

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 18.12.2011

Date of Reporting : 19.12.2011

### I. Regional Availability/Demand:

Evening Peak (19:00 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
30300	2690	32990	49.84	24691	650	25341	50.08	665.7	45.80

\* 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	Actual Drawal	UI	Consumption	Shortages *
	Thermal	Hydro	Renewable/others \$	Total	(Net MU)	(Net MU)	(Net MU)	(Net MU)	(MU)
Punjab	48.91	8.44		57.35	29.68	25.91	-3.77	83.26	4.30
Haryana	55.79	0.66		56.44	27.46	33.89	6.43	90.33	7.60
Rajasthan	89.16	5.24	7.17	101.57	53.59	58.12	4.53	159.70	0.19
Delhi	22.36			22.36	38.58	33.29	-5.29	55.64	0.80
UP	92.57	6.26	15.60	114.44	78.85	77.33	-1.51	191.77	30.26
Uttarakhand		8.86		8.86	17.45	18.33	0.88	27.19	0.24
HP		5.19		5.19	17.25	17.09	-0.17	22.27	0.52
J & K		5.50	0.00	5.50	23.97	26.89	2.93	32.39	1.90
Chandigarh				0.00	3.44	3.17	-0.27	3.17	0.00
<b>Total</b>	<b>308.79</b>	<b>40.14</b>	<b>22.77</b>	<b>371.70</b>	<b>290.26</b>	<b>294.02</b>	<b>3.76</b>	<b>665.71</b>	<b>45.80</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 [OD/Import: (+ve), UD/Export: (-ve)]

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	
Punjab	3892	600	-484	-403	3039	0	-215	-901	-11.18	
Haryana	4031	629	190	-56	3421	0	116	-70	-1.61	
Rajasthan	6777	2	357	431	6269	0	298	546	14.72	
Delhi	2898	59	-280	-147	1334	0	-229	-678	-8.29	
UP	8269	1300	-565	167	7433	650	-105	167	4.01	
Uttarakhand	1457	0	27	332	974	0	4	332	7.97	
HP	1186	0	-292	8	763	0	154	237	3.70	
J&K	1622	100	-114	216	1371	0	226	254	5.91	
Chandigarh	168	0	-23	0	88	0	-3	-30	-0.24	
<b>Total</b>	<b>30300</b>	<b>2690</b>	<b>-1184</b>	<b>548</b>	<b>24691</b>	<b>650</b>	<b>245</b>	<b>-143</b>	<b>14.99</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	Off Peak MW	Energy	Average	Schedule	UI
				(Gross)	(Gross)	(Net MU)	Sentout(MW)	Net MU	Net MU
A. NTPC	Singrauli STPS	2000	1677	1864	1735	40.53	1689	40.25	0.28
	Rihand I STPS	1000	863	955	934	20.87	870	20.71	0.16
	Rihand II STPS	1000	977	1040	1043	23.63	985	23.45	0.18
	Dadri I STPS	840	592	680	504	13.76	573	13.75	0.01
	Dadri II STPS	980	967	1027	895	22.94	956	22.81	0.13
	Unchahar I TPS	440	341	440	347	8.44	352	8.19	0.26
	Unchahar II TPS	440	341	439	359	8.23	343	8.19	0.04
	Unchahar III TPS	210	171	220	178	4.12	172	4.09	0.03
	ISTPP (Jhajjar)	1000	475	500	395	10.87	453	11.15	-0.28
	Dadri GPS	830	836	733	506	16.58	691	16.66	-0.09
	Anta GPS	419	278	212	262	5.70	238	5.52	0.18
	Auraiya GPS	663	652	637	512	14.27	594	12.82	1.45
	<b>Sub Total (A)</b>	<b>9822</b>	<b>8169</b>	<b>8747</b>	<b>7670</b>	<b>189.94</b>	<b>7914</b>	<b>187.58</b>	<b>2.35</b>
	B. NPC	NAPS	440	218	263	259	5.34	223	5.23
RAPS- B		440	420	463	464	10.09	420	10.08	0.00
RAPS- C		440	420	470	476	10.22	426	10.08	0.14
<b>Sub Total (B)</b>		<b>1320</b>	<b>1058</b>	<b>1196</b>	<b>1199</b>	<b>25.65</b>	<b>1069</b>	<b>25.39</b>	<b>0.25</b>
C. NHPC	Chamera I HPS	540	0	0	0	0.00	0	0.00	0.00
	Chamera II HPS	300	297	175	0	1.16	48	1.35	-0.19
	Bairasuil HPS	180	179	110	0	0.42	17	0.50	-0.08
	Salal-HPS	690	122	307	92	2.95	123	3.00	-0.05
	Tanakpur-HPS	94	33	44	28	0.78	32	0.79	-0.01
	Uri-HPS	480	126	231	40	2.97	124	2.99	-0.02
	Dhauliganga-HPS	280	210	143	0	1.11	46	1.21	-0.10
	Dulhasti-HPS	390	303	259	0	2.51	105	3.09	-0.57
	Sewa-II HPS	120	0	0	0	0.00	0	0.00	0.00
	<b>Sub Total (C)</b>	<b>3074</b>	<b>1271</b>	<b>1269</b>	<b>160</b>	<b>11.90</b>	<b>496</b>	<b>12.92</b>	<b>-1.03</b>
	D. NJPC	Nathpa Jhakri	1500	1125	1209	0	7.46	311	7.95
<b>Sub Total (D)</b>		<b>1500</b>	<b>1125</b>	<b>1209</b>	<b>0</b>	<b>7.46</b>	<b>311</b>	<b>7.95</b>	<b>-0.49</b>
E. THDC	Tehri HPS	1000	1040	750	0	6.49	270	6.50	-0.01
	Koteshwar HPS	200	119	101	0	2.20	92	2.10	0.10
	<b>Sub Total (E)</b>	<b>1200</b>	<b>1159</b>	<b>851</b>	<b>0</b>	<b>8.69</b>	<b>362</b>	<b>8.60</b>	<b>0.09</b>
F. BBMB	Bhakra HPS	1480	696	944	522	17.07	711	16.70	0.38
	Dehar HPS	990	136	495	0	3.31	138	3.27	0.04
	Pong HPS	396	221	366	66	4.83	201	5.30	-0.47
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1053</b>	<b>1805</b>	<b>588</b>	<b>25.21</b>	<b>1050</b>	<b>25.26</b>	<b>-0.05</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.16	7	0.06	0.10
	KWHEP HPS(IPP)	1000	0	270	0	4.30	179	4.22	0.08
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.00	0.00
	Shree Cement TPS	150	0	125	141	3.26	136	2.87	0.39
<b>Sub Total (G)</b>	<b>1442</b>	<b>0</b>	<b>395</b>	<b>141</b>	<b>7.71</b>	<b>321</b>	<b>7.15</b>	<b>0.56</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>21225</b>	<b>13834</b>	<b>15472</b>	<b>9758</b>	<b>276.55</b>	<b>11523</b>	<b>274.87</b>	<b>1.69</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	1045	23.08	962	
	Guru Nanak Dev TPS(Bhatinda)	440	215	215	4.56	190	
	Guru Hargobind Singh TPS(L.mbt)	920	965	960	21.27	886	
	Thermal (Total)	2620	2230	2220	48.91	2038	
	Total Hydro	1148	273	205	8.44	352	
	<b>Total Punjab</b>	<b>3768</b>	<b>2503</b>	<b>2425</b>	<b>57.35</b>	<b>2389</b>	
Haryana	Panipat TPS	1360	1031	1034	24.93	1039	
	DCRTPP (Yamuna nagar)	600	273	270	6.61	276	
	Faridabad GPS (NTPC)	432	430	448	10.50	438	
	RGTPP (khedar) (IPP)	1200	524	522	13.74	573	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Thermal (Total)	3617	2258	2274	55.79	2325	
	Total Hydro	62	21	27	0.66	27	
		<b>Total Haryana</b>	<b>3679</b>	<b>2279</b>	<b>2301</b>	<b>56.44</b>	<b>2352</b>
Rajasthan	kota TPS	1240	1174	1173	27.65	1152	
	suratgarh TPS	1500	1071	1147	25.87	1078	
	Chabra TPS	500	403	403	9.52	397	
	Dholpur GPS	330	227	230	5.33	222	
	Ramgarh GPS	113	65	65	1.68	70	
	RAPS A (NPC)	300	178	180	4.44	185	
	Barsingar (NLC)	250	60	50	2.10	87	
	Giral LTPS (IPP)	250	48	50	1.02	43	
	Rajwest LTPS (IPP)	540	423	424	11.55	481	
	VSLP LTPS (IPP)	135	0	0	0.00	0	
	Thermal (Total)	5158	3649	3722	89.16	3715	
	Total Hydro	550	207	179	5.24	218	
	Wind power	1294	227	5	0.49	20	
	Biomass	71	53	53	1.27	53	
	Solar	50	0	0	0.17	7	
	Renewable/Others (Total)	1365	280	58	7.17	299	
		<b>Total Rajasthan</b>	<b>7073</b>	<b>4136</b>	<b>3959</b>	<b>101.57</b>	<b>4232</b>
UP	Anpara TPS	1630	1393	1429	33.80	1408	
	Obra TPS	1442	601	585	14.60	608	
	Paricha TPS	640	351	352	8.40	350	
	Panki TPS	210	167	55	3.60	150	
	Harduaganj TPS	415	38	36	0.90	38	
	Tanda TPS (NTPC)	440	295	399	8.48	353	
	Roza TPS (IPP)	600	495	495	11.90	496	
	Anpara-C (IPP)	1200	357	351	8.34	348	
	Bajaj Energy Pvt.Ltd(IPP) TPS	180	104	101	2.55	106	
	Thermal (Total)	6757	3801	3803	92.57	3857	
	Vishnuparyag HPS (IPP)	400	103	99	2.41	100	
	Other Hydro	527	215	39	3.85	160	
	Cogeneration	951	650	650	15.60	650	
		<b>Total UP</b>	<b>8635</b>	<b>4769</b>	<b>4591</b>	<b>114.44</b>	<b>4668</b>
	Uttarakhand	Total Hydro	1303	513	316	8.86	369
<b>Total Uttarakhand</b>		<b>1303</b>	<b>513</b>	<b>316</b>	<b>8.86</b>	<b>369</b>	
Delhi	Rajghat TPS	135	0	48	0.47	20	
	Delhi Gas Turbine	282	159	197	4.30	179	
	Praagati Gas Turbine	330	313	284	7.48	312	
	Rithala GPS	108	0	0	0.00	0	
	Bawana GPS	440	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	490	405	10.11	421	
	Thermal (Total)	2000	962	934	22.36	931	
	<b>Total Delhi</b>	<b>2000</b>	<b>962</b>	<b>934</b>	<b>22.36</b>	<b>931</b>	
HP	Baspa HPS (IPP)	330	31	0	1.32	55	
	Malana HPS (IPP)	101	35	0	0.27	11	
	Other Hydro	571	191	93	3.60	150	
	<b>Total HP</b>	<b>1002</b>	<b>257</b>	<b>93</b>	<b>5</b>	<b>216</b>	
J & K	Baglihar HPS (IPP)	450	260	132	3.96	165	
	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>314</b>	<b>232</b>	<b>5.50</b>	<b>229</b>	
<b>Total State Control Area Generation</b>		<b>28416</b>	<b>15733</b>	<b>14851</b>	<b>371.70</b>	<b>15387</b>	
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>1132</b>	<b>1048</b>	<b>41.32</b>	<b>1722</b>	
<b>Total Regional Availability(Gross)</b>		<b>49641</b>	<b>32337</b>	<b>25657</b>	<b>689.56</b>	<b>28631</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10083	5529	889	60.97	2540
State Control Area Hydro	5365	1800	1091	37.73	1572
<b>Total Regional Hydro</b>	<b>15447</b>	<b>7329</b>	<b>1980</b>	<b>98.70</b>	<b>4112</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	-200	0	0	200	0.00	2.34	-2.34
Gwalior-Agra (D/C)	319	367	887	0	13.64	0.00	13.64
Zerda-Kankroli	-92	-100	48	138	0.00	1.58	-1.58
Zerda-Bhinmal	-21	-13	152	114	0.89	0.00	0.89
Malanpur-Auraiya	-207	-159	0	207	0.00	3.22	-3.22
Badod-Kota/Morak	-66	-95	0	119	0.00	1.19	-1.19
<b>Sub Total WR</b>	<b>-267</b>	<b>0</b>			<b>14.53</b>	<b>8.33</b>	<b>6.20</b>
Pusauli Bypass	300	300	300	0	7.24	0.00	7.24
MZP- GKP (D/C)	420	226	780	0	11.81	0.00	11.81
Patna-Balia(D/C)	412	268	702	0	9.08	0.00	9.08
B'Sharif-Balia (D/C)	202	183	398	0	5.30	0.00	5.30
Barh - balia(D/C)	0	0	0	0	0.00	0.00	0.00
Pusauli-Sahupuri	95	105	160	0	2.56	0.00	2.56
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>1399</b>	<b>1048</b>			<b>35.99</b>	<b>0.87</b>	<b>35.12</b>
<b>Total IR Exch</b>	<b>1132</b>	<b>1048</b>			<b>50.52</b>	<b>9.20</b>	<b>41.32</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
17.17	0.49	17.66	13.01	6.16	1.20	3.13	2.35	-2.35

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
34.22	1.60	35.82	35.12	6.20	41.32	0.90	4.60	5.50

**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
0.00	0.00	0.00	4.40	26.50	94.50	72.40	14.80

----- 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)
50.33	16.03	49.33	0.15	49.82	0.64	0.18	50.24	49.61

**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	410	00:00	398	14:16	0.0	0.0	0.0	0.0
Gorakhpur	400	429	16:12	406	07:40	0.0	0.0	26.6	0.0
Bareilly	400	420	21:53	407	00:16	0.0	0.0	0.0	0.0
Kanpur	400	419	04:04	398	10:48	0.0	0.0	0.0	0.0
Dadri	400	420	04:04	401	10:47	0.0	0.0	0.0	0.0
Ballabgarh	400	421	04:02	402	12:00	0.0	0.0	0.6	0.0
Bawana	400	421	04:01	404	10:37	0.0	0.0	0.6	0.0
Bassi	400	421	20:55	387	06:41	0.0	0.9	0.4	0.0
Hissar	400	412	20:12	396	10:47	0.0	0.0	0.0	0.0
Moga	400	419	20:37	401	09:12	0.0	0.0	0.0	0.0
Abdullapur	400	419	04:01	404	10:37	0.0	0.0	0.0	0.0
Nalagarh	400	426	20:35	409	09:07	0.0	0.0	9.9	0.0
Kishenpur	400	409	01:46	394	06:38	0.0	0.0	0.0	0.0
Wagoor	400	389	13:08	366	07:58	81.8	100.0	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	504.38	1285.56	505.68	1339.30	182.90	466.29
Pong	426.72	384.05	415.06	680.86	418.23	807.91	51.00	289.06
Tehri	829.79	740.04	812.40	850.25	818.65	982.26	68.80	149.00
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 18.12.2011 :**

1. Fog in Eastern U.P.

**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 : 18.12.2011

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER