>	<b>2000</b>	<b>1100</b>	<b>821</b>	<b>23.74</b>	<b>989</b>	
HP	Baspa HPS (IPP)	330	0	0	1.32	55	
	Malana HPS (IPP)	101	48	0	0.27	11	
	Other Hydro	571	208	72	3.60	150	
	<b>Total HP</b>	<b>1002</b>	<b>256</b>	<b>72</b>	<b>5</b>	<b>216</b>	
J & K	Baglihar HPS (IPP)	450	152	132	3.34	139	
	Other Hydro	323	54	100	1.54	64	
	Gas/Diesel/Others	183	0	0	0.00	0	
		<b>Total J &amp; K</b>	<b>956</b>	<b>206</b>	<b>232</b>	<b>4.88</b>	<b>203</b>
<b>Total State Control Area Generation</b>		<b>28416</b>	<b>15302</b>	<b>14344</b>	<b>349.88</b>	<b>14483</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>958</b>	<b>776</b>	<b>40.27</b>	<b>1678</b>	
<b>Total Regional Availability(Gross)</b>		<b>49641</b>	<b>32105</b>	<b>24929</b>	<b>668.75</b>	<b>27769</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10083	5583	927	59.14	2464
State Control Area Hydro	5365	2049	1118	42.41	1767
<b>Total Regional Hydro</b>	<b>15447</b>	<b>7632</b>	<b>2045</b>	<b>101.55</b>	<b>4231</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	0	-200	0	350	0.00	5.01	-5.01
Gwalior-Agra (D/C)	377	389	1008	0	16.26	0.00	16.26
Zerda-Kankroli	-114	-131	38	179	0.00	1.17	-1.17
Zerda-Bhinmal	-51	-9	210	103	1.33	0.00	1.33
Malanpur-Auraiya	-169	-173	0	186	0.00	2.60	-2.60
Badod-Kota/Morak	-90	-112	25	142	0.00	1.44	-1.44
<b>Sub Total WR</b>	<b>-47</b>	<b>-236</b>			<b>17.59</b>	<b>10.22</b>	<b>7.37</b>
Pusauli Bypass	300	300	300	0	7.25	0.00	7.25
MZP- GKP (D/C)	258	272	717	0	9.84	0.00	9.84
Patna-Balia(D/C)	248	246	527	0	7.28	0.00	7.28
B'Sharif-Balia (D/C)	131	135	791	0	7.22	0.00	7.22
Barh - balia(D/C)	0	0	0	0	0.00	0.00	0.00
Pusauli-Sahupuri	98	93	135	0	2.18	0.00	2.18
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-30	-34	0	48	0.00	0.87	-0.87
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>1005</b>	<b>1012</b>			<b>33.77</b>	<b>0.87</b>	<b>32.90</b>
<b>Total IR Exch</b>	<b>958</b>	<b>776</b>			<b>51.36</b>	<b>11.09</b>	<b>40.27</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
16.65	0.57	17.22	13.72	8.48	2.88	-2.44	2.82	-2.82

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
36.63	-2.10	34.53	32.90	7.37	40.27	-3.73	9.47	5.73

**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	2.80	27.90	56.90	71.30	42.30	9.70	0.80

←----- Frequency (Hz) ----->				Average Frequency Hz	Frequency Variation Index	Std. Dev.	Frequency in 15 Min Block	
Maximum		Minimum					MAX (Hz)	MIN (Hz)
Freq	Time	Freq	Time	Hz				
50.33	4.58	48.88	14.17	49.65	1.83	0.25	50.23	0.00

**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	409	04:03	395	14:15	0.0	0.0	0.0	0.0
Gorakhpur	400	429	20:53	398	08:42	0.0	0.0	33.8	0.0
Bareilly	400	426	20:52	386	12:10	0.0	0.5	7.0	0.0
Kanpur	400	424	04:07	391	14:15	0.0	0.0	3.1	0.0
Dadri	400	422	04:06	391	14:15	0.0	0.0	1.5	0.0
Ballabgarh	400	424	04:06	392	12:10	0.0	0.0	7.6	0.0
Bawana	400	425	04:08	391	14:16	0.0	0.0	11.1	0.0
Bassi	400	423	04:04	384	14:16	0.0	0.5	2.8	0.0
Hissar	400	414	04:07	384	12:10	0.0	3.5	0.0	0.0
Moga	400	420	03:03	394	10:11	0.0	0.0	0.0	0.0
Abdullapur	400	424	03:21	392	14:18	0.0	0.0	3.4	0.0
Nalagarh	400	425	03:02	402	10:29	0.0	0.0	13.9	0.0
Kishenpur	400	420	12:25	388	10:23	0.0	1.4	0.0	0.0
Wagoora	400	407	12:25	358	10:23	70.6	97.1	0.0	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 (m³/s)	Usage (m³/s)
Bhakra	513.59	445.62	504.20	1272.20	505.48	1325.82	173.10	461.56
Pong	426.72	384.05	414.94	668.52	418.16	807.91	51.11	348.69
Tehri	829.79	740.04	812.15	842.28	818.65	982.26	69.58	143.00
Koteshwar	612.50	598.50	607.25	3.32	NA	NA	149.00	146.00
Chamera-I	760.00	748.75	NA	NA	NA	NA	42.61	0.00
Rihand	268.22	252.98	263.96	542.00	257.56	181.70	NA	NA
RPS	352.80	343.81	350.41	NA	NA	NA	NA	234.69
Jawahar Sagar	298.70	295.78	297.73	NA	NA	NA	NA	243.47
RSD	527.91	487.91	514.04	NA	515.83	NA	75.63	117.85

\* NA: Not Available

**IX. System Constraints:**

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

**XI. Weather Conditions For 20.12.2011 :**

1. Normal weather in NR.

**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 : 20.12.2011

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER