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NORTHERN REGION GRID REPORT FOR THE MONTH OF MAY 2003

A) Summary Report

1. Grid Overview during the Month

During the month of May 2003 the average system frequency was 49.98 Hz and frequency remained in the normal range i.e. between 49.0 & 50.5 Hz for 88.50% of the time compared to 68.56% during the last year i.e. May 2002. Frequency variation index during the month was below 2.0 for most of the times. However, large gap between maximum and minimum frequencies and fluctuation in frequency from low to high and vice-versa reminds the need of implementation of free governor operation on all generating units in the region at the earliest.

Overall voltage profile in the grid during the month has been better on most of the 400 kV buses compared to last year. For example, the minimum voltages at 400 kV Dadri and 220 kV BTPS were 378 kV and 189 kV compared to last year i.e. 368 kV and 170 kV respectively. There was no major transmission outage during May 2003. 220 kV Kishanpur-Pampore line-I remained out w.e.f 26.04.2003 to 04.05.2003 due to jumper snapping. During this period generation at Uri had to be regulated to control the loading of 220 kV Kishanpur-Pampore line-II, which was changing quite frequently due to variation in load of valley area of J&K.

During May 2003 there was no major grid incident. However there were some minor incident which are reported at annexure-IV

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

- i) Baspa # 1 synchronised on 12.05.2003 at 17.45 hrs. and declared under commercial operation w.e.f 06.00 hrs. of 24.05.2003.
- ii) Baspa # 2 synchronised on 14.05.2003 at 17.06 hrs. and declared under commercial operation w.e.f 19.00 hrs. of 29.05.2003.
- iii) Baspa # 3 synchronised on 27.05.2003 at 18.34 hrs.

3. Frequency Profile :

Maximum frequency	51.40	Hz	at	19.02	hours on	18.05.2003
Minimum frequency	48.19	Hz	at	23.51	hours on	19.05.2003
Average frequency	49.96	Hz				

Frequency distribution in %

Hz	< 48.5	<49.0	49.0-50.5	> 50.5
% of time	0.04	0.90	88.50	10.60

Frequency Variation Index

Monthly Average	1.71
Maximum	3.46
Minimum	0.83

4. Power Supply Position :

a. Average Energy/day (Net)

State / U.T.	Demand met MU/Day	Requirement MU/Day	Shortage MU/Day	Shortage %
Punjab	83.65	85.59	1.94	2.27
Haryana	51.95	52.53	0.58	1.10
Rajasthan	68.56	68.56	0.00	0.00
U.P.	112.13	132.82	20.69	15.58
Utttranchal	10.50	10.77	0.27	2.51
Delhi	59.39	60.02	0.63	1.05
H.P.	9.32	9.32	0.00	0.00
J & K	17.00	19.50	2.50	12.82
Chandigarh	3.22	3.22	0.00	0.00
N.F.F./Rail	1.83	1.83	0.00	0.00
Total	415.65	438.93	23.28	5.30

b. Peak MW

State / U.T.	MAX. Demand met MW	MAX. Requirement MW	Shortage MW	Shortage %
	A	B	C	(C/B)*100
Punjab	4545	4647	102	2.19
Haryana	2799	2887	88	3.05
Rajasthan	3640	3640	0	0.00
U.P.	5692	6536	844	12.91
Utttranchal	623	680	57	8.38
Delhi	2951	3053	102	3.34
H.P.	527	527	0	0.00
J & K	1015	1165	150	12.88
Chandigarh	187	187	0	0.00
N.F.F./Rail	90	90	0	0.00
Region	20964	22203	1239	5.58

Diversity Factor = 1.11

* Approximate and Estimated

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

(All figs in M.U)

State / U.T.	Schedule	Actual Drawal	OD/UD
Punjab	1185.05	1193.61	8.56
Haryana	874.08	1040.21	166.13
Rajasthan	989.16	918.71	-70.45
U.P.	1440.23	1565.82	125.59
Uttaranchal	1.24	22.97	21.73
Delhi	1244.34	1043.58	-200.76
H.P.	124.18	116.72	-7.46
J & K	479.90	446.46	-33.44
Chandigarh	118.92	108.48	-10.44
N.F.F./Rail	49.83	56.70	6.87

6. **Inter Regional Exchanges**

		Energy M.U.	Peak MW
<u>Import</u>			
a)	From WR over HVDC Vindhyachal B/B	0	0
b)	From WR to over 220 kV Ujjain-Kota	0	0
c)	From ER over HVDC Sasaram B/B	156.49	468
d)	From ER over 220 kV Dehri-Sahupuri	0	0
<u>Export</u>			
d)	To WR over HVDC Vindhyachal B/B	103.31	450
e)	To WR (MP) over 220 kV Auraiya-Malanpur	13.97	28
f)	To ER (Bihar) over 220 kV/132kV lines	24.09	54
g)	To Nepal over 132 kV Tanakpur-Mahendernagar	3.39	6
h)	To ER over HVDC Sasaram B/B	0	0

B). Detailed Report

I. Details of Installed/Effective Capacity at the end of May 2003

	<u>STATION</u>	<u>INSTALLED CAPACITY</u>	<u>EFFECTIVE CAPACITY</u>
		(MW)	
A	NTPC		
(a)	Badarpur TPS	3x100+2x210 720.00	3x95+2x210 705.00
(b)	Singrauli STPS	5x200+2x500 2000.00	5x200+2x500 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	3x180 540.00	3x180 540.00
(f)	URI	4x120 480.00	4x120 480.00
	Sub-Total	2010.00	1984.20
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
Total Central Sector (A + B + C)		11544.04	11333.24
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	2x60 + 4x66 384.00	2x60 + 4x66 384.00
	Total BBMB	2864.15	2864.15

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

J & K (Contd.)				
(h)	GAS TURBINES Pampore GT St - I Pampore GT St - II	3x25.0 4x25.0	75.00 100.00	3x25.0 4x25.0
9h)	Total Gas		175.00	
(I)	Diesel Gen. Sets		8.94	
	Total J & K		495.63	
8	PUNJAB			
(a)	HYDRO Jogindernagar/ Shanan	4x15+1x50	110.00	4x15+1x50
(b)	Upper Behari Doab Canal (UBDC)	3x15+3x15	90.00	3x15+3x15
(c)	Mukerian	6x15+6x19.5	207.00	6x15+6x19.5
(d)	Anandpur Sahib (APS)	4x33.5	134.00	4x33.5
(e)	Ranjit Sagar HPS	4x150	600.00	4x150
(f)	Small Hydel		4.10	
	Total Hydro		1145.10	
(g)	THERMAL Guru Nanak Dev TPS (Bhatinda)	4x110	440.00	4x110
(h)	Guru Gobind Singh TPS (Ropar)	6x210	1260.00	6x210
(i)	Lehra Mohabbat TPS	2x210	420.00	2x210
(j)	Jhalkeri Rice Straw Fired	1x10	10.00	1x10
	Total Thermal		2130.00	
	Total Punjab		3275.10	
9	RAJASTHAN			
(a)	HYDRO Mahi Bajaj Sagar	2x25+2x45	140.00	2x25+2x45
(b)	Rana Pratap Sagar (RPS)	4x43	172.00	4x43
(c)	Jawahar Sagar (JS)	3x33	99.00	3x33
(d)	Anoopgarh	6x1.5	9.00	6x1.5
(e)	Small Hydro		14.85	
	Total Hydro		434.85	
(f)	THERMAL Kota TPS	2x110+3x210	850.00	2x110+3x210
(g)	Suratgarh TPS	4x250	1000.00	4x250
(g)	Ramgarh GT	1x3	3.00	1x3
(i)	Ramgarh GT EXT.	1x35.5	35.50	1x35.5
	Total Thermal		1888.50	
(J)	Wind farm		14.01	
	Total Rajasthan		2337.36	

					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)			29055.93		28543.77

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	28.62%
NHPC	1984.20	0.00	0.00	0.00	1984.20	6.95%
NPC	0.00	0.00	0.00	1180.00	1180.00	4.13%
BBMB	2864.15	0.00	0.00	0.00	2864.15	10.03%
CHANDIGARH	0.00	0.00	1.40	0.00	1.40	0.00%
DELHI	0.00	396.50	612.00	0.00	1008.50	3.53%
HARYANA	48.00	1025.00	25.20	0.00	1098.20	3.85%
HIMACHAL	712.20	0.00	0.00	0.00	712.20	2.50%
J&K	311.69	0.00	182.18	0.00	493.87	1.73%
PUNJAB	1145.10	2130.00	0.00	0.00	3275.10	11.47%
RAJASTHAN	434.85	1850.00	52.51	0.00	2337.36	8.19%
UP	529.90	3909.00	0.00	0.00	4438.90	15.55%
UTTRANCHAL	980.85	0.00	0.00	0.00	980.85	3.44%
Total	9010.94	15135.50	3217.33	1180.00	28543.77	100.00%
% of TOTAL	31.57%	53.03%	11.27%	4.13%	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 31.05.2003

Agency / Source	Run-of -the -river	Reservoir	Total
NHPC	1444.20	540.00	1984.20
BBMB	1155.15	1709.00	2864.15
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	5491.94	3519.00	9010.94
PERCENTAGE	59.60%	40.40%	100%

* Includes Malana IPP (86 MW) & Baspa 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	0.00	2.24	89.52	51.19	10.48	0.54	0.00
02	0.00	0.00	0.42	1.54	75.22	57.03	24.36	1.89	0.00
03	0.00	0.00	0.66	5.97	97.50	31.93	1.84	0.28	0.00
04	0.00	0.00	0.00	1.63	91.32	59.01	8.68	0.38	0.00
05	0.00	0.00	0.66	9.52	95.43	33.24	3.91	0.00	0.00
06	0.00	0.00	0.49	13.23	96.22	23.37	3.30	0.00	0.00
07	0.00	0.00	0.00	23.26	98.38	21.04	1.62	0.00	0.00
08	0.00	0.00	0.00	23.52	98.12	20.84	1.88	0.00	0.00
09	0.00	0.28	3.16	12.19	90.09	54.66	6.75	0.26	0.00
10	0.00	0.00	0.87	6.49	95.14	43.98	3.99	0.35	0.00
11	0.00	0.00	0.00	1.35	76.53	56.84	23.47	0.00	0.00
12	0.00	0.00	0.00	5.90	97.05	34.35	2.95	0.00	0.00
13	0.00	0.00	0.00	3.55	82.27	46.77	16.31	1.43	0.00
14	0.00	0.00	0.18	9.03	86.44	42.59	13.39	0.00	0.00
15	0.00	0.00	0.90	16.16	98.05	26.44	1.04	0.00	0.00
16	0.00	0.00	0.17	16.35	97.57	22.08	2.26	0.00	0.00
17	0.00	0.00	0.42	4.31	93.65	39.69	5.94	0.59	0.00
18	0.00	0.00	0.00	6.08	83.19	39.17	16.81	2.64	0.00
19	0.00	0.38	0.63	6.01	89.10	37.12	10.28	0.69	0.00
20	0.00	0.00	1.94	23.06	95.17	19.38	2.88	0.21	0.00
21	0.00	0.38	2.33	26.57	88.02	40.16	9.66	0.28	0.00
22	0.00	0.00	0.00	0.00	52.88	92.19	47.12	2.40	0.00
23	0.00	0.00	0.31	10.38	68.83	63.24	30.86	9.41	0.00
24	0.00	0.00	0.17	2.98	85.45	66.60	14.38	0.94	0.00
25	0.00	0.00	0.00	5.66	69.10	80.81	30.90	1.22	0.00
26	0.00	0.00	0.07	8.40	92.86	45.25	7.07	0.46	0.00
27	0.00	0.00	0.97	10.18	93.19	36.50	5.84	0.17	0.00
28	0.00	0.00	1.77	22.01	93.40	31.28	4.83	0.07	0.00
29	0.00	0.14	2.54	26.93	94.88	27.85	2.58	0.00	0.00
30	0.00	0.00	2.16	31.50	96.93	14.52	0.91	0.00	0.00
31	0.00	0.00	7.29	38.82	92.08	16.08	0.63	0.00	0.00
Max	0.00	0.38	7.29	38.82	98.38	92.19	47.12	9.41	0.00
Min	0.00	0.00	0.00	0.00	52.88	14.52	0.63	0.00	0.00
Average	0.00	0.04	0.90	11.42	88.50	41.14	10.60	0.78	0.00

Frequency (Hz)				Average Frequency	Frequency Variation Index
Maximum		Minimum			
Freq	Time	Freq	Time		
51.18	19.03	49.24	00.31	50.14	1.12
51.30	13.03	48.86	19.48	50.22	1.95
51.11	19.02	48.73	19.47	49.85	0.91
51.09	17.33	49.37	00.20	50.09	0.98
50.80	08:09	48.92	20:59	49.88	1.13
50.76	06.09	48.76	19.40	49.82	1.23
50.97	08.08	49.03	12.39	49.74	1.73
50.94	18.05	49.34	11.22	49.90	1.25
51.10	19.02	48.43	19.59	49.97	1.68
51.23	19.02	48.85	00.10	49.96	0.94
51.00	19.02	49.14	19.59	50.21	1.55
50.86	18.08	49.03	00.06	49.91	0.83
51.32	18.56	49.14	14.39	50.18	1.62
50.94	06.06	48.83	20.08	50.03	1.42
50.68	09.39	48.65	22.16	49.74	1.48
50.87	12.04	48.97	23.24	49.78	1.30
51.21	19.04	48.80	0.06	49.98	1.11
51.40	19.02	49.12	21.22	50.05	1.88
51.18	19.00	48.19	23.51	50.00	1.41
51.05	19.06	48.69	00.26	49.73	2.02
51.22	18.04	48.41	04.52	49.92	2.57
51.15	08.07	49.56	20.10	50.47	2.89
51.34	07.26	48.64	19.37	50.13	3.36
51.14	18.05	48.96	00.04	50.15	1.46
51.25	19.04	49.02	20.05	50.23	2.33
51.25	19.03	48.95	19.49	49.98	1.17
51.08	19.02	48.90	00.51	49.88	1.98
51.01	09.35	48.66	00.07	49.83	1.98
50.89	19.03	48.36	00.04	49.75	2.09
50.86	19.05	48.60	00.03	49.66	2.06
50.86	19.05	48.62	00.04	49.55	3.46
51.40		49.56		50.47	3.46
50.68		48.19		49.55	0.83
51.07		48.86		49.96	1.71

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	411	08.04	381	10.44	401	09.00	391	10.00	206	05.00	194	20.00	409	04.00	391	20.00
02	414	13.26	393	19.5	413	18.30	408	00.33	201	05.00	194	20.00	409	04.00	391	20.00
03	412	18.26	398	15.21	413	18.3	401	16.20	207	18.25	198	14.55	409	18.26	391	15.3
04	410	18.28	394	15.28	411	19.04	400	15.40	207	18.25	198	14.55	409	18.26	391	15.3
05	414	04:24	383	16:06	407	06:00	391	12:00	211	06:00	200	16:00	408	04:00	392	12:00
06	412	08.12	381	11.45	403	07.00	391	12:00	212	03.00	194	17.00	408	04:00	389	10.00
07	414	06.06	384	10.56	407	07.00	391	11.00	210	06.00	197	17.00	407	03.00	389	20.00
08	415	06.06	383	14.28	424	18.00	413	15.00	209	06.00	189	12.00	410	10.00	390	12.00
09	408	03.59	386	19.59	410	19.08	395	00.37	209	06.00	189	12.00	410	10.00	390	12.00
10	412	19.03	390	16.07	415	19.03	395	16.08	208	04.00	199	16.00	406	04.00	394	17.00
11	412	19.01	397	16.10	411	19.02	395	16.21	208	19.02	199	16.21	406	19.08	390	16.25
12	413	07.58	386	23.59	405	08.00	391	23.5	209	08.00	194	17.00	405	16.40	390	19.02
13	423	19.08	386	23.59	410	08.00	390	01.06	208	8.00	198	15.00	409	19.00	391	21.00
14	414	04.11	384	19.36	405	03.00	384	20.00	211	07.00	196	17.00	404	08.00	391	24.00
15	411	08.06	383	19.44	406	08.00	392	16.00	205	06.00	194	24.00	406	08.00	392	20.00
16	406	08.01	381	19.43	397	08.00	389	16.00	207	06.00	196	20.0	406	08.00	391	01.00
17	405	08.01	381	19.43	397	08.00	389	16.00	207	06.00	197	21.00	406	08.00	391	01.00
18	416	19.04	382	23.40	415	19.05	395	21.25	208	08.00	197	24.00	412	19.00	387	24.00
19	418	19.05	381	16.40	418	23.55	395	16.41	208	08.00	197	24.00	412	19.00	387	24.00
20	419	01.12	388	12.49	424	01.11	399	10.55	209	01.14	192	14.08	412	01.20	387	12.20
21	404	18.28	384	14.50	411	22.00	395	15.45	208	06.00	192	16.00	402	18.00	393	15.00
22	408	08.15	382	15.59	410	08.14	397	15.58	206	08.00	193	16.00	403	08.00	390	15.00
23	426	08.00	385	16.49	415	08.00	393	15.00	214	08.00	191	15.00	408	07.00	390	12.00
24	415	07.40	398	20.19	407	08.00	396	15.00	205	10.00	194	15.00	408	08.00	392	16.00
25	414	03.29	386	19.58	410	03.25	397	19.59	205	10.00	194	15.00	408	08.00	392	16.00
26	408	06.16	384	14.29	408	05.59	395	13.54	206	07.00	192	15.00	407	19.00	394	09.00
27	402	19.04	383	15.34	404	06.00	391	17.00	205	03.00	193	16.00	407	08.00	390	24.00
28	407	05.02	378	17.02	405	05.01	391	14.49	208	08.03	191	17.04	411	19.01	384	00.33
29	405	06.14	379	00.04	403	06.07	393	00.01	206	07.00	189	16.00	405	19.02	385	00.15
30	409	07.05	386	15.15	405	08.00	395	00.00	206	07.00	193	16.00	406	08.00	387	24.00
31	404	03.42	382	15.05	404	05.08	390	14.57	206	05.10	191	14.57	407	19.02	382	00.03
Max	426		398		424		413		214		200		412		394	
Min	402		378		397		384		201		189		402		382	

V. Regional Power Supply Position

(All Figs In MUs)

Date	Availability (Gross) MW	Peak Hrs. Requirement MW	Shortage/ Restriction MW	Availability (Gross) MW	Off Peak Hrs. Requirement MW	Shortage/ Restriction* MW	Regional Availability MU
01	20407	21436	1029	18407	18692	285	416
02	19279	21050	1771	18157	18622	465	393
03	19096	20670	1574	17808	18273	465	405
04	19858	20969	1111	18514	19054	540	410
05	19989	21244	1255	17755	18315	560	409
06	20273	22007	1734	18397	18589	192	416
07	20393	22127	1734	18845	19037	192	421
08	20964	21867	903	19343	19833	490	430
09	20268	21240	972	19606	19796	190	428
10	20248	21923	1675	19133	19473	340	422
11	20080	21556	1476	19261	19546	285	426
12	20259	21521	1262	19340	19625	285	426
13	17926	18327	401	19027	19352	325	416
14	19045	20310	1265	18398	18683	285	414
15	20150	21409	1259	19134	19934	800	420
16	20376	21510	1134	19568	20516	948	425
17	20367	21440	1073	19663	20778	1115	430
18	20137	20630	493	19948	20138	190	429
19	20580	21363	783	20579	21179	600	452
20	20305	21692	1387	18192	19679	1487	422
21	20485	21765	1280	19766	20971	1205	443
22	20286	20881	595	20307	20499	192	440
23	19543	20882	1339	17772	18072	300	398
24	19307	19741	434	18890	19618	728	413
25	19898	20489	591	18190	18475	285	415
26	20127	21104	977	18933	19226	293	423
27	20752	21997	1245	19360	20075	715	430
28	20462	21847	1385	19742	20693	951	431
29	20803	21284	481	19805	21015	1210	435
30	20852	21903	1051	19796	21239	1443	442
	20145	21357	1212	19854	21179	1325	440
Maximum	20964	22127	1771	20579	21239	1487	452
Minimum	17926	18327	401	17755	18072	190	393
Average	20086	21211	1125	19080	19683	603	423

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	3371	3143	2358	2407	3585	3126	2844	2243	4600	5197
02	2938	2785	2427	2277	3452	3143	2900	2306	4443	5259
03	3171	2787	2413	2183	3471	2955	2715	2312	4357	4956
04	3196	3357	2222	2342	3548	3210	2574	2263	4396	4845
05	3190	2873	2436	2339	3600	3040	2707	2075	4428	4839
06	3686	2941	2488	2362	3424	3081	2776	1822	4647	5306
07	3825	3203	2400	2409	3579	3099	2786	2149	4381	5471
08	3794	3302	2436	2455	3546	3083	2786	2149	4381	5361
09	3669	3662	2494	2535	3162	3011	2655	2232	4469	5579
10	3504	3762	2425	2441	3640	3042	2720	2214	4762	5413
11	3690	3457	2399	2405	3640	3076	2653	2487	4478	5279
12	3789	3698	2305	2585	3438	2985	2854	2330	4505	5280
13	3317	3575	1562	2204	3438	2985	2288	2424	4100	5437
14	3483	3596	2020	1805	3315	3090	2695	2192	4250	4728
15	3722	3436	2199	2124	3256	3123	2737	2403	4287	5102
16	3705	3948	2394	2413	3409	3150	2741	2347	4611	5193
17	3664	4090	2303	2342	3285	3021	2792	2301	4396	4924
18	3499	4021	2084	2382	3392	2830	2674	2453	5046	5556
19	3462	4258	2342	2649	3543	3075	2788	2426	4534	5422
20	3845	3781	2586	2172	3471	3000	2849	2505	4469	4361
21	3945	4189	2465	2416	3324	3047	2819	2488	4573	5396
22	4020	4457	2123	2646	3477	3057	2869	2678	4406	5334
23	3746	3759	2128	1377	3279	3208	2758	2466	4313	4346
24	3664	3907	1986	2274	3429	2927	2840	2350	4230	5553
25	3505	3776	2265	2087	2841	2010	2428	2369	4448	5248
26	3535	3769	2349	2359	3208	2796	2827	2251	4189	5556
27	3587	4197	2473	2247	3327	2692	2883	2458	4650	5569
28	3295	4301	2250	2455	3217	2805	2830	2450	4760	5204
29	3718	4299	2464	2517	3249	2520	2939	2479	4830	5257
30	3669	4155	2477	2343	3573	2816	2896	2492	5213	5378
31	3945	4449	2521	2577	3255	2933	2869	2572	4919	19391
Maximum	4020	4457	2586	2649	3640	3210	2939	2678	5213	5579
Minimum	2938	2785	1562	1377	2841	2010	2288	1822	4100	4346
Average	3585	3708	2316	2327	3399	2966	2758	2345	4518	5669

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	598	397	149	107	475	328	745	450
02	570	411	149	107	380	308	703	400
03	517	435	151	103	430	272	888	818
04	520	390	125	115	463	322	842	637
05	603	383	156	97	472	309	699	458
06	570	430	130	115	440	312	811	570
07	588	370	159	98	470	307	891	619
08	590	454	158	108	481	304	954	625
09	538	386	158	108	481	321	956	610
10	608	415	148	110	466	343	924	554
11	594	448	142	100	467	341	812	582
12	623	444	156	95	432	336	775	510
13	337	423	134	110	455	321	974	556
14	532	302	161	103	427	333	918	590
15	590	413	153	110	481	341	948	572
16	487	348	155	111	483	327	818	547
17	613	434	130	120	476	352	937	768
18	588	400	148	107	439	347	832	748
19	572	414	161	123	439	330	648	729
20	557	409	160	107	461	350	904	719
21	566	458	175	137	448	373	771	533
22	471	433	164	142	444	353	1008	542
23	583	387	163	107	435	329	1015	725
24	569	377	157	118	429	349	921	669
25	556	449	136	104	444	345	850	574
26	494	445	160	110	418	334	971	586
27	567	426	170	124	471	319	968	655
28	596	431	170	124	459	341	994	658
29	547	446	169	126	477	327	949	664
30	586	445	168	126	469	340	968	717
31	564	474	165	130	452	335	701	782
Maximum	623	474	175	142	483	373	1015	818
Minimum	337	302	125	95	380	272	648	400
Average	558	415	154	113	454	331	874	618

VII Daily Energy Consumption By Constituents

(All Figs In MUs)

Date	Punjab	Haryana	Rajasthan	Delhi	UP	Uttaranchal	Chandigarh	HP	J & K	Total
01	79.054	52.406	68.972	56.921	116.614	10.626	3.082	9.163	13.605	410.442
02	63.520	50.057	68.250	59.248	113.138	10.765	3.082	8.600	10.983	387.643
03	72.463	49.597	68.538	55.821	109.910	10.255	2.955	8.472	16.223	394.233
04	76.764	49.771	70.325	52.640	110.577	10.027	2.960	9.322	17.125	399.511
05	73.559	50.510	69.975	53.444	109.238	10.088	2.971	8.715	16.994	395.495
06	76.092	52.580	69.234	53.866	110.045	10.389	2.960	9.030	16.873	401.068
07	82.283	51.852	70.860	54.529	113.523	10.083	3.083	9.102	17.400	412.715
08	82.330	53.441	71.185	54.921	115.853	10.726	3.131	8.944	17.873	418.404
09	81.432	54.020	69.790	55.154	116.178	10.633	2.960	9.797	16.642	416.607
10	80.263	53.733	69.604	53.546	113.483	11.265	3.018	9.264	17.979	412.155
11	78.761	53.186	68.472	53.649	116.205	11.216	2.796	9.761	19.731	413.778
12	81.282	53.737	68.178	58.082	118.239	11.121	3.287	9.381	17.051	420.358
13	80.821	50.844	63.635	56.740	111.589	7.666	3.210	9.032	16.337	399.874
14	81.621	46.632	70.889	56.163	111.214	8.569	3.209	8.985	18.348	405.629
15	82.199	49.876	68.169	56.883	112.110	9.726	3.209	9.505	20.023	411.699
16	86.061	51.686	69.601	57.031	112.727	10.164	3.219	9.469	18.612	418.570
17	89.392	52.909	67.167	57.065	113.065	10.908	3.274	9.587	18.757	422.124
18	85.404	55.514	66.686	56.434	114.526	10.678	3.018	9.158	18.228	419.647
19	91.475	56.267	71.889	59.464	114.061	10.722	3.494	9.413	15.241	432.027
20	86.628	53.902	70.935	61.956	106.536	10.903	3.018	9.803	16.392	420.074
21	93.526	55.316	71.887	61.872	113.434	10.555	3.757	9.836	15.889	436.072
22	95.758	53.453	71.827	62.502	108.160	10.029	3.662	9.447	16.527	431.365
23	84.254	39.398	69.679	55.456	100.002	11.714	3.302	9.455	17.993	391.252
24	85.193	49.910	69.027	57.206	112.303	10.438	3.186	9.486	16.150	412.900
25	85.740	48.762	59.904	54.639	113.136	10.648	2.719	9.290	17.061	401.899
26	87.393	50.164	66.525	57.716	112.343	10.879	3.349	9.367	16.525	414.261
27	89.385	51.731	68.761	61.033	110.031	10.574	3.533	9.866	18.496	423.411
28	87.184	50.818	67.360	61.464	110.845	10.762	3.533	9.205	16.874	418.045
29	89.051	54.894	62.347	62.084	118.211	10.892	3.610	9.314	17.419	427.823
30	89.817	54.621	71.046	62.372	110.830	11.228	3.586	9.620	17.082	430.201
31	94.308	58.877	64.711	62.029	108.051	11.391	3.529	9.540	16.703	429.140
Maximum	95.758	58.877	71.889	62.502	118.239	11.714	3.757	9.866	20.023	436.072
Minimum	63.520	39.398	59.904	52.640	100.002	7.666	2.719	8.472	10.983	387.643
Average	83.646	51.950	68.562	57.482	112.135	10.505	3.216	9.320	17.004	413.820
Month Total	2593.015	1610.464	2125.423	1781.931	3476.177	325.640	99.702	288.928	527.138	12828.419

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-May-2003	32196	32566	27377	32420	31884	29344	43164	33331	46159	53985	-132	1781
2-May-2003	32417	33016	28371	33246	32380	26533	41010	34787	45771	52151	-95	1406
3-May-2003	32668	37699	27896	33561	32921	26796	40347	31018	46076	54188	-181	815
4-May-2003	34619	39383	29640	35525	34897	27693	40146	26915	46743	51232	-130	1231
5-May-2003	32428	36682	27464	36612	33544	27853	40566	29948	47158	49740	-252	2028
6-May-2003	32379	36435	26610	34447	33568	27775	39551	30949	47113	47955	-119	2674
7-May-2003	32549	34279	26617	34317	33368	28637	39797	30232	46933	50661	833	2615
8-May-2003	32641	36112	26811	35732	33035	29500	40208	30566	46770	50077	887	3473
9-May-2003	33550	35922	26522	34670	31255	29058	41096	30942	44143	47652	1679	2838
10-May-2003	33517	33018	26733	34300	30380	29199	41841	28657	43402	50424	1510	2899
11-May-2003	35184	37795	28382	34531	31168	28606	42654	29009	48001	54629	1920	2881
12-May-2003	36677	37503	30906	35281	30240	28808	39571	34018	48824	53110	1129	1418
13-May-2003	36468	37605	29227	31315	30296	31579	38992	33349	47853	50769	856	-2524
14-May-2003	38568	40946	28242	33308	31587	30519	39566	32126	47488	49506	-249	-1668
15-May-2003	41904	38282	29526	34080	32406	30288	37622	34832	48044	51783	-787	886
16-May-2003	41286	39061	29106	33613	32731	31933	40507	33496	46966	50201	-529	1752
17-May-2003	41680	40588	28975	35875	32667	29794	40883	33444	48336	52398	-585	392
18-May-2003	42392	41953	29491	35090	33351	31290	40050	32593	48988	53757	-475	285
19-May-2003	41905	40004	29125	32012	32978	34269	40646	36140	48298	52913	-799	-327
20-May-2003	39493	36050	26419	27955	28923	27925	38991	36659	38090	45774	-1073	86
21-May-2003	41430	40497	28962	31580	31940	27962	41657	37073	45347	51372	-259	1406
22-May-2003	42788	42417	28871	34824	32299	34474	43768	38633	47581	47260	703	-1637
23-May-2003	41508	38474	28075	32646	30705	34199	38631	34257	43662	49955	-135	-3075
24-May-2003	42622	41304	29459	33372	33115	30315	39328	36386	48711	55438	78	458
25-May-2003	43305	44909	28419	34770	31845	29360	39481	32954	48275	51338	292	616
26-May-2003	43709	42744	30273	35688	33180	31544	39461	36451	49855	50692	566	694
27-May-2003	41203	41053	28279	33095	30940	26887	37006	36751	46276	46123	156	1091
28-May-2003	41989	41312	28268	33079	30626	28102	37792	37656	46534	47999	-764	324
29-May-2003	42191	40704	27949	32746	30834	28775	42175	38019	46371	50036	-641	182
30-May-2003	40005	38718	25922	29393	29364	29976	38717	36713	42782	46184	-1196	-606
31-May-2003	39774	36583	26162	31122	30733	29718	39118	35675	43679	46516	-972	-1420
Total MU	1185.045	1193.614	874.079	1040.205	989.160	918.711	1244.342	1043.579	1440.229	1565.818	1.236	22.974
Max. MWH	43709	44909	30906	36612	34897	34474	43768	38633	49855	55438	1920	3473
Min MWH	32196	32566	25922	27955	28923	26533	37006	26915	38090	45774	-1196	-3075
Avg. MWH	38227	38504	28196	33555	31908	29636	40140	33664	46459	50510	40	741

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-May-2003	4184	4718	16664	11467	3827	3423	480	591	1107	1449
2-May-2003	4258	4252	16396	9110	3837	3453	480	579	991	973
3-May-2003	4439	4239	14630	14011	3814	3277	480	577	819	1607
4-May-2003	4445	5034	16616	15121	3821	2805	480	584	878	1399
5-May-2003	4336	5170	17530	15039	3869	3197	480	578	858	568
6-May-2003	4360	5251	16469	15579	3837	3267	480	575	945	658
7-May-2003	4556	5482	16527	15268	3792	3333	480	641	1375	557
8-May-2003	4722	4581	17015	15194	3784	3396	480	637	1549	543
9-May-2003	3721	4461	17103	15999	3668	3427	480	616	1351	628
10-May-2003	3452	4251	15870	15312	3723	3242	480	595	735	611
11-May-2003	3348	4480	16067	14869	3804	3021	480	600	1130	638
12-May-2003	3895	3971	16202	14117	3909	3507	480	593	808	1459
13-May-2003	3712	3753	16285	13493	3790	3448	480	476	1080	1480
14-May-2003	3948	4356	15257	14696	3777	3421	480	405	1040	1448
15-May-2003	3739	4524	13819	15311	3925	3492	480	533	833	1412
16-May-2003	3849	4552	13760	15366	3878	3452	480	584	1436	1374
17-May-2003	3717	4492	15447	15348	3918	3550	480	595	1410	1470
18-May-2003	3710	4043	15552	14931	4003	3262	480	601	1577	1473
19-May-2003	4182	3865	13397	13683	3972	3737	480	599	1044	1460
20-May-2003	4409	4422	14667	14167	3795	3909	480	594	1279	1552
21-May-2003	4023	4317	14774	14756	3910	4030	480	597	1211	1485
22-May-2003	4211	3978	15613	14303	3975	3994	480	618	1634	1362
23-May-2003	3707	2277	15256	14203	3715	3537	480	628	870	1299
24-May-2003	4145	1895	15126	12835	3965	3420	480	642	720	1370
25-May-2003	3489	1601	15092	15363	4010	2975	480	625	1275	1448
26-May-2003	3458	1319	15896	14074	3924	3647	480	631	707	1443
27-May-2003	3535	2041	15703	14765	3789	3805	480	648	916	1393
28-May-2003	3390	713	14630	13210	3800	3870	480	650	1072	1388
29-May-2003	3869	-188	15383	15039	3790	3900	480	652	1156	1399
30-May-2003	4767	3748	15170	15445	3624	3847	480	654	1426	1402
31-May-2003	4601	5118	11988	14388	3670	3833	480	637	1719	1415
Total MU	124.177	116.716	479.904	446.462	118.915	108.477	14.880	18.535	34.951	38.163
Max. MWH	4767	5482	17530	15999	4010	4030	480	654	1719	1607
Min MWH	3348	-188	11988	9110	3624	2805	480	405	707	543
Avg. MWH	4006	3765	15481	14402	3836	3499	480	598	1127	1231

IX Schedule vs Actual Injection of ISGS (Sheet 1 of 3)

Date	Singrauli		Rihand		Dadri(T)		Unchahar-I		Unchahar-II		Dadri GPS	
	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual
1-May-2003	43777	43871	21669	21741	15940	16010	8929	9022	4337	4445	10318	10545
2-May-2003	43642	43622	21552	21545	14837	14857	8903	8788	4309	4282	9517	8953
3-May-2003	43368	43857	21546	21858	14405	14719	8785	8942	4196	4428	11803	12198
4-May-2003	43272	43817	21521	21761	14415	14725	8826	8866	4239	4389	12011	12207
5-May-2003	43368	43847	21546	21792	14359	15066	8958	9035	4398	4532	12484	12869
6-May-2003	43368	43895	21546	21826	14370	15585	8913	9046	4335	4515	12525	13192
7-May-2003	43368	43976	21546	21834	14425	15182	8896	9062	4336	4513	12971	13257
8-May-2003	43480	43671	21596	21675	14409	14539	8932	9004	3875	3966	13146	13275
9-May-2003	37513	37770	21596	21706	14409	14443	8809	8911	-280	-167	12578	12854
10-May-2003	33556	33625	21596	21814	14457	14809	9009	8949	904	798	12129	12835
11-May-2003	43775	43783	21596	21525	14459	14433	8954	8944	4185	4186	12421	12399
12-May-2003	43224	43861	21569	21774	13897	14516	8968	9062	4406	4482	12150	12798
13-May-2003	43532	43723	21519	21485	13825	14054	9004	8936	4438	4407	11897	11835
14-May-2003	43182	43303	21344	21398	13810	14220	8946	8927	4375	4418	10750	10637
15-May-2003	44040	44164	21385	21423	13310	15193	8787	9001	4209	4428	11847	12637
16-May-2003	44040	44105	20818	20856	13310	15112	9029	9087	4445	4539	12301	12861
17-May-2003	44040	44007	20056	20083	14365	15243	9144	9146	4584	4600	15395	16035
18-May-2003	44040	43986	20859	20738	13795	14149	9123	9059	4563	4536	15747	16033
19-May-2003	43498	43174	21068	21047	14120	14822	8656	8352	4567	4590	15032	16147
20-May-2003	16959	16067	20053	20122	14556	16848	7865	7309	4575	4577	16579	17032
21-May-2003	33939	33941	20225	20253	14759	16170	9127	9029	4566	4563	16695	16919
22-May-2003	43499	42956	20675	20310	15472	14951	8679	8373	4399	4235	15788	15911
23-May-2003	37539	37411	19879	19811	13229	13702	8347	8339	4071	4125	14045	15452
24-May-2003	41775	41789	21724	21657	13982	14390	9068	8997	4452	4432	15274	16186
25-May-2003	43194	43035	21476	21243	13952	13972	8848	8749	4318	4271	14710	15082
26-May-2003	43235	43293	19930	19780	14567	14979	9076	9106	7315	7192	16279	17175
27-May-2003	35710	35802	21840	21870	14382	15367	9106	9102	9092	9080	16806	17379
28-May-2003	40008	40093	21840	21923	14780	15870	9097	9152	9075	9045	16629	17290
29-May-2003	40080	40140	21840	21913	17878	18152	9096	9143	9071	9077	17142	17486
30-May-2003	31559	31680	21840	21925	16989	17729	8249	8241	8376	8249	16609	17261
31-May-2003	38526	38350	21840	21931	17748	17357	6740	6500	7410	7324	17648	16880
Total MU	1258.106	1260.614	659.090	660.619	453.211	471.164	272.869	272.179	151.141	152.057	431.226	443.620
Max. MWH	44040	44164	21840	21931	17878	18152	9144	9152	9092	9080	17648	17486
Min MWH	16959	16067	19879	19780	13229	13702	6740	6500	-280	-167	9517	8953
Avg. MWH	40584	40665	21261	21310	14620	15199	8802	8780	4876	4905	13911	14310

IX. Schedule vs Actual Injection of ISGS (Sheet 2 of 3)

Date	Anta GPS		Auraiya GPS		NAPS		RAPS-B		Bairasiul		Salal	
	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual
1-May-2003	7619	7938	11602	12140	4320	4009	9600	9554	4320	4380	12754	12781
2-May-2003	7271	7317	12776	12719	4560	4348	9600	9544	4320	4368	11603	11753
3-May-2003	7942	8607	13033	13485	4560	4380	9600	9402	4320	4361	5788	5700
4-May-2003	8210	8464	12565	12772	4560	4495	9600	9652	4050	4111	12762	13014
5-May-2003	8160	8474	12511	13084	4560	4485	9600	9465	3540	3596	11701	11850
6-May-2003	7991	8686	13016	13570	4560	4451	9600	9458	3405	3489	11399	11559
7-May-2003	8683	8883	13447	13885	4680	4351	9600	9451	3180	3240	11558	11751
8-May-2003	8628	8636	13444	13580	4680	5185	9600	9552	3420	3463	13225	13471
9-May-2003	8241	8429	13083	13337	8113	8454	8800	8628	3540	3555	15185	15434
10-May-2003	8310	8616	13189	13385	9360	8985	4800	4478	3780	3819	15360	15586
11-May-2003	8319	8372	13222	13230	9168	9005	2800	2469	3165	3204	15360	15515
12-May-2003	7501	8370	13147	13697	9168	8818	0	-278	3195	3308	15380	15545
13-May-2003	8103	8272	13316	13369	9168	9036	0	-313	3240	3304	15402	15506
14-May-2003	7911	8224	13121	13192	8928	8992	3840	3397	2895	2951	15405	15480
15-May-2003	7441	8214	12465	13174	9096	8840	4800	4625	3120	3136	15211	15382
16-May-2003	7156	8035	12714	13366	9096	9038	4800	4608	3180	3239	15360	15573
17-May-2003	7001	7287	12858	13158	8904	8897	4800	4574	3750	3820	15360	15542
18-May-2003	7890	8149	12949	13064	9144	8781	4800	4679	3330	3378	15054	15106
19-May-2003	8037	8551	12683	13050	9000	8929	4800	4550	3405	3424	13272	13514
20-May-2003	8621	8547	13911	13898	8832	8784	4800	4454	3630	3700	13915	14372
21-May-2003	8417	8167	13893	13866	9000	8742	4800	4632	3270	3373	13495	13713
22-May-2003	8072	8063	13020	12817	8880	9023	4800	4642	3120	3177	15360	15538
23-May-2003	7797	7929	11844	12321	8832	9127	4800	4565	2670	2737	15205	15400
24-May-2003	8796	8795	13429	13563	9000	8967	4800	4522	2670	2721	14198	14172
25-May-2003	7896	7940	11919	11970	9192	9088	4800	4572	2400	2460	15480	15685
26-May-2003	8740	8802	13662	13826	9048	8941	4800	4525	3060	3073	15480	15689
27-May-2003	8785	8819	13294	13425	5285	4993	4800	4527	2535	2597	15480	15709
28-May-2003	8655	8727	10263	10232	4416	4118	4800	4504	2355	2416	15480	15717
29-May-2003	8646	8706	10185	10192	4368	4261	4800	4478	2145	2214	15480	15704
30-May-2003	8205	8591	10162	10336	4320	4224	4800	4447	2625	2742	15480	15706
31-May-2003	8770	8683	10155	10244	4368	4093	4800	4299	3135	3213	6174	6323
Total MU	251.814	259.293	390.878	397.947	221.166	217.840	178.640	171.662	100.770	102.569	428.366	433.790
Max. MWH	8796	8883	13911	13898	9360	9127	9600	9652	4320	4380	15480	15717
Min MWH	7001	7287	10155	10192	4320	4009	0	-313	2145	2214	5788	5700
Avg. MWH	8123	8364	12609	12837	7134	7027	5763	5537	3251	3309	13818	13993

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

Date	Tanakpur		Chamera		Uri		Bhakra Complex		Dehar		Pong	
	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual	Schedule	Actual
1-May-2003	992	1021	12683	12844	11520	6578	17232	16913	10329	9661	2993	3259
2-May-2003	1125	1134	12972	13092	11520	4459	17232	16932	10329	11305	3705	3484
3-May-2003	1102	1121	12972	13104	11520	9699	17076	16719	12510	12777	3449	3918
4-May-2003	1301	1310	12972	13108	11491	8427	16902	16911	13450	9284	4318	2780
5-May-2003	1107	1122	12595	12765	11520	11557	16918	16821	11016	8446	2009	2465
6-May-2003	1103	1086	12390	12566	11520	11536	16926	16701	9528	8779	2608	2512
7-May-2003	1043	1048	11242	11428	11520	11281	16926	16822	10008	8880	2437	2107
8-May-2003	971	971	10708	10832	11520	11523	16797	16991	9573	10749	2237	2271
9-May-2003	972	988	9235	9455	11520	11570	16797	16805	12549	12364	2423	3303
10-May-2003	1008	1015	9755	9935	11520	11548	16797	16578	11760	12157	3377	3623
11-May-2003	1075	1096	8106	8221	11520	10094	16797	16803	12720	14662	3819	3654
12-May-2003	1176	1191	12030	12221	11520	9704	16773	16489	15243	14417	3862	3846
13-May-2003	1322	1355	9456	9716	11520	8846	16773	16816	15205	14290	3933	3518
14-May-2003	1335	1348	10365	10545	11520	11573	16923	17136	15205	14112	3377	3379
15-May-2003	1346	1364	10841	11058	11520	11568	16923	17074	15205	14361	3534	3096
16-May-2003	1335	1342	9996	10234	11520	11556	16921	17081	15205	12607	3192	3090
17-May-2003	1458	1477	9751	9920	11520	11564	17124	17006	14673	14310	3392	3471
18-May-2003	1456	1463	10574	10792	11520	11553	17124	17204	15331	14575	3890	3568
19-May-2003	1428	1432	10815	10964	11520	11248	17124	17090	15334	14855	3677	3964
20-May-2003	1466	1483	12924	13074	11520	11540	17214	17359	15161	14660	4142	4256
21-May-2003	1386	1398	12838	13016	11520	11544	17304	17360	15125	14504	4284	3070
22-May-2003	1664	1680	12791	12889	11520	11526	17338	17767	15149	14762	2865	2653
23-May-2003	1789	1827	12456	12573	11520	11536	17518	17583	15323	15231	2865	3471
24-May-2003	1586	1599	12924	13018	10980	11052	17808	18152	15529	14582	3414	2592
25-May-2003	1513	1529	12924	13110	11520	11566	17808	17851	15529	14729	2995	3045
26-May-2003	1522	1552	11051	11261	11520	11581	17805	17895	15529	11088	2995	2833
27-May-2003	1588	1629	9498	9707	11520	11553	17970	17761	12636	11240	2860	2057
28-May-2003	1606	1634	9765	9948	11520	11542	17970	18149	12636	11529	1959	1935
29-May-2003	1629	1656	9765	9970	11520	11559	17973	18093	13610	10347	2093	2169
30-May-2003	1640	1665	9186	9415	11520	11566	17968	17725	11958	13002	2756	2676
31-May-2003	1794	1849	9765	10005	11520	11567	18033	18144	13478	14967	2756	3016
Total MU	41.838	42.385	345.345	350.786	356.551	334.016	534.794	534.731	416.836	393.232	98.216	95.081
Max. MWH	1794	1849	12972	13110	11520	11581	18033	18152	15529	15231	4318	4256
Min MWH	971	971	8106	8221	10980	4459	16773	16489	9528	8446	1959	1935
Avg. MWH	1350	1367	11140	11316	11502	10775	17251	17249	13446	12685	3168	3067

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	28.20	15.05	9.35	0.64	34.81	0.31	52.07	4.15	9.41	12.19	4.58	1.58	173.11
02	16.09	12.65	10.80	0.65	35.13	0.42	50.59	4.39	9.82	12.78	4.58	1.58	160.25
03	16.31	17.81	10.70	0.70	35.44	0.42	45.68	6.02	9.90	13.48	4.58	1.58	163.41
04	23.27	16.13	9.25	0.74	35.31	0.61	47.03	6.37	9.34	13.55	4.60	1.58	168.58
05	23.56	14.87	8.62	0.68	35.44	0.68	49.30	5.94	8.78	13.01	3.78	1.67	167.13
06	24.44	15.78	12.44	0.64	35.37	0.61	48.91	5.96	8.17	12.20	3.98	1.67	170.97
07	31.66	15.10	11.89	0.66	35.25	0.75	52.44	5.02	8.29	11.94	3.78	1.67	179.15
08	31.83	14.55	12.21	0.56	35.73	0.47	56.87	4.55	7.65	12.69	4.73	1.67	184.20
09	30.31	14.62	13.32	0.69	35.44	0.53	56.04	5.67	8.55	12.68	5.27	1.67	185.50
10	29.49	16.68	13.75	0.66	35.64	0.58	51.53	5.48	8.82	13.36	5.25	1.67	183.61
11	25.75	14.96	13.63	0.69	35.32	0.47	51.81	4.78	8.78	13.56	5.45	2.77	178.68
12	24.98	17.45	12.71	0.78	34.81	0.31	52.84	4.59	10.21	12.76	5.45	2.77	180.36
13	23.91	16.72	12.05	4.44	30.06	0.50	51.36	3.96	10.46	12.95	5.40	2.77	175.26
14	20.84	18.08	10.30	0.79	35.35	0.81	51.18	4.02	10.48	12.84	4.71	2.77	172.87
15	23.68	17.15	11.43	0.67	35.50	1.01	49.81	4.09	9.38	11.27	5.30	2.77	173.26
16	26.98	17.32	12.43	0.63	34.81	0.31	51.77	3.35	9.04	11.66	5.43	2.77	177.72
17	28.47	16.95	11.10	0.77	34.81	0.31	51.93	3.83	11.09	11.59	5.43	2.77	180.27
18	24.58	15.97	15.20	0.77	32.09	0.66	52.16	4.47	11.07	11.82	5.43	2.77	178.20
19	30.56	15.97	17.98	0.79	34.81	0.31	49.25	5.45	11.57	11.82	5.43	2.77	187.92
20	27.60	18.73	20.03	0.81	37.76	0.64	47.66	6.25	11.59	12.85	5.43	2.77	193.32
21	29.35	19.32	18.76	0.79	38.07	0.54	49.71	5.67	9.89	12.64	5.48	1.67	193.38
22	31.53	17.95	15.30	0.86	32.24	0.54	49.31	3.59	12.24	12.42	5.46	1.67	184.77
23	23.16	18.34	6.71	0.83	30.35	0.80	42.50	4.12	12.37	10.59	5.25	1.67	158.65
24	21.74	18.34	10.53	0.75	33.54	0.75	44.35	4.66	10.69	9.72	5.45	1.67	164.08
25	20.16	17.44	8.93	0.75	32.60	0.69	51.74	3.63	10.82	11.10	5.69	1.67	167.11
26	22.26	18.76	8.92	0.72	33.53	0.44	51.09	4.26	10.75	10.98	5.62	1.67	170.88
27	27.18	18.32	13.06	0.66	37.31	0.75	54.53	4.35	10.35	10.65	5.62	2.77	187.52
28	27.19	17.17	14.72	0.63	38.09	0.66	53.46	4.05	11.31	9.88	5.42	2.77	187.24
29	28.10	18.06	12.65	0.75	38.51	0.78	53.92	4.09	11.47	9.82	4.71	1.67	185.42
30	31.41	17.00	14.81	0.71	38.48	0.79	53.24	4.88	12.59	11.69	4.38	1.67	192.55
31	35.13	17.73	17.60	0.82	37.35	1.03	50.22	5.83	13.42	12.10	4.68	1.67	198.49
Maximum	35.13	19.32	20.03	4.44	38.51	1.03	56.87	6.37	13.42	13.56	5.69	2.77	198.49
Minimum	16.09	12.65	6.71	0.56	30.06	0.31	42.50	3.35	7.65	9.72	3.78	1.58	158.65
Average	26.12	16.81	12.62	0.84	35.13	0.60	50.78	4.76	10.27	12.02	5.04	2.09	178.19
Month Total	809.68	520.98	391.17	26.03	1088.93	18.50	1574.27	147.50	318.29	372.59	156.36	64.64	5523.89

XI. Performance Of Generating Stations

S.No.	Power Station	Effective Capacity MW	Energy Generated during May, 2003 (Ex Bus MU)
1	CENTRAL SECTOR		
A	NTPC (Thermal)		
(a)	Badarpur TPS	705.00	434.37
(b)	Singrauli STPS	2000.00	1260.61
(c)	Rihand STPS	1000.00	660.62
(d)	Dadri NCTPS	840.00	471.16
(e)	Unchahar-I TPS	420.00	272.18
(f)	Unchahar-II TPS	420.00	152.06
(g)	Tanda TPS	440.00	194.08
(h)	Anta GPS	419.33	259.29
(i)	Auraiya GPS	663.36	397.95
(j)	Dadri GPS	829.78	443.62
(k)	Faridabad GPS	431.57	157.71
	Total NTPC	8169.04	4703.65
B	NHPC		
(a)	Bairasiul	180.00	102.57
(b)	Salal	690.00	433.79
(c)	Tanakpur HPS	94.20	42.39
(d)	Chamera HPS	540.00	350.79
(e)	Uri HPS	480.00	334.02
	Total NHPC	1984.20	1263.56
C	NPC		
(a)	RAPS -A	300.00	107.58
(b)	RAPS -B	440.00	171.68
(c)	NAPS	440.00	217.87
	Total NPC	1180.00	497.13
2	JOINTLY OWNED (BBMB)		
(a)	Bhakra Complex	1490.15	534.73
(b)	Dehar	990.00	393.23
(c)	Pong	384.00	95.08
	Total BBMB	2864.15	1023.04
3	DELHI		
(a)	Indra Prastha	247.50	38.23
(b)	Rajghat	149.00	41.04
(c)	Gas Turbines	282.00	90.03
(d)	Pragati Gas	330.00	202.85
	Total DELHI	1008.50	372.15
4	HARYANA		
(a)	WYC	48.00	22.57
(b)	Faridabad (New)	165.00	69.13
(c)	Panipat	860.00	349.18
(d)	Magnum Diesel(IPP)	25.20	5.87
	Total Haryana	1098.20	446.75

5	HP		
(a)	Giri	60.00	5.10
(b)	Bassi	60.00	40.94
(c)	Binwa	6.00	2.63
(d)	Rongtong (+Nogli+Micro+Thirot+Sal-2)	15.25	1.92
(e)	Andhra	16.95	6.80
(f)	Bhabha (H)	120.00	81.21
(g)	Baner (H)	12.00	3.36
(h)	Gaj (H)	10.50	4.01
(i)	Gumma	3.00	0.96
(j)	Ghanvi	22.50	8.12
(k)	Malana (IPP)	86.00	33.94
(l)	Baspa (IPP)	300.00	20.09
	Total HP	712.20	209.08
6	J & K		
(a)	Lower Jhelum	105.00	52.23
(b)	Upper Sindh	127.60	29.55
(c)	Ganderbal	15.00	2.07
(d)	Mohra	9.00	0.00
(e)	Chenani	32.80	6.38
(f)	Stakna	9.75	0.00
(g)	Small Hydel	3.54	0.00
(h)	Sewa	9.00	0.00
(i)	Diesel gen set	7.18	0.00
(j)	Pampore GT St - I	75.00	0.00
(k)	Pampore GT St - II	100.00	0.00
	Total J & K	493.87	90.23
7	PUNJAB		
(a)	Jogindernagar/ Shanan	110.00	69.78
(b)	UBDC	90.00	48.27
(c)	Mukerian	207.00	104.34
(d)	Anandpur Sahib (APS)	134.00	93.85
(e)	Ranjit Sagar HPS	600.00	209.38
(f)	Small Hydel	4.10	0.88
(g)	GNDTPS (Bhatinda)	440.00	165.40
(h)	GGSTPS (Ropar)	1260.00	433.85
(i)	Jhalkeri Rice Straw Fired	10.00	0.00
(j)	Lehra Mohabbat TPS	420.00	207.89
	Total Punjab	3275.10	1333.64
8	RAJASTHAN		
(a)	Mahi Bajaj Sagar	140.00	0.00
(b)	Rana Pratap Sagar (RPS)	172.00	11.56
(c)	Jawahar Sagar (JS)	99.00	8.50
(d)	Anoopgarh	9.00	0.24
(e)	Small Hydro	14.85	0.90
(f)	Kota TPS	850.00	511.18
(g)	RAMGARH GT	3.00	0.00
(h)	RAMGARH GT EXT	35.50	17.26
(i)	Suratgarh TPS	1000.00	562.76
(j)	Wind Farm	14.01	10.56
	Total Rajasthan	2337.36	1122.96

9	U.P.		
	<u>HYDRO</u>		
(a)	Rihand	300.00	73.34
(b)	Obra	99.00	31.26
(c)	Matatilla	30.00	5.21
(d)	Ganga Canal	10.70	0.00
(e)	Small hydro	18.20	0.00
(f)	Khara	72.00	38.50
	Total U.P. (Hydro)	529.90	148.31
	<u>THERMAL</u>		
(e)	Obra	1442.00	486.46
(f)	Panki	242.00	56.38
(g)	Harduaganj	375.00	29.88
(h)	Paricha	220.00	35.75
(i)	Anpara	1630.00	964.91
	Total U.P. (Thermal)	3909.00	1573.37
	Total U.P.	4438.90	1721.68
10	UTTRANCHAL		
(a)	Khatima	41.40	16.77
(b)	Ramganga	198.00	6.77
(c)	Ganga Canal	32.70	10.77
(d)	Yamuna (I & IV)	114.75	48.21
(e)	Chibro	240.00	73.04
(f)	Khodri	120.00	36.11
(g)	Chilla	144.00	57.74
(h)	Maneri Bhali	90.00	67.96
	Total Uttranchal	980.85	317.37
11	CHANDIGARH		
	Diesel gen set	1.40	
	Total Region	28543.77	13101.23

Notes : 1. The ex-bus generations are either actual values or based on the following 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%

Cummulative from 01.04.2002	
(Ex-bus MU)	
	821.99
	2465.94
	1309.40
	856.36
	535.61
	359.79
	374.78
	442.53
	760.58
	765.31
	409.96
	9102.25
	205.70
	756.72
	72.67
	606.78
	661.89
	2303.76
	218.06
	446.10
	413.95
	1078.11
	836.23
	676.06
	139.63
	1651.92
	73.16
	82.63
	171.12
	396.31
	723.22
	43.35
	135.18
	624.38
	12.49
	815.40
contd/-	

	12.77
	76.69
	6.85
	3.98
	13.97
	124.33
	7.92
	10.21
	1.99
	15.64
	53.65
	20.09
	328.00
	106.30
	58.15
	2.84
	0.00
	9.78
	0.00
	0.00
	0.00
	0.00
	0.00
	0.00
	177.07
	133.20
	74.05
	151.46
	107.53
	301.22
	1.39
	315.42
	931.65
	0.00
	456.75
	2472.67
	0.00
	18.54
	13.54
	0.88
	1.59
	1037.56
	35.92
	1032.65
	15.94
	2156.62
	contd/-

	139.26
	58.50
	6.09
	0.00
	0.00
	68.16
	272.02
	980.52
	122.32
	57.91
	96.21
	1806.10
	3063.06
	3335.08
	31.39
	10.36
	16.49
	90.06
	133.71
	64.89
	103.76
	120.53
	571.19
	24715.29

assumptions

XII. Inter Regional Exchanges During May 2003 (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	-100	0	400	0.00	4.13	-4.13	-25	-26	0	26	0.00	0.46	-0.46
02	0	-200	0	400	0.00	4.52	-4.52	-27	-18	0	27	0.00	0.40	-0.40
03	0	-100	0	250	0.00	2.16	-2.16	-21	-20	0	27	0.00	0.45	-0.45
04	0	-200	0	400	0.00	3.61	-3.61	-20	-21	0	24	0.00	0.39	-0.39
05	0	-100	0	200	0.00	2.15	-2.15	-20	-17	0	24	0.00	0.40	-0.40
06	0	-100	0	300	0.00	2.51	-2.51	-22	-20	0	26	0.00	0.44	-0.44
07	0	-50	0	150	0.00	1.40	-1.40	-22	-22	0	22	0.00	0.52	-0.52
08	0	-50	0	150	0.00	1.11	-1.11	-22	-22	0	22	0.00	0.35	-0.35
09	-100	0	0	100	0.00	0.29	-0.29	-20	-20	0	20	0.00	0.48	-0.48
10	0	-100	0	100	0.00	0.16	-0.16	-25	-20	0	25	0.00	0.51	-0.51
11	0	0	0	100	0.00	0.34	-0.34	-25	-20	0	25	0.00	0.00	0.00
12	0	-50	0	50	0.00	1.04	-1.04	-16	-14	0	16	0.00	0.29	-0.29
13	-300	-50	0	300	0.00	2.68	-2.68	-16	-14	0	16	0.00	0.29	-0.29
14	-200	-150	0	350	0.00	3.43	-3.43	-20	-20	0	22	0.00	0.48	-0.48
15	0	-100	0	100	0.00	1.89	-1.89	-20	-20	0	22	0.00	0.52	-0.52
16	-195	-100	0	400	0.00	5.64	-5.64	-20	-20	0	22	0.00	0.51	-0.51
17	0	-345	0	345	0.00	5.26	-5.26	-26	-22	0	26	0.00	0.51	-0.51
18	0	-200	0	400	0.00	3.35	-3.35	-27	-21	0	28	0.00	0.44	-0.44
19	0	-100	0	350	0.00	3.16	-3.16	-18	-17	0	20	0.00	0.45	-0.45
20	0	-50	0	200	0.00	1.00	-1.00	-23	-22	0	28	0.00	0.50	-0.50
21	0	-50	0	200	0.00	1.40	-1.40	-20	-20	0	28	0.00	0.47	-0.47
22	-50	-200	0	250	0.00	2.36	-2.36	-20	-20	0	28	0.00	0.45	-0.45
23	0	-250	0	450	0.00	3.63	-3.63	-25	-25	0	25	0.00	0.49	-0.49
24	-75	-250	0	400	0.00	4.49	-4.49	-22	-22	0	25	0.00	0.45	-0.45
25	-244	-450	0	450	0.00	7.89	-7.89	-15	-15	0	15	0.00	0.39	-0.39
26	-195	-445	0	445	0.00	7.46	-7.46	-15	-15	0	15	0.00	0.38	-0.38
27	-195	-445	0	445	0.00	8.00	-8.00	-21	-20	0	24	0.00	0.47	-0.47
28	-195	-445	0	445	0.00	8.00	-8.00	-21	-20	0	24	0.00	0.47	-0.47
29	0	-445	0	445	0.00	4.56	-4.56	-21	-20	0	24	0.00	0.52	-0.52
30	0	-250	0	250	0.00	2.57	-2.57	-23	-20	0	24	0.00	0.50	-0.50
31	0	-200	0	225	0.00	2.29	-2.29	-25	-25	0	25	0.00	0.52	-0.52
Maximum	0	0	0	450	0.00	8.00	-0.16	-15	-14	0	28	0.00	0.52	0.00
Minimum	-300	-450	0	50	0.00	0.16	-8.00	-27	-26	0	15	0.00	0.00	-0.52
Average	-55	-183	0	292	0.00	3.31	-3.31	-21	-20	0	23	0.00	0.43	-0.43
Total					0.00	102.48	-102.48					0.00	13.47	-13.47

XII. Inter Regional Exchanges During May 2003 (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	191	190	342	0	6.03	0.00	6.03
02	0	0	0	0	0.00	0.00	0.00	192	192	192	0	4.75	0.00	4.75
03	0	0	0	0	0.00	0.00	0.00	181	181	234	0	4.49	0.00	4.49
04	0	0	0	0	0.00	0.00	0.00	184	184	189	0	4.55	0.00	4.55
05	0	0	0	0	0.00	0.00	0.00	91	184	191	0	3.67	0.00	3.67
06	0	0	0	0	0.00	0.00	0.00	80	80	80	0	3.67	0.00	3.67
07	0	0	0	0	0.00	0.00	0.00	79	78	79	0	1.86	0.00	1.86
08	0	0	0	0	0.00	0.00	0.00	226	121	226	0	3.26	0.00	3.26
09	0	0	0	0	0.00	0.00	0.00	175	176	176	0	4.35	0.00	4.35
10	0	0	0	0	0.00	0.00	0.00	226	225	226	0	5.61	0.00	5.61
11	0	0	0	0	0.00	0.00	0.00	217	225	225	0	5.37	0.00	5.37
12	0	0	0	0	0.00	0.00	0.00	207	206	215	0	5.14	0.00	5.14
13	0	0	0	0	0.00	0.00	0.00	116	84	116	0	7.72	0.00	7.72
14	0	0	0	0	0.00	0.00	0.00	0	116	116	0	2.83	0.00	2.83
15	0	0	0	0	0.00	0.00	0.00	144	116	223	0	2.97	0.00	2.97
16	0	0	0	0	0.00	0.00	0.00	423	294	423	0	9.08	0.00	9.08
17	0	0	0	0	0.00	0.00	0.00	223	423	423	0	7.44	0.00	7.44
18	0	0	0	0	0.00	0.00	0.00	228	228	223	0	5.62	0.00	5.62
19	0	0	0	0	0.00	0.00	0.00	234	228	235	0	5.59	0.00	5.59
20	0	0	0	0	0.00	0.00	0.00	230	230	230	0	5.06	0.00	5.06
21	0	0	0	0	0.00	0.00	0.00	235	223	235	0	5.43	0.00	5.43
22	0	0	0	0	0.00	0.00	0.00	225	227	235	0	5.59	0.00	5.59
23	0	0	0	0	0.00	0.00	0.00	89	189	189	0	2.71	0.00	2.71
24	0	0	0	0	0.00	0.00	0.00	189	189	189	0	4.57	0.00	4.57
25	0	0	0	0	0.00	0.00	0.00	339	189	439	0	7.86	0.00	7.86
26	0	0	0	0	0.00	0.00	0.00	289	389	389	0	8.24	0.00	8.24
27	0	0	0	0	0.00	0.00	0.00	290	290	390	0	7.30	0.00	7.30
28	0	0	0	0	0.00	0.00	0.00	290	290	390	0	7.30	0.00	7.30
29	0	0	0	0	0.00	0.00	0.00	190	391	391	0	5.89	0.00	5.89
30	0	0	0	0	0.00	0.00	0.00	190	190	389	0	5.13	0.00	5.13
31	0	0	0	0	0.00	0.00	0.00	218	0	468	0	5.13	0.00	5.13
Maximum	0	0	0	0	0.00	0.00	0.00	423	423	468	0	9.08	0.00	9.08
Minimum	0	0	0	0	0.00	0.00	0.00	0	0	79	0	1.86	0.00	1.86
Average	0	0	0	0	0.00	0.00	0.00	200	204	260	0	5.30	0.00	5.30
Total					0.00	0.00	0.00					164.20	0.00	164.20

XIII. Progress Of Installation Of Shunt Capacitors As On 31.05.2003

(ALL FIGS IN MVar)

CONSTITUENT	REQUIREMENT AT THE END OF 2002-03	CAPACITORS AS ON 31.03.2003	CAPACITORS ADDITION DURING		ADDITIONAL REQUIRED DURING 2002-03
		INSTALLED	2001-02	2002 - 03	
Chandigarh	116	92	7	0	24
Delhi	2932	2755	397	122	177
Haryana	2797	2489	416	137	308
H.P.	319	278	57	73	41
J & K	924	147	12	0	777
Punjab	5107	4706	199	76	401
Rajasthan	2695	2711	59	234	-16
U.P.	5225	4965	485	274	260
Uttranchal	286		123		163
BBMB	360	381	0	0	0
TOTAL	20761	18524	1755	916	2135

SOURCE: Minutes of 339th OCC meeting of NREB held on 08th April, 2003.

XIV. Hydraulic Data For Reservoirs During May 2003

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 may 2003 (m)	470.84 1544.75	394.34 1293.76	255.48 838.20	345.60 1133.85	378.77 1242.68
Level on last day of May 2002 (m)	454.99 1492.74	395.17 1296.48	257.46 844.70	345.14 1132.35	380.16 1247.26
Live Capacity as on (mhmt) last day of May 2003 (maft)	0.19 1.57	0.11 0.90	0.07 0.55	0.03 0.27	0.00 0.00
Live Capacity as on (mhmt) last day of May 2002(maft)	0.05 0.44	0.11 0.86	0.13 1.05	0.03 0.22	0.00 0.00
Energy content as on last day of May 2003 (MU)	610.00	135.00	225.00	60.00	0.00
Energy content as on last day of may 2002 (MU)	180.00	140.00	575.00	55.00	0.00
Maximum level (m) (ft) (date)	470.84 1544.75 31.05.2003	398.35 1306.92 01.05.2003	256.89 842.80 01.05.2003	346.41 1136.50 01.05.2003	378874.93 1243028.00 01.05.2003
Minimum level (m) (ft) (date)	460.45 1510.66 01.05.2003	394.34 1293.76 31.05.2003	254.90 836.30 31.05.2003	345.60 1133.85 31.05.2003	378.77 1242.68 31.05.2003

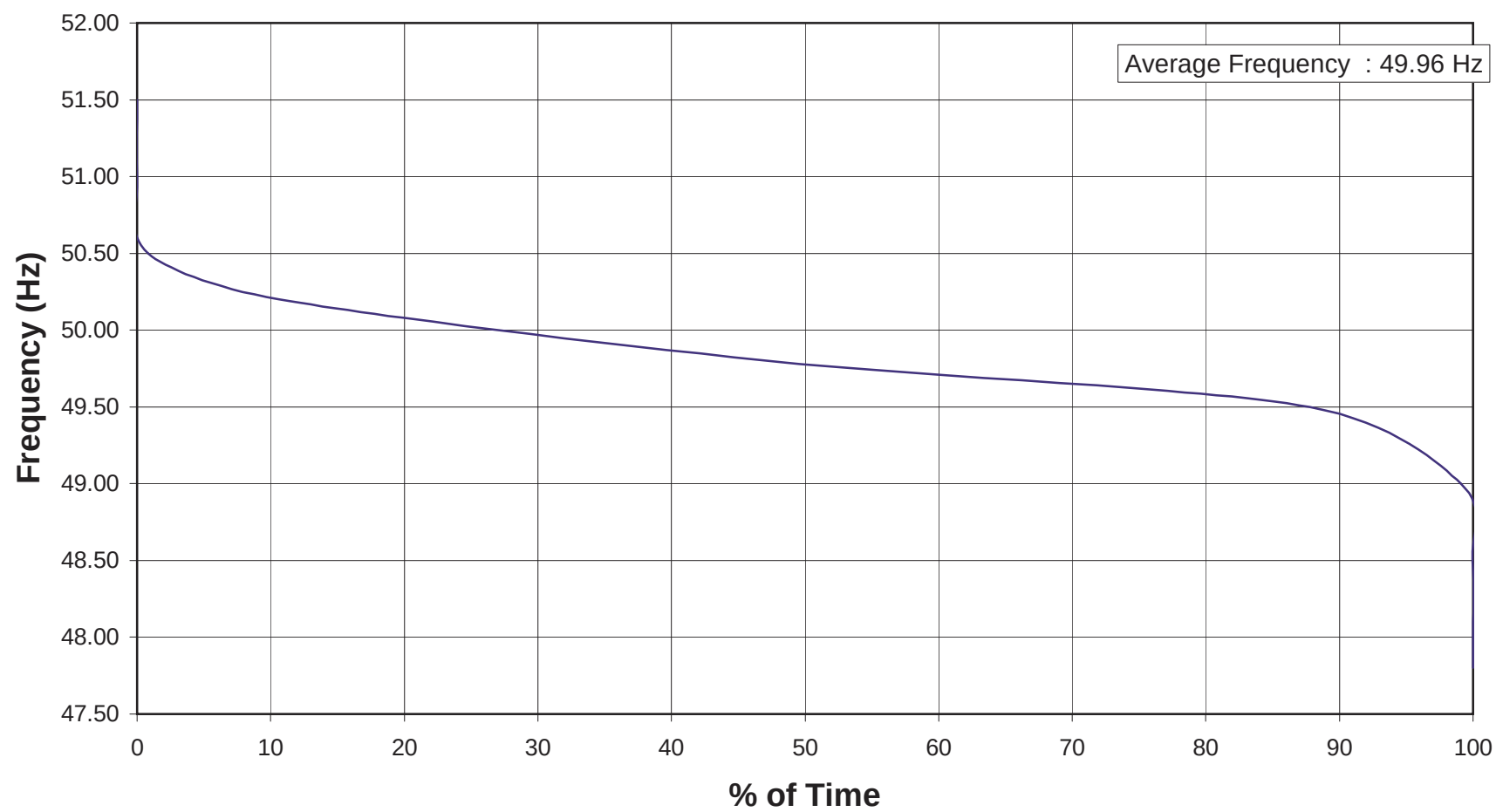
Energy content of Bhakra : Total Energy content at Bhakra, Ganguwal and Kotla power stations

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.

Frequency Duration Curve For Northern Region For May 2003



Grid Incident during May 2003

Date	Time	Incident
19.05.2003	23.50 hrs	All the running units at Singrauli STPS (2000 MW) tripped due to tripping of 132 kV Bus I & II causing loss of power to CW Pumps and other common auxiliaries. System frequency dropped to 48.2 Hz from 50.12 Hz due to above loss of generation. High voltage conditions were also observed and 400 kV Vindhyachal - Kanpur line tripped on over voltage. System remained intact and survived.