

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 20.03.2013

Date of Reporting : 21.03.2013

### 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
31166	1460	32626	49.94	28909	975	29884	50.17	750.1	58.82

\* 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	38.15	12.00		50.15	52.12	52.45	0.32	102.59	3.94
Haryana	54.56	0.66		55.21	54.24	53.45	-0.79	108.66	0.55
Rajasthan	99.94	3.46	8.55	111.96	69.22	66.94	-2.27	178.90	0.00
Delhi	24.67			24.67	39.48	36.66	-2.82	61.33	0.14
UP	94.55	7.46	19.20	121.21	91.34	90.14	-1.20	211.35	51.02
Uttarakhand		13.05		13.05	17.29	17.71	0.41	30.76	0.79
HP		8.26		8.26	14.30	14.17	-0.13	22.43	0.65
J & K		8.75	0.00	8.75	23.01	21.78	-1.23	30.53	1.73
Chandigarh				0.00	3.59	3.54	-0.05	3.54	0.00
<b>Total</b>	<b>311.86</b>	<b>53.65</b>	<b>27.75</b>	<b>393.26</b>	<b>364.58</b>	<b>356.83</b>	<b>-7.76</b>	<b>750.09</b>	<b>58.82</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	4701	0	-31	-75	3866	0	-67	148	-1.91
Haryana	5117	0	36	-47	3794	0	14	-539	-4.38
Rajasthan	6293	0	-626	696	7697	0	42	867	21.80
Delhi	3126	0	79	-865	1711	0	-66	-1260	-22.27
UP	7755	1360	-942	14	8812	975	-66	79	1.61
Uttarakhand	1569	0	246	331	1086	0	12	250	6.62
HP	913	0	-25	-314	722	0	-10	101	-0.21
J&K	1503	100	111	-39	1130	0	9	-39	-0.94
Chandigarh	189	0	3	-45	91	0	-5	0	-0.37
<b>Total</b>	<b>31166</b>	<b>1460</b>	<b>-1149</b>	<b>-343</b>	<b>28909</b>	<b>975</b>	<b>-137</b>	<b>-394</b>	<b>-0.04</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	2091	2103	47.48	1978	47.00	0.48
	Rihand I STPS	1000	715	763	760	17.06	711	17.11	-0.05
	Rihand II STPS	1000	975	1025	1020	23.11	963	23.30	-0.19
	Rihand III STPS	500	485	504	502	11.53	481	11.64	-0.11
	Dadri I STPS	840	791	842	680	16.42	684	17.93	-1.51
	Dadri II STPS	980	949	681	431	14.96	623	16.55	-1.60
	Unchahar I TPS	420	408	428	431	9.64	402	9.62	0.02
	Unchahar II TPS	420	406	405	433	9.52	397	9.36	0.16
	Unchahar III TPS	210	202	196	215	4.73	197	4.64	0.09
	ISTPP (Jhajjar)	1500	995	720	700	15.62	651	15.99	-0.37
	Dadri GPS	830	806	380	368	8.60	358	8.82	-0.23
	Anta GPS	419	406	256	233	5.69	237	5.84	-0.15
	Auraiva GPS	663	642	150	158	3.54	147	3.69	-0.15
	<b>Sub Total (A)</b>	<b>10782</b>	<b>9743</b>	<b>8441</b>	<b>8034</b>	<b>187.88</b>	<b>7828</b>	<b>191.49</b>	<b>-3.61</b>
	B. NPC	NAPS	440	301	330	334	7.11	296	7.22
RAPS- B		440	417	456	461	9.94	414	10.01	-0.07
RAPS- C		440	430	466	477	10.16	423	10.32	-0.16
<b>Sub Total (B)</b>		<b>1320</b>	<b>1148</b>	<b>1252</b>	<b>1272</b>	<b>27.21</b>	<b>1134</b>	<b>27.55</b>	<b>-0.35</b>
C. NHPC	Chamera I HPS	540	550	360	0	2.58	108	2.60	-0.01
	Chamera II HPS	300	310	151	0	1.96	82	2.04	-0.08
	Chamera III HPS	231	231	242	0	1.27	53	1.21	0.06
	Bairasuil HPS	180	182	162	20	1.75	73	1.70	0.04
	Salal-HPS	690	219	345	181	6.28	262	5.21	1.07
	Tanakpur-HPS	94	27	29	26	0.65	27	0.67	-0.02
	Uri-HPS	480	477	479	479	11.53	481	11.51	0.02
	Dhauliganga-HPS	280	289	214	0	1.18	49	1.10	0.08
	Dulhasti-HPS	390	387	396	0	2.82	117	2.67	0.15
	Sewa-II HPS	120	120	126	99	2.79	116	2.87	-0.08
	<b>Sub Total (C)</b>	<b>3305</b>	<b>2792</b>	<b>2504</b>	<b>805</b>	<b>32.81</b>	<b>1367</b>	<b>31.57</b>	<b>1.24</b>
	D.NJPC	Nathpa Jhakri	1500	1605	1264	0	8.14	339	8.20
<b>Sub Total (D)</b>		<b>1500</b>	<b>1605</b>	<b>1264</b>	<b>0</b>	<b>8.14</b>	<b>339</b>	<b>8.20</b>	<b>-0.06</b>
E. THDC	Tehri HPS	1000	600	596	0	9.05	377	9.00	0.05
	Koteshwar HPS	400	300	300	0	3.30	137	3.60	-0.30
	<b>Sub Total (E)</b>	<b>1400</b>	<b>900</b>	<b>896</b>	<b>0</b>	<b>12.35</b>	<b>514</b>	<b>12.60</b>	<b>-0.25</b>
F. BBMB	Bhakra HPS	1480	678	993	415	16.34	681	16.28	0.07
	Dehar HPS	990	263	660	140	6.76	282	6.31	0.45
	Pong HPS	396	236	300	60	5.69	237	5.01	0.68
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1177</b>	<b>1953</b>	<b>615</b>	<b>28.79</b>	<b>1200</b>	<b>27.59</b>	<b>1.20</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.40	17	0.36	0.04
	KWHEP HPS(IPP)	1000	0	140	0	4.27	178	4.33	-0.06
	Malana Stg-II HPS	100	0	47	0	0.22	9	0.19	0.03
	Shree Cement TPS	300	0	265	121	5.53	230	5.66	-0.13
	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>452</b>	<b>121</b>	<b>10.42</b>	<b>434</b>	<b>10.54</b>	<b>-0.12</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>17364</b>	<b>16762</b>	<b>10847</b>	<b>307.58</b>	<b>12816</b>	<b>309.54</b>	<b>-1.96</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	720	17.49	729
	Guru Nanak Dev TPS(Bhatinda)	440	232	200	4.83	201
	Guru Hargobind Singh TPS(L.mbt)	920	858	612	15.83	659
	Thermal (Total)	2620	1930	1532	38.15	1589
	Total Hydro	1148	560	456	12.00	500
	<b>Total Punjab</b>	<b>3768</b>	<b>2490</b>	<b>1988</b>	<b>50.15</b>	<b>2089</b>
Haryana	Panipat TPS	1367	1045	1088	26.00	1083
	DCRTPP (Yamuna nagar)	600	560	559	13.23	551
	Faridabad GPS (NTPC)	432	170	150	3.70	154
	RGTPP (khedar) (IPP)	1200	0	0	0.00	0
	Magnum Diesel (IPP)	25	0	0	0.00	0
	Jhajjar(CLP)	1320	620	376	11.62	484
	Thermal (Total)	4944	2395	2173	54.56	2273
	Total Hydro	62	27	24	0.66	27
	<b>Total Haryana</b>	<b>5006</b>	<b>2422</b>	<b>2197</b>	<b>55.21</b>	<b>2301</b>
	Rajasthan	kota TPS	1240	1110	1151	27.32
suratgarh TPS		1500	1117	1355	28.76	1198
Chabra TPS		500	401	431	10.32	430
Dholpur GPS		330	138	138	3.32	138
Ramgarh GPS		111	70	72	1.80	75
RAPS A (NPC)		300	179	179	4.77	199
Barsingsar (NLC)		250	179	179	4.77	199
Giral LTPS		250	129	88	2.99	125
Rajwest LTPS (IPP)		1080	729	594	15.89	662
VSLP LTPS (IPP)		135	0		0.00	0
Thermal (Total)		5696	4052	4187	99.94	4164
Total Hydro		550	120	189	3.46	144
Wind power		2191	163	577	6.94	289
Biomass		91	24	24	0.58	24
Solar		201	26	0	1.04	43
Renewable/Others (Total)		2483	187	601	8.55	356
<b>Total Rajasthan</b>		<b>8729</b>	<b>4359</b>	<b>4977</b>	<b>111.96</b>	<b>4665</b>
UP	Anpara TPS	1630	977	961	22.70	946
	Obra TPS	1382	429	456	10.80	450
	Paricha TPS	890	539	492	12.80	533
	Panki TPS	210	77	77	1.80	75
	Harduaganj TPS	665	41	40	0.90	38
	Tanda TPS (NTPC)	440	403	405	9.86	411
	Roza TPS (IPP)	1200	648	810	18.57	774
	Anpara-C (IPP)	1200	391	338	9.29	387
	Bajaj Energy Pvt.Ltd(IPP) TPS	450	391	361	7.82	326
	Thermal (Total)	8067	3896	3940	94.55	3939
	Vishnuparyag HPS (IPP)	400	79	82	1.87	78
	Other Hydro	527	224	252	5.59	233
	Cogeneration	981	800	800	19.20	800
	<b>Total UP</b>	<b>9975</b>	<b>4999</b>	<b>5074</b>	<b>121.21</b>	<b>4972</b>
Uttarakhand	Total Hydro	1303	576	490	13.05	544
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>576</b>	<b>490</b>	<b>13.05</b>	<b>544</b>
Delhi	Rajghat TPS	135	57	54	1.26	52
	Delhi Gas Turbine	282	154	153	3.80	158
	Pragati Gas Turbine	330	292	263	6.71	280
	Rithala GPS	108	0	0	0.00	0
	Bawana GPS	677	0	0	0.00	0
	Badarpur TPS (NTPC)	705	585	590	12.91	538
	Thermal (Total)	2237	1088	1060	24.67	1028
	<b>Total Delhi</b>	<b>2237</b>	<b>1088</b>	<b>1060</b>	<b>24.67</b>	<b>1028</b>
HP	Baspa HPS (IPP)	330	0	0	1.06	44
	Malana HPS (IPP)	86	46	0	0.21	9
	Other Hydro	589	282	263	6.99	291
	<b>Total HP</b>	<b>1005</b>	<b>328</b>	<b>263</b>	<b>8.26</b>	<b>344</b>
J & K	Baglihar HPS (IPP)	450	246	242	4.20	175
	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>8.75</b>	<b>364</b>
<b>Total State Control Area Generation</b>		<b>32979</b>	<b>16603</b>	<b>16421</b>	<b>393.26</b>	<b>16308</b>
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>1917</b>	<b>2501</b>	<b>67.25</b>	<b>2802</b>
<b>Total Regional Availability(Gross)</b>		<b>55815</b>	<b>35282</b>	<b>29769</b>	<b>768.09</b>	<b>31926</b>

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	6804	1420	86.97	3624
State Control Area Hydro	5368	2176	2046	53.65	2157
<b>Total Regional Hydro</b>	<b>15731</b>	<b>8980</b>	<b>3466</b>	<b>140.61</b>	<b>5781</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	300	150	400	0	4.21	0.00	4.21
Gwalior-Agra (D/C)	485	714	981	0	17.42	0.00	17.42
Zerda-Kankroli	-126	-96	1	219	0.00	2.10	-2.10
Zerda-Bhinmal	-67	-35	86	209	0.00	0.58	-0.58
Malanpur-Auraiya	-142	-106	0	142	0.00	2.40	-2.40
Badod-Kota/Morak	-167	-153	0	184	0.00	1.10	-1.10
Mundra-Mohindergarh(HVDC)	1051	1052	1054	0	25.39	0.00	25.39
<b>Sub Total WR</b>	<b>1334</b>	<b>1526</b>			<b>47.02</b>	<b>6.18</b>	<b>40.85</b>
Pusauli Bypass	-323	400	400	342	4.38	1.32	3.06
MZP- GKP (D/C)	110	62	254	0	2.03	0.00	2.03
Patna-Balia(D/C)	464	451	606	0	12.07	0.00	12.07
B'Sharif-Balia (D/C)	197	147	368	0	5.86	0.00	5.86
Pusauli-Balia	-35	-183	0	222	0.00	0.63	-0.63
Gaya-Fatehpur (765 Kv)	24	6	103	24	1.25	0.00	1.25
Pusauli-Sahupuri	182	132	193	0	3.59	0.00	3.59
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>583</b>	<b>975</b>			<b>29.18</b>	<b>2.78</b>	<b>26.40</b>
<b>Total IR Exch</b>	<b>1917</b>	<b>2501</b>			<b>76.20</b>	<b>8.95</b>	<b>67.25</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
42.21	0.20	42.41	-10.53	1.03	1.28	-1.87	-2.09	2.09

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
31.07	37.23	68.30	26.40	40.85	67.25	-4.67	3.62	-1.05

**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	0.76	91.56	90.80	85.59	8.44

<----- 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				
50.59	17.59	49.55	19.13	50.13	0.33	0.10	50.45	49.83

**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	407	2:07	401	9:38	0.0	0.0	0.0	0.0
Gorakhpur	400	425	2:08	406	11:15	0.0	0.0	16.2	0.0
Bareilly	400	0	0:00	9999	0:00	0.0	0.0	0.0	0.0
Kanpur	400	417	18:00	401	9:40	0.0	0.0	0.0	0.0
Dadri	400	420	4:03	400	11:17	0.0	0.0	0.0	0.0
Ballabgarh	400	425	4:03	404	11:06	0.0	0.0	7.1	0.0
Bawana	400	422	4:06	403	11:16	0.0	0.0	1.8	0.0
Bassi	400	422	17:58	395	11:15	0.0	0.0	1.6	0.0
Hissar	400	413	4:03	392	11:15	0.0	0.0	0.0	0.0
Moga	400	414	4:02	393	12:08	0.0	0.0	0.0	0.0
Abdullapur	400	425	2:02	402	8:41	0.0	0.0	6.3	0.0
Nalagarh	400	425	2:02	402	11:07	0.0	0.0	6.0	0.0
Kishenpur	400	415	4:01	396	19:08	0.0	0.0	0.0	0.0
Wagoora	400	409	12:50	382	19:06	0.0	14.9	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	769	18:00	733	11:22	0.0	14.4	0.0	0.0
Balia	765	767	17:52	731	11:07	0.0	14.7	0.0	0.0
Moga	765	784	4:03	745	12:09	0.0	0.0	0.0	0.0
Lucknow	765	777	4:03	744	11:10	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	482.31	511.55	480.58	474.82	223.50	506.22
Pong	426.72	384.05	400.79	237.89	404.98	344.07	90.42	398.93
Tehri	829.79	740.04	780.35	468.50	818.65	982.26	53.97	247.00
Koteshwar	612.50	598.50	NA	NA	NA	NA	NA	NA
Chamera-I	760.00	748.75	751.08	22.05	NA	NA	91.39	70.28
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 20.03.2013 :**  
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 : 20.03.2013

पारी प्रभाती अशियंता / SHIFT CHARGE ENGINEER