

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 29.03.2013  
Date of Reporting : 30.03.2013

### 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
27852	1539	29391	50.02	24168	830	24998	50.22	654.6	30.45

\* 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	26.40	9.16		35.56	50.76	51.12	0.36	86.68	0.00
Haryana	36.29	0.61		36.90	54.06	55.43	1.36	92.32	0.35
Rajasthan	78.35	0.47	5.93	84.74	68.67	64.83	-3.84	149.57	0.69
Delhi	23.18			23.18	33.42	33.39	-0.03	56.56	0.00
UP	84.81	4.90	19.20	108.91	79.32	75.94	-3.38	184.85	27.71
Uttarakhand		12.82		12.82	14.19	14.12	-0.07	26.94	0.00
HP		9.90		9.90	13.33	12.50	-0.83	22.40	0.00
J & K		11.63	0.00	11.63	23.16	20.41	-2.75	32.03	1.70
Chandigarh				0.00	3.53	3.28	-0.26	3.28	0.00
<b>Total</b>	<b>249.02</b>	<b>49.49</b>	<b>25.13</b>	<b>323.63</b>	<b>340.45</b>	<b>331.01</b>	<b>-9.44</b>	<b>654.64</b>	<b>30.45</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	3910	0	-125	65	2896	0	-48	160	4.32
Haryana	4623	159	271	-161	3198	0	220	-650	-9.89
Rajasthan	5387	0	-394	842	6019	0	-52	740	17.86
Delhi	2866	0	223	-1007	1623	0	-138	-1397	-27.03
UP	7176	1280	-167	-13	7551	830	4	38	0.72
Uttarakhand	1346	0	177	242	938	0	-57	164	4.64
HP	935	0	-84	-437	666	0	-75	-51	-2.11
J&K	1435	100	-49	-45	1187	0	-90	-45	-1.07
Chandigarh	175	0	-4	-31	90	0	-14	0	-0.18
<b>Total</b>	<b>27852</b>	<b>1539</b>	<b>-151</b>	<b>-545</b>	<b>24168</b>	<b>830</b>	<b>-251</b>	<b>-1040</b>	<b>-12.73</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	1795	1847	1600	40.71	1696	39.75	0.96
	Rihand I STPS	1000	715	715	650	15.77	657	15.73	0.04
	Rihand II STPS	1000	975	940	850	21.07	878	21.06	0.01
	Rihand III STPS	500	485	484	498	11.36	473	11.40	-0.04
	Dadri I STPS	840	807	764	625	16.09	670	17.20	-1.11
	Dadri II STPS	980	969	505	409	10.36	431	14.31	-3.96
	Unchahar I TPS	420	401	395	317	8.23	343	7.51	0.72
	Unchahar II TPS	420	406	399	316	8.64	360	7.88	0.76
	Unchahar III TPS	210	113	197	0	2.43	101	1.90	0.53
	ISTPP (Jhajjar)	1500	995	382	368	8.05	335	8.48	-0.43
	Dadri GPS	830	799	386	397	9.08	378	9.26	-0.18
	Anta GPS	419	402	237	227	5.52	230	5.70	-0.19
	Auraiva GPS	663	639	154	159	3.58	149	3.82	-0.24
	<b>Sub Total (A)</b>	<b>10782</b>	<b>9502</b>	<b>7405</b>	<b>6416</b>	<b>160.88</b>	<b>6703</b>	<b>164.00</b>	<b>-3.12</b>
B. NPC	NAPS	440	300	343	341	7.25	302	7.20	0.05
	RAPS- B	440	420	462	468	10.16	423	10.08	0.08
	RAPS- C	440	430	473	476	10.20	425	10.32	-0.12
	<b>Sub Total (B)</b>	<b>1320</b>	<b>1150</b>	<b>1278</b>	<b>1285</b>	<b>27.60</b>	<b>1150</b>	<b>27.60</b>	<b>0.00</b>
C. NHPC	Chamera I HPS	540	550	540	0	2.09	87	2.09	0.00
	Chamera II HPS	300	310	200	0	3.05	127	3.21	-0.16
	Chamera III HPS	231	231	228	0	1.70	71	1.81	-0.11
	Bairasuil HPS	180	182	120	30	1.95	81	1.61	0.34
	Salal-HPS	690	254	456	280	7.15	298	6.01	1.14
	Tanakpur-HPS	94	29	32	28	0.71	29	0.70	0.01
	Uri-HPS	480	476	480	479	11.61	484	11.65	-0.03
	Dhauliganga-HPS	280	289	285	0	1.74	73	1.71	0.04
	Dulhasti-HPS	390	387	371	0	3.60	150	3.49	0.11
	Sewa-II HPS	120	119	120	117	3.84	160	2.81	1.03
	<b>Sub Total (C)</b>	<b>3305</b>	<b>2826</b>	<b>2832</b>	<b>934</b>	<b>37.44</b>	<b>1560</b>	<b>35.08</b>	<b>2.36</b>
D.NJPC	Nathpa Jhakri	1500	1605	1214	0	9.68	403	9.60	0.09
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1214</b>	<b>0</b>	<b>9.68</b>	<b>403</b>	<b>9.60</b>	<b>0.09</b>
E. THDC	Tehri HPS	1000	780	783	0	12.09	504	12.00	0.09
	Koteshwar HPS	400	284	202	0	3.37	141	3.55	-0.18
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1064</b>	<b>985</b>	<b>0</b>	<b>15.46</b>	<b>644</b>	<b>15.55</b>	<b>-0.09</b>
F. BBMB	Bhakra HPS	1480	613	994	523	14.94	623	14.72	0.22
	Dehar HPS	990	323	660	300	8.09	337	7.75	0.34
	Pong HPS	396	92	120	0	2.36	98	5.01	-2.65
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1028</b>	<b>1774</b>	<b>823</b>	<b>25.39</b>	<b>1058</b>	<b>27.48</b>	<b>-2.09</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.45	19	0.43	0.02
	KWHEP HPS(IPP)	1000	0	205	0	4.94	206	5.04	-0.09
	Malana Stg-II HPS	100	0	50	0	0.28	12	0.25	0.03
	Shree Cement TPS	300	0	254	154	5.52	230	5.57	-0.05
	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>509</b>	<b>154</b>	<b>11.19</b>	<b>466</b>	<b>11.29</b>	<b>-0.10</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>17174</b>	<b>15997</b>	<b>9612</b>	<b>287.64</b>	<b>11985</b>	<b>290.59</b>	<b>-2.95</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	530	530	12.12	505
	Guru Nanak Dev TPS(Bhatinda)	440	95	95	2.07	86
	Guru Hargobind Singh TPS(L.mbt)	920	503	472	12.21	509
	Thermal (Total)	2620	1128	1097	26.40	1100
	Total Hydro	1148	344	388	9.16	382
<b>Total Punjab</b>	<b>3768</b>	<b>1472</b>	<b>1485</b>	<b>35.56</b>	<b>1481</b>	
Haryana	Panipat TPS	1367	636	652	15.38	641
	DCRTPP (Yamuna nagar)	600	282	281	6.64	277
	Faridabad GPS (NTPC)	432	202	164	4.16	173
	RGTPP (khedar) (IPP)	1200	0	0	0.00	0
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	618	368	10.11	421
	Thermal (Total)	4944	1738	1465	36.29	1512
	Total Hydro	62	22	25	0.61	25
	<b>Total Haryana</b>	<b>5006</b>	<b>1760</b>	<b>1490</b>	<b>36.90</b>	<b>1537</b>
Rajasthan	kota TPS	1240	739	787	18.23	760
	suratgarh TPS	1500	928	1116	25.02	1042
	Chabra TPS	500	218	215	4.71	196
	Dholpur GPS	330	135	143	3.33	139
	Ramgarh GPS	111	70	72	1.85	77
	RAPS A (NPC)	300	172	172	4.76	198
	Barsingsar (NLC)	250	181	153	4.15	173
	Giral LTPS	250	106	95	2.24	93
	Rajwest LTPS (IPP)	1080	725	486	14.08	586
	VSLP LTPS (IPP)	135	0		0.00	0
	Thermal (Total)	5696	3274	3239	78.35	3264
	Total Hydro	550	0	51	0.47	20
	Wind power	2191	153	141	3.30	138
	Biomass	91	37	37	0.89	37
	Solar	201	43	0	1.74	72
	Renewable/Others (Total)	2483	190	178	5.93	247
	<b>Total Rajasthan</b>	<b>8729</b>	<b>3464</b>	<b>3468</b>	<b>84.74</b>	<b>3531</b>
UP	Anpara TPS	1630	956	944	23.20	967
	Obra TPS	1382	355	482	9.70	404
	Paricha TPS	890	271	769	18.20	758
	Panki TPS	210	0	0	0.00	0
	Harduaganj TPS	665	727	275	6.20	258
	Tanda TPS (NTPC)	440	404	401	9.91	413
	Roza TPS (IPP)	1200	414	419	10.33	431
	Anpara-C (IPP)	1200	0	0	0.00	0
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	252	315	7.27	303
	Thermal (Total)	8067	3379	3605	84.81	3534
	Vishnuparyag HPS (IPP)	400	77	79	1.87	78
	Other Hydro	527	107	97	3.03	126
	Cogeneration	981	800	800	19.20	800
	<b>Total UP</b>	<b>9975</b>	<b>4363</b>	<b>4581</b>	<b>108.91</b>	<b>4460</b>
Uttarakhand	Total Hydro	1303	576	514	12.82	534
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>576</b>	<b>514</b>	<b>12.82</b>	<b>534</b>
Delhi	Rajghat TPS	135	106	103	2.48	103
	Delhi Gas Turbine	282	87	85	2.02	84
	Pragati Gas Turbine	330	306	264	6.85	285
	Rithala GPS	108	0	0	0.00	0
	Bawana GPS	677	0	0	0.00	0
	Badarpur TPS (NTPC)	705	540	490	11.82	493
	Thermal (Total)	2237	1039	942	23.18	966
	<b>Total Delhi</b>	<b>2237</b>	<b>1039</b>	<b>942</b>	<b>23.18</b>	<b>966</b>
HP	Baspa HPS (IPP)	330	29	38	1.18	49
	Malana HPS (IPP)	86	50	0	0.27	11
	Other Hydro	589	313	370	8.45	352
<b>Total HP</b>	<b>1005</b>	<b>392</b>	<b>408</b>	<b>9.90</b>	<b>413</b>	
J & K	Baglihar HPS (IPP)	450	296	294	7.08	295
	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>391</b>	<b>424</b>	<b>11.63</b>	<b>484</b>
<b>Total State Control Area Generation</b>		<b>32979</b>	<b>13457</b>	<b>13312</b>	<b>323.63</b>	<b>13407</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>1867</b>	<b>2125</b>	<b>61.01</b>	<b>2542</b>
<b>Total Regional Availability(Gross)</b>		<b>55815</b>	<b>31321</b>	<b>25049</b>	<b>672.28</b>	<b>27934</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	7060	1757	93.65	3902
State Control Area Hydro	5368	1832	1907	49.49	1984
<b>Total Regional Hydro</b>	<b>15731</b>	<b>8892</b>	<b>3664</b>	<b>143.13</b>	<b>5886</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	-250	-250	350	250	0.85	2.91	-2.06
Gwalior-Agra (D/C)	333	715	959	0	16.79	0.00	16.79
Zerda-Kankroli	-169	-166	0	256	0.00	3.37	-3.37
Zerda-Bhinmal	-134	-118	47	218	0.00	2.23	-2.23
Malanpur-Auraiya	-81	-35	0	81	0.00	0.95	-0.95
Badod-Kota/Morak	-111	-109	41	134	0.00	1.88	-1.88
Mundra-Mohindergarh(HVDC)	1263	1262	1265	0	29.77	0.00	29.77
<b>Sub Total WR</b>	<b>851</b>	<b>1299</b>			<b>47.41</b>	<b>11.33</b>	<b>36.08</b>
Pusauli Bypass	200	200	200	0	4.85	0.00	4.85
MZP- GKP (D/C)	224	60	318	0	3.73	0.00	3.73
Patna-Balia(D/C)	399	342	476	0	8.77	0.00	8.77
B'Sharif-Balia (D/C)	190	175	400	0	6.12	0.00	6.12
Pusauli-Balia	-73	-38	21	73	0.00	0.68	-0.68
Gaya-Fatehpur (765 Kv)	0	52	106	0	0.61	0.00	0.61
Pusauli-Sahupuri	112	75	120	0	2.35	0.00	2.35
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>1016</b>	<b>826</b>			<b>26.44</b>	<b>1.51</b>	<b>24.93</b>
<b>Total IR Exch</b>	<b>1867</b>	<b>2125</b>			<b>73.85</b>	<b>12.84</b>	<b>61.01</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
40.13	0.20	40.33	-11.19	-3.16	1.26	-10.62	-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
28.33	38.02	66.35	24.93	36.08	61.01	-3.40	-1.94	-5.34

**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	0.90	92.80	91.90	67.70	7.20

<----- 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				
50.54	7.05	49.65	19.08	50.04	0.18	0.12	50.45	49.91

**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	416	4:00	405	10:28	0.0	0.0	0.0	0.0
Gorakhpur	400	425	4:23	408	20:20	0.0	0.0	20.2	0.0
Bareilly	400	428	4:01	409	11:11	0.0	0.0	38.4	0.0
Kanpur	400	424	4:02	404	19:23	0.0	0.0	6.4	0.0
Dadri	400	427	4:01	408	11:11	0.0	0.0	24.9	0.0
Ballabgarh	400	432	4:00	412	19:10	0.0	0.0	71.0	0.9
Bawana	400	430	4:01	408	19:07	0.0	0.0	42.3	0.0
Bassi	400	431	17:59	409	9:16	0.0	0.0	40.0	0.2
Hissar	400	422	4:02	399	19:07	0.0	0.0	0.5	0.0
Moga	400	427	4:02	403	19:10	0.0	0.0	18.6	0.0
Abdullapur	400	427	17:05	404	19:10	0.0	0.0	28.0	0.0
Nalagarh	400	429	4:02	409	10:13	0.0	0.0	41.8	0.0
Kishenpur	400	422	4:00	397	19:12	0.0	0.0	1.0	0.0
Wagoora	400	413	16:57	383	19:47	0.0	6.3	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	779	4:04	740	19:25	0.0	0.9	0.0	0.0
Balia	765	770	4:04	732	20:18	0.0	4.6	0.0	0.0
Moga	765	800	4:02	755	19:10	0.0	0.0	0.0	0.0
Lucknow	765	0	0:00	9999	0:00	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	479.84	454.47	477.60	407.63	272.29	463.29
Pong	426.72	384.05	399.81	216.87	403.46	304.55	94.27	167.72
Tehri	829.79	740.04	775.50	268.00	818.65	982.26	67.59	339.00
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 29.03.2013 :**

1.Normal weather.

**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 : 29.03.2013

पारी प्रभाती अश्विनी / SHIFT CHARGE ENGINEER