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NORTHERN REGION GRID REPORT FOR THE MONTH OF JUNE 2004

A) Summary Report

Grid Overview during the Month

1.

In the month of June 2004, the average system frequency was 49.71 Hz and frequency remained in the normal range i.e. between 49.00 & 50.50 Hz for 89.45 % of the time as compared to 88.20 % during the last year i.e. June 2003. Frequency variation index during the month was below 3.00. However large gap between maximum 51.18 Hz and minimum 48.36 Hz was due to partial participation in free governor mode of operation by some of the generating agencies in the region. The average energy and peak demand met were 481.03 MU and 24112 MW respectively.

Overall voltage profile in the grid during the month has been satisfactory on most of the 400 kv buses.

During June 2004 there was no major grid incident. However there were some minor incidents which are reported at Annexure-VI

- (i) Faults of 400 KV Panki-Muradnagar out since 30.04.2004 due to damaged MOV card were restored on 18.06.2004.
- (ii) 400 KV Uri-Wagoora –I out since 20.05.2004 due to fault in oil filled cable at Uri end restored on 07.06.2004.

2. Commissioning of new Units/Lines/Transformers during the month

220 KV ALLAHABAD-PHOOLPUR line declared under commercial operation w.e.f 01.06.2004

3. Monthly Frequency Profile :

Maximum frequency	51.18	Hz	at	23.00	hours on	30.06.2004
Minimum frequency	48.36	Hz	at	21.04	hours on	23.06.2004
Average frequency	49.71	Hz				

Frequency distribution in %

Hz	< 48.50	<49.00	49.00-50.50	> 50.50
% of time	0.01	6.87	89.45	3.74

Monthly Frequency Variation Index

Maximum	8.84
Minimum	0.79
Average	2.99

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

State / U.T.	Demand met MU/Day	Requirement MU/Day	Shortage MU/Day	Shortage %
Punjab	107.09	110.88	3.79	3.42
Haryana	62.84	64.78	1.94	2.99
Rajasthan	80.85	80.85	0.00	0.00
U.P.	121.86	144.69	22.83	15.78
Uttaranchal	11.62	11.89	0.27	2.27
Delhi	64.48	64.99	0.51	0.78
H.P.	8.85	8.85	0.00	0.00
J & K *	18.09	24.26	6.17	25.43
Chandigarh	3.69	3.69	0.00	0.00
N.F.F./Rail	1.66	1.66	0.00	0.00
Total	481.03	516.54	35.51	6.87

b. Peak MW

State / U.T.	MAX. Demand met MW	MAX. Requirement MW	Shortage MW	Shortage %
	A	B	C	(C/B)*100
Punjab	5388	5749	361	6.28
Haryana	3621	3663	42	1.15
Rajasthan	3808	3808	0	0.00
U.P.	6088	7919	1831	23.12
Uttaranchal	762	793	31	3.91
Delhi	3328	3339	11	0.33
H.P.	576	576	0	0.00
J & K *	1127	1277	150	11.75
Chandigarh	208	208	0	0.00
N.F.F./Rail	74	74	0	0.00
Region	24112	26331	2219	8.43

Diversity Factor = **1.08**

* Approximate and Estimated

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

(All figs in M.U)

State / U.T.	Schedule	Actual	OD/UD
Punjab	1398.24	1570.83	172.59
Haryana	980.07	1260.14	280.07
Rajasthan	944.08	878.80	-65.28
U.P.	1613.19	1690.01	76.82
Uttranchal	92.03	60.88	-31.15
Delhi	1361.50	1083.98	-277.52
H.P.	-58.23	-61.47	-3.24
J & K	480.81	464.04	-16.77
Chandigarh	110.62	117.93	7.31
N.F.F./Rail	58.14	49.68	-8.46

6. **Inter Regional Exchanges**Energy
M.U.Peak
MWImport

a)	From WR over HVDC Vindhyachal B/B	184.93	500
b)	From WR over 220 kV Ujjain-Kota	0.00	0
c)	From ER over HVDC Sasaram B/B	68.42	500
d)	From ER over 220 kV Dehri-Sahupuri	21.48	85

Export

e)	To WR over HVDC Vindhyachal B/B	4.03	500
f)	To WR (MP) over 220 kV Auraiya-Malanpur	17.10	32
g)	To WR(MP) over 220 kV Kota-Ujjain	42.24	110
h)	To ER over 220 kV/132kV lines	14.21	35
i)	To ER over HVDC Sasaram B/B	0.00	0
j)	To Nepal over 132 kV Tanakpur-Mahendernagar	0.54	30

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

	<u>STATION</u>	<u>INSTALLED CAPACITY</u> <u>(MW)</u>		<u>EFFECTIVE CAPACITY</u>
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-I	3x180	540.00	3x180 540.00
(f)	Chamera HPS-II	3x100	300.00	3x100 300.00
(g)	URI	4x120	480.00	4x120 480.00
	Sub-Total		2310.00	2284.20
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	6x250	1500.00	6x250 1500.00
Total Central Sector (A + B + C +D)			13344.04	13133.24
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	6x66	396.00	6x66 396.00
	Total BBMB		2876.15	2876.15

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	2x67.5	135.00
(c)	Gas Turbines	6x30+3x34	282.00	6x30+3x34	282.00
(d)	Pragati Gas Turbines	2x104.6+1x121.2	330.00	2x104.6+1x121.2	330.00
	Total DELHI		1009.50		994.50
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	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	3.00	3.00
(m)	Ghanvi	2x11.25	22.50	2x11.25	22.50
(n)	Diesel Gen. Sets		0.00	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	3.54
(h)	Sewa	3x3.0	9.00	3x3.0	9.00
	Total Hydro		311.69		311.69

contd/-

J & K (Contd.)					
	GAS TURBINES				
(h)	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	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(50%)	86.00	4x43(50%)	86.00
(c)	Jawahar Sagar (JS)	3x33(50%)	49.50	3x33(50%)	49.50
(d)	Anoopgarh	6x1.5	9.00	6x1.5	9.00
(e)	Small Hydro		14.85	14.85	14.85
(f)	Gandhi sagar	5x23 (50%)	57.50	5x23 (50%)	57.50
	Total Hydro		356.85		356.85
	THERMAL				
(g)	Kota TPS	2x110+3x210 +1x195	1045.00	2x110+3x210 +1x195	1045.00
(h)	Suratgarh TPS	5x250	1250.00	5x250	1250.00
(i)	Ramgarh GT	1x3	3.00	1x3	3.00
(j)	Ramgarh GT EXT.	1x35.5+1x37.5	76.00	1x35.5+1x37.5	76.00
(k)	Satpura share		125.00		125.00
	Total Thermal		2499.00		2499.00
(J)	Wind farm		14.01	14.01	14.01
	Total Rajasthan		2869.86		2869.86

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)	Khara	3x24.0	72.00		72.00
	Total Hydro		501.00		501.00
	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		4693.00		4410.00
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
(l)	Sibla+Small hydel		18.20		18.20
	Total Hydro		999.05		999.05
	Total Region (1 to 11)		31389.73		30863.57

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	26.47%
NHPC	2284.20	0.00	0.00	0.00	2284.20	7.40%
SJVNL	1500.00	0.00	0.00	0.00	1500.00	4.86%
NPC	0.00	0.00	0.00	1180.00	1180.00	3.82%
BBMB	2876.15	0.00	0.00	0.00	2876.15	9.32%
CHANDIGARH	0.00	0.00	1.40	0.00	1.40	0.00%
DELHI	0.00	382.50	612.00	0.00	994.50	3.22%
HARYANA	48.00	1025.00	25.20	0.00	1098.20	3.56%
HIMACHAL	712.20	0.00	0.00	0.00	712.20	2.31%
J&K	311.69	0.00	182.18	0.00	493.87	1.60%
PUNJAB	1145.10	2130.00	0.00	0.00	3275.10	10.61%
RAJASTHAN	356.85	2420.00	93.01	0.00	2869.86	9.30%
UP	501.00	3909.00	0.00	0.00	4410.00	14.29%
UTTRANCHAL	999.05	0.00	0.00	0.00	999.05	3.24%
Total	10734.24	15691.50	3257.83	1180.00	30863.57	100.00%
% of TOTAL	34.78%	50.84%	10.56%	3.82%	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 Shanana 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 30.06.2004

Agency / Source	Run-of -the -river	Reservoir	Total
NHPC	1644.20	640.00	2284.20
BBMB	1155.15	1721.00	2876.15
SJVNL	0.00	1500.00	1500.00
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	270.85	86.00	356.85
UP	201.00	300.00	501.00
UTTRANCHAL	801.05	198.00	999.05
TOTAL	5689.24	5045.00	10734.24
PERCENTAGE	53.00%	47.00%	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	9.95	55.36	85.10	17.71	4.95	0.00	0.00
02	0.00	0.00	0.56	15.31	99.24	47.13	0.21	0.00	0.00
03	0.00	0.00	13.68	43.96	86.32	12.17	0.00	0.00	0.00
04	0.00	0.00	33.91	86.16	66.09	0.38	0.00	0.00	0.00
05	0.00	0.00	13.02	40.52	86.98	16.39	0.00	0.00	0.00
06	0.00	0.00	1.37	20.35	98.28	30.59	0.35	0.00	0.00
07	0.00	0.00	3.13	27.61	75.37	38.87	21.50	0.24	0.00
08	0.00	0.00	0.00	4.81	89.45	55.58	10.55	0.00	0.00
09	0.00	0.00	0.21	10.79	82.61	49.15	17.18	0.00	0.00
10	0.00	0.00	11.50	53.05	88.50	6.76	0.00	0.00	0.00
11	0.00	0.00	18.53	76.19	81.47	1.63	0.00	0.00	0.00
12	0.00	0.00	8.34	92.83	91.66	0.00	0.00	0.00	0.00
13	0.00	0.00	8.47	43.61	91.35	17.01	0.17	0.00	0.00
14	0.00	0.00	0.00	12.60	100.00	29.90	0.00	0.00	0.00
15	0.00	0.00	0.49	6.74	99.51	34.28	0.00	0.00	0.00
16	0.00	0.00	0.00	10.02	100.00	39.87	0.00	0.00	0.00
17	0.00	0.00	4.00	30.24	96.00	26.24	0.00	0.00	0.00
18	0.00	0.00	0.49	4.76	96.74	48.77	2.78	0.00	0.00
19	0.00	0.00	0.00	4.93	79.20	71.88	20.80	0.66	0.00
20	0.00	0.00	0.36	4.31	85.87	80.24	13.78	0.00	0.00
21	0.00	0.00	1.11	27.09	86.97	50.02	11.91	0.63	0.00
22	0.00	0.00	0.00	3.58	90.45	80.28	9.55	1.01	0.00
23	0.00	0.28	3.27	21.68	96.14	43.61	0.59	0.00	0.00
24	0.00	0.00	0.56	24.04	99.44	32.36	0.00	0.00	0.00
25	0.00	0.00	1.82	21.57	98.18	39.55	0.00	0.00	0.00
26	0.00	0.00	1.39	37.47	98.23	13.40	0.38	0.00	0.00
27	0.00	0.00	2.15	48.72	97.85	10.49	0.00	0.00	0.00
28	0.00	0.00	37.86	90.34	62.14	1.04	0.00	0.00	0.00
29	0.00	0.00	20.52	78.61	79.48	1.63	0.00	0.00	0.00
30	0.00	0.00	37.86	90.34	62.14	1.04	0.00	0.00	0.00
Max	0.00	0.28	37.86	92.83	100.00	80.28	21.50	1.01	0.00
Min	0.00	0.00	0.00	3.58	62.14	0.00	0.00	0.00	0.00
Average	0.00	0.01	7.82	36.25	88.47	29.93	3.82	0.08	0.00

Frequency (Hz)				Average Frequency	Frequency Variation Index
Maximum		Minimum			
Freq	Time	Freq	Time		
50.90	18.50	48.58	11.47	49.53	4.31
50.54	19.06	48.78	13.17	49.89	1.28
50.31	06.04	48.55	14.24	49.52	3.96
50.08	19.33	48.54	21.00	49.15	8.23
50.30	19.01	48.59	16.24	49.58	3.41
50.56	19.03	48.56	23.31	49.80	1.55
51.03	06.05	48.63	23.17	49.91	3.28
50.81	18.19	49.05	04.52	50.05	1.28
50.91	04.02	48.87	20.16	50.04	1.77
50.40	08.05	48.56	21.05	49.47	4.20
50.37	11.34	48.52	21.22	49.28	6.12
50.30	18.59	48.65	0.00	49.41	4.37
50.53	18.31	48.58	05.38	49.59	3.20
50.40	19.18	49.03	20.23	49.83	1.01
50.43	08.14	48.81	21.06	49.89	0.79
50.42	05.05	49.09	21.28	49.90	0.90
50.42	05.25	48.58	15.19	49.71	2.17
50.77	06.05	48.56	01.39	49.99	1.02
51.18	06.02	49.05	12.04	50.18	1.69
50.95	03.28	48.87	21.08	50.21	1.54
51.06	03.29	48.81	20.50	49.93	2.59
51.17	5.35	49.25	21.26	50.20	1.30
50.55	08.07	48.36	21.03	49.85	1.91
50.44	07.08	48.80	01.10	49.80	1.60
50.47	18.06	48.56	21.32	49.84	1.59
50.62	18.00	48.86	15.44	49.63	2.36
50.41	19.15	48.79	02.25	49.55	3.14
50.18	23.00	48.51	12.02	49.11	8.84
50.15	08.43	48.55	21.01	49.26	6.38
50.18	23.00	48.51	12.02	49.11	8.84
51.18		49.25		50.21	8.84
50.08		48.36		49.11	0.79
50.56		48.72		49.71	2.99

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	420	18.14	386	11.46	416	18.49	382	02.05	210	18.49	191	15.51	406	18.03	381	11.46
02	410	19.06	385	11.40	413	19.06	383	13.19	207	04.20	192	11.09	402	19.05	382	23.15
03	408	03.19	381	16.37	407	03.49	384	16.37	206	03.20	190	16.37	396	09.08	382	19.52
04	401	03.59	378	14.56	404	19.06	382	12.53	204	03.58	189	16.32	393	08.08	376	16.00
05	401	03.59	378	14.56	404	19.06	382	12.53	204	03.58	189	16.32	393	08.08	376	16.00
06	413	19.05	385	00.04	412	18.08	387	00.04	208	18.35	197	00.00	403	23.52	366	09.14
07	425	04.06	383	14.44	418	04.01	382	23.16	213	04.06	194	14.44	420	01.42	378	23.20
08	420	12.23	386	00.00	419	18.33	387	00.00	208	17.53	198	00.00	401	08.07	382	00.01
09	420	03.01	387	14.54	417	03.41	387	12.24	214	03.33	198	14.55	401	04.01	380	12.12
10	414	08.06	386	10.49	409	08.06	385	10.29	212	03.31	195	11.35	408	18.32	378	07.18
11	407	06.00	381	15.16	406	06.00	380	23.37	212	03.31	195	11.35	399	08.04	379	05.21
12	404	19.00	380	09.15	402	19.08	381	22.44	205	08.01	193	14.35	393	04.01	373	09.17
13	410	18.32	378	14.37	405	18.32	377	14.38	206	18.31	196	11.58	397	18.30	365	07.33
14	401	03.22	366	11.41	402	19.32	378	12.38	203	03.31	186	16.53	391	03.31	361	15.35
15	403	08.13	366	14.19	407	08.08	379	00.06	203	08.08	188	15.45	388	08.13	359	11.58
16	396	07.33	368	14.41	404	13.12	384	23.23	201	06.09	186	14.43	386	19.05	354	12.13
17	400	06.01	367	16.24	412	19.20	382	00.18	206	06.05	188	16.21	389	22.06	359	12.16
18	402	06.04	368	15.28	413	06.03	386	01.37	206	06.05	190	15.08	399	04.56	371	12.40
19	417	06.00	379	15.52	416	06.00	378	14.16	212	06.00	193	14.54	399	06.02	377	12.12
20	420	03.20	389	12.39	417	03.52	387	12.39	212	03.18	200	20.51	405	04.18	381	06.45
21	420	03.32	384	13.43	416	03.47	381	23.16	211	02.58	191	16.41	412	03.48	384	16.30
22	420	5.18	386	12.08	410	7.56	383	12.19	213	5.32	199	10.43	405	8.33	378	16.27
23	409	02.22	384	23.18	407	19.03	380	23.43	213	5.32	199	10.43	403	01.34	387	09.15
24	412	07.05	387	00.00	408	18.20	382	00.00	208	07.08	193	15.02	403	06.01	388	12.23
25	414	03.49	390	16.45	410	18.06	388	23.25	211	06.03	197	16.44	403	03.46	382	16.55
26	414	07.09	389	12.23	411	18.04	387	12.20	209	07.06	197	12.22	408	08.06	390	12.16
27	412	07.28	392	11.28	409	06.00	387	12.28	210	06.03	201	00.02	407	19.02	390	06.30
28	390	05.05	361	17.23	394	05.05	375	05.51	200	05.05	184	15.27	395	17.42	359	05.52
29	390	07.16	354	16.35	397	19.44	371	17.38	202	06.05	184	16.33	393	08.40	373	06.32
30	390	05.05	361	17.23	394	05.05	375	05.51	200	05.05	184	15.27	395	17.42	359	05.52
Max	425		392		419		388		214		201		420		390	
Min	390		354		394		371		200		184		386		354	

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	21490	22562	1072	21668	22848	1180	483.83
02	21519	22869	1350	21312	21929	617	476.60
03	21984	23324	1340	21432	22032	600	479.81
04	21981	23380	1399	20848	22948	2100	473.13
05	22582	23954	1372	20913	21529	616	475.69
06	21797	23273	1476	22118	23709	1591	477.19
07	22050	23950	1900	15733	16342	609	429.00
08	19962	20954	992	21349	22449	1100	451.63
09	21598	23138	1540	17834	18139	305	445.09
10	21472	22888	1416	19915	20840	925	463.04
11	22628	24589	1961	20886	22150	1264	471.55
12	22803	24173	1370	21116	22221	1105	482.78
13	23087	24433	1346	21638	22911	1273	489.90
14	23132	24480	1348	22195	22945	750	504.63
15	23424	25124	1700	22651	23522	871	499.44
16	23372	24789	1417	22401	23218	817	501.76
17	23022	24741	1719	21867	23013	1146	503.40
18	22913	24260	1347	21795	22402	607	501.38
19	22759	24113	1354	21475	22080	605	490.45
20	21782	22928	1146	20191	20791	600	463.20
21	22413	23852	1439	18618	19218	600	462.50
22	22758	24452	1694	21480	21980	500	486.18
23	22997	24920	1923	20913	21513	600	495.43
24	22358	23717	1359	21871	22510	639	492.43
25	22506	23927	1421	21194	21994	800	484.36
26	22466	24022	1556	21762	22362	600	481.54
27	22419	23765	1346	21071	21548	477	480.70
28	23156	24503	1347	21698	22465	767	490.86
29	23267	24713	1446	22561	23340	779	508.11
30	23952	25654	1702	22716	24457	1741	508.56
Maximum	23952	25654	1961	22716	24457	2100	508.56
Minimum	19962	20954	992	15733	16342	305	429.00
Average	22455	23915	1460	21107	21980	873	481.03

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	4552	4705	2288	2538	3272	3310	2812	2814	4762	5646
02	4235	4951	2382	2418	3051	3275	2950	2685	4233	5631
03	3945	4870	2676	2542	3202	3232	3201	2769	4848	5382
04	4480	4709	2668	2345	3084	3248	3213	2774	4992	5249
05	4287	4822	2734	2472	3134	3236	3080	2821	4845	5194
06	4368	4907	2815	2525	3129	3317	2790	2753	4735	6061
07	4165	936	2856	1827	3202	3193	3083	2573	4906	5409
08	4290	4343	2579	2775	2821	3217	2725	2604	3403	5597
09	4715	4588	2744	2190	2828	2606	2846	2269	4430	4267
10	4513	4447	2411	2566	3088	2859	3048	2258	4639	4934
11	4809	4628	2683	2418	3136	3127	3121	2467	4796	5486
12	4901	4479	2858	2556	3197	3163	2991	2642	5052	5683
13	5253	4951	2935	2576	3041	3196	2965	2687	4829	5455
14	5174	5060	3183	3059	3073	3167	3117	2764	5019	5389
15	5092	5062	3183	3215	3115	3302	3181	2794	4660	5448
16	5120	5130	3301	3224	3512	3524	3122	2867	4606	5140
17	5137	5251	3258	2993	2967	3001	3229	2740	5238	4605
18	5165	4821	3305	3112	2669	2954	3202	2829	4638	5833
19	5349	5143	2933	3233	2906	2655	2844	2505	4717	5004
20	4866	5087	2962	2447	2859	2832	3013	2242	4538	4861
21	4968	4208	2980	1814	3031	2871	3012	2509	5098	4793
22	4769	4928	2991	2781	3174	2864	2977	2706	4874	5595
23	4914	4863	3013	2750	3169	2910	3047	2568	4959	5234
24	4743	5047	3020	2839	3232	3071	3041	2770	4477	5480
25	4748	4669	2981	2601	3188	3328	3014	2634	4673	5060
26	4396	4906	3115	2659	3082	3173	2990	2546	4586	5540
27	4389	4784	3074	2558	2853	2943	2915	2609	4653	5604
28	4928	4900	3235	2793	3128	2869	3023	2623	5114	5792
29	4933	5297	3117	2946	3206	3141	3129	2679	5123	5877
30	4912	5279	3254	3012	3753	3056	3278	2863	5324	5956
Maximum	5349	5297	3305	3233	3753	3524	3278	2867	5324	6061
Minimum	3945	936	2288	1814	2669	2606	2725	2242	3403	4267
Average	4737	4726	2918	2659	3103	3088	3032	2645	4759	5374

Remarks: Peak - 2000 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	370	439	172	148	505	398	838	796
02	708	377	176	144	442	363	596	775
03	755	463	180	135	501	369	960	775
04	595	481	184	137	467	379	933	875
05	795	439	169	144	503	379	959	694
06	639	451	152	141	449	350	624	733
07	677	374	170	103	414	244	1037	76
08	533	425	163	128	429	370	874	642
09	578	373	167	107	501	354	1053	610
10	649	420	161	112	444	356	1049	723
11	619	462	167	121	463	335	1047	795
12	593	473	169	122	441	355	935	694
13	603	496	157	143	470	382	904	675
14	636	458	177	131	312	347	885	839
15	662	482	183	140	477	344	937	726
16	731	500	194	145	449	338	924	666
17	492	486	192	148	493	351	860	583
18	627	453	193	144	473	363	833	420
19	673	482	181	147	513	360	866	599
20	668	471	161	147	423	388	940	721
21	641	350	183	114	465	369	844	667
22	557	456	173	133	463	363	873	703
23	707	400	179	132	471	358	690	711
24	615	494	176	138	453	320	1057	759
25	694	485	172	131	477	370	1096	684
26	687	504	166	132	460	369	959	714
27	684	479	149	123	441	349	1074	552
28	613	491	178	117	470	346	953	692
29	691	465	187	147	558	377	1127	729
30	712	494	193	146	486	337	878	660
Maximum	795	504	194	148	558	398	1127	875
Minimum	370	350	149	103	312	244	596	76
Average	640	454	174	133	464	356	920	676

Remarks: Peak - 2000 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	102.606	56.597	80.352	68.341	123.216	10.825	3.893	9.019	18.187	1.722	474.758
02	100.838	56.953	76.994	69.307	117.912	10.491	3.842	9.301	18.073	1.582	465.294
03	102.066	57.947	78.162	68.217	114.032	12.274	3.825	9.376	18.618	1.610	466.126
04	101.132	57.298	78.419	68.642	113.711	11.802	3.911	9.532	17.871	1.708	464.027
05	103.947	56.379	78.671	65.724	112.693	10.905	3.793	9.525	18.464	1.692	461.793
06	108.181	58.209	79.578	60.253	118.243	11.136	3.255	9.383	15.783	1.644	465.666
07	67.442	55.431	78.170	65.206	114.808	10.051	3.382	8.200	12.015	1.482	416.186
08	97.679	54.335	74.816	62.397	111.398	9.601	3.325	9.199	17.366	1.593	441.710
09	106.539	56.795	68.286	59.424	101.235	10.200	3.276	9.239	18.252	1.594	434.840
10	101.417	58.374	72.744	62.000	109.734	11.446	3.471	9.393	19.094	1.631	449.304
11	100.797	57.495	76.505	65.940	115.725	11.727	3.397	9.025	19.218	1.780	461.609
12	105.915	60.183	77.737	65.576	116.428	11.735	3.547	9.222	19.454	1.643	471.440
13	111.990	65.301	77.092	64.345	115.785	11.762	3.332	9.210	19.300	1.654	479.772
14	114.778	70.650	78.097	69.148	114.597	11.636	3.772	8.572	18.833	1.769	491.852
15	115.945	71.266	76.677	69.845	109.416	11.998	3.988	7.872	18.584	1.753	487.344
16	116.473	72.770	76.691	70.583	107.720	11.502	4.134	7.889	18.880	1.748	488.389
17	117.838	73.566	73.706	70.276	110.357	11.730	4.119	7.896	18.434	1.568	489.488
18	113.058	77.368	72.401	68.844	114.817	11.589	4.056	7.973	17.123	1.683	488.912
19	118.158	70.242	69.727	60.443	111.801	12.438	3.978	8.133	18.308	1.585	474.812
20	110.187	63.581	66.541	60.140	110.517	12.212	3.452	8.107	16.969	1.586	453.291
21	103.648	56.782	73.186	64.551	113.084	10.917	3.643	8.297	17.839	1.697	453.644
22	113.338	60.865	73.324	64.390	117.270	11.390	3.656	8.642	18.379	1.705	472.958
23	113.193	65.894	74.801	66.828	115.109	11.726	3.806	8.739	18.414	1.695	480.206
24	109.025	65.804	76.823	67.439	115.046	12.208	3.760	8.930	17.988	1.634	478.655
25	110.636	62.087	78.331	62.851	111.200	12.931	3.663	9.174	18.566	1.560	471.000
26	103.620	64.383	76.837	62.727	117.538	12.264	3.496	9.364	17.747	1.610	469.587
27	105.873	65.610	72.496	61.322	118.344	12.102	3.055	9.159	18.500	1.556	468.015
28	109.783	61.572	65.696	66.867	127.132	12.886	3.626	9.362	18.712	1.784	477.422
29	113.388	66.930	77.927	68.344	122.476	12.040	4.100	9.026	18.913	1.745	494.890
30	113.101	64.520	75.169	70.965	124.537	13.199	4.219	8.862	18.806	1.667	495.046
Maximum	118.158	77.368	80.352	70.965	127.132	13.199	4.219	9.532	19.454	1.784	495.046
Minimum	67.442	54.335	65.696	59.424	101.235	9.601	3.055	7.872	12.015	1.482	416.186
Average	107.086	62.840	75.199	65.698	114.863	11.624	3.692	8.854	18.090	1.656	469.601
Month Total	3212.593	1885.187	2255.957	1970.934	3445.879	348.723	110.772	265.622	542.690	49.680	14088.037

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-Jun-2004	43266	44944	33072	34240	31021	29916	46839	39184	51801	63353	3692	1530
2-Jun-2004	41593	45491	30345	36875	29959	26824	44767	38538	50874	58463	3535	776
3-Jun-2004	41410	45949	30922	37046	29972	24333	44432	37141	50854	58767	3519	3103
4-Jun-2004	41094	40838	30959	34840	29248	26746	43740	39886	49947	55508	2572	2897
5-Jun-2004	42183	45059	31176	34675	30241	28600	43409	35683	52301	58750	3031	3386
6-Jun-2004	43224	52852	31981	37278	30822	29484	43346	29866	52978	60957	2999	3068
7-Jun-2004	38616	37034	30595	39985	30987	31929	44896	35764	52583	62750	2686	1575
8-Jun-2004	42207	47891	30561	36183	30270	28570	41917	33997	50927	53010	2778	699
9-Jun-2004	39317	54115	27280	35398	28989	22949	40283	30246	46241	45386	4083	2424
10-Jun-2004	40496	49873	27299	35589	28898	27275	37019	30350	52609	56204	3674	2740
11-Jun-2004	40045	47735	27945	37665	29724	27734	38452	34183	53750	57443	3910	3112
12-Jun-2004	43507	48201	29139	39158	30979	28733	40274	34961	56447	57742	4234	4403
13-Jun-2004	46001	53097	31312	42304	32031	27917	43418	35077	55505	55552	3976	4295
14-Jun-2004	49439	56228	33359	48747	33992	29902	48264	36673	58587	56613	4183	2981
15-Jun-2004	49157	57766	34582	49712	33907	33013	51955	37720	56336	49478	3771	2931
16-Jun-2004	49483	58455	35821	52759	34081	32585	51252	39298	54635	45856	3619	1505
17-Jun-2004	51739	59666	36721	50521	34712	32475	52845	40037	57304	56585	3880	371
18-Jun-2004	51526	57199	36025	55821	33800	28409	51324	39262	56207	51027	2921	385
19-Jun-2004	51151	62334	35495	49213	33679	25260	48765	34545	55012	52368	2487	-982
20-Jun-2004	47897	54783	32453	42352	32904	28217	47502	35267	50505	49408	1725	-1188
21-Jun-2004	51160	58009	34420	41732	33088	30845	49674	39931	52011	52680	1621	-1106
22-Jun-2004	53282	61048	33991	40164	33518	32184	48152	35048	54261	54585	1995	572
23-Jun-2004	53530	57391	33553	44942	32695	32145	46480	36846	55336	56410	1609	1408
24-Jun-2004	53375	55158	32910	44475	32257	33716	46460	37326	56846	63432	2155	2205
25-Jun-2004	53317	57203	33678	41783	32126	34445	47625	35269	57226	61809	1778	1993
26-Jun-2004	46862	49211	32567	42130	30715	31490	43913	32736	56855	66666	1696	2931
27-Jun-2004	44066	49611	30987	43462	28103	25569	41122	29335	54173	62059	2366	3459
28-Jun-2004	47279	52242	34370	41634	28803	24774	42095	37775	52575	57250	3210	3085
29-Jun-2004	50992	56065	37762	44590	30678	28920	44149	39938	53810	55001	3987	2963
30-Jun-2004	51710	55378	38787	44870	31879	33842	47135	42096	54698	54898	4333	3354
Total MU	1398.924	1570.826	980.067	1260.143	944.078	878.801	1361.504	1083.978	1613.194	1690.010	92.025	60.875
Max. MWH	53530	62334	38787	55821	34712	34445	52845	42096	58587	66666	4333	4403
Min MWH	38616	37034	27280	34240	28103	22949	37019	29335	46241	45386	1609	-1188
Avg. MWH	46631	52361	32669	42005	31469	29293	45383	36133	53773	56334	3068	2029

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-Jun-2004	-1214	-874	16758	15466	3786	4195	456	95	1943	1627
2-Jun-2004	-1033	-603	16639	15449	3846	4127	456	100	2032	1482
3-Jun-2004	-441	-341	15742	16089	3824	4055	456	83	1443	1527
4-Jun-2004	-929	-554	12583	15317	3746	4171	456	88	1579	1620
5-Jun-2004	-539	-22	16599	15752	3781	4057	456	104	2008	1588
6-Jun-2004	759	-790	17279	13191	3835	3550	456	102	1735	1542
7-Jun-2004	-1286	-1749	15200	9075	3844	3547	456	11	1788	1471
8-Jun-2004	-287	909	17348	14547	3862	3574	456	111	1110	1482
9-Jun-2004	-1458	571	16900	15593	3805	3473	456	96	1768	1498
10-Jun-2004	1573	2144	16488	16261	3903	3635	456	94	813	1537
11-Jun-2004	2061	1547	16351	16479	3933	3531	456	100	1687	1680
12-Jun-2004	1704	929	16424	16679	3902	3659	456	93	1948	1550
13-Jun-2004	-464	-1886	16606	16557	3843	3540	456	96	2011	1558
14-Jun-2004	-2327	-3883	16725	16231	3817	4128	456	110	1906	1659
15-Jun-2004	-3456	-4636	15976	15973	3444	4277	456	109	1307	1644
16-Jun-2004	-3600	-4162	15967	16362	3590	4394	456	93	1214	1655
17-Jun-2004	-3596	-4982	16077	16088	3635	4369	456	92	1197	1476
18-Jun-2004	-4617	-5195	15906	14815	3629	4329	456	100	1331	1583
19-Jun-2004	-4930	-5001	16307	16299	3579	4229	456	105	1403	1480
20-Jun-2004	-4825	-5051	12340	14685	3644	3810	456	109	1011	1477
21-Jun-2004	-4757	-4810	15821	15479	3705	3753	456	118	949	1579
22-Jun-2004	-4436	-4469	16250	15943	3739	3963	456	128	890	1577
23-Jun-2004	-4297	-3806	16106	16038	3716	4015	456	107	1356	1588
24-Jun-2004	-3946	-3145	16666	15291	3734	4043	456	116	943	1518
25-Jun-2004	-4067	-2775	16343	15786	3623	3918	456	114	1701	1446
26-Jun-2004	-1814	-809	16400	15000	3514	3716	456	110	1188	1500
27-Jun-2004	-2193	-1271	16090	15698	3282	3252	456	96	1710	1460
28-Jun-2004	-712	-494	15075	15861	3320	3809	456	95	1416	1689
29-Jun-2004	-662	-2336	15861	16043	3373	4315	456	98	1507	1647
30-Jun-2004	-2437	-3927	15983	15991	3363	4493	456	101	1561	1566
Total MU	-58.226	-61.471	480.810	464.038	110.617	117.927	13.680	2.974	44.455	46.706
Max. MWH	2061	2144	17348	16679	3933	4493	456	128	2032	1689
Min MWH	-4930	-5195	12340	9075	3282	3252	456	11	813	1446
Avg. MWH	-1941	-2049	16027	15468	3687	3931	456	99	1482	1557

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-Jun-2004	30715	30937	21960	22149	13776	13659	9173	9014	4608	4560	16773	16976
2-Jun-2004	30243	30552	21960	22268	12717	12870	9173	9105	4536	4551	15585	16310
3-Jun-2004	30448	30879	21960	22297	13776	13911	9173	9156	4536	4560	15569	16620
4-Jun-2004	30989	31381	21960	22413	13776	13902	9173	9162	7325	6937	16191	17096
5-Jun-2004	31185	31491	21960	22367	13429	13910	9173	9170	8960	8955	16222	16709
6-Jun-2004	31693	32054	21960	22256	13776	13745	9173	9157	9063	9122	15727	16612
7-Jun-2004	31440	31468	21389	21117	13030	12634	8934	8902	8784	8859	14106	15030
8-Jun-2004	32330	32440	21893	21904	12409	12153	8903	8917	9006	8957	14410	14436
9-Jun-2004	32261	32268	21650	21607	11729	12008	8203	8740	8455	8847	12977	13859
10-Jun-2004	32722	32947	21852	22348	11953	13834	9088	9412	9030	9328	15048	16540
11-Jun-2004	35758	36198	21855	22203	12834	13914	9173	9348	9173	9326	16236	17007
12-Jun-2004	44131	44474	21960	22436	13776	13910	9046	9222	9173	9304	15114	15311
13-Jun-2004	44280	44677	21960	22379	13776	13848	6500	6532	9173	9337	15342	15496
14-Jun-2004	44280	44825	21960	22304	15377	15250	8957	8631	9173	9297	14940	14997
15-Jun-2004	44280	45056	21960	22269	18360	18331	5393	5120	9123	9292	11579	11555
16-Jun-2004	40664	41420	21960	22309	16861	17430	6426	6535	9173	9260	11109	11485
17-Jun-2004	41679	42263	21546	21724	18360	18539	9047	9177	8635	8555	10895	11490
18-Jun-2004	39864	40348	21775	21872	16924	17298	9104	9270	9053	9249	12300	12351
19-Jun-2004	39491	39947	21564	20508	15058	15567	8246	7844	8874	8900	12527	12062
20-Jun-2004	38306	38276	20694	19948	14171	14526	3986	4084	8270	8339	12636	12262
21-Jun-2004	39311	39470	16059	15582	16418	16740	4325	4267	8566	8427	13193	13353
22-Jun-2004	39667	40035	20151	20117	14289	14647	4524	4615	8488	8308	12948	12323
23-Jun-2004	39549	40372	20631	20724	15073	16100	8693	8812	7628	7604	12971	13342
24-Jun-2004	39549	40859	20778	21005	16388	17696	8926	9152	8160	8422	13881	14037
25-Jun-2004	39549	40700	20682	20935	16911	17488	9085	9318	8978	9197	14035	13542
26-Jun-2004	39355	40276	20885	21038	15067	18592	9119	9319	9073	9277	13923	14860
27-Jun-2004	35424	36091	21248	21410	15228	18548	9119	9309	9055	9289	15141	15649
28-Jun-2004	38819	39639	21394	21670	18082	18545	9119	9317	9055	9301	10354	10445
29-Jun-2004	39864	40875	21803	22149	18360	18542	9173	9316	9173	9292	10958	10880
30-Jun-2004	39864	40595	21960	22370	18360	18746	9173	9334	9173	9308	11273	11109
Total MU	1117.710	1132.813	641.369	645.678	450.044	466.883	247.300	249.257	251.472	253.960	413.963	423.744
Max. MWH	44280	45056	21960	22436	18360	18746	9173	9412	9173	9337	16773	17096
Min MWH	30243	30552	16059	15582	11729	12008	3986	4084	4536	4551	10354	10445
Avg. MWH	37257	37760	21379	21523	15001	15563	8243	8309	8382	8465	13799	14125

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-Jun-2004	8171	8226	13390	13006	6772	6790	7920	7815	1617	1632	15567	15706
2-Jun-2004	7824	7621	12917	11808	6378	6369	7848	7841	2082	2101	15380	15525
3-Jun-2004	7774	7765	13165	12795	7368	7374	7896	7863	1679	1695	13960	14087
4-Jun-2004	7634	8221	13312	13554	7512	7274	7896	7818	1512	1526	13401	13525
5-Jun-2004	7665	7612	13281	12640	7512	7483	7944	7849	1529	1543	13778	13904
6-Jun-2004	7568	7169	12984	11943	7320	7524	7824	7891	1634	1646	15280	15083
7-Jun-2004	7125	6827	12203	11703	7752	7564	7920	7924	2022	1856	11787	11921
8-Jun-2004	7388	6721	11843	10920	7752	7630	7468	7983	1602	1615	15777	15879
9-Jun-2004	6630	6285	10369	10017	7632	7629	7992	7995	1632	1647	14601	14706
10-Jun-2004	7879	8009	13314	13406	7704	7506	8016	7918	1812	1829	12928	13035
11-Jun-2004	8263	8368	13925	13881	7704	7324	7564	7860	1692	1708	12240	12357
12-Jun-2004	7938	8187	13335	13469	7560	7396	7992	7844	1527	1541	13458	13572
13-Jun-2004	8078	7781	13485	12659	7416	7373	7896	7848	1737	1753	15401	15526
14-Jun-2004	7770	7246	12920	11748	7464	7402	7896	7899	1932	1950	16012	16122
15-Jun-2004	7776	7264	12899	11218	7464	7430	7896	7908	2485	2507	15996	16129
16-Jun-2004	7185	6789	11724	10895	7464	7456	7896	7937	2322	2343	15925	16031
17-Jun-2004	7468	7234	12545	11827	7512	7422	7896	7832	2277	2297	15690	15822
18-Jun-2004	6885	6473	11345	10469	7512	7469	7872	7873	2187	2207	15303	15307
19-Jun-2004	6522	5864	10418	9801	3744	3564	8064	7649	2562	2581	15888	15978
20-Jun-2004	6485	5812	9956	9781	3768	3657	7728	7568	2889	2938	4468	4503
21-Jun-2004	6474	6431	10716	11102	3792	3605	7704	7752	2384	2375	16143	16276
22-Jun-2004	6481	6737	10838	10620	3816	3647	7752	8010	2175	2189	16103	16223
23-Jun-2004	6046	6676	10818	10964	3816	3645	7992	7982	2024	2030	15194	15328
24-Jun-2004	6259	7085	11612	11816	3816	3590	8088	7973	1842	1859	16078	16228
25-Jun-2004	6501	6914	11639	11706	3696	3526	8040	8002	1872	1890	16052	16197
26-Jun-2004	5426	5635	11885	12150	6437	6271	7992	7927	1662	1678	15995	16147
27-Jun-2004	5437	5749	12928	13230	7208	7005	8472	7927	1664	1679	15634	15761
28-Jun-2004	5488	5752	12326	12886	7008	6935	8472	7918	1602	1618	14204	14333
29-Jun-2004	5719	5698	13906	13775	6936	7281	8472	7876	1662	1677	15689	15827
30-Jun-2004	6459	6589	13976	13760	7272	6849	8472	7833	1797	1814	15948	16089
Total MU	210.318	208.740	369.974	359.549	195.107	191.990	238.880	236.315	57.415	57.724	439.880	443.127
Max. MWH	8263	8368	13976	13881	7752	7630	8472	8010	2889	2938	16143	16276
Min MWH	5426	5635	9956	9781	3696	3526	7468	7568	1512	1526	4468	4503
Avg. MWH	7011	6958	12332	11985	6504	6400	7963	7877	1914	1924	14663	14771

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-Jun-2004	1300	1307	8544	8931	11391	11421	15548	15011	11745	11427	2564	2647
2-Jun-2004	1247	1318	6720	7008	11384	11404	15968	15460	9105	9270	2635	2570
3-Jun-2004	1346	1356	7832	8305	9679	9431	15438	15048	9855	9535	2754	2699
4-Jun-2004	1216	1224	7209	8018	0	0	15438	15107	8843	9322	2611	2623
5-Jun-2004	1167	1171	6052	6417	10773	10841	15206	15054	8509	8306	2612	2530
6-Jun-2004	1039	1047	5919	6256	11359	11158	14296	13735	9255	8909	2612	2527
7-Jun-2004	999	996	4406	4727	8509	8578	14606	14058	11843	10989	2648	2591
8-Jun-2004	1085	1092	5251	5475	11349	11451	14161	14140	12315	11024	2591	2440
9-Jun-2004	1084	1091	4317	4465	11285	11356	15220	14887	9723	8786	2833	2838
10-Jun-2004	1016	1029	9523	10393	11182	11281	14315	14245	7991	7271	2598	2463
11-Jun-2004	1030	1039	8989	9752	11036	11109	14325	14171	7628	7617	2598	2651
12-Jun-2004	1107	1117	8233	9313	10210	10249	14043	13894	7230	7185	2467	2436
13-Jun-2004	1038	1047	5807	6184	9416	9430	14013	13771	9900	9464	2467	2468
14-Jun-2004	1491	1545	6230	6521	8956	8980	12703	12524	14281	13786	2565	2481
15-Jun-2004	1498	1521	5785	6080	8818	8899	10826	9925	14518	14631	2675	2636
16-Jun-2004	1623	1670	8455	8813	8515	8563	11081	10357	14716	14592	2675	2637
17-Jun-2004	2000	2068	10369	10787	8352	8411	11385	10538	14731	14829	2650	2659
18-Jun-2004	2183	2190	8856	9194	7366	7232	11393	10422	14735	14465	2663	2588
19-Jun-2004	2211	2215	9434	9646	8475	8516	11524	10108	14735	14514	2603	2519
20-Jun-2004	2090	2107	12460	12636	8409	8482	11393	11064	14735	14340	2261	2389
21-Jun-2004	2176	2182	12149	11895	8458	8539	14194	13662	14924	14310	2188	2211
22-Jun-2004	2229	2224	12816	12758	8772	8840	13926	13765	14730	14358	2298	2235
23-Jun-2004	2174	2182	12816	12920	8931	9013	13973	13858	14736	14608	2217	2237
24-Jun-2004	1837	1868	12816	12921	9533	9619	13944	14126	14736	14238	2215	2197
25-Jun-2004	1848	1857	11125	11444	9876	9975	14089	14169	14736	13752	2215	2136
26-Jun-2004	1565	1577	8811	9403	10422	10477	14089	14113	9671	9385	2048	2140
27-Jun-2004	1589	1604	3471	3617	10713	10812	14089	14122	9625	9245	2048	2014
28-Jun-2004	1508	1516	6142	6744	10602	10592	14089	13999	10540	10561	1950	1998
29-Jun-2004	1424	1468	5363	5725	10182	10344	14089	14064	12499	12394	1866	1883
30-Jun-2004	1570	1605	4984	5539	10045	10139	14089	13955	14499	13755	1864	1843
Total MU	45.690	46.233	240.884	251.887	283.998	285.142	413.453	403.352	357.089	346.868	72.991	72.286
Max. MWH	2229	2224	12816	12921	11391	11451	15968	15460	14924	14829	2833	2838
Min MWH	999	996	3471	3617	0	0	10826	9925	7230	7185	1864	1843
Avg. MWH	1523	1541	8029	8396	9467	9505	13782	13445	11903	11562	2433	2410

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

Date	Nathpa-Jhakri HEP		Chamera stage-II	
	Schedule	Actual	Schedule	Actual
1-Jun-2004	30370	30585	5222	5262
2-Jun-2004	29570	29756	6039	6084
3-Jun-2004	27745	27970	5990	6039
4-Jun-2004	28004	28191	6269	6321
5-Jun-2004	26999	27060	6185	6227
6-Jun-2004	29175	29217	7128	7180
7-Jun-2004	30480	30574	7128	7060
8-Jun-2004	24432	24203	5948	5994
9-Jun-2004	22230	22292	5121	5166
10-Jun-2004	19081	19252	4732	4771
11-Jun-2004	20237	20451	4745	4788
12-Jun-2004	21811	21958	4824	4864
13-Jun-2004	27826	27994	4960	5004
14-Jun-2004	34072	34201	5159	5203
15-Jun-2004	36720	36912	6276	6326
16-Jun-2004	36480	36733	7272	7340
17-Jun-2004	36480	36801	7075	7145
18-Jun-2004	36175	36404	6438	6330
19-Jun-2004	36720	37014	7128	7096
20-Jun-2004	36528	36809	7128	7153
21-Jun-2004	36720	37004	7128	7183
22-Jun-2004	36720	36921	7128	7131
23-Jun-2004	32769	31970	6432	6483
24-Jun-2004	28410	28620	6954	7009
25-Jun-2004	30450	30715	5583	5627
26-Jun-2004	30320	30540	4788	4825
27-Jun-2004	27078	27213	1928	1949
28-Jun-2004	23830	23889	3006	3005
29-Jun-2004	27729	27958	5544	5568
30-Jun-2004	31200	31446	4920	4949
Total MU	896.361	900.653	174.178	175.082
Max. MWH	36720	37014	7272	7340
Min MWH	19081	19252	1928	1949
Avg. MWH	29879	30022	5806	5836

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(T)	HP+B'PA(H)	J & K(H+GT)	Total
01	43.096	14.335	12.949	0.671	44.941	0.025	47.117	3.270	9.601	14.897	9.993	2.72	203.62
02	41.068	13.925	11.513	0.665	45.080	0.000	49.739	1.975	10.184	16.272	10.004	2.62	203.05
03	41.650	13.824	11.491	0.588	48.196	0.054	47.522	1.743	9.209	16.317	9.815	2.53	202.94
04	42.759	15.193	12.397	0.690	47.750	0.079	48.718	3.742	8.928	14.436	10.188	2.55	207.44
05	43.300	15.397	12.419	0.572	48.304	0.050	47.669	2.959	8.029	16.321	9.643	2.71	207.38
06	41.986	14.282	11.990	0.649	47.849	0.000	47.598	2.299	8.307	16.029	10.276	2.59	203.86
07	19.268	11.403	6.798	0.751	40.670	0.054	45.698	1.879	8.986	15.111	10.049	2.94	163.61
08	35.688	13.391	9.242	0.731	39.695	0.000	49.045	1.806	8.935	13.638	8.374	2.82	183.36
09	37.215	14.833	12.366	0.808	38.718	0.045	46.291	2.448	7.732	15.013	8.756	2.66	186.88
10	36.588	14.638	12.260	0.495	39.492	0.000	45.356	3.218	8.779	16.522	7.322	2.83	187.50
11	38.004	14.820	11.022	0.582	42.766	0.000	47.118	3.556	8.304	16.552	7.554	2.74	193.02
12	42.633	14.909	10.769	0.706	42.634	0.000	47.118	3.556	7.643	16.554	8.377	2.77	197.67
13	43.338	15.476	12.866	0.630	43.307	0.000	49.300	2.979	7.657	15.706	11.208	2.74	205.21
14	42.893	15.475	13.260	0.676	42.203	0.000	47.543	2.810	8.809	16.893	12.581	2.60	205.74
15	42.507	15.265	12.120	0.851	39.344	0.000	47.543	2.810	9.055	16.861	12.634	2.61	201.60
16	42.650	15.395	10.710	0.944	41.895	0.000	50.165	3.050	9.877	16.271	12.173	2.52	205.65
17	42.806	15.496	13.221	0.889	39.216	0.048	41.798	3.694	11.302	15.605	13.008	2.35	199.43
18	41.276	14.317	13.214	0.509	40.175	0.275	49.508	3.574	10.879	15.656	13.301	2.31	204.99
19	40.808	15.084	11.845	1.040	37.851	0.653	49.461	2.815	12.877	12.596	13.267	2.01	200.31
20	40.099	14.692	11.980	1.247	32.696	0.000	48.736	3.155	13.086	10.921	13.291	2.28	192.19
21	31.987	13.839	8.921	1.112	36.654	0.000	46.798	4.233	11.744	10.839	13.239	2.36	181.73
22	38.286	14.229	10.965	0.913	35.538	0.000	51.654	3.697	10.567	15.408	13.243	2.44	196.94
23	41.561	14.177	11.816	0.882	36.453	0.010	45.293	4.532	10.353	15.261	12.672	2.38	195.39
24	40.091	14.002	12.669	0.766	37.149	0.035	40.250	5.088	9.988	15.336	12.197	2.70	190.27
25	39.169	14.282	11.644	0.820	38.251	0.000	36.022	5.834	10.518	13.048	12.070	2.78	184.44
26	39.769	14.128	11.967	0.820	38.874	0.124	35.908	5.759	9.191	14.964	10.276	2.75	184.53
27	41.660	14.328	11.844	0.626	40.584	0.000	45.533	5.754	8.591	16.707	10.535	2.80	198.96
28	42.727	14.309	12.829	0.709	36.446	0.000	54.910	5.626	9.488	13.266	9.956	2.85	203.12
29	42.585	14.308	12.063	0.624	42.760	0.000	54.675	5.557	8.867	13.529	11.477	2.87	209.32
30	42.727	14.309	12.829	0.709	36.446	0.000	54.910	5.626	9.488	13.266	12.918	2.81	206.04
Maximum	43.34	15.50	13.26	1.25	48.30	0.65	54.91	5.83	13.09	16.89	13.30	2.94	209.32
Minimum	19.27	11.40	6.80	0.50	32.70	0.00	35.91	1.74	7.64	10.84	7.32	2.01	163.61
Average	40.01	14.47	11.73	0.76	40.73	0.05	47.30	3.63	9.57	14.99	11.01	2.62	196.87
Month Total	1200.19	434.06	351.98	22.68	1221.94	1.45	1418.99	109.04	286.97	449.79	330.40	78.65	5906.16

XI. Performance Of Generating Stations

S.No.	Power Station	Effective Capacity MW	Energy Generated during June, 2004 (Ex Bus MU)	Cummulative from 01.04.2004 (Ex-bus MU)
1	CENTRAL SECTOR			
A	NTPC (Thermal)			
(a)	Badarpur TPS	705.00	434.28	1238.21
(b)	Singrauli STPS	2000.00	1132.50	3468.54
(c)	Rihand STPS	1000.00	645.74	1960.28
(d)	Dadri NCTPS	840.00	462.16	1435.25
(e)	Unchahar-I TPS	420.00	249.96	776.78
(f)	Unchahar-II TPS	420.00	254.27	726.70
(g)	Tanda TPS	440.00	250.99	694.51
(h)	Anta GPS	419.33	209.74	662.63
(i)	Auraiya GPS	663.36	354.01	1060.24
(j)	Dadri GPS	829.78	423.02	1335.27
(k)	Faridabad GPS	431.57	254.55	739.94
	Total NTPC	8169.04	4671.22	14098.33
B	NHPC			
(a)	Bairasiul	180.00	57.73	191.48
(b)	Salal	690.00	443.15	1123.70
(c)	Tanakpur HPS	94.20	46.23	94.18
(d)	Chamera HPS	540.00	251.89	655.50
(e)	Uri HPS	480.00	285.14	912.17
(f)	Chamera2 HPS	300.00	174.85	463.38
	Total NHPC	2284.20	1258.98	3440.41
C	Nathpa-Jhakri	1500.00	900.68	1835.74
D	NPC			
(a)	RAPS -A	300.00	145.14	303.81
(b)	RAPS -B	440.00	236.35	547.20
(c)	NAPS	440.00	192.02	652.16
	Total NPC	1180.00	573.52	1503.17
2	JOINTLY OWNED (BBMB)			
(a)	Bhakra Complex	1490.15	412.02	1172.20
(b)	Dehar	990.00	347.01	867.54
(c)	Pong	396.00	72.52	242.47
	Total BBMB	2876.15	831.55	2282.21
3	DELHI			
(a)	Indra Prastha	247.50	71.95	184.27
(b)	Rajghat	135.00	52.98	166.48
(c)	Gas Turbines	282.00	135.34	394.00
(d)	Pragati Gas	330.00	192.60	609.38
	Total DELHI	994.50	452.86	1354.12
4	HARYANA			
(a)	WYC	48.00	22.79	57.95
(b)	Faridabad (New)	165.00	67.60	197.89
(c)	Panipat	860.00	320.55	1151.15
(d)	Magnum Diesel(IPP)	25.20	5.54	20.28
	Total Haryana	1098.20	416.47	1427.27

contd/-

5	HP			
(a)	Giri	60.00	7.67	18.08
(b)	Bassi	60.00	30.57	91.81
(c)	Binwa	6.00	2.06	6.88
(d)	Rongtong	15.25	1.47	4.18
	(+Nogli+Micro+Thirot+Sal-2)			
(e)	Andhra	16.95	3.92	10.54
(f)	Bhabha (H)	120.00	79.67	202.35
(g)	Baner (H)	12.00	3.78	10.05
(h)	Gaj (H)	10.50	3.93	10.91
(i)	Gumma	3.00	0.37	1.54
(j)	Ghanvi	22.50	7.84	19.74
(k)	Malana (IPP)	86.00	34.03	75.21
(l)	Baspa (IPP)	300.00	188.09	361.54
	Total HP	712.20	363.41	812.83
6	J & K			
(a)	Lower Jhelum	105.00	59.69	167.01
(b)	Upper Sindh	127.60	9.33	34.19
(c)	Ganderbal	15.00	1.39	3.57
(d)	Mohra	9.00	0.00	0.00
(e)	Chenani	32.80	10.90	26.54
(f)	Stakna	9.75	0.00	0.00
(g)	Small Hydel	3.54	0.83	1.61
(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	0.00
(k)	Pampore GT St - II	100.00	0.00	0.00
	Total J & K	493.87	82.14	232.92
7	PUNJAB			
(a)	Jogindernagar/ Shanan	110.00	62.86	175.07
(b)	UBDC	90.00	54.13	81.44
(c)	Mukerian	207.00	89.18	272.16
(d)	Anandpur Sahib (APS)	134.00	69.94	169.08
(e)	Ranjit Sagar HPS	600.00	157.61	236.93
(f)	Small Hydel	4.10	0.00	0.00
(g)	GNDTPS (Bhatinda)	440.00	151.40	396.15
(h)	GGSTPS (Ropar)	1260.00	767.98	2132.79
(i)	Jhalkeri	10.00	0.00	0.00
	Peda & Sugarmill		0.00	0.00
(j)	Lehra Mohabbat TPS	420.00	163.74	608.46
	Total Punjab	3275.10	1516.83	4072.08
8	RAJASTHAN			
(a)	Mahi Bajaj Sagar	140.00	-0.04	48.50
(b)	Rana Pratap Sagar (RPS)	86.00	0.38	1.54
(c)	Jawahar Sagar (JS)	49.50	1.09	3.39
(d)	Gandhi sagar	57.50		
(d)	ACW	9.00	0.67	2.60
(e)	MMH	14.85	0.09	0.08
(f)	Kota TPS	1045.00	557.88	1623.94
(g)	RAMGARH GT	3.00		
(h)	RAMGARH GT EXT	76.00	17.82	53.60
(i)	Suratgarh TPS	1250.00	655.55	2150.72
(j)	Wind Farm	14.01	44.68	106.20
(k)	Others (S'tpura+ bio-mass)	125.00	147.08	150.08
	Total Rajasthan	2869.86	1425.19	4140.65

contd/-

9	U.P.			
	<u>HYDRO</u>			
(a)	Rihand	300.00	58.97	154.39
(b)	Obra	99.00	25.31	64.04
(c)	Matatilla	30.00	1.71	26.44
(d)	Khara	72.00	24.06	63.46
	Total U.P. (Hydro)	501.00	110.05	308.33
	<u>THERMAL</u>			
(e)	Obra	1442.00	359.62	1098.17
(f)	Panki	242.00	84.97	258.45
(g)	Harduaganj	375.00	54.63	169.95
(h)	Paricha	220.00	66.66	226.89
(i)	Anpara	1630.00	853.85	2512.99
	Total U.P. (Thermal)	3909.00	1419.72	4266.45
	Total U.P.	4410.00	1529.77	4574.78
10	UTTRANCHAL			
(a)	Khatima	41.40	14.27	37.01
(b)	Ramganga	198.00	3.92	52.63
(c)	Ganga Canal	32.70	15.73	41.24
(d)	Yamuna (I & IV)	114.75	101.14	252.58
(e)	Chibro	240.00	50.41	139.16
(f)	Khodri	120.00	24.78	64.65
(g)	Chilla	144.00	78.84	162.63
(h)	Maneri Bhali	90.00	0.00	0.00
(i)	Sibla+Small hydel	18.20		
	Total Uttranchal	999.05	289.09	749.90
11	CHANDIGARH			
	Diesel gen set	1.40		
	Total Region	30863.57	14311.70	40524.39

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% Faridabad---13.5% Suratgarh---10.0%

Rajghat---11% Panipat---12.0% KTPS---10.0%

UP---12.5% Lehra Mohabat---10.5%

Tanda---12.5% RTP---7.5%

GNDTP---10.5%

XII. DETAILS OF ENERGY EXCHANGES THROUGH BILATERAL AGREEMENTS (INTRA-REGIONAL) DURING JUNE 2004

(ALL FIGS IN MWH)

FROM / TO	PUNJAB	HARYANA	RAJASTHAN	DELHI	UP	UTTRANCHAL	HP	J & K	CHANDIGARH	MALANA
PUNJAB	-	-	-		-	56425****	32535****	31700****	-	-
HARYANA	-	-	-		-	-	4990***	-	-	2735*
RAJASTHAN		-	-		-	-	-	-		
DELHI	-		-		-	-	225710***	-	-	-
UP	-	-	-	-	-	-	-	-	-	-
UTTRANCHAL		-	-	-	-	-	-	-	-	-
HP		-	-		-	-	-	-	-	-
J & K		-	-		-	-	-	-	-	-
CHANDIGARH	-	-	-	-	-	-	-	-	-	-

* Through PTC

** Through NVVN

*** Through Mutual

**** Through Banking

REMARKS : Figures are provisional and indicative only.

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

FROM / TO	GRIDCO	MP	WBPCL	DVC	APTRCO	CSEB	TRIPURA	GOA	ARUNANCHAL
PUNJAB	7200* 2709***	-	22650***WR 13920*+16400*WR		60500*		-	-	
HARYANA	7200* 2859***+15400*** (WR)	-					5310**		10895****
RAJASTHAN	-	-					-	-	
DELHI						--			
UTTRANCHAL	-	-		-	-	-	-	-	
J & K	-	-			-	-	-	-	
CHANDIGARH									

* Through PTC

(+) Import by NR constituents

(-) Export by NR constituents

** Through Global Energy Limited

*** Throgh NVVN

**** Through ADANI

REMARKS : are provisional and indicative only

XIV. Inter Regional Exchanges During June 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	139	350	450	0	6.37	0.00	6.37	-23	-24	0	27	0.00	0.72	-0.72
02	-250	350	450	350	6.56	0.45	6.11	-23	-24	0	25	0.00	0.66	-0.66
03	137	450	500	0	7.97	0.00	7.97	-25	-23	0	25	0.00	0.69	-0.69
04	115	400	427	0	7.18	0.00	7.18	-27	-25	0	28	0.00	0.35	-0.35
05	115	273	500	0	6.24	0.00	6.24	-26	-23	0	28	0.00	0.73	-0.73
06	141	450	500	0	6.94	0.00	6.94	-23	-24	0	28	0.00	0.68	-0.68
07	50	189	350	0	5.07	0.00	5.07	-22	-16	0	24	0.00	0.67	-0.67
08	-300	350	350	300	3.78	0.34	3.45	-32	-30	0	32	0.00	0.71	-0.71
09	100	0	450	0	4.18	0.00	4.18	-28	-30	0	30	0.00	0.70	-0.70
10	150	350	500	0	9.04	0.00	9.04	-25	-30	0	30	0.00	0.71	-0.71
11	150	500	500	0	10.75	0.00	10.75	-21	-19	0	24	0.00	0.72	-0.72
12	187	500	500	0	9.77	0.00	9.77	-22	-25	0	25	0.00	0.72	-0.72
13	188	450	500	0	8.87	0.00	8.87	-25	-23	0	25	0.00	0.69	-0.69
14	188	350	500	0	7.33	0.00	7.33	-25	-22	0	25	0.00	0.71	-0.71
15	160	500	500	0	6.94	0.01	6.93	-21	-19	0	25	0.00	0.69	-0.69
16	101	500	500	0	7.62	0.00	7.62	-17	-20	0	20	0.00	0.66	-0.66
17	102	278	500	0	8.21	0.00	8.21	-18	-21	0	22	0.00	0.66	-0.66
18	55	450	450	0	7.58	0.00	7.58	-14	-12	0	20	0.00	0.33	-0.33
19	100	405	405	0	7.89	0.05	7.83	-14	-12	0	23	0.00	0.54	-0.54
20	68	250	500	50	6.01	0.07	5.93	-25	-30	0	30	0.00	0.69	-0.69
21	114	150	500	100	4.45	0.22	4.23	-28	-26	0	30	0.00	0.69	-0.69
22	-200	359	500	500	5.04	1.68	3.36	0	-15	0	21	0.00	0.26	-0.26
23	45	112	400	0	5.44	0.00	5.44	0	0	0	0	0.00	0.00	0.00
24	50	450	450	0	5.39	0.00	5.39	0	0	0	0	0.00	0.00	0.00
25	88	350	436	0	7.27	0.00	7.27	-21	0	0	25	0.00	0.09	-0.09
26	-200	450	450	300	2.19	3.84	-1.65	-21	0	0	25	0.00	0.09	-0.09
27	-348	50	150	348	0.52	2.86	-2.35	-19	-21	0	23	0.00	0.66	-0.66
28	44	450	450	148	5.83	0.04	5.80	-20	-25	0	23	0.00	0.69	-0.69
29	61	200	400	0	4.90	0.00	4.90	-23	-24	0	26	0.00	0.68	-0.68
30	100	350	350	0	5.68	0.00	5.68	-23	-21	0	25	0.00	0.69	-0.69
Maximum	188	500	500	500	10.75	3.84	10.75	0	0	0	32	0.00	0.73	0.00
Minimum	-348	0	150	0	0.52	0.00	-2.35	-32	-30	0	0	0.00	0.00	-0.73
Average	48	342	447	70	6.37	0.32	6.05	-20	-19	0	24	0.00	0.56	-0.56
Total					184.93	4.03	180.90					0.00	17.10	-17.10

XIV. Inter Regional Exchanges During June2004 (Sheet 2 of 2)

2 of 2

Date	With WR Over Ujjain - Kota {Export(-)/Import(+)}							With ER Over sasaram HVDC B/B {Export(-)/Import(+)}						
	Peak MW MW	Off Peak MW MW	Max Import MW	Max Export MW	Energy Import MU	Energy Export MU	Net MU	Peak MW MW	Off Peak MW MW	Max Import MW	Max Export MW	Energy Import MU	Energy Export MU	Net MU
01	-90	-80	0	110	0.00	1.96	-1.96	0	0	0	0	0.00	0.00	0.00
02	-65	-85	0	100	0.00	0.80	-0.80	0	0	0	0	0.00	0.00	0.00
03	-50	-90	0	100	0.00	2.01	-2.01	0	0	0	0	0.00	0.00	0.00
04	-102	-96	0	105	0.00	2.01	-2.01	0	0	0	0	0.00	0.00	0.00
05	-110	-90	0	105	0.00	2.01	-2.01	0	0	0	0	0.00	0.00	0.00
06	-70	-100	0	100	0.00	1.96	-1.96	0	0	0	0	0.00	0.00	0.00
07	0	-90	0	90	0.00	1.19	-1.19	0	0	0	0	0.00	0.00	0.00
08	0	0	0	0	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00
09	-60	0	0	80	0.00	0.88	-0.88	0	0	0	0	0.00	0.00	0.00
10	-90	-80	0	90	0.00	1.73	-1.73	0	0	0	0	0.00	0.00	0.00
11	-100	-85	0	100	0.00	1.84	-1.84	0	0	0	0	0.00	0.00	0.00
12	-90	-85	0	90	0.00	1.89	-1.89	0	0	0	0	0.00	0.00	0.00
13	-72	-70	0	85	0.00	1.87	-1.87	0	0	0	0	0.00	0.00	0.00
14	-85	-90	0	90	0.00	1.71	-1.71	0	0	0	0	0.00	0.00	0.00
15	-80	-80	0	90	0.00	1.16	-1.16	0	0	0	0	0.00	0.00	0.00
16	0	-70	0	70	0.00	0.34	-0.34	0	0	0	0	0.00	0.00	0.00
17	0	0	0	0	0.00	0.00	0.00	0	0	0	0	0.00	0.00	0.00
18	70	0	0	0	0.00	0.85	-0.85	0	0	0	0	0.00	0.00	0.00
19	-50	-80	0	0	0.00	1.40	-1.40	0	0	0	0	0.00	0.00	0.00
20	-70	-65	0	70	0.00	1.52	-1.52	0	0	0	0	0.00	0.00	0.00
21	-70	-65	0	70	0.00	1.42	-1.42	0	0	0	0	0.00	0.00	0.00
22	-87	-70	0	87	0.00	1.57	-1.57	0	0	50	0	0.04	0.00	0.04
23	-70	-70	0	75	0.00	1.33	-1.33	50	50	450	50	2.94	0.05	2.89
24	-60	0	0	80	0.00	0.56	-0.56	50	450	450	0	6.35	0.00	6.35
25	-70	-80	0	90	0.00	1.75	-1.75	72	250	300	0	3.91	0.00	3.91
26	-85	-90	0	90	0.00	1.91	-1.91	374	400	450	0	10.23	0.00	10.23
27	-70	-80	0	90	0.00	1.79	-1.79	500	450	500	0	11.66	0.00	11.66
28	-80	-80	0	85	0.00	1.57	-1.57	291	482	482	0	11.60	0.00	11.60
29	-85	-80	0	89	0.00	1.76	-1.76	319	500	500	0	10.93	0.00	10.93
30	-95	-80	0	101	0.00	1.69	-1.69	493	437	495	0	11.25	0.00	11.25
Maximum	70	0	0	110	0.00	2.01	0.00	500	500	500	50	11.66	0.05	11.66
Minimum	-110	-100	0	0	0.00	0.00	-2.01	0	0	0	0	0.00	0.00	0.00
Average	-63	-68	0	78	0.00	1.42	-1.42	72	101	123	2	2.30	0.00	2.30
Total					0.00	42.24	-42.24					68.43	0.05	68.38

XV. Progress Of Installation Of Shunt Capacitors As On 30.06.2004**(All fig. In MVARs)**

STATE/UT	Requirement by 31.03.2005	Installed as on 31.03.2004	Additional Requirement for 2004-2005	Programme as furnished by SEB's	Installed during 2003-04 upto 30.06.2004	Balance not installed during 2004-05	Capacitors installed as on 30.06.2004
DELHI	3588	3021	567	-	131	436	3152
HARYANA	3410	3269	141	500	0	141	3269
PUNJAB	6078	4721	1357	500	8	1349	4729
RAJASTHAN	3092	2949	143	500	99	44	3048
UP	5669	5192	477	700	0	477	5192
UTTRANCHAL	369	125	244	45	0	244	125
HP	352	311	41	-	0	41	311
J&K	937	147	790	500	0	790	147
BBMB	381	381	0	-	0	0	381
CHANDIGARH	154	92	62	-	0	62	92
TOTAL	24030	20208	3822	2745	238	3584	20446

XVI. Hydraulic Data For Reservoirs During June 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 JUNE 2004 (m)	454.95 1492.63	388.99 1276.23	253.50 831.70	344.39 1129.89	379.07 1243.67
Level on last day of JUNE 2003 (m)	486.30 1595.48	393.07 1289.61	253.69 832.30	345.70 1134.20	378.87 1243.00
Live Capacity as on (mhmt) last day of JUNE 2004 (maft)	0.06 0.47	0.03 0.28	0.00 0.04	0.02 0.16	0.00 0.00
Live Capacity as on (mhmt) last day of JUNE 2003(maft)	0.35 2.82	0.09 0.76	0.01 0.05	0.03 0.26	0.00 0.00
Energy content as on last day of JUNE 2004 (MU)	190.00	50.00	10.00	34.00	0.00
Energy content as on last day of JUNE 2003 (MU)	1100.00	110.00	15.00	47.00	0.00
Maximum level (m) (ft) (date)	455.38 1494.04 27.06.2004	391.49 1284.41 01.06.2004	254.33 834.40 01.06.2004	344.60 1130.58 01.06.2004	379.20 1244.08 01.06.2004
Minimum level (m) (ft) (date)	446.87 1466.11 13.06.2004	388.77 1275.50 17.06.2004	253.50 831.70 30.06.2004	1130.63 1129.89 30.06.2004	379.07 1243.67 30.06.2004

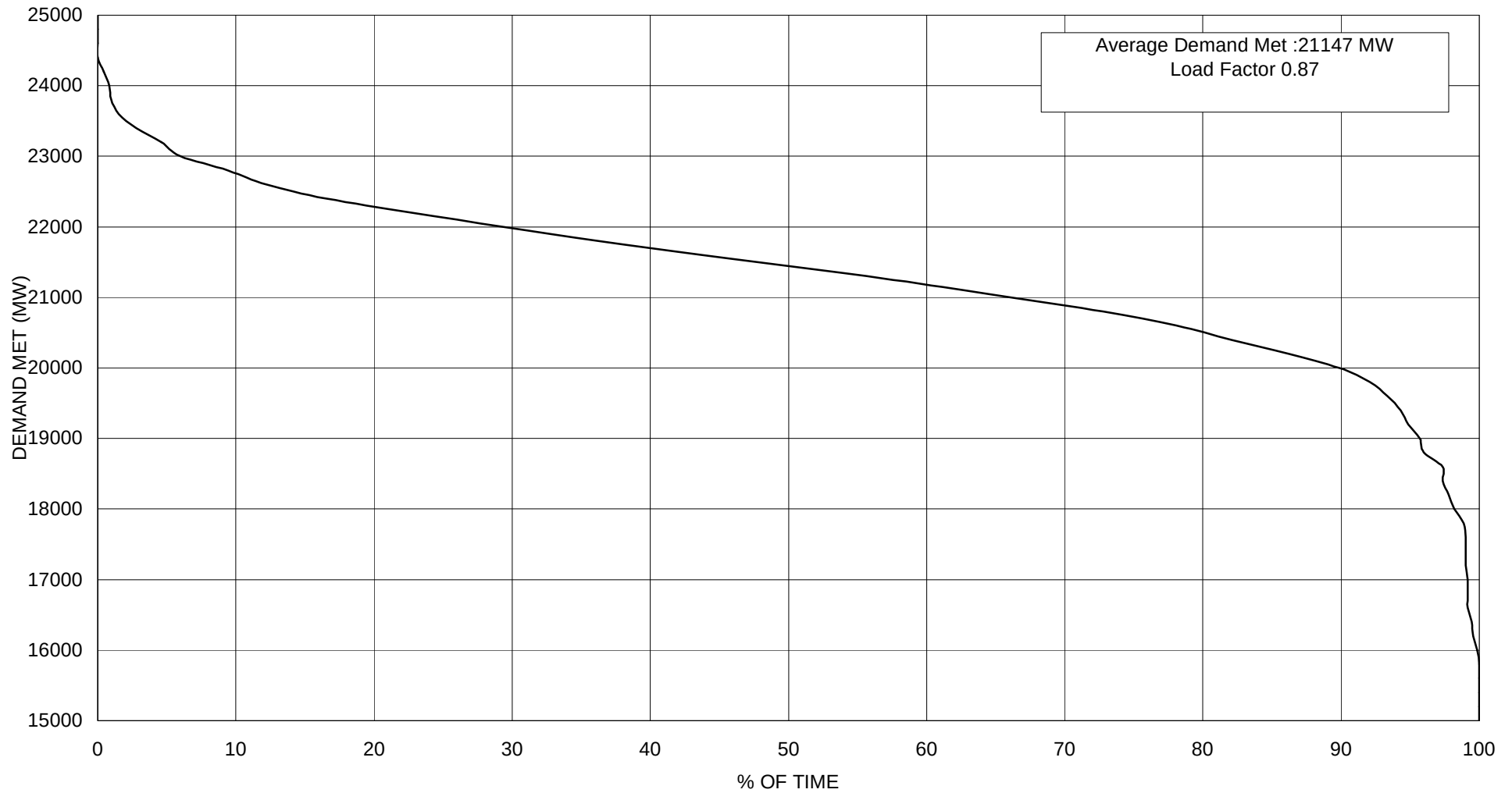
Energy content of Bhakra : Total Energy content at Bhakra, Ganguwal and Kotla power stations

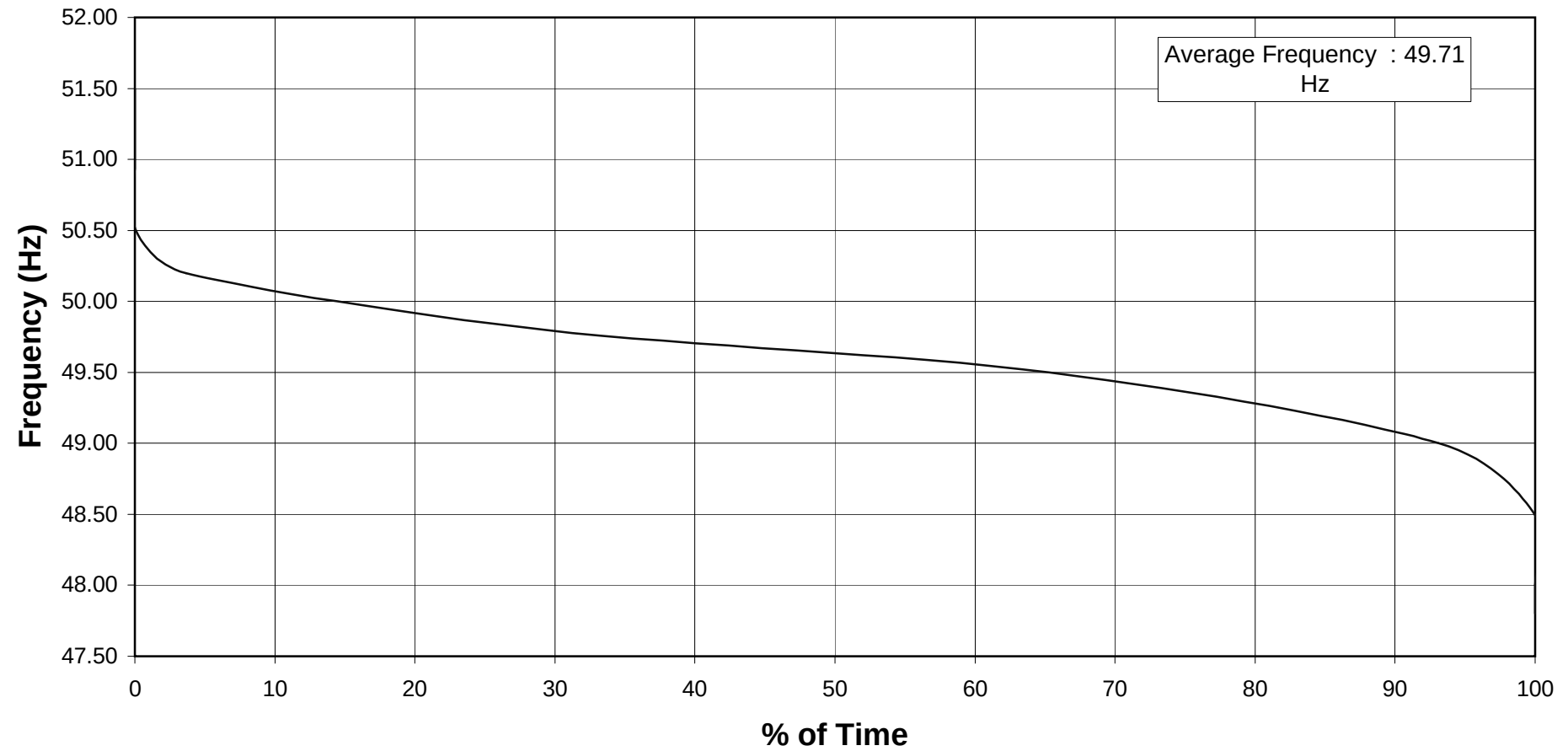
Energy content of Rihand : Total Energy content at Rihand & Obra power stations

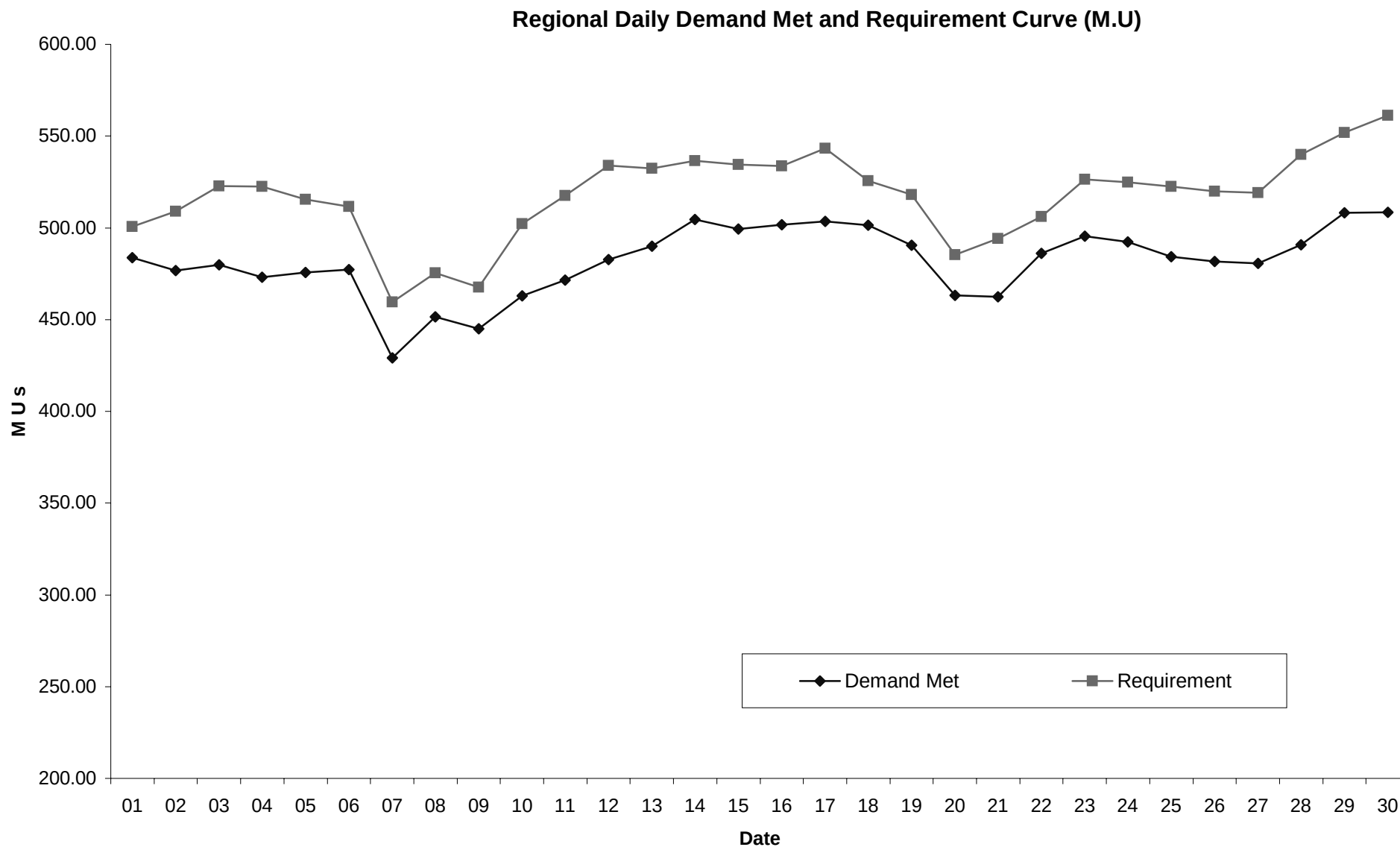
Energy content of RPS : Total Energy content of Rana Pratap Sagar and Jawahar Sagar Power Stations.

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 JUNE 2004

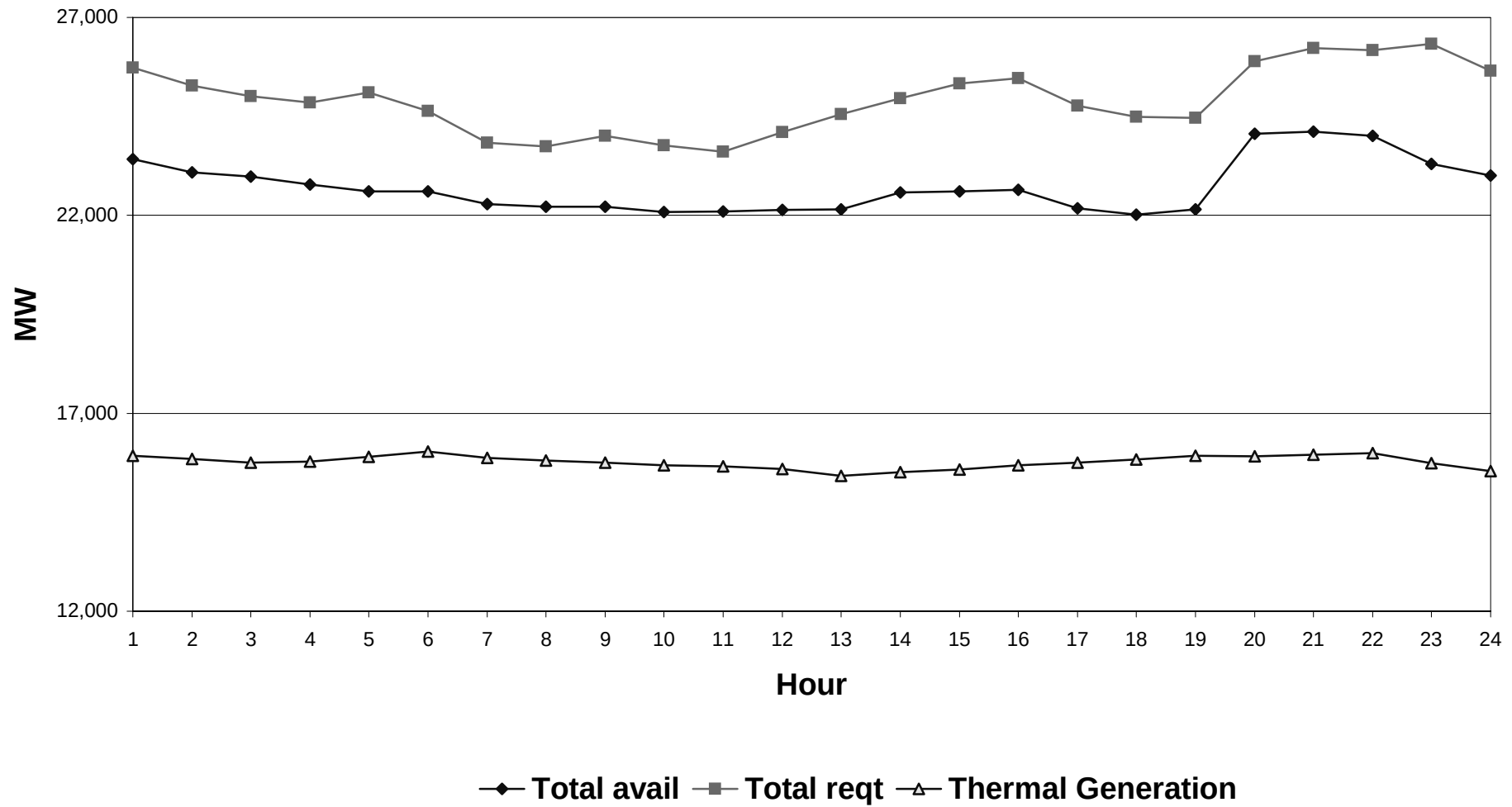


Frequency Duration Curve For Northern Region For JUNE 2004



Grid Incident during JUNE 2004		
DATE	TIME	INCIDENT
06.06.2004	23.00	Heavy rains in Punjab and J & K resulted in load crash at around 23.00 hrs.
		This caused heavy power flow from J & K to rest of the grid, resulting in tripping of 400/220 kv ICT's at Kisenpur followed by tripping of 220 kv ckt between Punjab and J & K. This further lead to tripping of all running units at URI (480 MW) and Salal (660 MW). Supply to Jammu and Valley restored at 02.00 hrs and 05.00 hrs respectively of 07.06.2004
08.06.2004	12.12	220 KV Mandola-Patparganj D/C tripped due to heavy storm resulting in loss of generation as well as load. The total loss of load was 1000 MW in DELHI system
		All the running units at Raighat, IP, IP- extension and Pragati (except GT-1) tripped. System was normalised at 12.35 hrs and all the units were brought on bar by 20.00 hrs.
08.06.2004	10.00	Three 'A' type towers (location no. 243,244,245) of 400 kv s/c Dadri-Malerkotla line collapsed near Pehowa village. The towers were rectified on 25.06.2004
18.06.2004	01.35	A minor grid disturbance occurred in Punjab & J&K system resulting in islanding of J&K system by separation from Punjab at 220 kv level. Before the incident there was heavy dust storm in and around Sarna, resulting in tripping of two units at Salal and all four units at Uri tripped on overspeed due to high frequency
		The system was fully normalised by 05.00 hrs.
19.06.2004	13.12	A partial grid disturbance occurred in Delhi system due to some fault in 220KV BTPS-IP ext ckt-II. This resulted in tripping of all the running GT's and loss of power to Lodhi road (66 MW) and Park street (130 MW). Power to Lodhi road was restored at 13.48 hrs and Park street at 13.51 hrs. GT's were also brought on bar at the same time.
21.06.2004	08.06	Grid disturbance occurred in Delhi system due to tripping of 220 KV Mandola-PTPJ D/C lines and IP-IP ext lines causing a total loss of around 800 MW in Delhi system. All the running units at IP, Raighat and Pragati also tripped.
		The system was fully normalised by 10.28 hrs and all the running units were brought on bar by 10.25 hrs.

Load Curve Of Northern Region For Maximum Demand Met Day (30th June 2004)



Load Curve Of Northern Region For Minimum Demand Met Day (7th June 2004)

