

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 25.03.2013

Date of Reporting : 26.03.2013

### I. Regional Availability/Demand:

Demand Met	Evening Peak (19:00 Hrs) MW			Demand Met	Off Peak (03:00 Hrs) MW			Demand Met	Day Energy (Net MU)	
	Shortage	Requirement	Freq* (Hz)		Shortage	Requirement	Freq* (Hz)		Shortage	Requirement
30205	1752	31957	50.05	28199	1165	29364	50.24	727.1	40.53	

\* 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	32.65	11.55		44.20	47.62	48.73	1.11	92.93	0.00
Haryana	41.57	0.65		42.22	62.37	60.77	-1.60	102.99	0.00
Rajasthan	92.96	1.42	12.29	106.66	67.15	58.46	-8.69	165.12	0.00
Delhi	26.64			26.64	36.79	34.91	-1.88	61.55	0.03
UP	105.29	6.04	19.20	130.52	89.81	88.77	-1.04	219.29	38.80
Uttarakhand		13.70		13.70	16.47	15.65	-0.81	29.35	0.00
HP		10.20		10.20	13.20	11.35	-1.85	21.54	0.00
J & K		10.50	0.00	10.50	22.29	20.42	-1.87	30.92	1.70
Chandigarh				0.00	3.73	3.42	-0.31	3.42	0.00
<b>Total</b>	<b>299.11</b>	<b>54.05</b>	<b>31.49</b>	<b>384.65</b>	<b>359.43</b>	<b>342.48</b>	<b>-16.95</b>	<b>727.12</b>	<b>40.53</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	
Punjab	4132	0	-44	-17	3208	0	194	146	-0.37
Haryana	4665	0	-196	-271	3719	0	38	-635	-7.16
Rajasthan	5680	0	-875	882	6854	0	-249	812	19.99
Delhi	3148	2	161	-837	1801	0	-142	-1485	-25.62
UP	8565	1650	-46	17	9808	1165	128	76	1.59
Uttarakhand	1464	0	158	327	984	0	-82	215	6.30
HP	832	0	-61	-329	655	0	-60	100	0.07
J&K	1543	100	111	-39	1079	0	-82	-39	-0.94
Chandigarh	177	0	-6	-51	91	0	-9	-20	-0.46
<b>Total</b>	<b>30205</b>	<b>1752</b>	<b>-797</b>	<b>-318</b>	<b>28199</b>	<b>1165</b>	<b>-264</b>	<b>-830</b>	<b>-6.61</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	1963	2048	1951	45.73	1906	44.66	1.07	
	Rihand I STPS	1000	715	658	765	16.18	674	16.09	0.09	
	Rihand II STPS	1000	975	912	1032	21.52	897	21.50	0.02	
	Rihand III STPS	500	485	488	516	11.13	464	11.09	0.05	
	Dadri I STPS	840	807	784	630	16.13	672	18.39	-2.26	
	Dadri II STPS	980	969	445	391	9.67	403	12.76	-3.09	
	Unchahar I TPS	420	408	337	420	9.01	375	8.73	0.28	
	Unchahar II TPS	420	406	366	429	8.81	367	8.30	0.51	
	Unchahar III TPS	210	13	0	0	0.14	6	0.29	-0.15	
	ISTPP (Jhajjar)	1500	995	681	662	14.75	615	14.92	-0.18	
	Dadri GPS	830	799	383	340	8.15	340	8.23	-0.08	
	Anta GPS	419	403	237	248	5.62	234	5.68	-0.07	
	Auraiva GPS	663	639	152	157	3.56	148	3.58	-0.02	
	<b>Sub Total (A)</b>	<b>10782</b>	<b>9576</b>	<b>7491</b>	<b>7541</b>	<b>170.40</b>	<b>7100</b>	<b>174.22</b>	<b>-3.82</b>	
	B. NPC	NAPS	440	297	334	336	7.12	297	7.12	0.00
RAPS- B		440	419	464	467	10.12	422	10.06	0.06	
RAPS- C		440	430	470	476	10.04	418	10.32	-0.29	
<b>Sub Total (B)</b>		<b>1320</b>	<b>1146</b>	<b>1268</b>	<b>1279</b>	<b>27.27</b>	<b>1136</b>	<b>27.50</b>	<b>-0.23</b>	
C. NHPC	Chamera I HPS	540	550	450	0	5.03	210	5.10	-0.07	
	Chamera II HPS	300	310	305	81	3.97	166	3.76	0.22	
	Chamera III HPS	231	231	226	50	2.40	100	2.40	0.00	
	Bairasuil HPS	180	182	170	90	2.55	106	2.59	-0.03	
	Salal-HPS	690	336	436	280	8.04	335	7.86	0.18	
	Tanakpur-HPS	94	30	30	23	0.68	28	0.72	-0.04	
	Uri-HPS	480	480	480	480	11.49	479	11.41	0.07	
	Dhauliganga-HPS	280	289	189	0	1.42	59	1.39	0.04	
	Dulhasti-HPS	390	387	406	0	3.30	138	3.33	-0.02	
	Sewa-II HPS	120	119	121	112	2.80	117	2.80	0.01	
	<b>Sub Total (C)</b>	<b>3305</b>	<b>2914</b>	<b>2813</b>	<b>1116</b>	<b>41.70</b>	<b>1738</b>	<b>41.36</b>	<b>0.34</b>	
	D.NJPC	Nathpa Jhakri	1500	1605	1334	0	10.04	418	9.80	0.23
		<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1334</b>	<b>0</b>	<b>10.04</b>	<b>418</b>	<b>9.80</b>	<b>0.23</b>
E. THDC	Tehri HPS	1000	780	403	0	8.61	359	8.50	0.11	
	Koteshwar HPS	400	300	291	0	3.83	160	3.80	0.03	
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1080</b>	<b>694</b>	<b>0</b>	<b>12.44</b>	<b>518</b>	<b>12.30</b>	<b>0.14</b>	
F. BBMB	Bhakra HPS	1480	781	994	523	18.88	787	18.75	0.13	
	Dehar HPS	990	375	660	495	11.69	487	8.99	2.70	
	Pong HPS	396	135	240	60	2.92	122	5.01	-2.09	
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1291</b>	<b>1894</b>	<b>1078</b>	<b>33.49</b>	<b>1395</b>	<b>32.75</b>	<b>0.74</b>	
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.29	12	0.26	0.04	
	KWHEP HPS(IPP)	1000	0	257	0	5.22	218	5.22	0.01	
	Malana Stg-II HPS	100	0	51	0	0.26	11	0.23	0.03	
	Shree Cement TPS	300	0	263	184	6.05	252	6.09	-0.04	
	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>571</b>	<b>184</b>	<b>11.82</b>	<b>493</b>	<b>11.79</b>	<b>0.03</b>	
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>17612</b>	<b>16065</b>	<b>11198</b>	<b>307.16</b>	<b>12798</b>	<b>309.73</b>	<b>-2.56</b>		

I. State Entities	Station	Effective Installed Capacity (MW)	Peak MW	Off Peak MW	Energy(MU)	Average(Sent out MW)	
<b>Punjab</b>	Guru Gobind Singh TPS (Ropar)	1260	720	540	16.09	670	
	Guru Nanak Dev TPS(Bhatinda)	440	95	95	2.00	84	
	Guru Hargobind Singh TPS(L.mbt)	920	649	650	14.56	607	
	Thermal (Total)	2620	1464	1285	32.65	1361	
	Total Hydro	1148	442	482	11.55	481	
	<b>Total Punjab</b>	<b>3768</b>	<b>1906</b>	<b>1767</b>	<b>44.20</b>	<b>1842</b>	
<b>Haryana</b>	Panipat TPS	1367	656	765	15.94	664	
	DCRTPP (Yamuna nagar)	600	564	521	12.51	521	
	Faridabad GPS (NTPC)	432	172	150	4.09	171	
	RGTPP (khedar) (IPP)	1200	0	0	0.00	0	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Jhajjar(CLP)	1320	390	372	9.03	376	
	Thermal (Total)	4944	1782	1808	41.57	1732	
	Total Hydro	62	26	27	0.65	27	
	<b>Total Haryana</b>	<b>5006</b>	<b>1808</b>	<b>1835</b>	<b>42.22</b>	<b>1759</b>	
	<b>Rajasthan</b>	kota TPS	1240	1076	1090	26.35	1098
suratgarh TPS		1500	1125	1120	27.31	1138	
Chabra TPS		500	391	383	9.62	401	
Dholpur GPS		330	143	143	3.38	141	
Ramgarh GPS		111	74	75	1.85	77	
RAPS A (NPC)		300	172	172	4.83	201	
Barsingsar (NLC)		250	184	179	4.24	177	
Giral LTPS		250	58	0	1.13	47	
Rajwest LTPS (IPP)		1080	594	594	14.25	594	
VSLP LTPS (IPP)		135	0	0	0.00	0	
Thermal (Total)		5696	3817	3756	92.96	3873	
Total Hydro		550	72	40	1.42	59	
Wind power		2191	201	810	9.89	412	
Biomass		91	35	35	0.83	35	
Solar		201	39	0	1.57	66	
Renewable/Others (Total)		2483	236	845	12.29	512	
<b>Total Rajasthan</b>		<b>8729</b>	<b>4125</b>	<b>4641</b>	<b>106.66</b>	<b>4444</b>	
<b>UP</b>		Anpara TPS	1630	1087	1050	23.00	958
		Obra TPS	1382	550	514	11.70	488
		Paricha TPS	890	830	720	16.50	688
	Panki TPS	210	80	80	1.70	71	
	Harduaganj TPS	665	298	295	6.40	267	
	Tanda TPS (NTPC)	440	385	404	9.80	408	
	Roza TPS (IPP)	1200	653	809	17.51	730	
	Anpara-C (IPP)	1200	427	458	10.85	452	
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	282	403	7.83	326	
	Thermal (Total)	8067	4592	4733	105.29	4387	
	Vishnuparyag HPS (IPP)	400	76	85	1.55	64	
	Other Hydro	527	226	253	4.49	187	
	Cogeneration	981	800	800	19.20	800	
	<b>Total UP</b>	<b>9975</b>	<b>5694</b>	<b>5871</b>	<b>130.52</b>	<b>5374</b>	
	<b>Uttarakhand</b>	Total Hydro	1303	604	535	13.70	571
<b>Total Uttarakhand</b>		<b>1303</b>	<b>604</b>	<b>535</b>	<b>13.70</b>	<b>571</b>	
<b>Delhi</b>	Rajghat TPS	135	105	104	2.20	92	
	Delhi Gas Turbine	282	158	157	3.93	164	
	Pragati Gas Turbine	330	302	267	7.13	297	
	Rithala GPS	108	0	0	0.00	0	
	Bawana GPS	677	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	625	540	13.38	557	
	Thermal (Total)	2237	1190	1068	26.64	1110	
	<b>Total Delhi</b>	<b>2237</b>	<b>1190</b>	<b>1068</b>	<b>26.64</b>	<b>1110</b>	
	<b>HP</b>	Baspa HPS (IPP)	330	28	38	1.26	53
Malana HPS (IPP)		86	47	0	0.26	11	
Other Hydro		589	326	361	8.68	362	
<b>Total HP</b>		<b>1005</b>	<b>401</b>	<b>399</b>	<b>10.20</b>	<b>425</b>	
<b>J &amp; K</b>	Baglihar HPS (IPP)	450	246	242	5.96	248	
	Other Hydro	323	95	130	4.55	189	
	Gas/Diesel/Others	183	0	0	0.00	0	
	<b>Total J &amp; K</b>	<b>956</b>	<b>341</b>	<b>372</b>	<b>10.50</b>	<b>438</b>	
<b>Total State Control Area Generation</b>		<b>32979</b>	<b>16069</b>	<b>16488</b>	<b>384.65</b>	<b>15963</b>	
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>977</b>	<b>5174</b>	<b>44.78</b>	<b>1866</b>	
<b>Total Regional Availability(Gross)</b>		<b>55815</b>	<b>33111</b>	<b>32860</b>	<b>736.59</b>	<b>30627</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	7043	2194	103.44	4310
State Control Area Hydro	5368	2112	2108	54.05	2188
<b>Total Regional Hydro</b>	<b>15731</b>	<b>9155</b>	<b>4302</b>	<b>157.49</b>	<b>6498</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	300	50	300	0.65	1.97	-1.31
Gwalior-Agra (D/C)	-64	303	846	64	11.58	0.00	11.58
Zerda-Kankroli	-265	3287	0	299	0.00	4.90	-4.90
Zerda-Bhinmal	-227	-259	0	299	0.00	3.65	-3.65
Malanpur-Auraiya	-144	-119	0	151	0.00	2.05	-2.05
Badod-Kota/Morak	-234	-205	0	234	0.00	4.13	-4.13
Mundra-Mohindergarh(HVDC)	1264	1265	1286	0	30.66	0.00	30.66
<b>Sub Total WR</b>	<b>380</b>	<b>4572</b>			<b>42.90</b>	<b>16.69</b>	<b>26.20</b>
Pusauli Bypass	400	400	400	0	9.19	0.00	9.19
MZP- GKP (D/C)	-26	-76	170	180	0.07	0.00	0.07
Patna-Balia(D/C)	191	317	385	0	7.88	0.00	7.88
B'Sharif-Balia (D/C)	97	118	192	0	2.87	0.00	2.87
Pusauli-Balia	-165	-108	0	165	0.00	2.83	-2.83
Gaya-Fatehpur (765 Kv)	0	-147	18	172	0.00	0.82	-0.82
Pusauli-Sahupuri	136	138	142	0	3.05	0.00	3.05
K'nasa-Sahupuri	0	0	0	0	0.00	0.00	0.00
Son Ngr-Rihand	-36	-40	0	44	0.00	0.83	-0.83
Garhwa-Rihand	0	0	0	0	0.00	0.00	0.00
<b>Sub Total ER</b>	<b>597</b>	<b>602</b>			<b>23.06</b>	<b>4.48</b>	<b>18.58</b>
<b>Total IR Exch</b>	<b>977</b>	<b>5174</b>			<b>65.96</b>	<b>21.17</b>	<b>44.78</b>

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

ER	ISGS/LT Schedule (MU)		Bilateral Schedule (MU)		Power Exchange Shdi (MU)		Wheeling (MU)	
	Bhutan	Total	Through ER	Through WR	Through ER	Through WR	Through ER	Through WR
33.94	0.07	34.01	-11.82	-3.08	2.17	-5.43	-2.08	2.08

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
22.28	43.22	65.50	18.58	26.20	44.78	-3.69	-17.02	-20.71

**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	0.00	0.30	93.10	92.80	58.20	6.90

<----- 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				
50.38	17.06	49.66	22.07	50.03	0.13	0.11	50.37	49.89

**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	410	15:07	403	21:14	0.0	0.0	0.0	0.0
Gorakhpur	400	432	16:26	416	22:07	0.0	0.0	56.9	3.9
Bareilly	400	424	5:04	407	10:35	0.0	0.0	12.6	0.0
Kanpur	400	420	5:00	403	22:09	0.0	0.0	0.0	0.0
Dadri	400	422	2:31	407	9:54	0.0	0.0	7.7	0.0
Ballabgarh	400	428	2:30	412	10:12	0.0	0.0	68.7	0.0
Bawana	400	425	2:31	407	11:14	0.0	0.0	20.0	0.0
Bassi	400	428	4:02	401	22:09	0.0	0.0	21.0	0.0
Hissar	400	414	2:32	397	8:55	0.0	0.0	0.0	0.0
Moga	400	420	2:31	395	19:24	0.0	0.0	0.0	0.0
Abdullapur	400	425	2:44	406	11:20	0.0	0.0	8.6	0.0
Nalagarh	400	424	2:32	407	10:38	0.0	0.0	5.3	0.0
Kishenpur	400	418	4:03	390	19:24	0.0	0.0	0.0	0.0
Wagoora	400	410	4:02	374	19:43	3.4	8.4	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	777	5:01	739	21:16	0.0	2.1	0.0	0.0
Balia	765	763	5:04	734	22:14	0.0	15.6	0.0	0.0
Moga	765	791	2:43	746	19:26	0.0	0.0	0.0	0.0
Lucknow	765	780	5:09	753	11:15	0.0	0.0	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	481.15	488.47	479.29	441.00	423.05	625.80
Pong	426.72	384.05	400.18	223.85	404.25	320.26	78.55	264.65
Tehri	829.79	740.04	778.16	300.00	818.65	982.26	68.81	222.00
Koteshwar	612.50	598.50	NA	NA	NA	NA	NA	NA
Chamera-I	760.00	748.75	NA	NA	NA	NA	NA	NA
Rihand	268.22	252.98	258.07	NA	260.18	NA	NA	NA
RPS	352.80	343.81	345.69	NA	NA	NA	NA	119.64
Jawahar Sagar	298.70	295.78	296.27	NA	NA	NA	NA	258.05
RSD	527.91	487.91	507.67	NA	496.20	NA	103.30	102.05

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 25.03.2013 :**  
Normal Weather Conditions in NR

**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 :**

Report for : 25.03.2013

पारी प्रभाती अश्विनी / SHIFT CHARGE ENGINEER