

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 21.03.2013  
Date of Reporting : 22.03.2013

### 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
31569	1940	33509	49.97	29129	2120	31249	50.17	753.4	57.54

\* 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	44.80	12.05		56.86	49.97	49.89	-0.08	106.74	2.73
Haryana	55.73	0.61		56.34	55.92	53.47	-2.46	109.81	0.08
Rajasthan	98.59	4.76	4.90	108.24	69.10	66.90	-2.20	175.14	1.13
Delhi	24.56			24.56	39.23	37.73	-1.51	62.29	0.01
UP	95.86	6.71	19.20	121.77	89.93	89.88	-0.05	211.65	51.32
Uttarakhand		12.55		12.55	17.24	17.43	0.19	29.98	0.54
HP		8.57		8.57	15.52	14.42	-1.10	23.00	0.00
J & K		10.39	0.00	10.39	23.08	20.82	-2.26	31.21	1.73
Chandigarh				0.00	3.70	3.58	-0.12	3.58	0.00
<b>Total</b>	<b>319.54</b>	<b>55.65</b>	<b>24.10</b>	<b>399.28</b>	<b>363.69</b>	<b>354.11</b>	<b>-9.58</b>	<b>753.40</b>	<b>57.54</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	4810	0	-155	-67	4126	0	45	151	-1.62
Haryana	5053	0	-218	-34	3923	0	0	-528	-5.45
Rajasthan	6081	0	-351	567	7502	0	78	881	21.12
Delhi	3126	0	135	-829	1749	0	-54	-1333	-23.22
UP	8370	1840	-44	14	8781	2120	32	79	1.61
Uttarakhand	1493	0	193	336	1129	0	9	250	6.65
HP	927	0	-121	-213	748	0	-31	101	1.29
J&K	1518	100	46	-39	1074	0	-184	-39	-0.94
Chandigarh	192	0	1	-56	98	0	-5	0	-0.31
<b>Total</b>	<b>31569</b>	<b>1940</b>	<b>-513</b>	<b>-321</b>	<b>29129</b>	<b>2120</b>	<b>-111</b>	<b>-439</b>	<b>-0.87</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	2102	2103	47.05	1960	46.85	0.20
	Rihand I STPS	1000	715	772	777	17.05	710	17.06	-0.01
	Rihand II STPS	1000	975	1035	1042	23.14	964	23.20	-0.06
	Rihand III STPS	500	372	264	516	8.31	346	8.93	-0.62
	Dadri I STPS	840	807	692	615	16.29	679	17.80	-1.51
	Dadri II STPS	980	969	689	671	16.58	691	16.20	0.38
	Unchahar I TPS	420	408	429	433	9.64	402	9.03	0.61
	Unchahar II TPS	420	406	348	435	9.37	390	8.50	0.87
	Unchahar III TPS	210	202	167	218	4.68	195	4.26	0.42
	ISTPP (Jhajjar)	1500	995	700	727	15.69	654	16.19	-0.50
	Dadri GPS	830	799	316	369	8.66	361	8.83	-0.18
	Anta GPS	419	403	256	247	5.85	244	5.84	0.02
	Auraiva GPS	663	641	150	156	3.52	147	3.70	-0.18
	<b>Sub Total (A)</b>	<b>10782</b>	<b>9655</b>	<b>7920</b>	<b>8309</b>	<b>185.82</b>	<b>7742</b>	<b>186.38</b>	<b>-0.56</b>
B. NPC	NAPS	440	298	330	338	7.13	297	7.15	-0.02
	RAPS- B	440	416	459	467	10.03	418	9.98	0.04
	RAPS- C	440	430	472	476	10.19	424	10.32	-0.13
	<b>Sub Total (B)</b>	<b>1320</b>	<b>1144</b>	<b>1261</b>	<b>1281</b>	<b>27.35</b>	<b>1139</b>	<b>27.46</b>	<b>-0.11</b>
C. NHPC	Chamera I HPS	540	550	450	0	3.08	128	3.09	-0.01
	Chamera II HPS	300	310	132	0	1.93	81	1.69	0.24
	Chamera III HPS	231	231	79	0	1.17	49	1.15	0.02
	Bairasuil HPS	180	182	162	20	1.77	74	1.54	0.22
	Salal-HPS	690	272	426	270	6.76	282	6.27	0.50
	Tanakpur-HPS	94	27	32	25	0.67	28	0.65	0.02
	Uri-HPS	480	476	480	480	11.45	477	11.52	-0.06
	Dhauliganga-HPS	280	289	215	0	1.10	46	1.04	0.07
	Dulhasti-HPS	390	387	400	0	2.86	119	2.69	0.17
	Sewa-II HPS	120	120	124	112	2.83	118	2.82	0.02
	<b>Sub Total (C)</b>	<b>3305</b>	<b>2843</b>	<b>2500</b>	<b>907</b>	<b>33.64</b>	<b>1402</b>	<b>32.46</b>	<b>1.18</b>
D. NJPC	Natpcha Jhakri	1500	1605	1348	0	8.51	354	8.20	0.31
	<b>Sub Total (D)</b>	<b>1500</b>	<b>1605</b>	<b>1348</b>	<b>0</b>	<b>8.51</b>	<b>354</b>	<b>8.20</b>	<b>0.31</b>
E. THDC	Tehri HPS	1000	600	605	0	9.08	378	9.00	0.08
	Koteshwar HPS	400	300	301	0	3.68	153	3.60	0.08
	<b>Sub Total (E)</b>	<b>1400</b>	<b>900</b>	<b>906</b>	<b>0</b>	<b>12.76</b>	<b>532</b>	<b>12.60</b>	<b>0.16</b>
F. BBMB	Bhakra HPS	1480	739	970	532	17.89	745	17.73	0.16
	Dehar HPS	990	259	660	140	6.52	272	6.21	0.31
	Pong HPS	396	218	300	60	5.30	221	5.01	0.29
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1216</b>	<b>1930</b>	<b>732</b>	<b>29.71</b>	<b>1238</b>	<b>28.95</b>	<b>0.76</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.49	20	0.46	0.02
	KWHEP HPS(IPP)	1000	0	141	0	4.56	190	4.56	0.00
	Malana Stg-II HPS	100	0	45	0	0.28	12	0.25	0.03
	Shree Cement TPS	300	0	270	283	6.47	270	6.53	-0.06
	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>456</b>	<b>283</b>	<b>11.80</b>	<b>492</b>	<b>11.81</b>	<b>0.00</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>17363</b>	<b>16321</b>	<b>11512</b>	<b>309.59</b>	<b>12900</b>	<b>307.85</b>	<b>1.73</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	910	853	20.94	872
	Guru Nanak Dev TPS(Bhatinda)	440	232	200	4.72	196
	Guru Hargobind Singh TPS(L.mbt)	920	781	773	19.15	798
	Thermal (Total)	2620	1923	1826	44.80	1867
	Total Hydro	1148	486	458	12.05	502
	<b>Total Punjab</b>	<b>3768</b>	<b>2409</b>	<b>2284</b>	<b>56.86</b>	<b>2369</b>
Haryana	Panipat TPS	1367	1059	1053	26.16	1090
	DCRTPP (Yamuna nagar)	600	562	561	13.24	552
	Faridabad GPS (NTPC)	432	171	150	4.40	183
	RGTPP (khedar) (IPP)	1200	0	0	0.00	0
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	628	411	11.92	497
	Thermal (Total)	4944	2420	2175	55.73	2322
	Total Hydro	62	24	24	0.61	25
	<b>Total Haryana</b>	<b>5006</b>	<b>2444</b>	<b>2199</b>	<b>56.34</b>	<b>2347</b>
	Rajasthan	kota TPS	1240	1088	1148	27.09
suratgarh TPS		1500	1188	1129	28.53	1189
Chabra TPS		500	411	431	10.22	426
Dholpur GPS		330	144	144	3.32	139
Ramgarh GPS		111	69	71	1.79	74
RAPS A (NPC)		300	179	179	4.79	200
Barsingsar (NLC)		250	184	186	4.34	181
Giral LTPS		250	127	129	2.67	111
Rajwest LTPS (IPP)		1080	654	729	15.84	660
VSLP LTPS (IPP)		135	0	0	0.00	0
Thermal (Total)		5696	4044	4146	98.59	4108
Total Hydro		550	135	98	4.76	198
Wind power		2191	0	321	3.10	129
Biomass		91	30	30	0.72	30
Solar		201	27	0	1.09	45
Renewable/Others (Total)		2483	30	351	4.90	204
<b>Total Rajasthan</b>		<b>8729</b>	<b>4209</b>	<b>4595</b>	<b>108.24</b>	<b>4510</b>
UP	Anpara TPS	1630	1092	1055	22.60	942
	Obra TPS	1382	510	499	11.00	458
	Paricha TPS	890	528	594	12.20	508
	Panki TPS	210	85	80	1.70	71
	Harduaganj TPS	665	259	44	3.40	142
	Tanda TPS (NTPC)	440	405	402	9.90	412
	Roza TPS (IPP)	1200	593	806	17.97	749
	Anpara-C (IPP)	1200	419	392	9.67	403
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	338	362	7.43	309
	Thermal (Total)	8067	4229	4234	95.86	3994
	Vishnuparyag HPS (IPP)	400	75	79	1.86	78
	Other Hydro	527	232	254	4.85	202
	Cogeneration	981	800	800	19.20	800
	<b>Total UP</b>	<b>9975</b>	<b>5336</b>	<b>5367</b>	<b>121.77</b>	<b>4996</b>
Uttarakhand	Total Hydro	1303	544	533	12.55	523
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>544</b>	<b>533</b>	<b>12.55</b>	<b>523</b>
Delhi	Rajghat TPS	135	56	56	1.36	56
	Delhi Gas Turbine	282	154	156	3.85	160
	Pragati Gas Turbine	330	294	258	6.57	274
	Rithala GPS	108	0	0	0.00	0
	Bawana GPS	677	0	0	0.00	0
	Badarpur TPS (NTPC)	705	580	575	12.79	533
	Thermal (Total)	2237	1084	1045	24.56	1023
	<b>Total Delhi</b>	<b>2237</b>	<b>1084</b>	<b>1045</b>	<b>24.56</b>	<b>1023</b>
HP	Baspa HPS (IPP)	330	0	0	0.93	39
	Malana HPS (IPP)	86	44	0	0.27	11
	Other Hydro	589	298	317	7.37	307
	<b>Total HP</b>	<b>1005</b>	<b>342</b>	<b>317</b>	<b>8.57</b>	<b>357</b>
J & K	Baglihar HPS (IPP)	450	244	242	5.85	244
	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>339</b>	<b>372</b>	<b>10.39</b>	<b>433</b>
<b>Total State Control Area Generation</b>		<b>32979</b>	<b>16707</b>	<b>16712</b>	<b>399.28</b>	<b>16559</b>
<b>J. Net Inter Regional Exchange</b> [Import (+ve)/Export (-ve)]			<b>2641</b>	<b>2331</b>	<b>63.68</b>	<b>2653</b>
<b>Total Regional Availability(Gross)</b>		<b>55815</b>	<b>35669</b>	<b>30555</b>	<b>772.55</b>	<b>32112</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	6870	1639	89.95	3748
State Control Area Hydro	5368	2102	2056	55.65	2241
<b>Total Regional Hydro</b>	<b>15731</b>	<b>8972</b>	<b>3695</b>	<b>145.60</b>	<b>5989</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	50	400	0	3.26	0.00	3.26
Gwalior-Agra (D/C)	487	626	988	0	15.54	0.00	15.54
Zerda-Kankroli	-133	-141	0	252	0.00	2.97	-2.97
Zerda-Bhinmal	-80	-77	0	233	0.00	1.25	-1.25
Malanpur-Auraiya	-138	-107	0	162	0.00	2.52	-2.52
Badod-Kota/Morak	-161	-152	0	209	0.00	3.32	-3.32
Mundra-Mohindergarh(HVDC)	1052	1052	1053	0	25.39	0.00	25.39
<b>Sub Total WR</b>	<b>1227</b>	<b>1251</b>			<b>44.18</b>	<b>10.06</b>	<b>34.12</b>
Pusauli Bypass	200	200	400	0	5.56	0.00	5.56
MZP- GKP (D/C)	280	248	308	0	2.94	0.00	2.94
Patna-Balia(D/C)	561	504	655	0	13.10	0.00	13.10
B'Sharif-Balia (D/C)	293	167	391	0	5.87	0.00	5.87
Pusauli-Balia	-41	-84	0	107	0.00	1.47	-1.47
Gaya-Fatehpur (765 Kv)	31	-102	76	107	0.17	0.00	0.17
Pusauli-Sahupuri	126	187	216	0	4.22	0.00	4.22
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>1414</b>	<b>1080</b>			<b>31.86</b>	<b>2.30</b>	<b>29.56</b>
<b>Total IR Exch</b>	<b>2641</b>	<b>2331</b>			<b>76.04</b>	<b>12.36</b>	<b>63.68</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
41.63	0.14	41.77	-10.53	1.62	1.43	-4.70	-2.09	2.11

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
30.58	38.92	69.49	29.56	34.12	63.68	-1.02	-4.79	-5.82

**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	93.89	92.99	80.73	6.11

<----- 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				
50.62	17.06	49.63	19.12	50.10	0.26	0.10	50.43	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	4:06	403	12:42	0.0	0.0	0.0	0.0
Gorakhpur	400	426	17:07	402	12:37	0.0	0.0	23.9	0.0
Bareilly	400	423	18:02	399	11:12	0.0	0.0	2.5	0.0
Kanpur	400	422	4:02	402	11:18	0.0	0.0	0.9	0.0
Dadri	400	422	4:05	401	11:09	0.0	0.0	0.9	0.0
Ballabgarh	400	429	4:02	406	11:19	0.0	0.0	19.8	0.0
Bawana	400	427	4:04	403	11:12	0.0	0.0	11.3	0.0
Bassi	400	425	4:04	399	11:20	0.0	0.0	3.8	0.0
Hissar	400	416	4:02	392	11:35	0.0	0.0	0.0	0.0
Moga	400	419	4:05	395	9:06	11.4	11.4	0.0	0.0
Abdullapur	400	427	4:03	291	9:55	0.1	0.1	20.8	0.0
Nalagarh	400	429	4:05	401	11:09	0.0	0.0	19.8	0.0
Kishenpur	400	420	4:04	393	19:10	0.0	0.0	0.0	0.0
Wagoora	400	414	3:37	376	19:13	3.0	9.6	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	4:05	739	11:09	0.0	0.9	0.0	0.0
Balia	765	768	17:05	733	11:40	0.0	9.3	0.0	0.0
Moga	765	793	4:05	740	14:19	0.0	0.7	0.0	0.0
Lucknow	765	781	4:05	743	11:21	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 (m³/s)	Usage (m³/s)
Bhakra	513.59	445.62	482.02	503.43	480.27	468.02	235.43	578.26
Pong	426.72	384.05	400.62	230.85	404.79	336.10	88.18	372.20
Tehri	829.79	740.04	779.75	468.00	818.65	982.26	49.03	249.00
Koteshwar	612.50	598.50	611.80	4.95	NA	NA	249.00	244.00
Chamera-I	760.00	748.75	751.37	2.53	NA	NA	110.74	83.47
Rihand	268.22	252.98	258.26	NA	260.39	NA	NA	NA
RPS	352.80	343.81	346.07	NA	NA	NA	NA	NA
Jawahar Sagar	298.70	295.78	296.24	NA	NA	NA	NA	NA
RSD	527.91	487.91	508.32	NA	495.85	NA	135.86	132.41

\* NA: Not Available

**X. System Constraints:**

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

**XII. Weather Conditions For 21.03.2013 :**  
Normal Weather in Northern Region.

**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 : 21.03.2013

पारी प्रभाती अश्विनी / SHIFT CHARGE ENGINEER