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NORTHERN REGION GRID REPORT FOR THE MONTH OF JANUARY 2004

A) Summary Report

1. Grid Overview during the Month

During the month of January 2004, the power supply position in the region was satisfactory. The average energy and peak demand met were 423.36 MU/day and 22079 MW compared to 375.52 MU/day and 20109 MW thereby a growth of 12.74% and 9.80% in terms both energy and peak demand. The average energy and peak shortages were 6.32% & 6.80% compared to 9.99% and 8.76% during the last year i.e. January 2003 respectively. The average system frequency was 49.71Hz and frequency remained in the normal range i.e. between 49.0 & 50.5 Hz for 91.55% of the time compared to 79.65% during the last year i.e. January 2003. The average frequency variation index during the month was 2.84. It could be seen from the above that there is substantial increase in the % of frequency band i.e. between 49.0 & 50.5 Hz.

Overall voltage profile in the grid during the month was satisfactory on most of the 400 kV buses.

During January 2004 there was no major grid incident. However there were some minor incidents which are reported at annexure-6.

2. Commissioning of New Units/Lines/Transformers During the Month :

- 1 Nathpa-Jhakri #6 declared under commercial operation w.e.f 03.30 hrs. of 02.01.2004.

3. Frequency Profile :

Maximum frequency	51.28	Hz	at	0306	hours on	15.01.2004
Minimum frequency	48.56	Hz	at	07.23	hours on	17.01.2004
Average frequency	49.71	Hz				

Frequency distribution in %

Hz	< 48.5	<49.0	49.0-50.5	> 50.5
% of time	0.00	7.04	91.55	1.41

Frequency Variation Index

Monthly Average	2.84
Maximum	6.10
Minimum	1.04

4. Power Supply Position :**a. Average Energy/day (Net)**

State / U.T.	Demand met MU/Day	Requirement MU/Day	Shortage MU/Day	Shortage %
Punjab	68.17	70.85	2.68	3.78
Haryana	50.47	51.25	0.78	1.52
Rajasthan	86.27	86.78	0.51	0.59
U.P.	114.98	137.18	22.20	16.18
Uttanchal	12.05	12.49	0.44	3.52
Delhi	54.62	55.46	0.84	1.51
H.P.	10.63	10.63	0.00	0.00
J & K *	21.39	22.50	1.11	4.93
Chandigarh	3.10	3.10	0.00	0.00
N.F.F./Rail	1.68	1.68	0.00	0.00
Total	423.36	451.92	28.56	6.32

b. Peak MW

State / U.T.	MAX. Demand met MW	MAX. Requirement MW	Shortage MW	Shortage %
	A	B	C	(C/B)*100
Punjab	3883	3883	0	0.00
Haryana	2890	3090	200	6.47
Rajasthan	4267	4267	0	0.00
U.P.	5842	7368	1526	20.71
Uttanchal	737	777	40	5.15
Delhi	3289	3372	83	2.46
H.P.	582	582	0	0.00
J & K *	1146	1350	204	15.11
Chandigarh	179	179	0	0.00
N.F.F./Rail	78	78	0	0.00
Region	22079	23690	1611	6.80
Diversity Factor = 1.09				

* Approximate and Estimated

5. **Schedule Vs Drawal By the Constituents :**

(All figs in M.U)

State / U.T.	Schedule	Actual	OD/UD
Punjab	613.13	562.42	-50.71
Haryana	627.95	761.63	133.68
Rajasthan	959.26	1043.80	84.54
U.P.	1396.41	1427.58	31.17
Uttranchal	193.40	202.75	9.35
Delhi	978.24	784.81	-193.43
H.P.	249.56	258.63	9.07
J & K	539.11	614.98	75.87
Chandigarh	100.81	96.18	-4.63
N.F.F./Rail	59.44	51.85	-7.59

6. **Inter Regional Exchanges**

	Energy M.U.	Peak MW
<u>Import</u>		
a) From WR over HVDC Vindhyachal B/B	64.78	500
b) From WR over 220 kV Ujjain-Kota	0	0
c) From ER over HVDC Sasaram B/B	309.05	500
d) From ER over 220 kV Dehri-Sahupuri	0	0
<u>Export</u>		
e) To WR over HVDC Vindhyachal B/B	35.33	450
f) To WR (MP) over 220 kV Auraiya-Malanpur	50.22	190
g) To WR(MP) over 220 kV Kota-Ujjain	51.38	115
h) To ER (Bihar) over 220 kV/132kV lines	20.76	55
i) To ER over HVDC Sasaram B/B	0	0
j) To Nepal over 132 kV Tanakpur-Mahendernagar	6.73	12

B). Detailed Report**I. Details of Installed/Effective Capacity at the end of January 2004**

	STATION	INSTALLED CAPACITY	EFFECTIVE CAPACITY
		(MW)	
A	NTPC		
(a)	Badarpur TPS	3x100+2x210 720.00	3x95+2x210 705.00
(b)	Singrauli STPS	5x200+2x500 2000.00	2000.00
(c)	Rihand STPS	2x500 1000.00	2x500 1000.00
(d)	Dadri NCTPS	4x210 840.00	4x210 840.00
(e)	Unchahar TPS	2x210 + 2x210 840.00	2x210 + 2x210 840.00
(f)	Tanda TPS	4x110 440.00	4x110 440.00
(g)	Anta GPS	3x88.71+1x153.20 419.33	3x88.71+1x153.20 419.33
(h)	Auraiya GPS	4x111.19+2x109.30 663.36	4x111.19+2x109.30 663.36
(i)	Dadri GPS	4x130.19+2x154.51 829.78	4x130.19+2x154.51 829.78
(j)	Faridabad GPS	2x137.75 +1x156.07 431.57	2x137.75 +1x156.07 431.57
	Sub-Total	8184.04	8169.04
B	NHPC		
(a)	Bairasiul	3x60 180.00	3x60 180.00
(b)	Salal Stage - I	3x115 345.00	3x115 345.00
(c)	Salal Stage - II	3x115 345.00	3x115 345.00
(d)	Tanakpur HPS	3x40 120.00	3x31.4 94.20
(e)	Chamera HPS-I	3x180 540.00	3x180 540.00
(f)	URI	4x120 480.00	4x120 480.00
(g)	Chamera HPS-II	1x100 100.00	1x100 100.00
	Sub-Total	2110.00	2084.20
C.	NPC		
(a)	RAPS -A	2x220 440.00	1x100+1x200 300.00
(b)	RAPS -B	2x220 440.00	2x220 440.00
(c)	NAPS	2x235 470.00	2x220 440.00
	Sub-Total	1350.00	1180.00
D.	Nathpa-Jhakri	2x250 500.00	2x250 500.00
Total Central Sector (A + B + C)		12144.04	11933.24
2	BBMB		
(a)	Bhakra Complex		
(i)	Bhakra (L)	5x108 540.00	5x108 540.00
(ii)	Bhakra (R)	5x157 785.00	5x157 785.00
(iii)	Ganguwal	1x29.25+1x27.63+1x26.7 83.58	1x29.25+1x27.63+1x26.7 83.58
(iv)	Kotla	1x29.25+1x24.2+1x28.12 81.57	1x29.25+1x24.2+1x28.12 81.57
	Sub-Total	1490.15	1490.15
(b)	Dehar	6x165 990.00	6x165 990.00
(c)	Pong	1x60 + 5x66 390.00	1x60 + 5x66 390.00
	Total BBMB	2870.15	2870.15

contd/-

3	CHANDIGARH				
(a)	Diesel Gen Sets		2.00		1.40
4	DELHI				
	THERMAL				
(a)	Indra Prastha	3x62.5+1x60	247.50	3x62.5+1x60	247.50
(b)	Rajghat	1x15+2x67.5	150.00	1x14+2x67.5	149.00
(c)	Gas Turbines	6x30+3x34	282.00	6x30+3x34	282.00
(d)	Pragati Gas Turbines	2x108+1x114	330.00	2x108 +1x114	330.00
	Total DELHI		1009.50		1008.50
5	HARYANA				
	HYDRO				
(a)	Western Yamuna Canal (WYC)	6x8	48.00	6x8	48.00
	Total Hydro		48.00		48.00
	THERMAL				
(b)	Faridabad (New)	3x60	180.00	3x55	165.00
(c)	Panipat	4x110+2x210	860.00	4x110+2x210	860.00
	Total Thermal		1040.00		1025.00
(d)	Magnum Diesel (IPP)	4x6.3	25.20	4x6.3	25.20
	Total Haryana		1113.20		1098.20
6	HIMACHAL PRADESH				
	HYDRO				
(a)	Giri	2x30.00	60.00	2x30.00	60.00
(b)	Bassi	4x15.00	60.00	4x15.00	60.00
(c)	Binwa	2x 3.00	6.00	2x 3.00	6.00
(d)	Rongtong	4x 0.50	2.00	4x 0.50	2.00
(e)	Andhra	3x 5.65	16.95	3x 5.65	16.95
(f)	Micro Hydel+Killar+Thirot		8.75		8.75
(g)	Nogli	2x 0.25+4x0.50	2.50	2x 0.25+4x0.50	2.50
(h)	Bhabha (H)	3x40.00	120.00	3x40.00	120.00
(i)	Baner (H)	3x 4.00	12.00	3x 4.00	12.00
(j)	Gaj (H)	3x 3.50	10.50	3x 3.50	10.50
(k)	Sal -2	1x 2	2.00	1x 2	2.00
(l)	Gumma	.	3.00	3	3.00
(m)	Ghanvi	2x11.25	22.50	2x11.25	22.50
(n)	Diesel Gen. Sets		0.00		0.00
(o)	Malana (IPP)	2x43	86.00	2x43	86.00
(p)	Baspa (IPP)	3x100	300.00	3x100	300.00
	Total HP		712.20		712.20
7	J & K				
	HYDRO				
(a)	Lower Jhelum	3x35.0	105.00	3x35.0	105.00
(b)	Upper Sindh	2x11.30+3x35.0	127.60	2x11.30+3x35.0	127.60
(c)	Ganderbal	2x3+2x4.5	15.00	2x3+2x4.5	15.00
(d)	Mohra	2x4.5	9.00	2x4.5	9.00
(e)	Chenani	5x4.66 +2X1.0 +3x2.5	32.80	5x4.66 +2X1.0+3x2.5	32.80
(f)	Stakna	2x2.0 +3x1.25 +2.0	9.75	2x2.0 +3x1.25 +2.0	9.75
(g)	Small Hydel		3.54		3.54
(h)	Sewa	3x3.0	9.00	3x3.0	9.00
	Total Hydro		311.69		311.69

contd/-

J & K (Contd.)					
(h)	GAS TURBINES				
	Pampore GT St - I	3x25.0	75.00	3x25.0	75.00
	Pampore GT St - II	4x25.0	100.00	4x25.0	100.00
9h)	Total Gas		175.00		175.00
(I)	Diesel Gen. Sets		8.94		7.18
	Total J & K		495.63		493.87
8	PUNJAB				
	HYDRO				
(a)	Jogindernagar/ Shanan	4x15+1x50	110.00	4x15+1x50	110.00
(b)	Upper Behari Doab Canal (UBDC)	3x15+3x15	90.00	3x15+3x15	90.00
(c)	Mukerian	6x15+6x19.5	207.00	6x15+6x19.5	207.00
(d)	Anandpur Sahib (APS)	4x33.5	134.00	4x33.5	134.00
(e)	Ranjit Sagar HPS	4x150	600.00	4x150	600.00
(f)	Small Hydel		4.10		4.10
	Total Hydro		1145.10		1145.10
	THERMAL				
(g)	Guru Nanak Dev TPS (Bhatinda)	4x110	440.00	4x110	440.00
(h)	Guru Gobind Singh TPS (Ropar)	6x210	1260.00	6x210	1260.00
(i)	Lehra Mohabbat TPS	2x210	420.00	2x210	420.00
(j)	Jhalkeri Rice Straw Fired	1x10	10.00	1x10	10.00
	Total Thermal		2130.00		2130.00
	Total Punjab		3275.10		3275.10
9	RAJASTHAN				
	HYDRO				
(a)	Mahi Bajaj Sagar	2x25+2x45	140.00	2x25+2x45	140.00
(b)	Rana Pratap Sagar (RPS)	4x43	172.00	4x43	172.00
(c)	Jawahar Sagar (JS)	3x33	99.00	3x33	99.00
(d)	Anoopgarh	6x1.5	9.00	6x1.5	9.00
(e)	Small Hydro		14.85		14.85
	Total Hydro		434.85		434.85
	THERMAL				
(f)	Kota TPS	2x110+3x210 +1x195	1045.00	2x110+3x210 +1x195	1045.00
(g)	Suratgarh TPS	5x250	1250.00	5x250	1250.00
(g)	Ramgarh GT	1x3	3.00	1x3	3.00
(i)	Ramgarh GT EXT.	1x35.5	35.50	1x35.5	35.50
	Total Thermal		2333.50		2333.50
(J)	Wind farm		14.01		14.01
	Total Rajasthan		2782.36		2782.36

contd/-

10	UP				
	HYDRO				
(a)	Rihand	6x50.0	300.00	6x50.0	300.00
(b)	Obra	3x33.0	99.00	3x33.0	99.00
(c)	Matatilla	3x10.0	30.00	3x10.0	30.00
(d)	Ganga Canal				
	Bhola	4x.375+2x.6+		4x.375+2x.6+	
	Salara	2x1.5+		2x1.5+	
	Nirgazni	2x2.5	10.70	2x2.5	10.70
(e)	Khara	3x24.0	72.00	3x24.0	72.00
(f)	Sobla & small hydro	6 +12.2	18.20	6 +12.2	18.20
	Total Hydro		529.90		529.90
	THERMAL				
(g)	Obra	5x50	250.00	4x40	160.00
(h)	Obra Extn. - I	3x100	300.00	3x94	282.00
(i)	Obra Extn. - II	5x200	1000.00	5x200	1000.00
(j)	Panki	1x32	32.00	1x32	32.00
(k)	Panki Extn.	2x110	220.00	2x105	210.00
(l)	Harduaganj - A	3x30	90.00	0	0.00
(m)	Harduaganj - B	2x50+2x60	220.00	1x40+2x55	150.00
(n)	Harduaganj - C	2x60+1x110	230.00	2x60+1x105	225.00
(o)	Paricha	2x110	220.00	2x110	220.00
(p)	Anpara - A	3x210	630.00	3x210	630.00
(q)	Anpara - B	2x500	1000.00	2x500	1000.00
	Total Thermal		4192.00		3909.00
	Total UP		4721.90		4438.90
11	UTTRANCHAL				
	HYDRO				
(a)	Khatima	3x13.8	41.40	3x13.8	41.40
(b)	Ramganga	3x66.0	198.00	3x66.0	198.00
(c)	Ganga Canal				
	Chitwa	2x1.5+		2x1.5+	
	Mohamedpur	3x3.1+		3x3.1+	
	Pathri	3x6.8	32.70	3x6.8	32.70
(d)	Yamuna (I & IV)				
	- Dhalipur	3x17.00+		3x17.00+	
	- Dhakrani	3x11.25+		3x11.25+	
	- Kulhal	3x10.00	114.75	3x10.00	114.75
(e)	Chibro	4x60.0	240.00	4x60.0	240.00
(f)	Khodri	4x30.0	120.00	4x30.0	120.00
(g)	Chilla	4x36.0	144.00	4x36.0	144.00
(h)	Maneri Bhali	3x30.0	90.00	3x30.0	90.00
	Total Hydro		980.85		980.85
Total Region (1 to 11)			30106.93		29594.77

SUMMARY OF THE EFFECTIVE GENERATING CAPACITY (MW)

Agency / Source	Hydro	Thermal	Gas/Diesel/Wind	Nuclear	Total	% of Total
NTPC	0.00	5825.00	2344.04	0.00	8169.04	27.60%
NHPC	2084.20	0.00	0.00	0.00	2084.20	7.04%
SJVNL	500.00	0.00	0.00	0.00	500.00	1.69%
NPC	0.00	0.00	0.00	1180.00	1180.00	3.99%
BBMB	2870.15	0.00	0.00	0.00	2870.15	9.70%
CHANDIGARH	0.00	0.00	1.40	0.00	1.40	0.00%
DELHI	0.00	396.50	612.00	0.00	1008.50	3.41%
HARYANA	48.00	1025.00	25.20	0.00	1098.20	3.71%
HIMACHAL	712.20	0.00	0.00	0.00	712.20	2.41%
J&K	311.69	0.00	182.18	0.00	493.87	1.67%
PUNJAB	1145.10	2130.00	0.00	0.00	3275.10	11.07%
RAJASTHAN	434.85	2295.00	52.51	0.00	2782.36	9.40%
UP	529.90	3909.00	0.00	0.00	4438.90	15.00%
UTTRANCHAL	980.85	0.00	0.00	0.00	980.85	3.31%
Total	9616.94	15580.50	3217.33	1180.00	29594.77	100.00%
% of TOTAL	32.50%	52.65%	10.87%	3.99%	100.00%	

Notes The above table does not take into account the shares of a state in power stations located in the neighbouring state. Such details are :

- (i) Haryana has one-third share in unit Nos. 2, 3, 4 at Indraprastha power stations of Delhi viz. 62.5 MW.
- (ii) HP has 25 % share in the Dhalipur, Dhakrani, Chibro and Khodri power houses of Uttranchal viz. 111.20 MW and 20 % share in the Kulhal and Khara hydro power houses viz. 20.40 MW. However, these shares are limited to actual physical drawals over designated transmission lines.
- (iii) HP has a fixed energy share (royalty) every month in the Shanan Power House of PSEB.
0.38 LU/Day to 2.22 LU/Day.
- (iv) HP has 4.6 % share in Ranjit Sagar Dam project of PSEB viz. 27.60 MW.
- (iv) The shares of Rajasthan in Chambal and Satpura projects are as under :

CHAMBAL

PROJECT	LOCATED	INSTALLED CAPACITY (MW)
Gandhi Sagar	M.P.	5 x 23 = 115
Rana Pratap Sagar	Rajasthan	4 x 43 = 172
Jawahar Sagar	Rajasthan	3 x 33 = 99
	Total	386

Rajasthan has 50 % share in the Chambal Projects viz. 193 MW.

SATPURA

PROJECTS	LOCATED	INSTALLED CAPACITY (MW)
Satpura TPS	M.P.	5x62.5+200.0+3x210.0 = 1142.50

Rajasthan has 40 % share in the first five units of Satpura TPS viz 125 MW.

II. BREAKUP OF HYDRO CAPACITY (MW) IN NORTHERN REGION AS ON 31.01.2004

Agency / Source	Run-of -the -river	Reservoir	Total
NHPC	1544.20	540.00	2084.20
BBMB	1155.15	1715.00	2870.15
SJVNL	0.00	500.00	500.00
DELHI	0.00	0.00	0.00
HARYANA	48.00	0.00	48.00
HP *	712.20	0.00	712.20
J&K	311.69	0.00	311.69
PUNJAB	545.10	600.00	1145.10
RAJASTHAN	262.85	172.00	434.85
UP	229.90	300.00	529.90
UTTRANCHAL	782.85	198.00	980.85
TOTAL	5591.94	4025.00	9616.94
PERCENTAGE	58.15%	41.85%	100%

* Includes Malana IPP (86 MW) & Baspal IPP (300 MW)

III.

Frequency Profile

Date	% of Time Frequency								
	< 48.00	< 48.50	< 49.00	<49.50	49.0-50.5	> 50.00	> 50.50	> 51.00	>51.50
01	0.00	0.00	6.70	50.12	93.30	20.76	0.00	0.00	0.00
02	0.00	0.00	14.69	57.64	85.31	17.26	0.00	0.00	0.00
03	0.00	0.00	16.67	64.65	83.33	4.93	0.00	0.00	0.00
04	0.00	0.00	12.81	68.06	87.19	6.01	0.00	0.00	0.00
05	0.00	0.00	24.13	67.15	75.87	2.26	0.00	0.00	0.00
06	0.00	0.00	16.19	62.96	83.81	9.97	0.00	0.00	0.00
07	0.00	0.00	23.56	63.10	76.44	4.24	0.00	0.00	0.00
08	0.00	0.00	3.95	39.62	96.05	18.01	0.00	0.00	0.00
09	0.00	0.00	12.59	48.50	87.41	12.62	0.00	0.00	0.00
10	0.00	0.00	4.06	27.93	95.94	23.24	0.00	0.00	0.00
11	0.00	0.00	1.21	15.48	98.79	51.68	0.00	0.00	0.00
12	0.00	0.00	1.04	13.31	98.96	50.17	0.00	0.00	0.00
13	0.00	0.00	3.90	33.08	96.10	25.37	0.00	0.00	0.00
14	0.00	0.00	1.74	22.92	98.26	33.58	0.00	0.00	0.00
15	0.00	0.00	3.68	30.35	96.18	32.36	0.54	0.00	0.00
16	0.00	0.00	6.52	46.37	83.48	18.10	0.00	0.00	0.00
17	0.00	0.00	3.72	31.22	96.28	15.76	0.00	0.00	0.00
18	0.00	0.00	1.42	12.29	98.58	56.25	0.00	0.00	0.00
19	0.00	0.00	7.60	48.13	92.40	23.06	0.00	0.00	0.00
20	0.00	0.00	15.32	55.82	84.68	6.11	0.00	0.00	0.00
21	0.00	0.00	0.28	9.11	95.34	70.69	4.38	0.00	0.00
22	0.00	0.00	0.03	4.17	81.76	76.59	18.21	0.00	0.00
23	0.00	0.00	13.16	43.35	68.59	34.43	18.25	0.00	0.00
24	0.00	0.00	2.88	17.47	96.84	55.59	0.28	0.00	0.00
25	0.00	0.00	4.83	28.09	95.17	40.03	0.00	0.00	0.00
26	0.00	0.00	2.08	12.08	97.92	57.12	0.00	0.00	0.00
27	0.00	0.00	0.21	14.80	99.79	60.02	0.00	0.00	0.00
28	0.00	0.00	0.90	16.39	99.10	35.69	0.10	0.00	0.00
29	0.00	0.00	3.61	23.81	96.39	31.03	0.00	0.00	0.00
30	0.00	0.00	6.56	32.60	93.44	29.65	0.00	0.00	0.00
31	0.00	0.00	1.42	23.82	96.53	44.51	2.05	0.00	0.00
Max	0.00	0.00	24.13	68.06	99.79	76.59	18.25	0.00	0.00
Min	0.00	0.00	0.03	4.17	68.59	2.26	0.00	0.00	0.00
Average	0.00	0.00	7.04	34.98	91.55	31.20	1.41	0.00	0.00

Frequency (Hz)				Average Frequency	Frequency Variation Index
Maximum		Minimum			
Freq	Time	Freq	Time		
50.31	16.02	48.59	18.10	49.59	3.44
50.30	17.03	48.59	18.07	49.46	4.70
50.30	20.46	48.62	07.19	49.53	5.28
50.34	06.04	48.62	10.08	49.66	4.91
50.42	05.04	48.59	10.03	49.70	6.10
50.45	13.08	48.59	21.04	49.72	5.15
50.35	17.03	48.61	18.08	49.79	5.78
50.30	03.05	48.57	6.23	49.56	2.67
50.24	23.58	48.62	17.23	49.43	3.94
50.31	05.14	48.78	18.15	49.73	2.18
50.37	05.13	48.58	18.11	49.74	1.11
50.30	21.59	48.61	07.31	49.64	1.04
50.50	02.58	48.96	18.18	50.19	2.35
50.74	02.12	49.24	05.28	50.17	1.62
51.28	03.06	48.75	17.50	50.19	2.14
51.23	03.12	48.73	19.07	49.99	3.33
50.34	00.06	48.56	07.23	49.68	2.28
50.33	05.09	48.66	18.12	49.80	1.07
50.28	03.35	48.59	18.09	49.51	3.37
50.32	03.39	48.69	09.11	49.77	4.65
50.59	23.49	48.60	09.57	49.92	1.08
50.64	00.57	48.58	18.14	49.74	1.27
50.37	03.26	48.62	21.12	49.72	5.03
50.40	06.03	48.56	18.23	49.55	1.58
50.52	06.07	48.70	10.07	49.62	2.10
50.40	07.04	48.59	10.05	49.50	1.22
50.59	03.18	48.80	08.07	49.86	1.12
50.51	3.44	48.62	12.09	49.86	1.17
50.38	03.39	48.61	21.32	49.61	1.82
50.31	03.39	48.59	12.07	49.50	2.57
50.37	08.04	48.58	21.07	49.34	1.98
51.28		49.24		50.19	6.10
50.24		48.56		49.34	1.04
50.45		48.66		49.71	2.84

IV.

Voltage Profile

Date	400 KV Dadri Voltage (kV)				400 KV Kanpur Voltage (kV)				220 KV BTPS Voltage (kV)				400 KV Moga Voltage (kV)			
	Maximum		Minimum		Maximum		Minimum		Maximum		Minimum		Maximum		Minimum	
	Voltage	Time	Voltage	Time	Voltage	Time	Voltage	Time	Voltage	Time	Voltage	Time	Voltage	Time	Voltage	Time
01	414	02.50	390	10.27	398	03.04	384	17.52	213	02.40	204	10.12	409	08.04	381	17.53
02	414	03.05	389	18.07	399	03.11	383	18.06	209	21.57	198	18.06	412	08.00	388	11.13
03	411	20.34	379	10.41	397	00.37	379	10.14	210	01.45	198	09.33	408	20.42	380	12.22
04	412	01.56	384	10.08	397	23.54	384	19.07	213	02.19	198	10.08	407	23.47	397	19.34
05	414	02.58	387	10.19	400	03.10	386	08.16	214	01.52	200	10.20	415	08.50	381	10.06
06	416	01.49	393	06.49	398	01.18	386	07.45	213	02.55	200	18.15	410	08.00	390	12.12
07	416	04.01	390	11.30	398	23.1	386	10.04	213	02.19	202	12.02	413	08.15	388	12.01
08	417	23.49	394	05.56	408	23.57	386	18.09	214	01.59	200	18.10	411	08.04	389	13.36
09	416	24.00	396	11.32	407	24.00	392	21.02	213	02.08	203	11.30	413	22.48	390	12.47
10	416	04.02	388	11.22	409	02.29	383	18.24	213	02.32	199	18.19	408	10.23	390	12.47
11	416	04.06	384	17.47	407	03.32	382	17.44	214	02.51	200	17.52	417	08.27	381	17.47
12	414	01.59	387	11.44	407	03.35	385	18.39	213	01.56	200	18.26	414	08.04	388	10.39
13	417	00.37	383	18.17	410	04.23	384	18.45	214	01.21	198	18.17	414	00.38	386	17.21
14	416	02.05	394	06.43	409	02.20	392	17.47	214	02.00	203	12.05	412	00.02	385	16.45
15	426	23.43	390	17.51	417	23.59	392	12.21	219	23.47	200	17.50	413	23.43	385	17.46
16	426	01.44	381	17.49	418	01.45	384	19.04	219	01.46	194	17.51	413	01.43	380	17.50
17	417	01.39	388	18.35	412	02.01	389	18.49	214	01.59	197	18.20	408	00.01	382	18.51
18	419	03.09	393	18.11	412	03.11	393	18.11	214	01.59	197	18.20	408	00.00	382	17.50
19	418	03.17	390	18.19	410	03.00	388	12.23	213	02.04	197	18.09	408	00.00	382	17.50
20	417	03.14	385	17.44	408	03.12	383	19.28	213	03.00	195	18.36	409	03.19	377	17.45
21	416	01.55	390	11.45	408	02.44	383	18.09	213	01.25	198	18.09	409	02.33	385	18.12
22	417	00.17	387	18.13	412	02.37	386	13.46	214	01.01	194	18.29	411	08.20	383	18.14
23	417	00.38	389	17.49	412	01.04	384	18.22	213	01.36	196	17.49	410	01.10	385	17.51
24	414	01.02	390	17.53	411	01.45	390	20.01	212	01.53	196	17.53	409	08.13	385	17.48
25	414	01.31	386	17.45	410	01.37	384	17.47	212	02.11	194	18.07	412	23.35	386	18.07
26	411	00.14	383	11.31	409	05.03	385	11.30	210	24.00	194	10.03	408	00.12	382	11.31
27	414	23.04	385	11.16	413	03.18	388	18.39	212	01.26	194	18.19	407	13.12	381	18.17
28	415	03.14	388	10.32	412	03.34	387	10.31	211	03.22	196	12.07	409	01.21	380	18.10
29	414	03.27	383	12.10	407	03.05	383	18.07	211	03.15	193	11.36	408	01.01	383	18.08
30	412	21.56	386	18.23	407	03.02	384	18.10	209	02.23	194	10.45	411	21.58	381	17.21
31	410	08.05	384	10.34	404	08.04	383	17.27	209	03.19	194	17.42	412	08.04	379	17.28
Max	426		396		418		393		219		204		417		397	
Min	410		379		397		379		209		193		407		377	

V. Regional Power Supply Position

(All Figs In MUs)

Date	Availability (Gross)	Peak Hrs. Requirement	Shortage/ Restriction	Availability (Gross)	Off Peak Hrs. Requirement	Shortage/ Restriction*	Regional Availability
	MW	MW	MW	MW	MW	MW	MU
01	21671	23361	1690	17539	18129	590	437.04
02	22045	23652	1607	17579	18169	590	402.91
03	21473	23187	1714	17525	18115	590	404.97
04	21244	23237	1993	17551	18136	585	434.68
05	21489	23314	1825	17339	17924	585	409.18
06	21788	23581	1793	17948	18533	585	441.06
07	21311	23359	2048	17831	18466	635	430.14
08	21530	23149	1619	17962	18547	585	448.65
09	22055	23618	1563	17838	18423	585	447.03
10	22079	23690	1611	17843	18428	585	442.41
11	21739	23281	1542	17955	18545	590	436.50
12	21786	23337	1551	17456	18046	590	448.30
13	21451	23343	1892	17710	18300	590	438.50
14	21528	23223	1695	17409	17999	590	440.35
15	21752	23470	1718	17153	17743	590	437.48
16	21505	23363	1858	17248	17838	590	441.58
17	21125	23014	1889	17141	17731	590	430.40
18	21393	22940	1547	16047	16632	585	424.42
19	21807	23444	1637	16344	16953	609	431.99
20	21884	23565	1681	16850	17435	585	434.53
21	20484	22019	1535	16320	16905	585	417.81
22	20689	22248	1559	14718	15018	300	400.63
23	20212	22155	1943	14119	14419	300	394.97
24	20853	22506	1653	15299	15884	585	402.17
25	20806	22424	1618	16085	16675	590	413.46
26	20029	21460	1431	15838	16428	590	409.99
27	20600	22253	1653	15447	16037	590	415.89
28	21138	22800	1662	16216	16806	590	425.44
29	21089	22824	1735	16413	17003	590	405.35
30	20889	22678	1789	16269	16859	590	428.08
31	20856	22665	1809	15299	15799	500	420.95
Maximum	22079	23690	2048	17962	18547	635	448.65
Minimum	20029	21460	1431	14119	14419	300	394.97
Average	21300	23005	1705	16784	17352	569	425.71

Note: * Shortage / Restriction figures are as given by the constituents.

VI. Daily Peak/Off-Peak Demand Met By Constituents (Sheet 1 of 2)

State	Punjab		Haryana		Rajasthan		Delhi		Uttar Pradesh	
Date	Peak	Off Peak	Peak	Off Peak	Peak	Off Peak	Peak	Off Peak	Peak	Off Peak
01	3660	2829	2734	2232	3826	3652	3145	1614	5016	5186
02	3697	2768	2612	2161	3902	3583	3128	1557	5018	4901
03	3462	2822	2610	2184	3903	3554	3115	1554	4973	5041
04	3507	2880	2413	2195	3706	3513	3077	1562	5028	4860
05	3557	2803	2575	2091	3836	3510	3223	1592	5021	5163
06	3689	2855	2588	2246	3893	3518	3081	1702	5165	5157
07	3623	2907	2543	2195	3700	3604	2975	1717	5197	5184
08	3684	3122	2590	2186	3780	3561	3141	1600	5020	5241
09	3725	3020	2770	2181	3763	3618	3016	1547	5293	5235
10	3646	3133	2859	2193	3847	3647	2919	1413	5455	3062
11	3723	3164	2771	2206	3743	3646	2770	1482	5459	4998
12	3645	2926	2833	1973	3776	3590	2847	1377	5340	5520
13	3589	2984	2616	2177	3750	3644	2934	1354	5247	5462
14	3645	2872	2558	2119	3669	3640	2881	1376	5351	5186
15	3628	2881	2684	2102	3989	3529	2872	1391	5358	4951
16	3372	2783	2582	2057	3741	3537	2698	1326	5277	5036
17	3238	2647	2481	2015	3717	3640	2927	1364	5240	5138
18	3422	2375	2655	1885	3673	3677	2783	1383	5235	4910
19	3494	2406	2830	1955	3759	3539	2864	1357	5262	4933
20	3446	2532	2790	2061	3928	3688	2959	1413	5368	4985
21	2875	2598	2386	2004	3720	3428	2966	1374	4904	4789
22	3167	1961	2423	1761	3681	3414	2946	1471	4860	4460
23	3061	1897	2509	1526	3640	3364	2891	1350	4903	4207
24	3209	2125	2662	1974	3740	3485	2854	1417	5086	4288
25	3080	2244	2540	1946	3726	3455	2714	1414	5005	4630
26	3138	1992	2495	1897	3426	3511	2534	1411	4794	4566
27	3173	1955	2590	1837	3599	3416	2743	1235	4980	4669
28	3195	2269	2508	1958	3649	3539	2822	1356	5174	4972
29	3330	2355	2617	1936	3574	3593	2869	1368	4992	4834
30	3101	2231	2415	1974	3684	3575	2986	1476	5031	4884
31	3075	2085	2497	1772	3566	3574	2961	1438	4869	4408
Maximum	3725	3164	2859	2246	3989	3688	3223	1717	5459	5520
Minimum	2875	1897	2386	1526	3426	3364	2534	1235	4794	3062
Average	3415	2594	2604	2032	3739	3556	2924	1451	5126	4866

Remarks: Peak - 1900 hrs offpeak - 0300 hrs

VI. Daily Peak/Off-Peak demand Met By Constituents (Sheet 2 of 2)

State	Uttaranchal		Chandigarh		Himachal Pradesh		Jammu & Kashmir	
Date	Peak	Off Peak	Peak	Off Peak	Peak	Off Peak	Peak	Off Peak
01	713	422	164	75	514	255	971	717
02	715	444	178	76	593	247	983	827
03	737	440	169	80	564	276	977	810
04	720	417	152	83	562	293	915	774
05	679	407	168	76	445	284	1029	810
06	578	415	163	79	545	320	935	803
07	664	455	162	83	606	285	881	803
08	653	424	157	78	516	289	983	761
09	623	392	151	71	543	292	950	791
10	729	512	151	71	539	296	983	783
11	623	405	132	68	515	295	963	801
12	623	405	152	66	556	287	944	783
13	649	404	138	70	490	291	992	768
14	680	414	149	71	559	295	949	766
15	637	407	147	67	538	299	984	759
16	690	408	154	72	540	288	961	773
17	699	364	147	65	451	296	861	744
18	673	373	133	56	541	257	958	498
19	675	399	151	64	546	274	953	776
20	692	397	156	70	469	284	894	732
21	676	420	160	73	531	268	1003	730
22	696	371	149	72	522	271	967	549
23	676	420	155	67	498	256	848	476
24	669	344	156	70	471	277	976	696
25	667	419	134	71	492	274	999	813
26	582	397	135	72	472	267	983	793
27	589	375	149	63	487	270	957	724
28	665	373	154	75	509	286	1027	752
29	617	399	150	74	534	275	971	723
30	608	422	160	70	516	275	1001	743
31	666	415	151	71	510	270	916	663
Maximum	737	512	178	83	606	320	1029	827
Minimum	578	344	132	56	445	247	848	476
Average	663	408	152	72	522	280	959	740

Remarks: Peak - 1900 hrs offpeak - 0300 hrs

VII Daily Energy Consumption By Constituents

(All Figs In MUs)

Date	Punjab	Haryana	Rajasthan	Delhi	UP	Uttaranchal	Chandigarh	HP	J & K	NFF/RAIL	Total
01	71.006	55.661	83.674	59.089	118.636	12.755	3.504	10.249	20.908	1.690	437.172
02	72.235	54.867	82.140	58.532	115.437	13.139	3.691	10.152	22.007	1.632	433.832
03	71.247	54.143	82.700	58.553	114.437	12.831	3.411	10.628	22.125	1.832	431.907
04	69.043	51.227	84.159	57.602	113.797	12.646	3.230	10.685	21.890	1.811	426.090
05	69.738	50.585	84.933	60.742	112.589	12.373	3.424	10.989	22.390	1.768	429.532
06	71.240	52.190	85.003	61.599	115.185	11.963	3.390	10.653	21.823	1.704	434.750
07	71.204	50.918	85.135	58.560	113.895	12.370	3.287	10.637	22.029	1.777	429.813
08	74.362	52.718	87.200	55.672	120.415	12.023	3.253	10.796	21.518	1.803	439.760
09	73.939	51.992	86.523	57.209	119.382	11.608	3.228	11.022	21.806	1.838	438.546
10	75.750	53.193	87.299	53.906	120.260	11.981	3.017	10.814	21.826	1.860	439.905
11	73.376	53.886	87.272	51.086	119.415	11.858	2.682	10.578	21.795	1.785	433.732
12	75.538	52.043	87.120	52.145	122.076	11.878	3.032	11.009	21.770	1.361	437.973
13	72.834	51.766	86.987	52.523	118.700	12.237	2.897	10.876	21.491	1.566	431.878
14	73.476	52.439	85.853	53.136	118.807	12.694	2.946	10.676	21.352	1.478	432.857
15	71.037	52.059	86.726	51.699	117.297	12.604	2.926	10.618	21.231	1.757	427.955
16	72.312	51.074	85.897	52.744	118.608	12.275	3.080	10.865	21.211	1.782	429.848
17	67.992	50.350	86.963	52.604	117.458	11.902	2.930	10.669	19.457	1.498	421.822
18	66.441	49.293	87.910	52.085	117.951	11.763	2.457	9.969	18.037	1.726	417.632
19	67.891	49.423	87.627	54.112	117.948	11.656	3.050	10.619	21.072	1.640	425.039
20	68.356	51.170	88.527	54.057	118.031	12.087	3.159	11.451	21.767	1.443	430.049
21	66.396	47.817	83.367	54.382	110.305	12.881	3.316	11.298	21.342	1.548	412.652
22	59.510	44.829	85.576	54.545	110.259	11.292	2.975	10.352	18.042	1.586	398.965
23	58.778	44.588	82.901	53.489	105.136	11.664	3.128	9.958	19.904	1.453	391.000
24	60.735	48.094	87.181	53.322	106.892	11.056	2.953	10.228	21.681	1.638	403.781
25	60.402	46.665	86.787	52.871	110.720	11.706	2.904	10.156	22.393	1.656	406.259
26	55.678	48.503	85.704	47.453	113.766	12.299	2.747	10.099	23.924	1.729	401.903
27	60.861	49.185	87.873	51.543	111.117	11.727	3.010	10.200	22.485	1.721	409.722
28	65.252	48.385	89.183	53.696	113.745	11.646	3.065	10.412	22.178	1.707	419.269
29	65.417	49.827	88.855	53.712	110.906	11.612	2.977	10.856	21.906	1.673	417.741
30	63.649	48.475	88.697	56.276	112.850	11.873	3.335	11.269	21.764	1.722	419.910
31	67.617	47.093	88.679	54.418	108.254	11.276	3.178	10.759	19.994	1.735	413.003
Maximum	75.750	55.661	89.183	61.599	122.076	13.139	3.691	11.451	23.924	1.860	439.905
Minimum	55.678	44.588	82.140	47.453	105.136	11.056	2.457	9.958	18.037	1.361	391.000
Average	68.171	50.466	86.273	54.625	114.977	12.054	3.103	10.630	21.391	1.675	423.364
Month Total	2113.315	1564.459	2674.452	1693.362	3564.275	373.675	96.182	329.541	663.116	51.919	13124.296

VIII. Schedule VS Actual Drawals of Northern Regional Constituents (Sheet 1 of 2)

Date	Punjab		Haryana		Rajasthan		Delhi		Uttar Pradesh		Uttaranchal	
	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual
1-Jan-2004	19709	19374	20802	27215	25879	31287	34653	26580	46227	46383	5738	6618
2-Jan-2004	19366	18574	21309	26338	27468	31192	33926	27610	47077	48071	6097	6695
3-Jan-2004	20061	18176	20743	25130	29933	31271	34859	26575	46955	51497	6185	6520
4-Jan-2004	19558	15571	20253	24432	30180	29427	31153	25664	45054	50008	6279	6817
5-Jan-2004	18934	14754	19354	24287	27892	30536	35487	28920	43112	45228	5899	6247
6-Jan-2004	19469	16721	20742	24560	29295	31709	36265	30284	44197	47341	6043	6200
7-Jan-2004	18543	15766	20297	23096	30663	31451	36068	30753	44159	48720	6073	6335
8-Jan-2004	18402	16796	21002	26177	33382	31609	36690	30696	46560	49963	6379	6198
9-Jan-2004	17471	16117	20987	24816	32846	30335	36940	30373	46133	51823	6309	6355
10-Jan-2004	18526	18253	21188	26031	32514	33264	35459	26362	47036	50335	6417	6485
11-Jan-2004	18364	18600	20860	25757	30978	33060	33147	23286	45446	47408	6227	6590
12-Jan-2004	18642	18761	20548	25909	31724	31587	31302	21860	46428	50254	6370	6418
13-Jan-2004	19092	17117	20669	25085	32181	30548	30141	22361	45942	51423	6306	6729
14-Jan-2004	19701	17435	20352	28569	32143	30680	31540	23218	46889	49752	6253	6907
15-Jan-2004	19432	18035	21061	27461	32211	33212	29259	22834	47132	46904	6314	7200
16-Jan-2004	19393	18110	20952	24120	33216	35082	27306	23801	48049	49420	6652	6950
17-Jan-2004	19490	17010	20039	24132	35463	41198	27744	22864	47917	48824	6414	6445
18-Jan-2004	20095	20316	20658	24606	37339	44575	27162	22301	48423	46415	6506	6338
19-Jan-2004	19642	15016	20399	24720	34715	42239	28992	24706	47878	47176	6586	6576
20-Jan-2004	20617	15957	20462	25622	35054	38784	28172	24633	48000	47528	6486	6566
21-Jan-2004	21478	21069	21228	23200	32116	32775	29304	25776	45545	40054	6374	8274
22-Jan-2004	20711	19556	19566	23615	29390	34065	29421	24504	40625	36927	6481	6604
23-Jan-2004	21161	21308	18656	23231	28300	37731	31020	24754	36774	32544	5818	4650
24-Jan-2004	21102	21820	19224	22621	27323	31775	30262	25935	37875	34513	5653	4391
25-Jan-2004	21871	20652	19642	21631	29317	35152	29577	24337	40466	39282	5389	6415
26-Jan-2004	20964	18904	19473	23261	29684	34631	29337	20213	42172	42415	5978	6847
27-Jan-2004	20678	20523	19521	22758	30485	31312	30489	23753	40125	43478	6631	6584
28-Jan-2004	21130	18757	19631	23864	30890	33791	30631	24056	44511	45125	6304	6936
29-Jan-2004	20083	17803	19332	22882	29856	33664	30142	23849	45723	46193	6328	6875
30-Jan-2004	19492	15207	19508	22761	28387	32075	30787	26673	46884	48818	6404	7381
31-Jan-2004	19948	20359	19493	23745	28437	33787	31001	25280	47100	43761	6504	6602
Total MU	613.125	562.417	627.951	761.632	959.261	1043.804	978.236	784.811	1396.414	1427.583	193.397	202.748
Max. MWH	21871	21820	21309	28569	37339	44575	36940	30753	48423	51823	6652	8274
Min MWH	17471	14754	18656	21631	25879	29427	27162	20213	36774	32544	5389	4391
Avg. MWH	19778	18142	20256	24569	30944	33671	31556	25316	45046	46051	6239	6540

VIII. Schedule vs Actual Drawals of Northern Regional Constituents (Sheet 2 of 2)

Date	Himachal Pradesh		Jammu & Kashmir		Chandigarh		NFF		Railways	
	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual
1-Jan-2004	7309	7710	16895	19889	3195	3504	456	323	1840	1367
2-Jan-2004	7157	7534	17271	20712	3239	3691	456	342	1804	1290
3-Jan-2004	7437	8163	17262	20872	3239	3411	456	341	1645	1482
4-Jan-2004	7356	8182	17228	20459	3177	3230	456	350	1910	1461
5-Jan-2004	7295	8500	16888	21004	3156	3424	456	356	1808	1412
6-Jan-2004	7498	8207	17212	20441	3123	3390	456	343	2088	1361
7-Jan-2004	7688	8310	17131	20545	3349	3287	456	356	1683	1421
8-Jan-2004	7940	8485	17067	20155	3213	3253	456	351	1735	1452
9-Jan-2004	8089	8729	17534	20481	3259	3228	456	342	1618	1496
10-Jan-2004	8395	8490	17348	20497	3331	3017	456	345	1923	1515
11-Jan-2004	8461	7911	17301	20466	3297	2682	456	303	1839	1482
12-Jan-2004	9232	9440	17901	20458	3397	3032	456	0	1308	1361
13-Jan-2004	9189	9520	18258	20122	3274	2897	456	0	1150	1566
14-Jan-2004	9213	9358	18167	20047	3270	2946	456	84	1242	1394
15-Jan-2004	9456	9276	16718	20052	3264	2926	456	261	1540	1496
16-Jan-2004	9076	9580	17398	19874	3279	3080	456	292	1545	1490
17-Jan-2004	8958	9347	17407	17993	3353	2930	456	287	1428	1211
18-Jan-2004	8796	8500	18665	16459	3382	2457	456	274	1860	1452
19-Jan-2004	8473	8111	18204	19527	3323	3050	456	50	1326	1590
20-Jan-2004	7700	8357	17033	19998	3358	3159	456	39	1571	1404
21-Jan-2004	7953	8882	16495	19592	3295	3316	456	146	1826	1402
22-Jan-2004	7940	7732	16776	16167	3261	2975	456	159	1427	1370
23-Jan-2004	7712	7234	17296	17894	3193	3128	456	0	956	1453
24-Jan-2004	7896	7603	17037	19721	3066	2953	456	130	952	1508
25-Jan-2004	7686	7435	17080	20402	3123	2904	456	119	1106	1537
26-Jan-2004	7520	7674	17045	21884	3147	2747	456	124	1011	1605
27-Jan-2004	7407	7400	17512	20555	3265	3010	456	118	1068	1603
28-Jan-2004	7457	7843	17266	20804	3249	3065	456	115	942	1592
29-Jan-2004	7643	8425	16870	20082	3231	2977	456	109	965	1564
30-Jan-2004	7902	8556	18153	19844	3209	3335	456	112	1147	1610
31-Jan-2004	7725	8131	18691	17983	3291	3178	456	118	1038	1617
Total MU	249.559	258.625	539.109	614.979	100.808	96.182	14.136	6.289	45.301	45.564
Max. MWH	9456	9580	18691	21884	3397	3691	456	356	2088	1617
Min MWH	7157	7234	16495	16167	3066	2457	456	0	942	1211
Avg. MWH	8050	8343	17391	19838	3252	3103	456	203	1461	1470

IX Schedule vs Actual Injection of ISGS (Sheet 1 of 4)

Date	Singrauli		Rihand		Dadri(T)		Unchahar-I		Unchahar-II		Dadri GPS	
	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual
1-Jan-2004	44040	44202	21840	21860	18264	18188	9122	9121	9144	9176	16033	16236
2-Jan-2004	44040	44231	21840	21869	17960	17899	9144	9129	9144	9170	16018	16020
3-Jan-2004	44040	44225	21840	21874	17192	17491	9144	9138	9144	9186	14899	14605
4-Jan-2004	39139	39295	21840	21870	13680	13606	9144	9144	9144	9180	15979	16133
5-Jan-2004	33360	33478	21840	21879	17900	17477	9144	9138	9144	9188	16019	16214
6-Jan-2004	33360	33502	21840	21870	18264	18229	9144	9157	9144	9182	16884	16962
7-Jan-2004	33407	33492	21840	21868	18264	18264	9144	9192	9144	9154	15884	16060
8-Jan-2004	42664	42803	21840	22029	18264	18224	9144	9181	9144	9166	15877	15798
9-Jan-2004	44040	44215	21840	22039	18264	18202	9144	9190	9144	9172	13719	13577
10-Jan-2004	44040	44218	21840	22000	18264	18121	9144	9165	9114	9145	16584	16577
11-Jan-2004	44040	44217	21840	21882	18264	17936	9144	9056	4477	4569	15281	15221
12-Jan-2004	44280	44483	21840	21837	17927	17603	9144	9123	7637	7622	14332	14321
13-Jan-2004	44280	44451	21840	21965	17489	17409	9144	9168	9144	9172	13235	13261
14-Jan-2004	44280	44466	21780	21826	17492	17511	8939	8965	9144	9181	14072	14146
15-Jan-2004	44082	44465	21714	21847	17120	17243	9106	9050	9056	9186	14096	14108
16-Jan-2004	44040	44439	21840	21917	17092	17226	9144	9153	9144	9203	14294	14377
17-Jan-2004	44040	44503	21840	21909	16280	16574	9144	9180	9144	9194	14564	14667
18-Jan-2004	44280	44386	21410	21333	16904	16297	9127	9118	9100	9109	14912	14924
19-Jan-2004	44280	44507	21840	21867	17332	17630	9144	9150	9144	9164	13638	13682
20-Jan-2004	44040	44764	21840	22102	17200	18128	9144	9154	9144	9177	13993	14061
21-Jan-2004	44040	43716	21840	21632	17602	16836	8002	7968	9114	8911	12939	12872
22-Jan-2004	36671	35335	21713	21134	16213	15894	8317	8309	8658	8616	10781	10824
23-Jan-2004	32558	32016	19433	18785	16532	16771	8755	8711	8747	8734	11172	11307
24-Jan-2004	38983	38792	20976	20980	16063	16311	8413	8806	8626	8892	9798	9787
25-Jan-2004	43770	43982	21565	21661	15831	16067	8305	9111	8573	9167	10268	10218
26-Jan-2004	43770	43728	21183	21155	15404	15399	8794	8947	8731	8826	10343	10306
27-Jan-2004	43770	43618	21470	21463	16592	16399	8339	8725	8297	8270	10415	10540
28-Jan-2004	44010	44126	21685	21815	17057	17137	8718	9056	8789	9049	10244	10231
29-Jan-2004	44010	44241	21685	21785	16947	17197	9042	9301	8958	9260	10999	11008
30-Jan-2004	43770	44003	21685	21930	17119	17169	9052	9050	8974	9021	11581	11522
31-Jan-2004	43770	43364	21685	21515	17137	16794	9028	8791	8903	8765	11470	11540
Total MU	1302.894	1305.263	671.104	671.498	531.913	531.232	277.363	279.447	272.914	274.807	420.323	421.105
Max. MWH	44280	44764	21840	22102	18264	18264	9144	9301	9144	9260	16884	16962
Min MWH	32558	32016	19433	18785	13680	13606	8002	7968	4477	4569	9798	9787
Avg. MWH	42029	42105	21649	21661	17158	17137	8947	9014	8804	8865	13559	13584

IX. Schedule vs Actual Injection of ISGS (Sheet 2 of 4)

Date	Anta GPS		Auraiya GPS		NAPS		RAPS-B		Bairasiul		Salal	
	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual
1-Jan-2004	7514	7716	9416	9325	7920	8264	8400	8218	450	461	3078	3153
2-Jan-2004	8289	8596	10268	10447	8736	8547	8400	8285	450	462	2776	2832
3-Jan-2004	8108	8407	10497	10436	8760	8610	8400	8311	450	463	2688	2752
4-Jan-2004	8254	8262	10648	10653	8808	8680	8400	8351	420	431	2874	2955
5-Jan-2004	8177	8269	10616	10555	8736	8689	8280	8320	420	432	2878	2948
6-Jan-2004	8550	8582	13776	13508	8784	8629	8280	8314	420	432	2878	2946
7-Jan-2004	8936	9001	13593	13374	8784	8562	8280	8297	420	432	2688	2751
8-Jan-2004	8218	8241	12077	11833	8784	8693	8280	8328	405	416	2688	2752
9-Jan-2004	7574	7720	12723	12589	8664	8654	8280	8285	405	416	2874	2939
10-Jan-2004	7284	7439	11830	11541	8784	8711	8280	8335	405	415	2688	2744
11-Jan-2004	6867	6971	10347	9862	8832	8647	8280	8375	420	432	2878	2948
12-Jan-2004	7423	7874	9542	9076	8832	8693	8280	8346	540	553	2878	2954
13-Jan-2004	7526	7910	9412	9091	8832	8645	8280	8326	450	461	2688	2735
14-Jan-2004	8213	8467	9607	9319	8736	8635	8280	8335	465	476	2973	3036
15-Jan-2004	8108	9015	9702	9553	8736	8605	8280	8320	450	462	2973	3049
16-Jan-2004	8101	8583	11563	11548	8736	8710	8280	8270	435	446	2688	2751
17-Jan-2004	8570	9166	12665	12449	8664	8609	8280	8259	450	462	2730	2808
18-Jan-2004	8593	8999	13043	12323	8760	8688	8280	8342	735	752	4121	4230
19-Jan-2004	8120	8538	11787	11463	8736	8689	8280	8289	510	522	3638	3726
20-Jan-2004	8386	9117	12127	11890	8688	8557	8280	8217	480	492	2973	3033
21-Jan-2004	7042	7128	11238	10418	8605	8456	8280	8331	510	522	3451	3522
22-Jan-2004	6036	6180	10771	10243	8640	8441	8280	8391	840	859	5431	5553
23-Jan-2004	4922	4863	9349	9371	8640	8469	8280	8316	870	894	6009	6148
24-Jan-2004	5642	5874	7203	7150	8544	8531	8280	8301	630	647	5409	5513
25-Jan-2004	5913	6342	8437	8576	8448	8435	8280	8284	600	617	4296	4386
26-Jan-2004	6908	7203	8562	8444	8448	8507	8280	8315	540	554	3871	3884
27-Jan-2004	7199	8257	8580	8442	8448	8489	8280	8322	495	509	3153	3242
28-Jan-2004	8608	9298	10735	10551	8448	8448	8280	8303	510	524	3676	3776
29-Jan-2004	7274	8221	11035	10859	8448	8486	8400	8258	480	494	3371	3449
30-Jan-2004	6677	7752	11119	11051	8424	8501	8400	8246	555	568	4746	4876
31-Jan-2004	7342	7497	11082	10933	8448	8447	8400	8253	675	693	5625	5750
Total MU	234.374	245.488	333.350	326.873	267.853	265.727	257.520	257.443	15.885	16.299	107.688	110.141
Max. MWH	8936	9298	13776	13508	8832	8711	8400	8391	870	894	6009	6148
Min MWH	4922	4863	7203	7150	7920	8264	8280	8217	405	415	2688	2735
Avg. MWH	7560	7919	10753	10544	8640	8572	8307	8305	512	526	3474	3553

IX. Schedule & Actual Injection of ISGS (Sheet 3 of 4)

Date	Tanakpur		Chamera		Uri		Bhakra Complex		Dehar		Pong	
	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual
1-Jan-2004	690	709	1647	1693	3499	3549	16768	16630	2719	2204	2478	3369
2-Jan-2004	684	697	1602	1640	3758	3812	16768	16687	2220	2553	3105	3760
3-Jan-2004	696	710	1602	1629	3923	4001	16783	16408	2443	2858	3524	4345
4-Jan-2004	717	723	1602	1644	3803	3863	16626	16344	2639	2938	4149	4096
5-Jan-2004	696	707	1691	1736	3567	3660	16458	16238	2906	3089	4149	3849
6-Jan-2004	657	672	1602	1646	3738	3830	16458	16212	2906	3041	3954	3590
7-Jan-2004	672	686	1602	1649	3687	3748	16468	16322	3148	2792	3603	3748
8-Jan-2004	648	662	1602	1646	3513	3552	16403	16273	2773	2499	3777	3916
9-Jan-2004	632	639	1602	1641	3388	3424	16403	16191	2785	2306	3985	4196
10-Jan-2004	637	643	1602	1643	3381	3446	16403	16420	2510	2477	4207	4366
11-Jan-2004	597	600	1602	1639	3440	3481	17015	16918	2505	2658	4362	4040
12-Jan-2004	648	658	1602	1644	3291	3339	17015	17055	2645	2782	4143	4445
13-Jan-2004	716	730	1602	1645	3114	3155	17015	17099	3110	3005	4609	4330
14-Jan-2004	651	663	1602	1642	3349	3411	17015	16990	2711	2495	4616	4699
15-Jan-2004	637	649	1602	1641	3273	3308	17015	16956	2711	2518	4616	4574
16-Jan-2004	719	731	1602	1651	3340	3410	17015	16914	2171	2012	4616	4555
17-Jan-2004	680	693	1602	1637	3518	3603	17015	17005	2306	2851	4513	4504
18-Jan-2004	689	699	1602	1640	5526	5637	17015	16681	2633	2653	4513	4637
19-Jan-2004	696	703	1602	1637	5313	5356	17025	16745	2613	2701	4513	4460
20-Jan-2004	672	686	1602	1628	4756	4847	16866	16456	2825	2895	4480	4147
21-Jan-2004	713	719	1602	1579	4716	4759	16813	16496	2929	2769	4299	4727
22-Jan-2004	696	706	1602	1629	5479	5633	16813	16830	3121	3165	4299	4760
23-Jan-2004	768	798	1602	1641	5815	5898	16824	16688	3358	4040	4300	3102
24-Jan-2004	870	887	1602	1640	6566	6638	14720	13943	4270	4194	1803	1703
25-Jan-2004	816	828	1602	1652	6763	6840	15205	15431	3403	3287	1998	2173
26-Jan-2004	774	784	1602	1633	6348	6484	15015	15057	3548	3222	2154	3013
27-Jan-2004	750	758	1602	1636	6223	6268	15027	14875	3555	3161	3040	3313
28-Jan-2004	684	705	1602	1648	5976	6005	15027	14813	2976	2944	3244	2786
29-Jan-2004	737	746	1602	1640	5486	5641	15207	14689	2785	2805	2791	2935
30-Jan-2004	672	656	1602	1640	5849	5939	15247	14781	2785	2780	2997	2929
31-Jan-2004	672	689	1602	1642	6122	6064	15258	14762	2785	3573	2814	1972
Total MU	21.586	21.936	49.796	50.951	140.520	142.601	506.705	500.909	88.794	89.267	115.651	117.039
Max. MWH	870	887	1691	1736	6763	6840	17025	17099	4270	4194	4616	4760
Min MWH	597	600	1602	1579	3114	3155	14720	13943	2171	2012	1803	1703
Avg. MWH	696	708	1606	1644	4533	4600	16345	16158	2864	2880	3731	3775

IX. Schedule & Actual Injection of ISGS (Sheet 4 of 4)

Date	Nathpa-Jhakri HEP		Chamera stage-II	
	Schedule	Actual	Schedule	Actual
1-Jan-2004	1050	7023	1214	1446
2-Jan-2004	3076	7000	944	1128
3-Jan-2004	6972	7151	944	1063
4-Jan-2004	6947	7159	944	1080
5-Jan-2004	5861	5852	1007	1132
6-Jan-2004	7129	7485	832	939
7-Jan-2004	6611	6848	297	1111
8-Jan-2004	6070	6254	830	1306
9-Jan-2004	6940	7132	937	1065
10-Jan-2004	5731	6004	972	1023
11-Jan-2004	6943	7075	1007	1106
12-Jan-2004	6631	6742	1007	1138
13-Jan-2004	6293	6454	874	897
14-Jan-2004	6710	6703	1054	1083
15-Jan-2004	6484	6676	883	1074
16-Jan-2004	6607	6889	944	970
17-Jan-2004	6237	6432	903	1137
18-Jan-2004	6607	6764	1249	1452
19-Jan-2004	6484	6762	903	951
20-Jan-2004	6607	6962	941	966
21-Jan-2004	6237	6416	1224	1254
22-Jan-2004	7099	6314	1314	1337
23-Jan-2004	6905	7027	1344	1384
24-Jan-2004	6402	6764	1074	1196
25-Jan-2004	5906	6083	1074	1202
26-Jan-2004	6278	6459	1154	1486
27-Jan-2004	6422	6679	1235	1269
28-Jan-2004	6719	7048	1235	1271
29-Jan-2004	5866	6196	1129	1161
30-Jan-2004	6113	6425	1194	1227
31-Jan-2004	6422	6629	1197	1223
Total MU	192.359	207.407	31.860	36.077
Max. MWH	7129	7485	1344	1486
Min MWH	1050	5852	297	897
Avg. MWH	6205	6691	1028	1164

X. Daily Generation Details of State Sector Stations

(All Figs In MUs)

Date	Punjab(T)	Punjab(H)	Haryana(T)	Haryana(H)	Rajasthan(T)	Rajasthan(H)	UP (T)	UP (H)	Uttaranchal(H)	Delhi	HP	J & K	Total
01	37.53	9.50	18.95	0.41	45.38	3.16	57.29	4.93	6.10	18.42	1.46	1.02	204.15
02	40.20	8.42	18.81	0.47	44.52	3.16	55.50	4.14	6.08	17.84	1.58	1.29	202.01
03	39.64	9.00	19.14	0.40	44.85	3.17	52.08	5.20	6.04	18.04	1.50	1.25	200.33
04	39.98	9.13	16.85	0.43	48.11	3.17	53.20	5.29	5.82	17.93	1.43	1.43	202.77
05	40.72	9.36	16.83	0.43	47.11	3.41	53.89	5.54	5.88	17.65	1.43	1.39	203.63
06	40.54	9.15	17.57	0.43	47.10	2.34	52.44	6.25	5.79	17.01	1.40	1.38	201.40
07	40.72	9.34	17.79	0.40	46.65	2.87	50.83	6.18	5.82	13.75	1.35	1.48	197.18
08	44.18	8.63	17.51	0.45	48.51	2.67	54.90	6.21	5.75	12.95	1.32	1.36	204.43
09	44.25	9.05	17.42	0.42	48.12	3.68	53.77	6.32	5.52	12.82	1.39	1.32	204.10
10	44.27	8.73	17.95	0.39	47.60	2.18	55.63	6.38	5.56	13.39	1.28	1.33	204.69
11	42.99	8.16	19.74	0.43	47.43	2.50	58.93	6.18	5.62	14.68	1.30	1.33	209.29
12	43.46	9.06	17.88	0.39	51.76	3.10	58.50	6.12	5.64	16.95	1.35	1.31	215.51
13	42.53	9.34	17.67	0.42	48.19	3.96	53.81	6.51	5.85	16.28	1.37	1.37	207.29
14	43.27	8.82	15.20	0.41	48.42	2.20	55.82	6.36	5.85	16.19	1.33	1.30	205.17
15	42.91	6.33	17.66	0.40	48.67	3.38	57.82	6.13	5.34	15.22	1.36	1.18	206.39
16	41.46	9.35	18.00	0.39	49.30	3.35	56.70	6.15	5.47	15.35	1.30	1.34	208.14
17	39.97	8.59	17.91	0.41	41.58	3.80	54.50	6.96	5.58	15.62	1.34	1.46	197.72
18	34.92	8.37	16.12	0.43	39.20	3.62	57.24	6.29	5.47	16.23	1.48	1.58	190.95
19	40.46	8.77	17.15	0.39	39.91	4.75	58.92	6.13	5.47	15.42	1.38	1.55	200.29
20	39.08	9.15	17.02	0.38	44.14	4.30	57.74	6.86	5.78	15.73	1.98	1.77	203.91
21	34.14	7.70	16.51	0.42	44.98	4.13	60.47	4.60	4.95	15.71	1.28	1.75	196.63
22	29.68	7.69	12.53	0.49	46.62	4.47	60.28	3.57	4.95	16.77	1.61	1.88	190.54
23	25.69	8.73	12.47	0.58	36.37	4.66	59.65	4.90	7.01	15.83	1.71	2.01	179.61
24	29.22	6.90	16.14	0.48	46.68	4.16	59.53	3.84	6.61	15.30	2.01	1.96	192.84
25	30.27	7.06	17.05	0.54	46.98	4.71	59.53	3.82	5.37	15.88	1.87	1.99	195.07
26	26.76	7.20	16.82	0.50	48.38	3.94	60.05	5.65	5.24	15.65	1.61	2.04	193.83
27	29.78	6.80	18.43	0.50	48.65	4.08	55.54	5.31	5.24	15.63	1.64	1.93	193.51
28	35.25	7.58	16.80	0.35	47.13	4.16	55.54	6.35	4.92	16.10	1.52	1.37	197.07
29	36.24	7.84	19.38	0.35	47.51	3.81	53.76	6.12	4.85	16.14	1.61	1.82	199.43
30	37.15	7.45	19.56	0.36	49.09	3.33	51.54	6.44	4.77	15.81	1.65	1.92	199.05
31	37.09	7.07	17.10	0.49	47.15	3.98	51.54	6.44	4.77	16.07	1.72	2.01	195.44
Maximum	44.27	9.50	19.74	0.58	51.76	4.75	60.47	6.96	7.01	18.42	2.01	2.04	215.51
Minimum	25.69	6.33	12.47	0.35	36.37	2.18	50.83	3.57	4.77	12.82	1.28	1.02	179.61
Average	37.88	8.33	17.29	0.43	46.33	3.55	56.03	5.72	5.58	15.88	1.50	1.55	200.08
Month Total	1174.35	258.29	535.94	13.32	1436.08	110.18	1736.93	177.20	173.07	492.36	46.53	48.14	6202.36

XI. Performance Of Generating Stations

S.No.	Power Station	Effective Capacity MW	Energy Generated during Jan, 2004 (Ex Bus MU)	Cummulative from 01.04.2003 (Ex-bus MU)
1	CENTRAL SECTOR			
A	NTPC (Thermal)			
(a)	Badarpur TPS	705.00	456.42	4101.88
(b)	Singrauli STPS	2000.00	1305.26	12238.22
(c)	Rihand STPS	1000.00	671.498	6000.01
(d)	Dadri NCTPS	840.00	531.23	4678.26
(e)	Unchahar-I TPS	420.00	279.45	2370.09
(f)	Unchahar-II TPS	420.00	274.81	2408.37
(g)	Tanda TPS	440.00	215.29	2097.72
(h)	Anta GPS	419.33	245.49	2213.38
(i)	Auraiya GPS	663.36	326.87	3482.67
(j)	Dadri GPS	829.78	421.11	4145.66
(k)	Faridabad GPS	431.57	236.43	2236.42
	Total NTPC	8169.04	4963.84	45972.66
B	NHPC			
(a)	Bairasiul	180.00	16.30	581.99
(b)	Salal	690.00	110.14	3137.42
(c)	Tanakpur HPS	94.20	21.94	472.38
(d)	Chamera HPS	540.00	50.95	2260.02
(e)	Uri HPS	480.00	142.60	2321.27
(f)	Chamera2 HPS	300.00	36.08	68.70
	Total NHPC	2284.20	378.01	8841.78
C	Nathpa-Jhakri	500.00	207.41	765.53
D	NPC			
(a)	RAPS -A	300.00	82.00	919.07
(b)	RAPS -B	440.00	257.44	2156.16
(c)	NAPS	440.00	265.73	2224.11
	Total NPC	1180.00	605.17	5299.34
2	JOINTLY OWNED (BBMB)			
(a)	Bhakra Complex	1490.15	500.91	5979.81
(b)	Dehar	990.00	89.27	2932.34
(c)	Pong	390.00	117.04	931.90
	Total BBMB	2870.15	707.22	9844.05
3	DELHI			
(a)	Indra Prastha	247.50	74.85	516.56
(b)	Rajghat	149.00	87.23	546.83
(c)	Gas Turbines	282.00	113.55	983.12
(d)	Pragati Gas	330.00	216.63	1909.15
	Total DELHI	1008.50	492.26	3955.65
4	HARYANA			
(a)	WYC	48.00	13.37	239.27
(b)	Faridabad (New)	165.00	67.53	541.73
(c)	Panipat	860.00	527.36	4334.54
(d)	Magnum Diesel(IPP)	25.20	0.00	26.32
	Total Haryana	1098.20	608.26	5141.86

contd/-

5	HP			
(a)	Giri	60.00	11.02	150.43
(b)	Bassi	60.00	7.14	284.63
(c)	Binwa	6.00	0.92	28.31
(d)	Rongtong (+Nogli+Micro+Thirot+Sal-2)	15.25	1.37	19.44
(e)	Andhra	16.95	1.78	63.98
(f)	Bhabha (H)	120.00	17.65	535.43
(g)	Baner (H)	12.00	0.96	34.37
(h)	Gaj (H)	10.50	1.43	40.67
(i)	Gumma	3.00	0.32	13.89
(j)	Ghanvi	22.50	2.40	60.25
(k)	Malana (IPP)	86.00	4.31	330.36
(l)	Baspa (IPP)	300.00	248.53	1634.27
	Total HP	712.20	297.83	3196.02
6	J & K			
(a)	Lower Jhelum	105.00	25.92	415.57
(b)	Upper Sindh	127.60	14.73	219.23
(c)	Ganderbal	15.00	2.73	19.62
(d)	Mohra	9.00	0.00	0.00
(e)	Chenani	32.80	4.74	56.45
(f)	Stakna	9.75	0.00	0.00
(g)	Small Hydel	3.54	0.00	0.00
(h)	Sewa	9.00	0.00	0.00
(i)	Diesel gen set	7.18	0.00	0.00
(j)	Pampore GT St - I	75.00	0.00	1.50
(k)	Pampore GT St - II	100.00	0.00	14.63
	Total J & K	493.87	48.12	727.01
7	PUNJAB			
(a)	Jogindernagar/ Shanan	110.00	12.63	504.46
(b)	UBDC	90.00	24.54	331.39
(c)	Mukerian	207.00	110.09	866.98
(d)	Anandpur Sahib (APS)	134.00	54.41	699.94
(e)	Ranjit Sagar HPS	600.00	57.62	1430.11
(f)	Small Hydel	4.10	0.76	3.84
(g)	GNDTPS (Bhatinda)	440.00	201.86	1930.84
(h)	GGSTPS (Ropar)	1260.00	692.21	6263.79
(i)	Jhalkeri	10.00	1.76	6.98
	Peda & Sugarmill		12.96	0.00
(j)	Lehra Mohabbat TPS	420.00	277.43	2626.84
	Total Punjab	3275.10	1446.26	14665.16
8	RAJASTHAN			
(a)	Mahi Bajaj Sagar	140.00	23.36	128.32
(b)	Rana Pratap Sagar (RPS)	172.00	50.27	216.04
(c)	Jawahar Sagar (JS)	99.00	37.36	185.30
(d)	ACW	9.00	1.17	6.10
(e)	MMH	14.85	1.29	11.01
(f)	Kota TPS	1045.00	614.55	4879.36
(g)	RAMGARH GT	3.00		
(h)	RAMGARH GT EXT	35.50	17.24	174.17
(i)	Suratgarh TPS	1250.00	808.43	6013.44
(j)	Wind Farm	14.01	1.13	89.08
(k)	Others (KPTL bio-mass)		2.27	14.18
	Total Rajasthan	2782.36	1557.06	11717.00

contd/-

9	U.P.			
	<u>HYDRO</u>			
(a)	Rihand	300.00	113.15	914.29
(b)	Obra	99.00	43.40	364.18
(c)	Matatilla	30.00	4.35	93.61
(d)	Ganga Canal	10.70	0.00	0.00
(e)	Small hydro	18.20	0.00	0.00
(f)	Khara	72.00	16.97	359.72
	Total U.P. (Hydro)	529.90	177.87	1731.79
	<u>THERMAL</u>			
(e)	Obra	1442.00	471.85	4727.79
(f)	Panki	242.00	99.46	765.74
(g)	Harduaganj	375.00	66.11	505.43
(h)	Paricha	220.00	65.85	422.77
(i)	Anpara	1630.00	1024.82	8683.28
	Total U.P. (Thermal)	3909.00	1728.10	15105.01
	Total U.P.	4438.90	1905.97	16836.81
10	UTTRANCHAL			
(a)	Khatima	41.40	10.01	155.10
(b)	Ramganga	198.00	24.15	86.00
(c)	Ganga Canal	32.70	10.85	109.04
(d)	Yamuna (I & IV)	114.75	23.59	506.02
(e)	Chibro	240.00	30.56	757.83
(f)	Khodri	120.00	15.31	354.93
(g)	Chilla	144.00	30.23	638.07
(h)	Maneri Bhali	90.00	27.37	434.99
	Total Uttranchal	980.85	172.05	3041.98
11	CHANDIGARH			
	Diesel gen set	1.40		
	Total Region	29794.77	13389.45	130004.85

Notes : 1. The ex-bus generations are either actual values or based on the following assumptions in respect of auxiliary consumption

-----Hydro and diesel/gas power stations in open cycle-----1.0%

-----Gas power stations in combined cycle-----3.0%

-----Coal fired power stations

IP ----12% Rajghat----11% Faridabad----13.5% Suratgarh----10.0%

Panipat----12.0% RTP----7.5% GNDTP----10.5% Tanda----12.5%

Lehra Mohabbat----10.5% KTPS----10% UP----12.5%

XII. DETAILS OF ENERGY EXCHANGES THROUGH BILATERAL AGREEMENTS (INTRA-REGIONAL) DURING JANUARY 2004**(ALL FIGS IN MWH)**

FROM / TO	PUNJAB	HARYANA	RAJASTHAN	DELHI	UP	UTTRANCHAL	HP	J & K	CHANDIGARH
PUNJAB	-	-	-	3300 *	-	-	-	-	-
HARYANA	-	-	-	10975 **	-	-	-	-	-
RAJASTHAN	-	-	-	55250 ** 9600***	-	-	-	-	4960 *
DELHI	-	-	-	-	-	-	-	-	-
UP	-	-	-	-	-	-	-	-	-
UTTRANCHAL	31985 ***	-	-	-	-	-	-	-	-
HP	51274 ***	-	-	21250 *	-	-	-	-	-
J & K	33650 ***	-	-	26000 *	-	-	-	-	-
CHANDIGARH	-	-	-	-	-	-	-	-	-

* Through PTC

** Through Mutual

*** Through Banking

REMARKS : Figures are provisional and indicative only.

XIII. DETAILS OF ENERGY EXCHANGES THROUGH BILATERAL AGREEMENTS (INTER-REGIONAL) DURING JANUARY 2004
(ALL FIGS IN MWH)

FROM / TO	GRIDCO	MP	WBPCL	DVC	APTRCO	CSEB	GEB	GOA	KEB
PUNJAB	-	-	-	-	-		-	-	
HARYANA	-	-	-	-			-	-	
RAJASTHAN	-	-	4914 * 865 * (SR)	40335 * 26086 * (SR)			-	-	
DELHI	1325 * 20600 ***	-28950 *	80720 *	9300 *	4048 * (SR)	-1438 *	-20850 *	10529 **	-150 *
	8217 * (SR) 5072 *** (SR)								
UTTRANCHAL	-	-	-	-	-	-	-	-	
J & K	-	-	64988 *	-	-	-	-	-	
CHANDIGARH	146 *** (SR)								

* Through PTC

(+) Import by NR constituents

(-) Export by NR constituents

** Through Global Energy Limited

*** Throgh NVVN

REMARKS : provisional and indicative only

XIV. Inter Regional Exchanges During January 2004 (Sheet 1 of 2)

1 OF 2

Date	Wiith WR Over Vindhyachal HVDC B/B {Export (-)/Import(+)}							With WR Over Auraiya - Malanpur {Export(-)/Import(+)}						
	Peak MW	Off Peak MW	Max Import	Max Export	Energy Import	Energy Export	Net (MU)	Peak MW	Off Peak MW	Max Import	Max Export	Energy Import	Energy Export	Net (MU)
01	0	50	150	150	1.13	0.09	1.04	-170	-165	0	175	0.00	3.64	-3.64
02	0	-50	200	50	0.72	0.19	0.53	-140	-126	0	149	0.00	3.28	-3.28
03	0	200	200	100	2.82	0.00	2.82	-124	-127	0	149	0.00	3.53	-3.53
04	0	-100	250	100	2.02	0.21	1.81	-120	-145	0	145	0.00	3.53	-3.53
05	98	-100	400	100	3.44	0.48	2.96	-65	-110	0	110	0.00	2.24	-2.24
06	93	0	400	0	3.63	0.00	3.63	-173	-175	0	190	0.00	2.81	-2.81
07	100	100	435	0	4.61	0.00	4.61	-55	-170	0	188	0.00	2.41	-2.41
08	100	-53	421	53	4.53	0.18	4.35	-55	-55	0	55	0.00	1.34	-1.34
09	100	-253	500	100	5.02	0.81	4.21	-55	-55	0	55	0.00	1.30	-1.30
10	150	-100	423	150	4.14	0.41	3.74	-56	-52	0	58	0.00	1.39	-1.39
11	50	0	286	200	2.89	0.14	2.75	-57	-55	0	57	0.00	1.46	-1.46
12	50	-100	422	200	2.63	0.78	1.85	-55	-50	0	55	0.00	1.29	-1.29
13	0	-253	376	300	2.20	1.68	0.52	-55	-50	0	55	0.00	1.25	-1.25
14	0	-150	386	150	2.10	0.83	1.27	-54	-55	0	62	0.00	1.32	-1.32
15	0	-50	386	150	2.15	0.48	1.67	-54	-55	0	62	0.00	1.34	-1.34
16	0	-250	430	250	3.34	1.34	2.00	-54	-55	0	62	0.00	1.20	-1.20
17	0	-150	379	250	2.64	0.95	1.69	-55	-52	0	60	0.00	1.34	-1.34
18	0	-400	283	400	1.16	2.82	-1.66	-54	-50	0	65	0.00	1.33	-1.33
19	0	-300	238	400	1.42	2.09	-0.67	-53	-52	0	62	0.00	0.72	-0.72
20	0	-400	143	400	0.82	2.21	-1.39	-54	-50	0	65	0.00	1.28	-1.28
21	0	-300	236	350	0.81	2.01	-1.20	-52	-51	0	64	0.00	0.82	-0.82
22	0	-450	200	450	0.60	3.07	-2.47	-50	-49	0	55	0.00	1.01	-1.01
23	0	-200	392	200	2.80	1.27	1.53	-50	-51	0	55	0.00	1.08	-1.08
24	0	-200	200	300	0.95	1.67	-0.72	-50	-51	0	55	0.00	1.13	-1.13
25	0	-250	192	250	0.61	1.65	-1.04	-50	-51	0	55	0.00	1.15	-1.15
26	0	-200	286	200	1.38	1.68	-0.30	-52	-49	0	53	0.00	1.09	-1.09
27	0	-250	286	250	1.33	1.66	-0.33	-47	-36	0	47	0.00	1.17	-1.17
28	0	-250	283	250	1.39	1.61	-0.22	-50	-40	0	50	0.00	1.24	-1.24
29	0	-300	150	300	0.41	1.71	-1.30	-55	-50	0	50	0.00	1.23	-1.23
30	0	-300	100	300	0.70	1.38	-0.68	-50	-48	0	55	0.00	1.15	-1.15
31	0	-250	250	100	0.39	1.93	-1.54	-51	-48	0	55	0.00	1.15	-1.15
Maximum	150	200	500	450	5.02	3.07	4.61	-47	-36	0	190	0.00	3.64	-0.72
Minimum	0	-450	100	0	0.39	0.00	-2.47	-173	-175	0	47	0.00	0.72	-3.64
Average	24	-171	299	208	2.09	1.14	0.95	-68	-72	0	80	0.00	1.62	-1.62
Total					64.78	35.33	29.45					0.00	50.22	-50.22

XIV. Inter Regional Exchanges During January 2004 (Sheet 2 of 2)

2 of 2

Date	With WR Over Ujjain - Kota {Export(-)/Import(+)}							With ER {Export(-)/Import(+)}						
	Peak MW	Off Peak MW	Max Import	Max Export	Energy Import	Energy Export	Net	Peak MW	Off Peak MW	Max Import	Max Export	Energy Import	Energy Export	Net
	MW	MW	MW	MW	MU	MU	MU	MW	MW	MW	MW	MU	MU	MU
01	0	0	0	0	0.00	0.00	0.00	408	408	500	0	10.55	0.00	10.55
02	0	0	0	0	0.00	0.00	0.00	408	457	460	0	10.56	0.00	10.56
03	0	0	0	0	0.00	0.00	0.00	406	407	457	0	10.37	0.00	10.37
04	0	0	0	0	0.00	0.00	0.00	450	402	500	0	10.63	0.00	10.63
05	70	0	0	0	0.00	0.62	-0.62	402	500	500	0	11.37	0.00	11.37
06	0	0	0	0	0.00	0.00	0.00	500	401	500	0	10.91	0.00	10.91
07	100	0	0	105	0.00	1.18	-1.18	401	450	500	0	11.17	0.00	11.17
08	80	80	0	80	0.00	2.08	-2.08	403	452	453	0	10.51	0.00	10.51
09	80	80	0	80	0.00	2.20	-2.20	399	453	500	0	9.71	0.00	9.71
10	100	90	0	100	0.00	2.25	-2.25	397	450	451	0	10.49	0.00	10.49
11	100	90	0	100	0.00	2.25	-2.25	402	451	500	0	11.23	0.00	11.23
12	-105	-90	0	105	0.00	2.25	-2.25	404	454	459	0	10.63	0.00	10.63
13	-100	-110	0	110	0.00	2.34	-2.34	409	459	459	0	10.72	0.00	10.72
14	-100	-100	0	110	0.00	2.22	-2.22	408	459	459	0	10.69	0.00	10.69
15	-115	-75	0	115	0.00	2.16	-2.16	308	354	458	0	9.33	0.00	9.33
16	-100	-80	0	100	0.00	2.24	-2.24	311	458	500	0	9.96	0.00	9.96
17	-100	-100	0	100	0.00	2.26	-2.26	311	410	460	0	9.05	0.00	9.05
18	-101	-100	0	105	0.00	2.17	-2.17	311	411	460	0	9.79	0.00	9.79
19	-100	-90	0	102	0.00	2.06	-2.06	311	411	464	0	9.55	0.00	9.55
20	-100	-85	0	103	0.00	2.12	-2.12	307	405	460	0	9.70	0.00	9.70
21	-90	-85	0	103	0.00	1.98	-1.98	322	407	482	0	9.71	0.00	9.71
22	-90	-80	0	100	0.00	1.99	-1.99	332	132	482	0	7.92	0.00	7.92
23	-90	-75	0	100	0.00	1.48	-1.48	332	282	482	0	9.22	0.00	9.22
24	-90	-75	0	100	0.00	1.92	-1.92	332	282	482	0	8.81	0.00	8.81
25	-90	-75	0	100	0.00	2.05	-2.05	312	337	500	0	9.09	0.00	9.09
26	-110	-80	0	110	0.00	1.95	-1.95	312	337	462	0	9.48	0.00	9.48
27	-100	-80	0	105	0.00	2.02	-2.02	307	332	462	0	9.57	0.00	9.57
28	-90	-65	0	90	0.00	1.89	-1.89	309	337	462	0	9.37	0.00	9.37
29	-90	-65	0	90	0.00	1.87	-1.87	313	360	500	0	10.08	0.00	10.08
30	-100	-80	0	100	0.00	1.95	-1.95	313	363	463	0	9.57	0.00	9.57
31	-100	-80	0	100	0.00	1.87	-1.87	313	338	468	0	9.31	0.00	9.31
Maximum	100	90	0	115	0.00	2.34	0.00	500	500	500	0	11.37	0.00	11.37
Minimum	-115	-110	0	80	0.00	0.00	-2.34	307	132	451	0	7.92	0.00	7.92
Average	-46	-43	0	101	0.00	1.66	-1.66	360	392	476	0	9.97	0.00	9.97
Total					0.00	51.38	-51.38					309.05	0.00	309.05

XV. Progress Of Installation Of Shunt Capacitors As On 31.01.2004**(ALL FIGS IN MVARs)**

CONSTITUENT	REQUIREMENT AT THE END OF Mar-04	CAPACITORS AS ON 31.03.2003	CAPACITORS ADDITION DURING		BALANCE TO BE INSTALLED DURING 2003-04	CAPACITORS INSTALLED AS ON 31.01.2004
		INSTALLED	2002-03	2003 - 04		
Chandigarh	150	92	0	0	58	92
Delhi	3364	2755	122	222	387	2877
Haryana	3435	2685	333	438	312	3018
H.P.	347	278	73	17	52	351
J & K	892	147	0	0	745	147
Punjab	4874	4706	76	15	153	4782
Rajasthan	2863	2698	221	162	3	2919
U.P.	5495	4965	274	106	424	5239
Uttaranchal	344	123	0	2	219	123
BBMB	381	381	0	0	0	381
TOTAL	22145	18830	1099	962	2353	19929

SOURCE: Minutes of 348th OCC meeting of NREB held on 19th January, 2003.

XVI. Hydraulic Data For Reservoirs During January 2004

Item	Bhakra	Pong	Rihand	R.P.S.	Gandhi Sagar (M.P.)
Full Reservoir Level (m) (FRL) (ft)	514.50 1688.00	433.12 1421.00	268.22 880.00	352.65 1157.00	402.64 1321.00
Min. Draw Down Level (m) (MDDL) (ft)	445.62 1462.00	384.05 1260.00	252.98 830.00	342.90 1125.00	381.00 1250.00
Level on last day of January 2004 (m)	485.35 1592.36	406.05 1332.17	260.91 856.00	344.65 1130.73	382.55 1255.07
Level on last day of January 2003 (m)	476.92 1564.70	400.26 1313.19	260.82 855.70	347.09 1138.74	379.63 1245.52
Live Capacity as on (mhmt) last day of January 2004 (maft)	0.32 2.57	0.22 1.82	0.25 2.05	0.02 0.16	0.03 0.23
Live Capacity as on (mhmt) last day of January 2003(maft)	0.25 2.02	0.18 1.42	0.23 1.85	0.06 0.48	0.00 0.00
Energy content as on last day of January 2004 (MU)	1150.00	310.00	480.00	34.00	70.00
Energy content as on last day of January 2003 (MU)	870.00	240.00	475.00	47.00	0.00
Maximum level (m) (ft) (date)	493.17 1618.02 01.01.2004	408.86 1341.40 01.01.2004	262.74 862.00 01.01.2004	346.37 1136.38 01.01.2004	383.41 1257.90 01.01.2004
Minimum level (m) (ft) (date)	485.35 1592.36 31.01.2004	406.05 1332.17 31.01.2004	260.91 856.00 31.01.2004	344.65 1130.73 31.01.2004	382.55 1255.07 31.01.2004

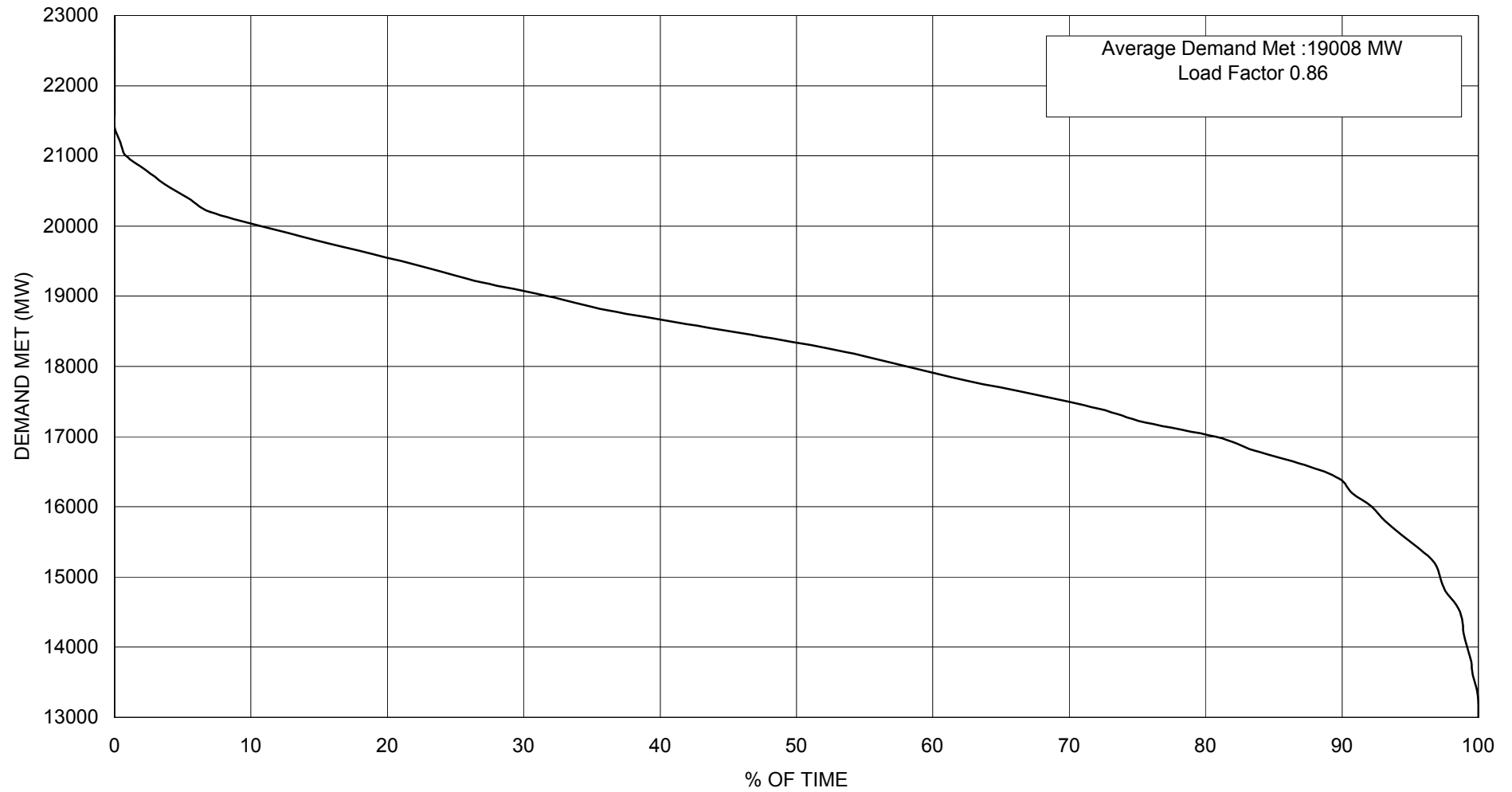
Energy content of Bhakra : Total Energy content at Bhakra, Ganguwal and Kotla power stations

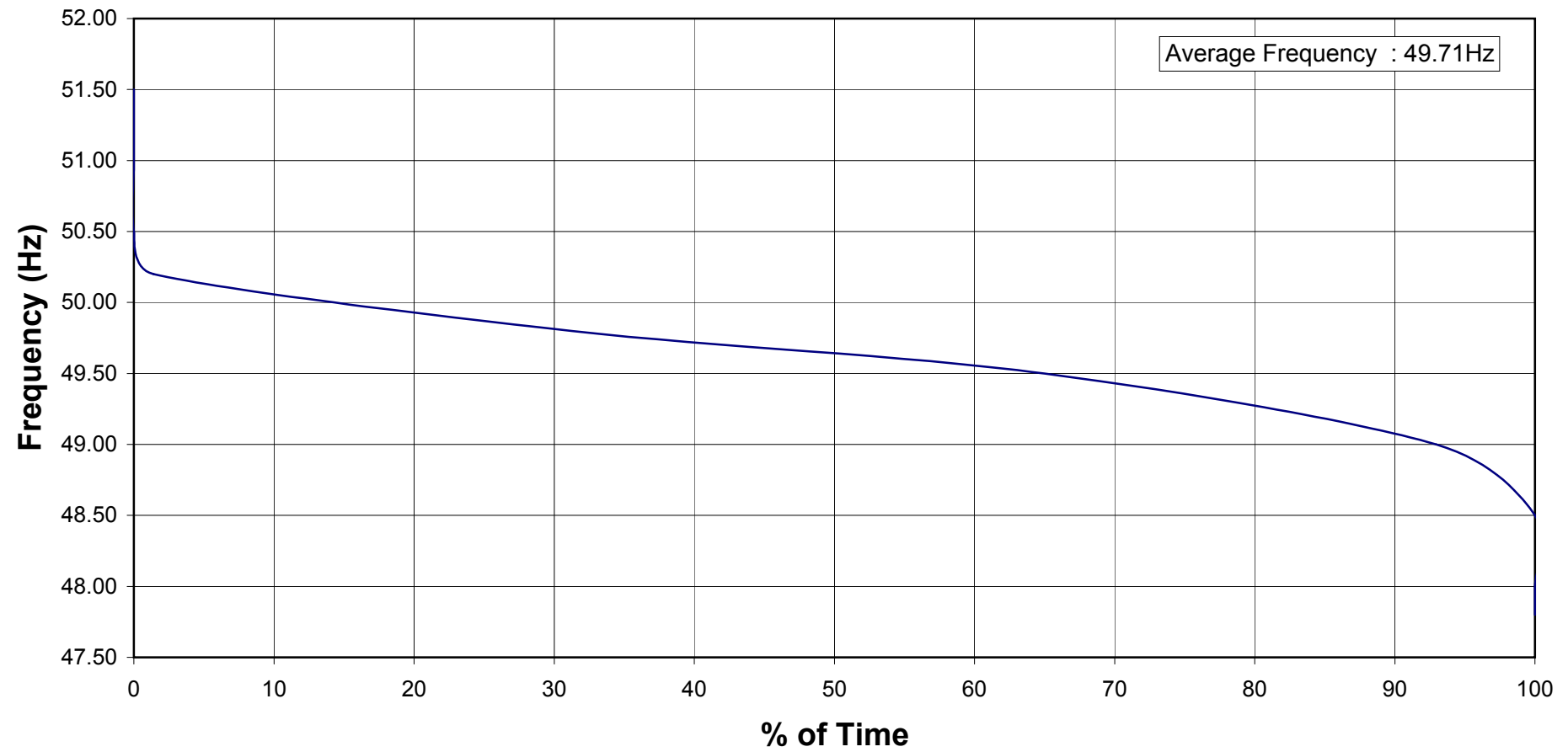
Energy content of Rihand : Total Energy content at Rihand & Obra power stations

Energy content of RPS : Total Energy content of Rana Pratap Sagar and Jawahar Sagar Power Stations.

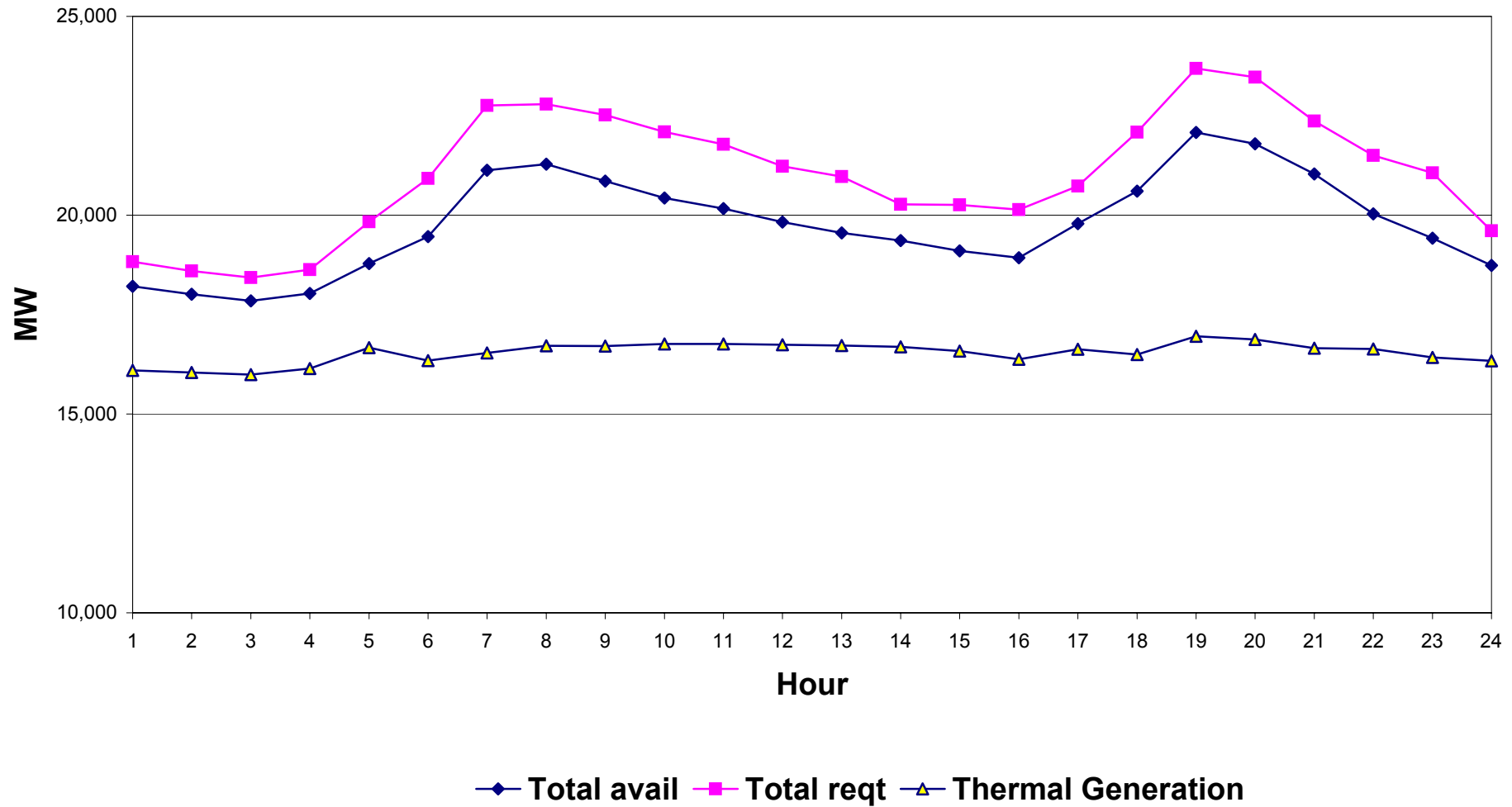
Energy Content of G. Sagar : Total Energy content at Gandhi Sagar, RP Sagar and Jawahar Sagar Power Stations.

Load Duration Curve For Northern Region For January 2004

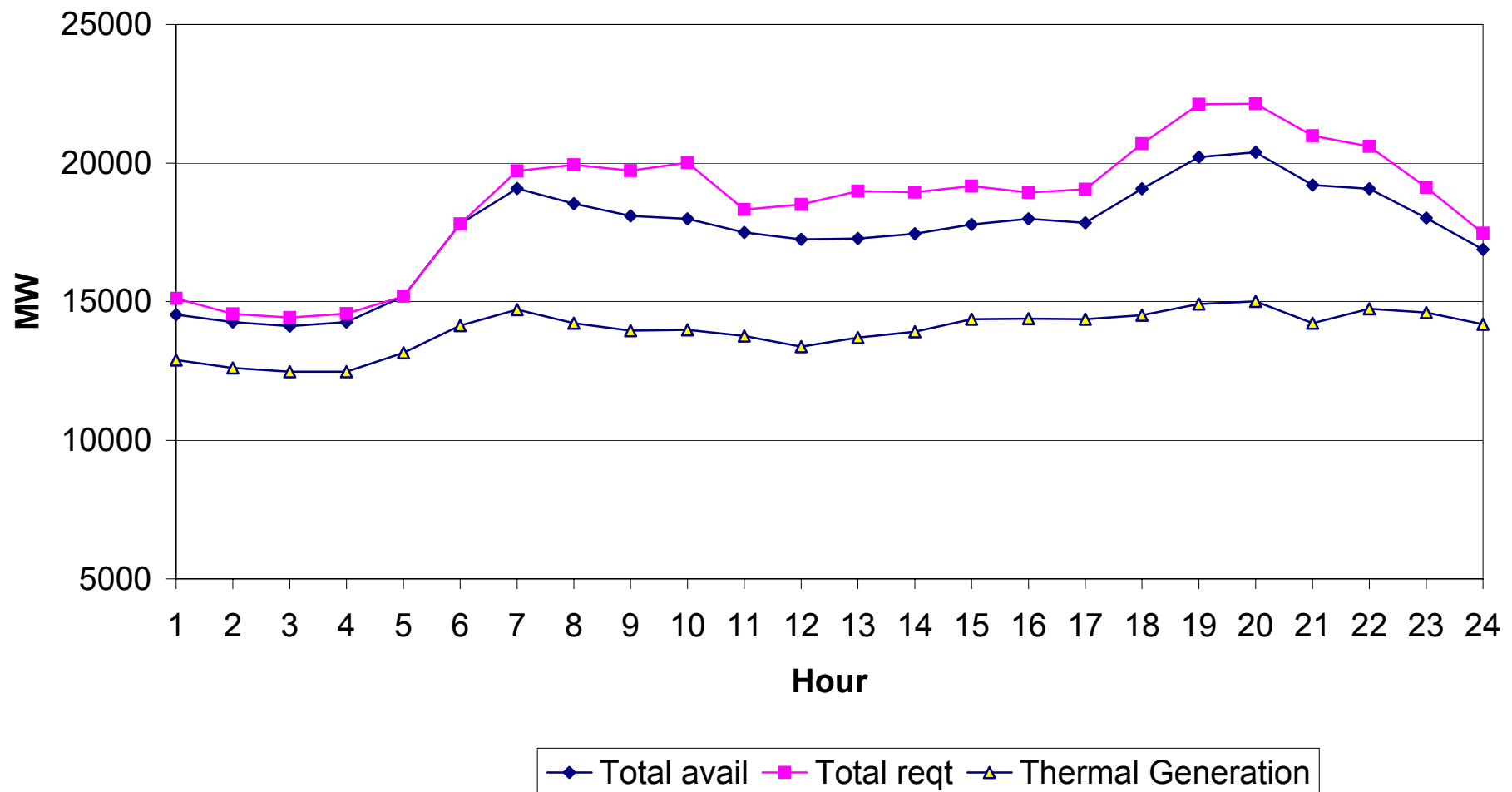


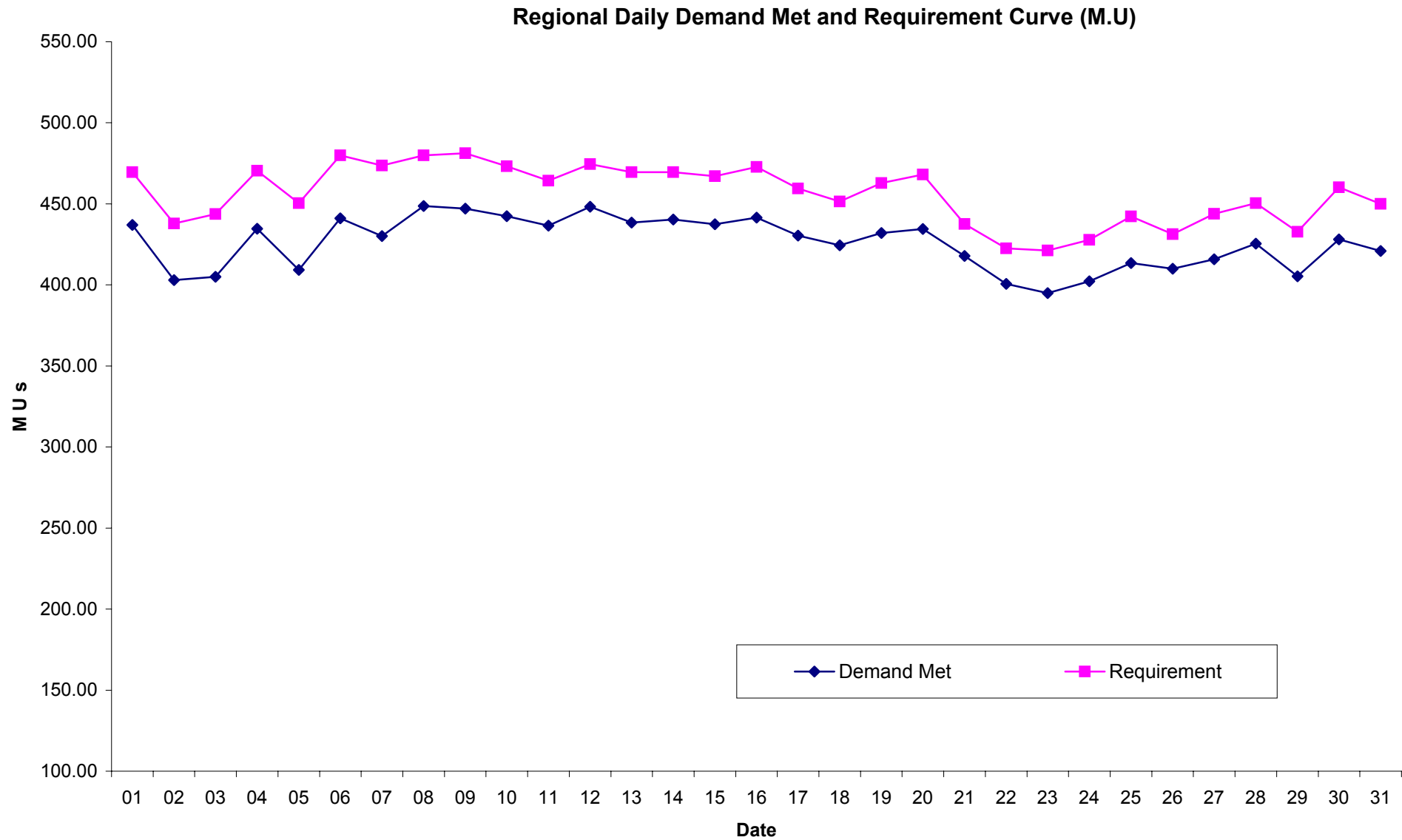
Frequency Duration Curve For Northern Region For January 2004

Load Curve Of Northern Region For Maximum Demand Met Day (10th January 2004)



Load Curve Of Northern Region For Minimum Demand Met Day (23rd January 2004)





Grid Incident during January 2004

DATE	TIME	INCIDENT
23.01.2004	05.20 hrs.	A bus fault occurred due to snapping of jumper of A phase of bus-II isolator of 220 kV Sikar - reengus -II. This resulted in tripping of all the lines emanating from 220 kV reengus GSS. With the tripping of the above 220 kv Ratangarh - Jhunjhunu and 220 kv Bikaner - Nagaur lines tripped on Powe Swing. This caused tripping of all the running machines at Suratgarh on overspeed due to load throw off.