

# पॉवर सिस्टम ऑपरेशन कार्पोरेशन लिमिटेड

(पावरग्रिड की पूर्ण स्वामित्व प्राप्त सहायक कंपनी)



## उत्तरी क्षेत्रीय भार प्रेषण केंद्र

Power Supply Position in Northern Region for 27.03.2013  
Date of Reporting : 28.03.2013

### 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
26154	1410	27564	50.42	27358	1250	28608	50.14	646.7	25.10

\* 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	27.43	12.02		39.46	39.84	40.79	0.95	80.25	0.00
Haryana	33.91	0.62		34.52	59.29	59.16	-0.12	93.68	0.00
Rajasthan	87.79	0.74	9.55	98.08	51.11	45.74	-5.37	143.83	0.08
Delhi	20.36			20.36	29.11	26.33	-2.78	46.69	0.00
UP	93.89	5.93	19.20	119.01	87.58	89.66	2.08	208.67	23.32
Uttarakhand		12.91		12.91	14.12	9.23	-4.89	22.14	0.00
HP		9.49		9.49	7.68	7.11	-0.58	16.59	0.00
J & K		11.75	0.00	11.75	22.43	20.25	-2.18	31.99	1.70
Chandigarh				0.00	3.42	2.88	-0.54	2.88	0.00
<b>Total</b>	<b>263.37</b>	<b>53.45</b>	<b>28.75</b>	<b>345.58</b>	<b>314.59</b>	<b>301.15</b>	<b>-13.44</b>	<b>646.72</b>	<b>25.10</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	3471	0	226	-158	3298	0	55	120	-0.89
Haryana	4285	0	87	-209	3449	0	15	-452	-5.94
Rajasthan	4602	0	-746	148	6568	0	-31	242	4.80
Delhi	2231	0	60	-573	1651	0	-134	-1429	-19.62
UP	8230	1310	320	-13	9529	1250	136	28	0.54
Uttarakhand	1068	0	-63	240	935	0	-96	215	5.43
HP	621	0	-134	-400	695	0	12	-51	-3.89
J&K	1497	100	-1	-45	1139	0	-100	-45	-1.07
Chandigarh	149	0	-24	0	94	0	-8	0	-0.04
<b>Total</b>	<b>26154</b>	<b>1410</b>	<b>-276</b>	<b>-1009</b>	<b>27358</b>	<b>1250</b>	<b>-151</b>	<b>-1371</b>	<b>-20.69</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	1970	1708	2105	42.44	1768	42.88	-0.43
	Rihand I STPS	1000	715	553	775	15.46	644	15.72	-0.27
	Rihand II STPS	1000	975	630	1051	20.55	856	20.99	-0.45
	Rihand III STPS	500	469	347	510	9.32	389	9.72	-0.40
	Dadri I STPS	840	807	641	790	14.02	584	14.62	-0.60
	Dadri II STPS	980	969	324	503	8.40	350	9.39	-0.99
	Unchahar I TPS	420	408	340	440	8.16	340	7.75	0.41
	Unchahar II TPS	420	406	350	442	8.16	340	7.46	0.70
	Unchahar III TPS	210	0	0	0	0.00	0	0.00	0.00
	ISTPP (Jhajjar)	1500	995	597	670	14.40	600	15.48	-1.08
	Dadri GPS	830	799	388	377	9.13	380	9.47	-0.34
	Anta GPS	419	402	256	203	5.20	217	5.67	-0.47
	Auraiva GPS	663	639	151	159	3.58	149	3.98	-0.40
	<b>Sub Total (A)</b>	<b>10782</b>	<b>9554</b>	<b>6285</b>	<b>8025</b>	<b>158.82</b>	<b>6617</b>	<b>163.14</b>	<b>-4.32</b>
	B. NPC	NAPS	440	297	332	339	7.21	301	7.12
RAPS- B		440	422	457	465	10.09	421	10.13	-0.04
RAPS- C		440	430	469	475	10.21	426	10.32	-0.11
<b>Sub Total (B)</b>		<b>1320</b>	<b>1149</b>	<b>1258</b>	<b>1279</b>	<b>27.52</b>	<b>1147</b>	<b>27.57</b>	<b>-0.05</b>
C. NHPC	Chamera I HPS	540	550	540	0	2.62	109	3.08	-0.46
	Chamera II HPS	300	271	310	0	3.03	126	3.58	-0.56
	Chamera III HPS	231	231	221	0	2.03	84	2.20	-0.18
	Bairasuil HPS	180	182	182	100	2.15	89	2.47	-0.32
	Salal-HPS	690	298	455	254	6.60	275	7.02	-0.41
	Tanakpur-HPS	94	30	32	29	0.67	28	0.72	-0.05
	Uri-HPS	480	480	480	479	11.51	479	11.66	-0.16
	Dhauliganga-HPS	280	289	213	0	0.97	40	1.12	-0.15
	Dulhasti-HPS	390	387	406	0	2.67	111	3.31	-0.64
	Sewa-II HPS	120	119	120	117	2.72	113	2.81	-0.10
	<b>Sub Total (C)</b>	<b>3305</b>	<b>2837</b>	<b>2959</b>	<b>979</b>	<b>34.95</b>	<b>1456</b>	<b>37.98</b>	<b>-3.02</b>
	D.NJPC	Natpcha Jhakri	1500	1605	1204	0	7.23	301	8.00
<b>Sub Total (D)</b>		<b>1500</b>	<b>1605</b>	<b>1204</b>	<b>0</b>	<b>7.23</b>	<b>301</b>	<b>8.00</b>	<b>-0.77</b>
E. THDC	Tehri HPS	1000	780	380	0	6.29	262	6.50	-0.21
	Koteshwar HPS	400	300	296	0	2.63	110	2.70	-0.07
	<b>Sub Total (E)</b>	<b>1400</b>	<b>1080</b>	<b>676</b>	<b>0</b>	<b>8.92</b>	<b>372</b>	<b>9.20</b>	<b>-0.28</b>
F. BBMB	Bhakra HPS	1480	767	993	522	18.24	760	18.41	-0.16
	Dehar HPS	990	350	660	420	8.22	343	8.40	-0.18
	Pong HPS	396	153	300	60	3.58	149	5.01	-1.43
	<b>Sub Total (F)</b>	<b>2866</b>	<b>1270</b>	<b>1953</b>	<b>1002</b>	<b>30.04</b>	<b>1252</b>	<b>31.81</b>	<b>-1.77</b>
G. IPP(s)/JV(s)	ADHPL HPS(IPP)	192	0	0	0	0.46	19	0.44	0.02
	KWHEP HPS(IPP)	1000	0	250	0	3.70	154	3.84	-0.14
	Malana Stg-II HPS	100	0	51	0	0.24	10	0.21	0.03
	Shree Cement TPS	300	0	126	0	3.23	135	2.98	0.25
	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>427</b>	<b>0</b>	<b>7.63</b>	<b>318</b>	<b>7.46</b>	<b>0.17</b>
<b>H. Total Regional Entities (A-G)</b>	<b>22836</b>	<b>17495</b>	<b>14762</b>	<b>11285</b>	<b>275.10</b>	<b>11463</b>	<b>285.16</b>	<b>-10.05</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	640	640	14.92	622	
	Guru Nanak Dev TPS(Bhatinda)	440	95	95	2.03	84	
	Guru Hargobind Singh TPS(L.mbt)	920	480	476	10.49	437	
	Thermal (Total)	2620	1215	1211	27.43	1143	
	Total Hydro	1148	479	513	12.02	501	
	<b>Total Punjab</b>	<b>3768</b>	<b>1694</b>	<b>1724</b>	<b>39.46</b>	<b>1644</b>	
Haryana	Panipat TPS	1367	627	629	15.12	630	
	DCRTPP (Yamuna nagar)	600	259	269	6.15	256	
	Faridabad GPS (NTPC)	432	152	169	3.74	156	
	RGTPP (khedar) (IPP)	1200	0	0	0.00	0	
	Magnum Diesel (IPP)	25	0	0	0.00	0	
	Jhajjar(CLP)	1320	373	372	8.90	371	
	Thermal (Total)	4944	1411	1439	33.91	1413	
	Total Hydro	62	22	26	0.62	26	
		<b>Total Haryana</b>	<b>5006</b>	<b>1433</b>	<b>1465</b>	<b>34.52</b>	<b>1438</b>
Rajasthan	kota TPS	1240	927	1171	25.88	1078	
	suratgarh TPS	1500	713	1130	22.14	922	
	Chabra TPS	500	391	453	9.91	413	
	Dholpur GPS	330	0	151	2.66	111	
	Ramgarh GPS	111	11	74	1.64	68	
	RAPS A (NPC)	300	172	172	4.80	200	
	Barsingsar (NLC)	250	186	179	4.18	174	
	Giral LTPS	250	59	0	0.94	39	
	Rajwest LTPS (IPP)	1080	594	698	15.64	652	
	VSLP LTPS (IPP)	135	0	0	0.00	0	
	Thermal (Total)	5696	3053	4028	87.79	3658	
	Total Hydro	550	10	139	0.74	31	
	Wind power	2191	696	333	7.99	333	
	Biomass	91	37	37	0.89	37	
	Solar	201	17	0	0.67	28	
	Renewable/Others (Total)	2483	733	370	9.55	398	
		<b>Total Rajasthan</b>	<b>8729</b>	<b>3796</b>	<b>4537</b>	<b>98.08</b>	<b>4087</b>
	UP	Anpara TPS	1630	984	1003	21.30	888
Obra TPS		1382	461	494	10.40	433	
Paricha TPS		890	789	729	16.80	700	
Panki TPS		210	72	72	1.50	63	
Harduaganj TPS		665	0	259	4.40	183	
Tanda TPS (NTPC)		440	404	406	9.89	412	
Roza TPS (IPP)		1200	810	810	17.67	736	
Anpara-C (IPP)		1200	0	401	3.75	156	
Bajaj Energy Pvt.Ltd(IPP) TPS		450	333	403	8.18	341	
Thermal (Total)		8067	3853	4577	93.89	3912	
Vishnuparyag HPS (IPP)		400	77	79	1.83	76	
Other Hydro		527	188	240	4.10	171	
Cogeneration		981	800	800	19.20	800	
		<b>Total UP</b>	<b>9975</b>	<b>4918</b>	<b>5696</b>	<b>119.01</b>	<b>4883</b>
Uttarakhand	Total Hydro	1303	533	536	12.91	538	
	<b>Total Uttarakhand</b>	<b>1303</b>	<b>533</b>	<b>536</b>	<b>12.91</b>	<b>538</b>	
Delhi	Rajghat TPS	135	100	51	2.05	85	
	Delhi Gas Turbine	282	79	156	2.74	114	
	Pragati Gas Turbine	330	261	265	6.58	274	
	Rithala GPS	108	0	0	0.00	0	
	Bawana GPS	677	0	0	0.00	0	
	Badarpur TPS (NTPC)	705	395	430	9.00	375	
	Thermal (Total)	2237	835	902	20.36	848	
		<b>Total Delhi</b>	<b>2237</b>	<b>835</b>	<b>902</b>	<b>20.36</b>	<b>848</b>
HP	Baspa HPS (IPP)	330	0	110	0.91	38	
	Malana HPS (IPP)	86	49	0	0.22	9	
	Other Hydro	589	326	417	8.36	348	
	<b>Total HP</b>	<b>1005</b>	<b>375</b>	<b>527</b>	<b>9.49</b>	<b>395</b>	
J & K	Baglihar HPS (IPP)	450	296	290	7.20	300	
	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>420</b>	<b>11.75</b>	<b>489</b>	
<b>Total State Control Area Generation</b>		<b>32979</b>	<b>13975</b>	<b>15807</b>	<b>345.58</b>	<b>14323</b>	
<b>J. Net Inter Regional Exchange [Import (+ve)/Export (-ve)]</b>			<b>497</b>	<b>920</b>	<b>30.92</b>	<b>1288</b>	
<b>Total Regional Availability(Gross)</b>		<b>55815</b>	<b>29234</b>	<b>28012</b>	<b>651.59</b>	<b>27074</b>	

#### IV. Total Hydro Generation:

Regional Entities Hydro	10364	7093	1981	85.54	3564
State Control Area Hydro	5368	1998	2401	53.45	2151
<b>Total Regional Hydro</b>	<b>15731</b>	<b>9091</b>	<b>4382</b>	<b>138.99</b>	<b>5715</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	-300	50	400	0.07	6.04	-5.97
Gwalior-Agra (D/C)	201	295	999	0	9.23	0.00	9.23
Zerda-Kankroli	-303	-290	0	368	0.00	6.11	-6.11
Zerda-Bhinmal	-293	-248	0	349	0.00	5.16	-5.16
Malanpur-Auraiya	-113	-109	0	145	0.00	2.10	-2.10
Badod-Kota/Morak	-215	-220	0	241	0.00	4.80	-4.80
Mundra-Mohindergarh(HVDC)	1263	1264	1267	0	30.18	0.00	30.18
<b>Sub Total WR</b>	<b>290</b>	<b>392</b>			<b>39.48</b>	<b>24.22</b>	<b>15.26</b>
Pusauli Bypass	200	400	400	0	7.95	0.00	7.95
MZP- GKP (D/C)	-116	-16	162	200	0.00	0.30	-0.30
Patna-Balia(D/C)	245	277	412	0	7.71	0.00	7.71
B'Sharif-Balia (D/C)	23	3	188	0	1.94	0.00	1.94
Pusauli-Balia	-126	-158	0	163	0.00	2.98	-2.98
Gaya-Fatehpur (765 Kv)	-83	-75	30	98	0.00	0.82	-0.82
Pusauli-Sahupuri	100	137	149	0	2.98	0.00	2.98
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>207</b>	<b>528</b>			<b>20.58</b>	<b>4.93</b>	<b>15.65</b>
<b>Total IR Exch</b>	<b>497</b>	<b>920</b>			<b>60.06</b>	<b>29.15</b>	<b>30.92</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
28.24	0.17	28.42	-14.12	-7.53	1.02	-7.73	-2.02	2.02

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
13.29	30.44	43.73	15.65	15.26	30.92	2.36	-15.18	-12.82

**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	0.00	66.70	66.70	80.70	33.30

<----- 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				
50.69	17.13	49.73	2.16	50.14	0.44	0.16	50.66	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	417	16:10	404	12:47	0.0	0.0	0.0	0.0
Gorakhpur	400	426	16:15	411	0:04	0.0	0.0	20.5	0.0
Bareilly	400	432	16:07	412	0:05	0.0	0.0	48.8	0.6
Kanpur	400	427	16:07	409	0:04	0.0	0.0	18.1	0.0
Dadri	400	428	16:11	415	0:02	0.0	0.0	55.8	0.0
Ballabgarh	400	434	16:05	416	0:00	0.0	0.0	98.2	12.9
Bawana	400	430	17:03	417	12:30	0.0	0.0	75.0	0.0
Bassi	400	433	17:05	412	0:05	0.0	0.0	71.3	5.3
Hissar	400	420	4:02	405	11:13	0.0	0.0	0.0	0.0
Moga	400	425	4:02	404	19:05	0.0	0.0	8.6	0.0
Abdullapur	400	427	17:03	409	18:50	0.0	0.0	19.7	0.0
Nalagarh	400	433	17:03	416	18:53	0.0	0.0	92.6	1.4
Kishenpur	400	422	4:02	400	19:08	0.0	0.0	2.5	0.0
Wagoora	400	412	3:15	384	20:12	0.0	15.9	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	789	17:04	756	0:04	0.0	0.0	0.0	0.0
Balia	765	772	17:03	740	1:32	0.0	1.7	0.0	0.0
Moga	765	800	4:02	763	19:07	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	480.55	468.02	478.31	420.92	351.33	604.03
Pong	426.72	384.05	399.20	216.87	403.79	312.39	97.66	254.37
Tehri	829.79	740.04	776.70	282.00	818.65	982.26	86.74	178.00
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 27.03.2013 :**  
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 : 27.03.2013

पारी प्रभाती अश्विनी / SHIFT CHARGE ENGINEER