

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 27.11.2011  
Date of Reporting : 28.11.2011

### 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
29406	1825	31231	50.05	24909	650	25558.6384	50.09	647.0	31.17

\* Half hourly (two 15 minutes block--one block each before and after the designated time) average frequency

### II. A. State's Load Energy 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	45.19	11.51		56.70	25.00	29.98	4.97	86.68	4.30
Haryana	63.24	0.72		63.95	25.22	26.79	1.58	90.75	1.09
Rajasthan	85.06	5.09	8.93	99.08	52.06	55.46	3.40	154.53	4.62
Delhi	23.99			23.99	36.71	29.18	-7.53	53.18	0.10
UP	95.61	5.32	9.60	110.53	82.26	68.21	-14.06	178.74	18.87
Uttarakhand		8.73		8.73	17.23	16.31	-0.92	25.04	0.59
HP		5.74		5.74	15.38	16.07	0.69	21.81	0.00
J & K		6.43	0.00	6.43	21.48	26.84	5.36	33.28	1.60
Chandigarh				0.00	3.38	2.99	-0.39	2.99	0.00
<b>Total</b>	<b>313.09</b>	<b>43.54</b>	<b>18.53</b>	<b>375.16</b>	<b>278.72</b>	<b>271.83</b>	<b>-6.89</b>	<b>646.99</b>	<b>31.17</b>

\* Shortage furnished by the respective constituent.

### 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	
Punjab	3758	600	-133	-564	3059	0	-8	-737	-12.71
Haryana	4449	158	345	-88	3173	0	-246	-104	-2.49
Rajasthan	6439	0	116	436	6733	0	692	561	14.92
Delhi	2760	2	-354	-255	1412	0	-546	-520	-8.19
UP	7802	965	-987	391	7394	650	-442	391	9.39
Uttarakhand	1301	0	-129	316	917	0	63	316	7.58
HP	1152	0	-179	-340	742	0	204	4	-2.87
J&K	1587	100	-25	79	1392	0	370	158	2.97
Chandigarh	158	0	-34	0	86	0	-5	-30	-0.24
<b>Total</b>	<b>29406</b>	<b>1825</b>	<b>-1380</b>	<b>-23</b>	<b>24909</b>	<b>650</b>	<b>82</b>	<b>40</b>	<b>8.36</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	1921	2050	2069	46.41	1934	46.10	0.30
	Rihand I STPS	1000	741	996	716	17.98	749	17.68	0.30
	Rihand II STPS	1000	977	1036	1041	23.50	979	23.30	0.19
	Dadri I STPS	840	585	634	457	13.25	552	13.32	-0.08
	Dadri II STPS	980	922	918	889	21.68	903	22.01	-0.33
	Unchahar I TPS	440	337	415	359	8.09	337	8.06	0.03
	Unchahar II TPS	440	337	314	334	8.07	336	8.01	0.07
	Unchahar III TPS	210	169	207	167	4.02	168	4.00	0.02
	ISTPP (Jhajihar)	1000	475	493	498	11.34	473	11.28	0.06
	Dadri GPS	830	819	657	549	15.32	638	15.41	-0.09
	Anta GPS	419	417	318	293	7.72	322	7.59	0.12
	Auraiya GPS	663	629	443	467	10.56	440	10.44	0.12
	<b>Sub Total (A)</b>	<b>9822</b>	<b>8330</b>	<b>8481</b>	<b>7839</b>	<b>187.92</b>	<b>7830</b>	<b>187.20</b>	<b>0.72</b>
	B. NPC	NAPS	440	203	238	245	4.89	204	4.87
RAPS- B		440	207	230	230	5.03	209	4.97	0.06
RAPS- C		440	420	474	476	10.23	426	10.08	0.15
<b>Sub Total (B)</b>		<b>1320</b>	<b>830</b>	<b>942</b>	<b>951</b>	<b>20.14</b>	<b>839</b>	<b>19.92</b>	<b>0.22</b>
C. NHPC	Chamera I HPS	540	534	270	0	2.82	118	3.10	-0.28
	Chamera II HPS	300	297	268	0	1.58	66	1.78	-0.20
	Bairasuil HPS	180	120	40	0	0.57	24	0.62	-0.05
	Salal-HPS	690	155	312	226	3.49	145	3.72	-0.23
	Tanakpur-HPS	94	40	45	36	1.00	42	1.04	-0.04
	Uri-HPS	480	126	162	87	3.13	131	3.00	0.13
	Dhauliganga-HPS	280	277	200	0	1.34	56	1.54	-0.20
	Dulhasti-HPS	390	388	245	0	3.30	137	3.99	-0.69
	Sewa-II HPS	120	0	0	0	0.00	0	0.00	0.00
	<b>Sub Total (C)</b>	<b>3074</b>	<b>1937</b>	<b>1542</b>	<b>349</b>	<b>17.23</b>	<b>718</b>	<b>18.80</b>	<b>-1.57</b>
D. NJPC	Nathpa Jhakri	1500	1600	1370	0	9.09	379	9.01	0.09
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1600</b>	<b>1370</b>	<b>0</b>	<b>9.09</b>	<b>379</b>	<b>9.01</b>	<b>0.09</b>
E. THDC	Tehri HPS	1000	650	919	0	5.04	210	5.00	0.04
	Koteshwar HPS	200	69	170	82	1.63	68	1.60	0.03
<b>Sub Total (E)</b>	<b>1200</b>	<b>719</b>	<b>1089</b>	<b>82</b>	<b>6.67</b>	<b>278</b>	<b>6.60</b>	<b>0.07</b>	
F. BBMB	Bhakra HPS	1480	674	898	492	16.79	700	16.17	0.62
	Dehar HPS	990	162	495	0	3.95	165	3.90	0.06
	Pong HPS	396	226	306	186	5.77	240	5.41	0.36
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1062</b>	<b>1699</b>	<b>678</b>	<b>26.51</b>	<b>1105</b>	<b>25.48</b>	<b>1.03</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	42	0	0.37	15	0.35	0.02
	KWHEP HPS(IPP)	1000	0	220	128	4.64	194	4.84	-0.20
	Malana Stg-II HPS	100	0	0	0	0.00	0	0.00	0.00
	Shree Cement TPS	150	0	133	109	2.81	117	2.55	0.26
<b>Sub Total (G)</b>	<b>1442</b>	<b>0</b>	<b>395</b>	<b>237</b>	<b>7.83</b>	<b>326</b>	<b>7.75</b>	<b>0.08</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>21225</b>	<b>14477</b>	<b>15518</b>	<b>10136</b>	<b>275.39</b>	<b>11474</b>	<b>274.76</b>	<b>0.63</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	840.00	900.00	20.27	845	
	Guru Nanak Dev TPS(Bhatinda)	440	215.00	215.00	4.61	192	
	Guru Hargobind Singh TPS(L.mbt)	920	967.00	965.00	20.31	846	
	Thermal (Total)	2620	2022.00	2080.00	45.19	1883	
	Total Hydro	1148	274.00	288.00	11.51	479	
	<b>Total Punjab</b>	<b>3768</b>	<b>2296</b>	<b>2368</b>	<b>56.70</b>	<b>2363</b>	
Haryana	Panipat TPS	1360	1123.00	1115.00	27.09	1129	
	DCRTPP (Yamuna nagar)	600	287.00	270.00	6.59	275	
	Faridabad GPS (NTPC)	432	433.00	383.00	9.40	392	
	RGTPP (khedar) (IPP)	1200	745.00	818.00	20.15	839	
	Magnum Diesel (IPP)	25	0.00	0.00	0.00	0	
	Thermal (Total)	3617	2588.00	2586.00	63.24	2635	
	Total Hydro	62	26.00	29.00	0.72	30	
	<b>Total Haryana</b>	<b>3679</b>	<b>2614</b>	<b>2615</b>	<b>63.95</b>	<b>2665</b>	
Rajasthan	kota TPS	1240	1157.00	1159.00	27.40	1142	
	suratgarh TPS	1500	1141.00	1118.00	27.13	1130	
	Chabra TPS	500	419.00	415.00	9.62	401	
	Dholpur GPS	330	250.00	252.00	6.12	255	
	Ramgarh GPS	113	65.00	65.00	1.66	69	
	RAPS A (NPC)	300	177.00	179.00	4.59	191	
	Barsingsar (NLC)	250	0.00	0.00	0.00	0	
	Giral LTPS (IPP)	250	0.00	0.00	0.00	0	
	Rajwst LTPS (IPP)	540	344.00	331.00	8.54	356	
	VSLP LTPS (IPP)	135	0.00	0.00	0.00	0	
	Thermal (Total)	5158	3553.00	3519.00	85.06	3544	
	Total Hydro	550	172.00	201.00	5.09	212	
	Wind power	1294	200.00	122.00	3.16	132	
	Biomass	71	33.00	33.00	0.69	29	
	Solar	50	0.00	0.00	0.00	0	
	Renewable/Others (Total)	1365	233	155	8.93	372	
		<b>Total Rajasthan</b>	<b>7073</b>	<b>3958</b>	<b>3875</b>	<b>99.08</b>	<b>4128</b>
UP	Anpara TPS	1630	1357	1564	32.10	1338	
	Obra TPS	1442	659	623	14.00	583	
	Paricha TPS	640	399	393	8.60	358	
	Panki TPS	210	105	105	2.30	96	
	Harduaganj TPS	415	210	192	3.20	133	
	Tanda TPS (NTPC)	440	401	397	9.83	410	
	Roza TPS (IPP)	600	558	567	13.30	554	
	Anpara-C (IPP)	1200	477	441	10.67	444	
	Bajaj Energy Pvt.Ltd(IPP) TPS	180	81	81	1.61	67	
	Thermal (Total)	6757	4247	4363	95.61	3984	
	Vishnuparyag HPS (IPP)	400	134	119	2.95	123	
	Other Hydro	527	73	24	2.38	99	
	Cogeneration	951	400	400	9.60	400	
		<b>Total UP</b>	<b>8635</b>	<b>4854</b>	<b>4906</b>	<b>110.53</b>	<b>4483</b>
	Uttarakhand	Total Hydro	1303	489	221	8.73	364
<b>Total Uttarakhand</b>		<b>1303</b>	<b>489</b>	<b>221</b>	<b>8.73</b>	<b>364</b>	
Delhi	Raighat TPS	135	98	95	2.57	107	
	Delhi Gas Turbine	282	163	147	3.91	163	
	Pragati Gas Turbine	330	305	310	7.53	314	
	Rithala GPS	108	25	29	0.56	23	
	Bawana GPS	440	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	460	360	9.42	393	
	Thermal (Total)	2000	1051	941	23.99	1000	
	<b>Total Delhi</b>	<b>2000</b>	<b>1051</b>	<b>941</b>	<b>23.99</b>	<b>1000</b>	
HP	Baspa HPS (IPP)	330	0	28	1.48	62	
	Malana HPS (IPP)	101	0	0	0.27	11	
	Other Hydro	571	196	130	3.99	166	
		<b>Total HP</b>	<b>1002</b>	<b>196</b>	<b>158</b>	<b>6</b>	<b>239</b>
J & K	Baglihar HPS (IPP)	450	294	147	4.70	196	
	Other Hydro	323	54	100	1.73	72	
	Gas/Diesel/Others	183	0	0	0.00	0	
		<b>Total J &amp; K</b>	<b>956</b>	<b>348</b>	<b>247</b>	<b>6.43</b>	<b>268</b>
<b>Total State Control Area Generation</b>		<b>28416</b>	<b>15806</b>	<b>15331</b>	<b>375.16</b>	<b>15509</b>	
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>234</b>	<b>767</b>	<b>18.74</b>	<b>781</b>	
<b>Total Regional Availability(Gross)</b>		<b>49641</b>	<b>31558</b>	<b>26234</b>	<b>669.28</b>	<b>27764</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10083	6095	1346	67.33	2805
State Control Area Hydro	5365	1578	1168	40.59	1691
<b>Total Regional Hydro</b>	<b>15447</b>	<b>7673</b>	<b>2514</b>	<b>107.92</b>	<b>4497</b>

**VI(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	-400	-500	0	500	0.00	9.21	-9.21
Gwalior-Agra (D/C)	301	360	669	0	9.68	0.00	9.68
Zerda-Kankroli	-96	-70	26	196	0.00	2.02	-2.02
Zerda-Bhinmal	-30	53	168	156	0.60	0.00	0.60
Malanpur-Auraiya	-147	-165	0	190	0.00	3.50	-3.50
Badod-Kota/Morak	-70	-43	0	108	0.00	1.33	-1.33
<b>Sub Total WR</b>	<b>-442</b>	<b>-365</b>			<b>10.28</b>	<b>16.06</b>	<b>-5.78</b>
Pusauli Bypass	260	23	250	40	3.00	0.15	2.85
MZP- GKP (D/C)	113	444	564	0	8.29	0.00	8.29
Patna-Balia(D/C)	142	322	390	0	6.30	0.00	6.30
B'Sharif-Balia (D/C)	32	295	450	0	5.18	0.00	5.18
Barh - balia(D/C)	0	0	0	0	0.00	0.00	0.00
Pusauli-Sahupuri	157	88	157	0	2.82	0.00	2.82
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-28	-40	0	45	0.00	0.92	-0.92
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>676</b>	<b>1132</b>			<b>25.58</b>	<b>1.06</b>	<b>24.52</b>
<b>Total IR Exch</b>	<b>234</b>	<b>767</b>			<b>35.86</b>	<b>17.12</b>	<b>18.74</b>

**VI(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
17.30	0.65	17.96	7.85	0.02	0.34	0.59	1.32	-1.32

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
27.47	-6.33	21.15	24.52	-5.78	18.74	-2.96	0.55	-2.41

**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	0.00	3.20	19.90	94.90	78.20	23.00	1.90

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				
50.29	17.04	49.32	8.27	49.86	0.53	0.18	50.24	49.60

**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	408	03:17	401	10:02	0.0	0.0	0.0	0.0
Gorakhpur	400	430	04:17	401	10:31	0.0	0.0	42.6	0.0
Bareilly	400	424	20:42	399	10:29	0.0	0.0	6.4	0.0
Kanpur	400	421	17:02	401	10:21	0.0	0.0	0.1	0.0
Dadri	400	419	20:43	402	10:21	0.0	0.0	0.0	0.0
Ballabgarh	400	424	20:42	404	08:23	0.0	0.0	8.9	0.0
Bawana	400	423	20:42	404	10:30	0.0	0.0	3.9	0.0
Bassi	400	429	20:43	388	06:30	0.0	0.2	15.0	0.0
Hissar	400	417	20:44	394	08:21	0.0	0.0	0.0	0.0
Moga	400	416	16:01	397	08:22	0.0	0.0	0.0	0.0
Abdullapur	400	422	20:44	401	08:21	0.0	0.0	1.2	0.0
Nalagarh	400	419	01:54	411	11:08	0.0	0.0	0.0	0.0
Kishenpur	400	411	03:22	390	18:12	0.0	0.0	0.0	0.0
Wagoora	400	400	13:02	366	18:17	36.7	78.2	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 (m <sup>3</sup> /s)	Usage (m <sup>3</sup> /s)
Bhakra	513.59	445.62	507.84	1440.82	509.77	1530.03	218.29	455.25
Pong	426.72	384.05	417.99	794.52	420.74	916.71	64.90	323.43
Tehri	829.79	740.04	816.80	942.25	NA	NA	75.03	101.00
Koteshwar	612.50	598.50	601.45	1.15	NA	NA	101.00	93.00
Chamera-I	760.00	748.75	753.15	NA	752.95	8.80	54.48	90.54
Rihand	268.22	252.98	261.58	587.70	257.74	189.70	NA	NA
RPS	352.80	343.81	350.64	NA	NA	NA	NA	249.61
Jawahar Sagar	298.70	295.78	297.58	NA	NA	NA	NA	243.84
RSD	527.91	487.91	518.60	NA	519.60	NA	100.47	253.80

**IX. System Constraints:**

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

**XI. Weather Conditions For 27.11.2011 :**

1.Normal

**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 : 27.11.2011

पारी प्रभारी अभियंता / SHIFT CHARGE ENGINEER