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NORTHERN REGION GRID REPORT FOR THE MONTH OF MAY 2004

A) Summary Report

1. Grid Overview during the Month

In the month of May 2004, the average energy was 443.10 MU/day and requirement was 466.88 MU/day. There was a shortage of 5.11 % in terms of energy. During the month of May 2004 the average system frequency was 49.69 HZ and the frequency remained in the normal range i.e 49.00 to 50.50 HZ for 92.56% of time as compared to 88.50% for May 2003. Frequency variation index during the month was 2.75.

Overall voltage profile in the grid during the month has been satisfactory on 400 KV buses.

Open access system was introduced successfully for the first time in the country w.e.f 06.05.2004. A total no. of 33 transactions took place between various agencies both inter regional as well as intra regional in NR region. The total energy reserved in these transactions was of the order of 417671.40 MWH , with a minimum of 25 MW to a maximum of 212 MW.

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

There has been two major transmission outages during this month.

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

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

220 KV ALLAHABAD-PHOOLPUR line was successfully synchronised and power flow commenced w.e.f 22.05.2004 at 14.10 hrs.

3. Monthly Frequency Profile :

Maximum frequency	51.42	Hz	at	01.44	hours on	26.05.2004
Minimum frequency	48.48	Hz	at	14.45	hours on	21.05.2004
Average frequency	49.69	Hz				

Frequency distribution in %

Hz	< 48.50	<49.00	49.00-50.50	> 50.50
% of time	0.01	5.18	92.55	2.26

Monthly Frequency Variation Index

Maximum	6.13
Minimum	0.73
Average	2.75

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

State / U.T.	Demand met MU/Day	Requirement MU/Day	Shortage MU/Day	Shortage %
Punjab	86.35	86.89	0.54	0.62
Haryana	54.33	55.10	0.77	1.40
Rajasthan	76.81	76.81	0.00	0.00
U.P.	117.77	133.88	16.11	12.03
Uttaranchal	12.10	12.10	0.00	0.00
Delhi	62.65	62.71	0.06	0.10
H.P.	9.23	9.23	0.00	0.00
J & K *	18.62	25.02	6.40	25.58
Chandigarh	3.50	3.50	0.00	0.00
N.F.F./Rail	1.64	1.64	0.00	0.00
Total	443.00	466.88	23.88	5.11

b. Peak MW

State / U.T.	MAX. Demand met MW	MAX. Requirement MW	Shortage MW	Shortage %
	A	B	C	(C/B)*100
Punjab	4872	4872	0	0.00
Haryana	3165	3165	0	0.00
Rajasthan	3858	3858	0	0.00
U.P.	6293	7814	1521	19.47
Uttaranchal	779	819	40	4.88
Delhi	3332	3348	16	0.48
H.P.	578	578	0	0.00
J & K *	1194	1250	56	4.48
Chandigarh	214	214	0	0.00
N.F.F./Rail	75	75	0	0.00
Region	22729	24247	1518	6.26

Diversity Factor = **1.12**

* Approximate and Estimated

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

(All figs in M.U)

State / U.T.	Schedule	Actual	OD/UD
Punjab	1221.00	1288.04	67.04
Haryana	952.31	1009.72	57.41
Rajasthan	926.97	951.43	24.46
U.P.	1582.57	1878.44	295.87
Uttranchal	136.98	100.49	-36.49
Delhi	1237.90	1071.10	-166.80
H.P.	29.03	22.39	-6.64
J & K	501.31	505.41	4.10
Chandigarh	118.72	116.26	-2.46
N.F.F./Rail	59.71	50.92	-8.79

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

a)	From WR over HVDC Vindhyachal B/B	105.52	500
b)	From WR over 220 kV Ujjain-Kota	0.00	0
c)	From ER over HVDC Sasaram B/B	185.88	500
d)	From ER over 220 kV Dehri-Sahupuri	0.00	0

Export

e)	To WR over HVDC Vindhyachal B/B	8.30	500
f)	To WR (MP) over 220 kV Auraiya-Malanpur	19.03	35
g)	To WR (MP) over 220 kV Kota-Ujjain	50.00	105
h)	To ER (Bihar) over 220 kV/132kV lines	1.87	60
i)	To ER over HVDC Sasaram B/B	0.00	0
j)	To Nepal over 132 kV Tanakpur-Mahendernagar	4.98	30

B). Detailed Report**I. Details of Installed/Effective Capacity at the end of MAY 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	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	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	172.00	4x43	172.00
(c)	Jawahar Sagar (JS)	3x33	99.00	3x33	99.00
(d)	Anoopgarh	6x1.5	9.00	6x1.5	9.00
(e)	Small Hydro		14.85	14.85	14.85
	Total Hydro		434.85		434.85
	THERMAL				
(f)	Kota TPS	2x110+3x210 +1x195	1045.00	2x110+3x210 +1x195	1045.00
(g)	Suratgarh TPS	5x250	1250.00	5x250	1250.00
(g)	Ramgarh GT	1x3	3.00	1x3	3.00
(i)	Ramgarh GT EXT.	1x35.5	35.50	1x35.5	35.50
	Total Thermal		2333.50		2333.50
(J)	Wind farm		14.01	14.01	14.01
	Total Rajasthan		2782.36		2782.36

contd/-

10	UP				
	HYDRO				
(a)	Rihand	6x50.0	300.00	6x50.0	300.00
(b)	Obra	3x33.0	99.00	3x33.0	99.00
(c)	Matatilla	3x10.0	30.00	3x10.0	30.00
(d)	Ganga Canal				
	Bhola	4x.375+2x.6+		4x.375+2x.6+	
	Salara	2x1.5+		2x1.5+	
	Nirgazni	2x2.5	10.70	2x2.5	10.70
(e)	Khara	3x24.0	72.00	3x24.0	72.00
(f)	Sobla & small hydro	6 +12.2	18.20	6 +12.2	18.20
	Total Hydro		529.90		529.90
	THERMAL				
(g)	Obra	5x50	250.00	4x40	160.00
(h)	Obra Extn. - I	3x100	300.00	3x94	282.00
(i)	Obra Extn. - II	5x200	1000.00	5x200	1000.00
(j)	Panki	1x32	32.00	1x32	32.00
(k)	Panki Extn.	2x110	220.00	2x105	210.00
(l)	Harduaganj - A	3x30	90.00	0	0.00
(m)	Harduaganj - B	2x50+2x60	220.00	1x40+2x55	150.00
(n)	Harduaganj - C	2x60+1x110	230.00	2x60+1x105	225.00
(o)	Paricha	2x110	220.00	2x110	220.00
(p)	Anpara - A	3x210	630.00	3x210	630.00
(q)	Anpara - B	2x500	1000.00	2x500	1000.00
	Total Thermal		4192.00		3909.00
	Total UP		4721.90		4438.90
11	UTTRANCHAL				
	HYDRO				
(a)	Khatima	3x13.8	41.40	3x13.8	41.40
(b)	Ramganga	3x66.0	198.00	3x66.0	198.00
(c)	Ganga Canal				
	Chitwa	2x1.5+		2x1.5+	
	Mohamedpur	3x3.1+		3x3.1+	
	Pathri	3x6.8	32.70	3x6.8	32.70
(d)	Yamuna (I & IV)				
	- Dhalipur	3x17.00+		3x17.00+	
	- Dhakrani	3x11.25+		3x11.25+	
	- Kulhal	3x10.00	114.75	3x10.00	114.75
(e)	Chibro	4x60.0	240.00	4x60.0	240.00
(f)	Khodri	4x30.0	120.00	4x30.0	120.00
(g)	Chilla	4x36.0	144.00	4x36.0	144.00
(h)	Maneri Bhali	3x30.0	90.00	3x30.0	90.00
	Total Hydro		980.85		980.85
	Total Region (1 to 11)		31312.93		30800.77

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	26.52%
NHPC	2284.20	0.00	0.00	0.00	2284.20	7.42%
SJVNL	1500.00	0.00	0.00	0.00	1500.00	4.87%
NPC	0.00	0.00	0.00	1180.00	1180.00	3.83%
BBMB	2876.15	0.00	0.00	0.00	2876.15	9.34%
CHANDIGARH	0.00	0.00	1.40	0.00	1.40	0.00%
DELHI	0.00	396.50	612.00	0.00	1008.50	3.27%
HARYANA	48.00	1025.00	25.20	0.00	1098.20	3.57%
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	10.63%
RAJASTHAN	434.85	2295.00	52.51	0.00	2782.36	9.03%
UP	529.90	3909.00	0.00	0.00	4438.90	14.41%
UTTRANCHAL	980.85	0.00	0.00	0.00	980.85	3.18%
Total	10822.94	15580.50	3217.33	1180.00	30800.77	100.00%
% of TOTAL	35.14%	50.58%	10.45%	3.83%	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 30.05.2004

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	262.85	172.00	434.85
UP	229.90	300.00	529.90
UTTRANCHAL	782.85	198.00	980.85
TOTAL	5691.94	5131.00	10822.94
PERCENTAGE	52.59%	47.41%	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	1.04	11.48	88.98	62.34	9.98	0.00	0.00
02	0.00	0.00	0.00	4.41	98.75	78.23	1.25	0.00	0.00
03	0.00	0.00	0.38	16.16	99.58	42.09	0.03	0.00	0.00
04	0.00	0.00	1.58	23.28	98.42	28.81	0.00	0.00	0.00
05	0.00	0.00	0.00	9.17	100.00	31.25	0.00	0.00	0.00
06	0.00	0.00	1.26	21.70	98.74	21.07	0.00	0.00	0.00
07	0.00	0.00	13.92	62.63	86.08	8.77	0.00	0.00	0.00
08	0.00	0.00	6.56	56.53	93.44	4.51	0.00	0.00	0.00
09	0.00	0.00	4.62	46.42	95.38	10.43	0.00	0.00	0.00
10	0.00	0.00	3.09	34.68	96.91	12.53	0.00	0.00	0.00
11	0.00	0.00	10.84	54.34	89.16	9.43	0.00	0.00	0.00
12	0.00	0.00	4.27	37.82	95.73	21.12	0.00	0.00	0.00
13	0.00	0.00	8.31	50.82	91.69	16.16	0.00	0.00	0.00
14	0.00	0.00	6.94	42.92	93.06	21.42	0.00	0.00	0.00
15	0.00	0.00	7.41	39.33	92.59	11.82	0.00	0.00	0.00
16	0.00	0.00	1.91	22.19	97.93	22.57	0.16	0.00	0.00
17	0.00	0.00	5.31	24.24	94.69	26.12	0.00	0.00	0.00
18	0.00	0.00	6.75	50.92	93.25	5.12	0.00	0.00	0.00
19	0.00	0.00	3.19	30.07	96.81	24.88	00.00	0.00	0.00
20	0.00	0.00	5.78	41.72	94.22	10.21	0.00	0.00	0.00
21	0.00	0.14	19.26	76.30	80.74	1.08	0.00	0.00	0.00
22	0.00	0.00	9.10	48.73	90.90	9.10	0.00	0.00	0.00
23	0.00	0.00	0.00	1.94	88.30	73.06	11.70	0.00	0.00
24	0.00	0.00	12.17	46.46	61.44	43.58	26.39	2.08	0.00
25	0.00	0.00	0.33	20.40	96.75	42.19	2.92	0.10	0.00
26	0.00	0.00	15.11	34.13	65.10	48.36	19.78	4.70	0.00
27	0.00	0.00	8.09	23.09	83.58	58.91	8.33	0.00	0.00
28	0.00	0.00	15.71	37.42	84.27	21.20	0.02	0.00	0.00
29	0.00	0.00	0.92	39.50	99.08	26.83	0.00	0.00	0.00
30	0.00	0.00	7.71	56.41	92.29	14.90	0.00	0.00	0.00
31	0.00	0.00	18.02	74.08	81.98	5.92	0.00	0.00	0.00
Max	0.00	0.14	19.26	76.30	100.00	78.23	26.39	4.70	0.00
Min	0.00	0.00	0.00	1.94	61.44	1.08	0.00	0.00	0.00
Average	0.00	0.00	5.19	34.83	92.55	25.67	2.22	0.22	0.00

Frequency (Hz)				Average Frequency	Frequency Variation Index
Maximum		Minimum			
Freq	Time	Freq	Time		
50.76	00.08	48.60	19.47	50.05	1.60
50.95	18.09	49.10	23.09	50.11	0.73
50.52	5.04	48.85	21.03	49.87	1.24
50.44	07.06	48.65	00.06	49.77	1.62
50.32	7.05	49.14	13.43	49.85	0.80
50.28	7.05	48.76	22.39	49.74	1.63
50.27	18.06	48.55	23.14	49.41	4.90
50.20	07.31	48.73	23.13	49.45	3.92
50.24	18.10	48.58	19.43	49.56	3.06
50.24	18.02	48.60	6.19	49.63	2.41
50.22	8.00	48.51	19.42	49.48	4.05
50.48	18.09	48.54	4.53	49.65	2.68
50.30	18.08	48.65	19.56	49.53	3.68
50.27	6.00	48.53	19.39	49.59	3.20
50.48	19.01	48.58	14.20	49.58	3.09
50.53	19.00	48.65	04.52	49.75	1.69
50.32	12.04	48.57	21.07	49.71	2.14
50.23	6.02	48.58	19.45	49.50	3.56
50.33	12.02	48.59	22.35	49.70	2.06
50.18	03.16	48.53	19.29	49.56	3.05
50.14	8.04	48.48	14.45	49.28	6.13
50.28	19.01	48.56	14.36	49.51	3.68
51.01	7.35	49.12	0.08	50.19	1.36
51.16	03.13	48.56	20.22	49.81	5.44
51.03	19.02	48.78	17.00	49.88	1.52
51.42	01.44	48.54	22.14	49.86	5.11
50.83	16.58	48.61	0.35	49.92	2.91
50.52	03.07	48.59	21.28	49.58	3.63
50.45	19.03	48.95	20.11	49.69	2.41
50.27	5.04	48.69	20.01	49.49	3.92
50.30	19.11	48.58	21.06	49.32	5.88
51.42		49.14		50.19	6.13
50.14		48.48		49.28	0.73
50.48		48.67		49.69	2.75

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	428	00.21	388	19.43	424	00.23	388	19.45	218	03.11	200	19.34	408	22.55	381	19.34
02	421	3.04	397	19.40	416	3.04	392	19.40	214	2.35	202	19.39	412	2.35	390	19.49
03	422	3.30	397	19.47	407	19.00	391	17.00	210	2.00	202	13.00	414	3.05	393	19.58
04	419	2.55	392	19.35	409	18.07	390	6.33	212	2.48	201	19.52	414	3.21	390	19.36
05	417	03.04	392	14.38	409	18.07	392	12.20	212	2.54	199	11.29	413	3.52	391	19.51
06	415	2.55	387	15.54	409	2.47	387	14.26	212	3.37	199	15.50	393	3.10	390	9.31
07	410	03.34	384	14.28	407	18.41	381	13.44	211	03.34	194	15.40	410	03.47	391	14.30
08	409	03.35	382	11.44	407	02.26	378	14.39	209	03.37	195	11.41	407	02.26	378	50.00
09	407	5.59	382	19.49	405	19.00	380	20.22	208	5.59	198	19.46	405	19.00	380	20.22
10	409	14.01	391	19.52	400	10.31	390	19.53	209	18.03	200	19.51	409	03.10	393	19.54
11	415	03.28	386	23.28	404	06.00	391	17.12	209	05.05	194	15.47	412	03.11	391	19.38
12	409	18.10	385	00.17	407	18.10	382	04.21	209	05.05	194	15.47	406	18.07	387	19.57
13	410	6.01	370	14.36	406	19.01	382	14.10	207	06.00	186	14.41	409	17.59	391	14.23
14	408	06.03	378	15.37	404	19.07	382	15.36	202	03.46	185	16.27	409	18.00	392	15.33
15	407	19.01	379	15.41	407	19.01	396	14.20	203	06.07	189	14.56	408	08.01	392	20.27
16	416	19.04	385	15.10	408	18.40	386	15.12	207	18.41	195	00.01	414	18.45	391	12.23
17	409	19.00	382	15.24	408	19.02	381	15.26	205	4.25	189	14.25	407	19.01	389	14.24
18	410	19.01	378	16.39	409	19.01	377	16.39	203	03.40	189	16.39	407	18.37	389	16.38
19	413	12.07	387	16.47	413	09.06	391	16.53	204	04.00	192	17.00	407	19.00	384	16.52
20	410	3.44	379	16.39	407	4.37	378	14.50	205	3.44	187	15.18	403	6.01	386	19.26
21	405	19.03	376	14.43	407	19.03	377	14.43	200	7.50	185	16.40	403	19.04	387	10.19
22	412	19.07	382	16.44	408	19.00	382	00.00	196	08.00	189	17.00	405	19.00	391	07.00
23	423	23.57	394	00.00	415	22.51	393	15.52	209	23.58	197	00.00	414	18.38	392	00.08
24	427	03.06	386	15.29	422	03.15	387	15.20	213	02.47	190	15.54	412	03.06	385	11.49
25	419	19.02	385	15.08	416	19.01	382	15.18	213	19.00	193	14.59	411	23.55	381	13.46
26	430	01.44	389	14.54	417	01.44	381	14.52	220	01.42	196	14.55	415	00.56	387	11.25
27	421	11.17	398	00.10	418	17.01	395	00.10	211	23.26	202	00.06	412	08.12	380	17.33
28	424	03.55	394	19.57	414	03.41	382	23.17	214	03.37	198	15.43	405	00.49	385	20.01
29	413	3.44	392	20.12	410	19.04	382	0.00	211	5.03	200	15.30	403	19.01	384	23.03
30	412	04.00	390	23.23	408	06.09	380	23.24	211	03.58	200	23.12	406	18.53	380	07.18
31	409	19.09	383	16.32	407	1907	379	12.48	207	06.01	191	16.28	400	05.04	380	16.31
Max	430		398		424		396		220		202		415		393	
Min	405		370		400		377		196		185		393		378	

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	19046	19924	878	11301	11301	0	332.55
02	19729	20809	1080	16135	16725	590	377.73
03	20350	21435	1085	16510	16800	290	404.03
04	21523	22383	860	17737	18327	590	425.03
05	21930	22870	940	18877	19042	165	446.94
06	21938	22977	1039	19026	19496	290	449.96
07	21503	22288	785	19364	20084	720	454.06
08	22169	22854	685	20004	20394	390	464.23
09	21982	22938	956	20564	20742	178	467.68
10	22204	22872	668	20733	21096	363	464.41
11	21308	22235	927	20205	20460	255	459.29
12	21845	22532	687	20896	21301	405	465.98
13	22197	23515	1318	20496	21814	1318	466.53
14	22375	23732	1357	20888	22245	1357	484.13
15	22498	23232	734	21222	21956	734	482.38
16	22089	23411	1322	21894	22338	444	487.04
17	22107	23557	1450	21449	22039	590	486.94
18	22465	24247	1782	21721	22421	700	494.29
19	22481	23815	1334	22145	23079	1334	487.04
20	22528	23633	1105	21658	22248	590	486.01
21	22729	23820	1091	21721	22270	549	491.22
22	22107	24055	1948	21781	22074	293	491.20
23	19720	20787	1067	20162	20417	255	443.75
24	21197	22714	1517	15384	15639	255	413.75
25	19669	20669	1000	20192	21047	855	449.50
26	21082	22651	1569	14312	14762	450	403.80
27	19237	20382	1145	19237	20382	1145	420.09
28	21055	22092	1041	17129	17384	255	429.32
29	21342	22833	1491	19982	20810	828	459.32
30	21335	22374	1039	20762	21274	512	459.32
31	22286	23589	1303	20773	21525	752	477.79
Maximum	22729	24247	1948	22145	23079	1357	494.29
Minimum	19046	19924	668	11301	11301	0	332.55
Average	21485	22620	1136	19492	20048	563	452.43

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	3155	1685	2260	1011	3097	2700	2497	1380	4523	5348
02	3332	2561	2344	1759	3171	2990	2611	1687	4591	5561
03	3542	2592	2536	1746	3325	3062	2694	1708	4805	5487
04	3891	2924	2586	1965	3339	3323	2765	1895	5255	4900
05	2129	3068	2667	2060	3361	3397	2821	2091	5113	5251
06	3796	3328	2727	2139	3432	3415	2925	2106	4975	5502
07	3788	3527	2307	2174	3820	3249	2991	2317	5145	5536
08	3861	3440	2815	2363	3351	3507	3029	2454	5042	5049
09	3582	3657	2758	2379	3237	3372	2909	2563	5410	5095
10	3759	3571	2429	2373	3300	3138	2692	2687	5639	4934
11	3716	3528	2708	1254	3173	3276	2919	2460	4904	5323
12	4006	3867	2749	2418	3172	3357	3024	2706	4993	5599
13	3862	3820	2821	2454	3114	2972	3210	2664	5181	5337
14	3963	3820	2822	2497	3291	3116	3195	2744	5285	5603
15	4162	3965	2856	2541	3313	3229	3155	2750	5171	5577
16	3990	4152	2760	2606	3116	3322	3088	2821	5280	5690
17	3857	3994	2856	2600	3124	3232	3100	2830	5192	5801
18	4083	4127	2852	2648	3324	3329	3189	2843	5035	6045
19	3975	4285	2873	2857	3303	3297	3179	2781	4992	5752
20	4033	4170	2829	2728	3219	2937	3023	2964	5180	5617
21	3950	4378	2956	2622	3365	3107	3250	3042	5360	5765
22	4008	4462	2816	2741	3337	3294	3221	2977	4987	5771
23	2083	3725	2617	2575	3333	3279	2992	2912	5624	3791
24	3890	2060	2449	1144	3352	3196	3115	2446	4674	4465
25	4531	4032	1479	2371	3048	3362	2573	2698	3737	4978
26	3965	3153	2347	651	3154	2210	2834	1358	4746	4306
27	3894	4229	2135	2203	2602	3129	2648	2484	4160	5349
28	3886	4129	2650	1795	3247	2814	2949	1911	4657	5059
29	3842	4253	2636	2271	3252	3179	2909	2476	4847	5055
30	3916	4384	2612	2223	3146	3237	2899	2547	4886	3843
31	4011	4557	2814	2393	3339	3103	3058	2666	5126	5611
Maximum	4531	4557	2956	2857	3820	3507	3250	3042	5639	6045
Minimum	2083	1685	1479	651	2602	2210	2497	1358	3737	3791
Average	3757	3659	2615	2179	3250	3165	2950	2451	5000	5258

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	617	257	146	75	492	285	978	489
02	666	365	131	76	490	316	1003	689
03	668	361	145	75	468	273	994	736
04	659	404	159	81	435	324	944	676
05	687	377	166	86	526	302	916	781
06	743	396	166	105	491	286	965	765
07	679	420	174	107	503	313	912	772
08	702	456	173	114	514	332	1044	549
09	631	460	156	118	457	350	1044	840
10	744	500	154	124	487	345	952	846
11	696	476	177	123	512	366	920	714
12	695	442	181	126	443	360	932	705
13	698	522	184	123	445	318	1008	795
14	705	529	186	136	532	381	998	750
15	684	488	179	134	475	313	971	784
16	723	505	166	149	424	376	1017	770
17	673	539	190	149	483	364	959	659
18	701	543	190	161	483	357	991	795
19	699	537	187	149	490	404	980	745
20	741	512	186	150	461	345	1207	705
21	731	506	188	161	477	386	1004	760
22	737	497	195	166	479	386	860	713
23	597	278	148	160	441	277	945	528
24	663	237	179	60	454	322	936	647
25	824	513	182	139	453	371	955	721
26	397	513	124	139	384	371	697	736
27	641	521	155	141	427	358	1056	612
28	633	489	172	120	452	356	963	728
29	685	486	166	123	445	364	879	690
30	656	498	156	124	463	373	671	686
31	726	467	175	131	435	370	902	652
Maximum	824	543	195	166	532	404	1207	846
Minimum	397	237	124	60	384	273	671	489
Average	681	455	169	123	468	343	955	711

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	55.884	35.907	69.306	46.261	84.913	9.007	2.539	9.222	12.445	1.651	327.134
02	65.739	42.871	73.402	47.180	103.225	10.177	2.199	9.333	18.498	1.531	374.155
03	70.099	46.425	75.779	51.935	112.560	10.771	2.661	9.405	20.151	1.675	401.461
04	76.578	50.237	80.014	53.916	115.005	11.169	2.895	9.592	19.863	1.532	420.801
05	81.782	50.767	80.983	57.113	123.155	11.423	3.117	9.877	19.504	1.700	439.420
06	82.673	52.397	81.415	58.784	121.164	11.637	3.281	9.175	19.586	1.654	441.766
07	82.420	52.620	80.683	61.340	121.307	12.024	3.415	9.339	19.156	1.567	443.871
08	85.541	57.012	80.751	62.212	121.650	12.291	3.394	9.428	16.080	1.591	449.950
09	85.694	54.669	78.832	61.638	128.387	14.411	3.111	9.541	18.588	1.541	456.412
10	84.495	56.688	79.228	57.726	127.153	12.245	3.036	9.157	19.858	1.673	451.259
11	85.210	57.237	78.479	63.777	118.654	12.384	3.678	9.458	19.030	1.684	449.591
12	88.198	56.854	76.881	66.960	119.716	12.359	3.737	9.205	18.953	1.769	454.632
13	90.132	58.820	73.115	68.317	122.664	13.138	3.847	9.694	19.839	1.745	461.311
14	90.481	60.126	76.027	68.803	129.351	12.980	3.927	9.662	19.573	1.690	472.620
15	91.884	61.065	78.105	67.990	126.703	12.750	3.855	9.445	19.468	1.694	472.960
16	92.186	63.262	77.789	66.970	129.298	13.234	3.625	9.367	19.076	1.700	476.506
17	91.528	63.224	78.045	69.646	126.220	13.067	3.950	8.847	18.027	1.686	474.240
18	94.394	63.650	78.828	69.794	126.644	13.159	4.217	8.778	19.417	1.613	480.493
19	96.242	63.181	73.398	70.217	123.672	13.243	4.175	9.115	19.265	1.680	474.188
20	95.462	63.317	73.700	72.127	123.917	13.100	4.158	8.970	18.933	1.570	475.255
21	95.826	63.613	76.934	72.264	121.842	13.279	4.333	9.554	19.502	1.585	478.732
22	96.839	62.729	78.578	72.255	122.495	13.441	4.171	9.043	18.045	1.644	479.240
23	73.132	55.846	77.131	65.558	126.118	9.909	2.950	7.325	15.068	1.692	434.728
24	72.182	45.462	78.900	64.655	106.847	10.027	3.003	8.484	18.295	1.517	409.372
25	93.959	49.725	79.398	63.529	106.133	12.191	3.808	9.092	18.463	1.676	437.974
26	86.208	36.000	66.955	53.317	106.133	11.519	3.700	9.346	17.923	1.711	392.812
27	88.785	46.051	71.224	58.778	103.122	11.337	3.602	9.209	18.236	1.589	411.934
28	93.015	48.410	73.288	57.855	102.964	11.993	3.605	9.354	19.707	1.617	421.809
29	95.245	53.682	78.454	61.699	114.149	12.004	3.541	9.599	19.234	1.736	449.343
30	96.186	55.838	77.105	61.279	115.618	12.314	3.192	9.164	18.657	1.657	451.010
31	98.887	56.605	78.493	68.250	120.179	12.590	3.815	8.962	17.832	1.624	467.237
Maximum	98.887	63.650	81.415	72.264	129.351	14.411	4.333	9.877	20.151	1.769	480.493
Minimum	55.884	35.907	66.955	46.261	84.913	9.007	2.199	7.325	12.445	1.517	327.134
Average	86.351	54.332	76.814	62.650	117.773	12.102	3.501	9.217	18.589	1.645	442.975
Month Total	2676.886	1684.291	2381.220	1942.145	3650.958	375.173	108.537	285.741	576.267	50.994	13732.212

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-2004	32867	37390	26015	30979	27257	37103	32552	27659	38464	41497	4313	455
2-May-2004	33436	39917	26027	28833	29532	37888	32739	27099	47262	49703	5449	3527
3-May-2004	32345	39334	25223	26984	28736	34436	34787	28076	49312	50206	5449	4935
4-May-2004	33191	37823	24352	23974	26700	33725	33164	24018	49600	57398	5201	4768
5-May-2004	33309	36277	26207	25029	27807	29834	34677	26880	51225	57474	5186	4186
6-May-2004	33670	35614	26243	26295	28330	30176	32857	28074	51497	56451	5232	3995
7-May-2004	35186	35598	27633	29464	29106	30698	33880	30766	51143	59964	5208	4050
8-May-2004	37088	37760	28963	31902	29160	29746	36152	33203	51627	64743	5239	4612
9-May-2004	37868	39145	28117	30533	28542	27863	36476	32610	50746	65096	5059	4791
10-May-2004	37988	37344	28240	28612	29262	35635	36590	29716	51702	65277	5199	5046
11-May-2004	35858	37257	27898	29183	28990	34784	38417	35421	51949	58957	5136	5466
12-May-2004	40358	40556	29692	30374	29985	32197	39817	38466	52321	59729	5189	5114
13-May-2004	40450	41802	30531	32007	29911	29275	40059	38413	52888	60492	5211	4838
14-May-2004	41394	42814	31068	33704	29884	27489	40446	37806	53381	65502	5140	4474
15-May-2004	40888	44286	30935	34386	30956	31440	41404	39210	53674	62374	5002	3929
16-May-2004	42950	45971	34876	39251	30016	31768	44315	37088	51921	65297	4845	3522
17-May-2004	42298	44026	35051	38904	30210	30766	44659	39990	52115	68260	4739	2666
18-May-2004	42581	44516	35358	39337	30595	30297	45213	40375	52174	71079	4526	1393
19-May-2004	43525	45243	35176	39860	32019	25596	47552	40034	52948	73221	3060	2402
20-May-2004	45557	45431	38083	44348	32103	26249	47974	42422	53052	71473	3071	2709
21-May-2004	45991	47761	37988	43109	32423	31707	47078	42550	53286	65000	3389	2497
22-May-2004	46661	47578	39034	41452	32528	32730	47246	42376	52830	65575	3260	2574
23-May-2004	45171	40505	37132	36765	32127	32026	44608	37545	52802	69085	3220	-66
24-May-2004	41409	45663	31808	38899	32863	32723	44092	36303	51336	54945	2984	-1403
25-May-2004	41959	44272	31560	30673	30918	31673	43742	34104	52008	54946	3713	2864
26-May-2004	40988	46032	30374	23492	30629	31718	38896	29014	50293	56586	3817	2532
27-May-2004	39936	42317	29766	24817	29890	26422	38427	34628	49714	55718	3917	3116
28-May-2004	38131	42275	28288	28295	28383	25105	36194	34063	48159	47750	3836	2580
29-May-2004	38225	40761	29613	31450	29398	27070	40780	32589	51644	59959	3821	3680
30-May-2004	37669	39493	28513	31856	28489	25830	40453	31272	49832	62492	3681	2670
31-May-2004	42052	43279	32544	34953	30216	27457	42651	39330	51668	62187	3886	2569
Total MU	1220.999	1288.040	952.308	1009.720	926.965	951.426	1237.897	1071.100	1582.573	1878.436	136.978	100.491
Max. MWH	46661	47761	39034	44348	32863	37888	47974	42550	53674	73221	5449	5466
Min MWH	32345	35598	24352	23492	26700	25105	32552	24018	38464	41497	2984	-1403
Avg. MWH	39387	41550	30720	32572	29902	30691	39932	34552	51051	60595	4419	3242

VIII. Schedule vs Actual Draws 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-2004	3354	3063	14957	11515	3772	2663	456	57	661	1594
2-May-2004	3416	4236	15720	15936	3983	2367	456	104	750	1427
3-May-2004	3549	4383	17165	18122	3989	2873	456	85	1238	1590
4-May-2004	3864	5018	16398	17563	3677	3106	456	97	1082	1435
5-May-2004	3634	4917	15887	16924	3785	3329	456	99	1610	1601
6-May-2004	3180	3886	16658	16986	3806	3479	456	91	1504	1563
7-May-2004	3292	3689	16685	16587	3837	3663	456	92	1502	1475
8-May-2004	3302	3565	16605	14528	3818	3661	456	90	1680	1501
9-May-2004	2872	3051	16601	17095	3878	3338	456	93	1852	1448
10-May-2004	3126	2783	16844	17963	3929	3261	456	101	1884	1572
11-May-2004	2671	2115	16159	17221	3937	3922	456	109	1765	1575
12-May-2004	1825	1024	16601	17132	3916	4055	456	102	1463	1667
13-May-2004	1457	1078	16562	17808	3948	4176	456	114	1608	1631
14-May-2004	2030	243	15031	17313	3936	4189	456	83	1457	1607
15-May-2004	1782	-395	15446	17049	3802	4125	456	116	1623	1578
16-May-2004	-344	-1572	15083	16891	3810	3914	456	127	1678	1573
17-May-2004	-417	-1660	15320	15622	3832	4162	456	131	1556	1555
18-May-2004	-593	-1023	15915	17114	3825	4466	456	123	1290	1490
19-May-2004	-590	-2557	17284	16744	3731	4527	456	131	1695	1549
20-May-2004	-2536	-2991	17581	16490	3896	4441	456	132	1596	1445
21-May-2004	-2417	-2177	17653	17111	3920	4597	456	115	1444	1470
22-May-2004	-1752	-2321	17071	15525	3955	4365	456	112	1834	1532
23-May-2004	-1817	-3397	17036	12762	3889	3236	456	123	1791	1569
24-May-2004	-639	-908	17443	15711	3870	3270	456	76	1453	1441
25-May-2004	-1021	275	17226	15790	3744	4037	456	112	898	1564
26-May-2004	-1281	226	16734	15312	3730	4014	456	115	1596	1519
27-May-2004	-374	339	16203	15558	3684	3801	456	125	956	1464
28-May-2004	-894	283	15311	17106	3571	3848	456	122	1724	1495
29-May-2004	239	708	14694	16660	3724	3787	456	116	823	1620
30-May-2004	110	-986	12347	15950	3758	3494	456	108	1736	1549
31-May-2004	2	-2509	15086	15326	3767	4097	456	87	1825	1537
Total MU	29.030	22.386	501.306	505.414	118.719	116.263	14.136	3.288	45.574	47.636
Max. MWH	3864	5018	17653	18122	3989	4597	456	132	1884	1667
Min MWH	-2536	-3397	12347	11515	3571	2367	456	57	661	1427
Avg. MWH	936	722	16171	16304	3830	3750	456	106	1470	1537

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-May-2004	31763	33395	20145	20341	10551	10961	4981	5083	7463	7965	5097	5018
2-May-2004	38382	39223	21620	21846	11115	11130	8862	8876	8855	8941	10067	10699
3-May-2004	39312	39723	21830	21913	12244	12914	9172	9197	9172	9224	12040	12521
4-May-2004	39312	39731	21960	22152	12363	13386	9173	9252	9173	9272	13160	13293
5-May-2004	39377	39802	21960	22197	11712	11425	9173	9274	9173	9308	15281	15794
6-May-2004	39893	40406	21960	22202	9168	9195	8893	8640	9173	9275	15190	15882
7-May-2004	40382	40937	21960	22300	9580	9682	9173	9241	9173	9279	15132	16595
8-May-2004	40453	40857	21960	22307	13776	13903	9173	9254	9173	9256	15724	16785
9-May-2004	36842	37419	21960	22325	13776	13906	9173	9241	9173	9261	15682	16537
10-May-2004	38120	38621	21960	22251	13776	13901	9131	9214	9173	9254	16106	16881
11-May-2004	40833	41180	21960	22220	13776	13917	8487	8044	9173	9246	15617	16060
12-May-2004	40968	41313	21960	22202	13776	13785	8553	8629	9173	9224	14822	15291
13-May-2004	40933	41198	21960	22233	13776	13908	9173	9274	8963	9028	14518	15505
14-May-2004	40606	40812	21960	22158	13776	13893	9173	9252	8976	9052	14798	16197
15-May-2004	39747	39948	21960	22162	14577	14694	9173	9247	9173	9240	14985	16531
16-May-2004	39170	39305	21960	22069	18360	18419	9173	9166	4585	4681	15423	16169
17-May-2004	38075	38322	21761	21895	18360	18552	9173	9158	4503	4616	15241	15844
18-May-2004	37611	37864	21700	21827	18360	18587	9159	9140	4517	4613	14922	16475
19-May-2004	36924	37227	21323	21458	18360	18618	9127	9166	4568	4589	15317	16414
20-May-2004	38333	38582	19804	20050	18360	18541	9173	9196	4584	4609	15133	15989
21-May-2004	38310	38599	19849	20153	18360	18539	8966	8937	4584	4629	14562	16121
22-May-2004	38185	38460	18989	18982	18360	18446	8375	8369	4584	4622	15199	15827
23-May-2004	37744	37774	19735	19581	16541	15099	8431	8268	4529	4391	14041	14038
24-May-2004	36135	36018	21266	20462	15556	15684	7992	8024	4290	4243	13329	14130
25-May-2004	37044	37544	21836	22035	16905	16358	8501	8460	4562	4561	11796	12487
26-May-2004	36325	36845	21385	20832	12517	12582	8289	8121	4366	4337	11435	11377
27-May-2004	37086	37695	21715	21897	12381	11878	8230	8081	4432	4375	11207	11020
28-May-2004	37936	38376	20129	20375	12069	12523	7663	8097	4310	4466	12863	13670
29-May-2004	38206	38675	18429	18639	13776	13936	8361	8384	4584	4626	14715	15969
30-May-2004	30528	30936	21960	22354	13776	13905	8715	8757	4584	4628	16050	16572
31-May-2004	30825	31167	21960	22270	13776	13903	9173	9092	4584	4578	16636	17237
Total MU	1175.360	1187.954	660.916	665.688	443.559	446.170	269.964	270.134	207.325	209.389	436.088	458.928
Max. MWH	40968	41313	21960	22354	18360	18618	9173	9274	9173	9308	16636	17237
Min MWH	30528	30936	18429	18639	9168	9195	4981	5083	4290	4243	5097	5018
Avg. MWH	37915	38321	21320	21474	14308	14393	8709	8714	6688	6754	14067	14804

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-May-2004	5443	6030	6633	7415	7776	7795	8136	8197	3809	3844	15801	15880
2-May-2004	7013	7130	7593	9938	7824	7790	7416	8220	2982	3008	13028	13126
3-May-2004	6822	6205	10992	11052	7692	7744	8136	8180	3129	3159	11024	11125
4-May-2004	3257	3216	12700	12620	6977	6972	8280	8094	2918	2947	11425	11509
5-May-2004	3342	3324	12973	12336	7776	7594	8232	8087	2697	2722	10420	10503
6-May-2004	3611	3697	13038	12409	7776	7558	8112	8042	2784	2809	11023	11121
7-May-2004	5269	5470	10376	10366	7752	7496	8160	7944	2759	2785	11495	11590
8-May-2004	5179	5416	10017	10264	7656	6940	8112	7951	2607	2632	11730	11828
9-May-2004	7336	7396	10110	10144	7656	7389	7992	7947	2232	2253	11330	11435
10-May-2004	8009	8014	10388	10215	7656	7456	7992	7897	2097	2118	11255	11355
11-May-2004	7650	7830	9971	10093	7656	7501	7982	7870	2277	2299	11970	12078
12-May-2004	7705	7517	9802	9762	7656	7443	7992	7722	2279	2298	13610	13728
13-May-2004	7411	7602	9763	9896	7656	7402	7500	7624	2172	2191	13743	13862
14-May-2004	7299	7304	9809	9774	7477	7355	3936	3719	2472	2494	14124	14256
15-May-2004	7889	7767	10184	9899	7348	7210	3960	3802	2577	2600	15343	15476
16-May-2004	7181	6813	10154	9733	7416	7346	3936	3805	2845	2868	15851	15982
17-May-2004	7578	7219	9903	9510	7296	7313	3936	3813	2547	2569	15536	15684
18-May-2004	7583	7676	9793	9855	7368	7347	3936	3584	2277	2298	15720	15852
19-May-2004	7531	7290	9862	9581	7392	7400	7156	6960	2532	2556	15641	15784
20-May-2004	7331	7262	9915	9738	7392	7324	7968	7754	2561	2566	15681	15817
21-May-2004	7320	7926	9966	10034	7440	7328	7872	7725	2487	2510	15443	15593
22-May-2004	7527	7661	10064	9939	7392	7258	7872	7836	2607	2632	15620	15751
23-May-2004	6913	5909	9471	8619	7392	7440	7872	7933	2337	2354	15454	15587
24-May-2004	7095	7176	10140	10719	7344	7520	7872	7894	1962	1974	15375	15520
25-May-2004	6529	6749	11424	9719	7488	7516	8016	7937	1902	1915	15658	15811
26-May-2004	6767	6456	11456	11625	7488	7559	7992	7936	1842	1858	15741	15892
27-May-2004	6951	6642	10750	10635	7488	7625	8400	7907	1737	1748	15419	15518
28-May-2004	6394	6394	11403	11469	7488	7603	7992	7882	1692	1708	13643	13768
29-May-2004	7498	7298	12767	12842	7488	7434	7968	7869	1680	1696	12225	12338
30-May-2004	7694	7940	13523	13397	7464	7411	7944	7867	1842	1859	4814	4831
31-May-2004	7875	8084	13614	13543	7428	7257	8400	7806	2022	2041	10782	10882
Total MU	209.002	208.413	328.554	327.141	233.098	230.326	227.070	223.804	74.663	75.311	415.924	419.482
Max. MWH	8009	8084	13614	13543	7824	7795	8400	8220	3809	3844	15851	15982
Min MWH	3257	3216	6633	7415	6977	6940	3936	3584	1680	1696	4814	4831
Avg. MWH	6742	6723	10599	10553	7519	7430	7325	7219	2408	2429	13417	13532

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-May-2004	1177	1186	12816	12913	6317	5820	14557	13721	10073	10138	4576	4775
2-May-2004	961	969	12816	12905	11424	11466	14509	14325	8920	7043	4234	4174
3-May-2004	807	813	11659	11886	11304	11412	14687	14325	7358	6741	4363	4270
4-May-2004	725	729	5919	6211	11424	11460	14014	14007	7358	7052	3602	3523
5-May-2004	721	721	6230	6559	9762	9776	13934	13522	7358	6818	3941	3982
6-May-2004	690	702	6230	6560	11472	11532	13804	13542	7320	6734	4055	4055
7-May-2004	725	732	7387	7795	11472	11534	13776	13562	8445	8101	3903	3970
8-May-2004	778	784	7120	7504	11097	11120	13776	13473	9308	9007	3903	3917
9-May-2004	710	716	7298	7641	11112	11178	13612	13273	8295	7786	3660	3590
10-May-2004	684	687	7722	8078	11472	11538	13612	13568	7670	7226	3660	3735
11-May-2004	772	779	6942	7405	8790	8713	14311	14204	7845	7771	2878	2999
12-May-2004	745	754	6364	6694	8592	8619	14506	14229	10938	10575	2754	2721
13-May-2004	868	873	6631	6967	8592	8633	14326	14337	10938	10715	2847	2839
14-May-2004	882	889	6987	7373	8592	8615	14179	14233	11813	10818	2786	2719
15-May-2004	971	984	7610	8090	8592	8615	14179	14273	14078	12914	2936	3007
16-May-2004	1045	1059	6097	6454	8564	8463	14179	14180	14078	14273	2759	2585
17-May-2004	350	589	8233	8637	9534	9489	14179	14354	14865	14731	2759	2860
18-May-2004	0	334	7076	7589	11459	11457	14170	14160	14603	14635	3083	3095
19-May-2004	0	230	8633	9096	11424	11452	14170	14121	14743	14551	3083	2977
20-May-2004	305	483	8589	9008	11424	11310	14161	14319	14695	14646	3083	3008
21-May-2004	1458	1474	10947	11500	11424	11450	13120	13077	14695	14668	3083	3002
22-May-2004	1466	1495	11437	11850	11424	11433	13120	13033	14695	14618	2907	2961
23-May-2004	1581	1581	9879	10056	11424	8250	13286	12913	14691	14342	3123	3137
24-May-2004	1232	1241	10858	10921	11424	11476	13120	13013	14691	14836	3015	2974
25-May-2004	1003	1007	9434	9715	11424	11299	13208	12664	14440	12926	2318	2324
26-May-2004	978	981	8322	8619	10948	10864	13218	13128	13291	11310	2820	2782
27-May-2004	1002	990	7610	7842	9302	9198	13208	12794	11506	9902	2334	2157
28-May-2004	1096	1106	3827	4103	8544	8593	13208	13225	10013	9178	2334	2409
29-May-2004	1089	1098	9123	9524	8544	8512	13208	13361	10013	8748	2249	2250
30-May-2004	1130	1138	7788	8074	8544	8615	13208	13100	10013	9397	2394	2280
31-May-2004	1191	1198	8478	8890	10441	10466	13360	12858	12315	12347	2330	2404
Total MU	27.142	28.322	256.062	266.459	315.862	312.358	427.905	422.894	351.064	334.547	97.772	97.481
Max. MWH	1581	1581	12816	12913	11472	11538	14687	14354	14865	14836	4576	4775
Min MWH	0	230	3827	4103	6317	5820	13120	12664	7320	6734	2249	2157
Avg. MWH	876	914	8260	8595	10189	10076	13803	13642	11325	10792	3154	3145

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

Date	Nathpa-Jhakri HEP		Chamera stage-II	
	Schedule	Actual	Schedule	Actual
1-May-2004	9201	11808	6173	6124
2-May-2004	4817	10708	4374	4416
3-May-2004	4199	10236	4060	4084
4-May-2004	4508	9473	4656	4693
5-May-2004	9818	10276	4567	4605
6-May-2004	10189	10234	4822	4863
7-May-2004	10930	11031	4924	4963
8-May-2004	12165	12237	4944	4990
9-May-2004	12288	12358	4944	4988
10-May-2004	12056	12133	4944	4984
11-May-2004	14079	14167	5012	5049
12-May-2004	15870	15931	6485	6535
13-May-2004	16911	17039	6633	6682
14-May-2004	20439	20590	6608	6660
15-May-2004	22146	23518	6287	6340
16-May-2004	22415	28330	7128	7187
17-May-2004	23712	29599	5792	5770
18-May-2004	24577	29773	6732	6787
19-May-2004	29640	29803	6113	6161
20-May-2004	29640	29547	6460	6515
21-May-2004	28150	27985	7128	7191
22-May-2004	29003	29211	7128	7193
23-May-2004	29224	29261	5346	5225
24-May-2004	26005	26066	7128	6927
25-May-2004	22612	20994	7128	7165
26-May-2004	23043	23158	5665	5530
27-May-2004	23701	23878	4944	4829
28-May-2004	22860	22608	4944	4951
29-May-2004	23959	24128	5087	5123
30-May-2004	26956	27228	5440	5421
31-May-2004	30565	30705	4752	4807
Total MU	595.678	634.013	176.348	176.758
Max. MWH	30565	30705	7128	7193
Min MWH	4199	9473	4060	4084
Avg. MWH	19215	20452	5689	5702

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	12.196	8.150	4.226	0.701	23.708	2.270	30.759	2.978	8.178	8.502	6.159	0.93	108.76
02	17.210	8.760	5.670	0.700	27.970	1.410	43.480	1.830	6.900	9.550	5.097	2.56	131.14
03	20.753	9.393	10.624	0.682	34.606	0.957	50.455	1.557	5.943	12.337	5.022	2.03	154.36
04	29.170	8.870	17.090	0.500	38.660	0.880	49.880	2.410	6.590	15.780	4.574	2.30	176.70
05	35.710	8.878	16.806	0.555	44.526	0.917	52.279	3.498	7.351	15.355	4.960	2.58	193.41
06	36.176	9.887	16.902	0.617	44.862	0.716	51.984	2.691	7.732	15.744	5.289	2.60	195.20
07	35.974	10.063	14.265	0.572	43.195	0.976	48.811	4.052	7.911	15.469	5.650	2.57	189.51
08	36.544	10.353	14.964	0.584	44.249	1.087	47.741	3.757	7.374	13.831	5.863	1.55	187.90
09	35.160	10.170	16.870	0.450	44.350	1.040	50.370	3.760	7.190	13.850	6.490	1.49	191.19
10	36.523	9.875	18.937	0.393	36.917	0.983	50.469	4.034	7.013	13.016	6.374	1.89	186.43
11	37.233	10.232	17.968	0.538	37.241	0.986	45.505	3.739	6.777	13.739	7.343	1.81	183.11
12	38.155	9.466	16.729	0.625	38.035	1.007	47.114	3.146	7.294	13.671	8.181	1.82	185.24
13	38.332	9.804	17.232	0.680	41.411	0.868	49.451	3.145	8.048	14.866	8.616	2.03	194.48
14	37.615	9.784	16.963	0.753	45.665	1.266	51.190	3.187	8.390	16.089	9.419	2.26	202.58
15	36.309	11.088	17.033	0.749	45.536	1.018	51.360	3.012	8.781	14.169	9.840	2.42	201.31
16	36.563	9.623	14.772	0.761	45.215	0.901	50.418	3.181	9.380	15.004	10.939	2.18	198.94
17	38.490	9.600	14.780	0.820	44.730	1.070	44.920	3.460	10.360	15.270	10.507	2.40	196.41
18	38.731	10.899	14.320	0.838	45.512	0.937	42.319	3.846	11.729	15.188	9.801	2.30	196.42
19	38.476	12.063	13.611	0.752	45.249	0.918	43.380	3.050	10.999	15.116	11.672	2.52	197.81
20	38.440	11.920	9.640	0.740	45.690	1.030	43.110	3.780	10.410	14.570	11.961	2.44	193.73
21	36.278	11.499	11.045	0.785	43.431	0.855	45.774	4.276	10.721	14.579	11.731	2.39	193.36
22	37.197	11.958	11.664	0.837	44.678	1.159	42.824	4.859	10.589	15.028	11.364	2.52	194.68
23	23.689	9.182	10.646	0.761	41.707	0.844	42.824	4.265	9.981	13.898	10.722	2.31	170.82
24	16.040	11.308	5.024	0.813	42.253	0.260	35.759	3.069	10.926	14.715	9.392	2.58	152.14
25	38.980	11.050	9.890	0.710	41.630	0.000	39.850	2.470	8.980	16.220	8.817	2.67	181.27
26	38.981	11.046	9.893	0.711	41.634	0.000	39.848	2.470	8.982	16.219	9.120	2.61	181.51
27	35.679	10.782	12.850	0.676	38.956	0.000	37.539	2.533	8.047	12.374	8.870	2.68	170.99
28	38.715	11.111	11.885	0.755	42.704	0.000	45.170	2.003	8.907	11.512	9.071	2.60	184.43
29	42.260	11.320	12.590	0.670	44.970	0.060	43.850	2.760	8.400	15.380	8.891	2.57	193.73
30	41.340	12.720	14.080	0.660	45.410	0.050	43.710	2.880	9.440	15.440	10.150	2.71	198.59
31	41.060	13.500	13.810	0.650	45.280	0.100	47.400	3.190	9.860	14.360	11.471	2.51	203.19
Maximum	42.26	13.50	18.94	0.84	45.69	2.27	52.28	4.86	11.73	16.22	11.96	2.71	203.19
Minimum	12.20	8.15	4.23	0.39	23.71	0.00	30.76	1.56	5.94	8.50	4.57	0.93	108.76
Average	34.32	10.46	13.32	0.68	41.61	0.79	45.47	3.19	8.68	14.22	8.50	2.29	183.53
Month Total	1063.98	324.36	412.78	21.04	1289.98	24.57	1409.54	98.89	269.18	440.84	263.35	70.85	5689.36

XI. Performance Of Generating Stations

S.No.	Power Station	Effective Capacity MW	Energy Generated during MAY, 2004 (Ex Bus MU)	Cummulative from 01.04.2003 (Ex-bus MU)
1	CENTRAL SECTOR			
A	NTPC (Thermal)			
(a)	Badarpur TPS	705.00	435.65	803.93
(b)	Singrauli STPS	2000.00	1187.46	2336.04
(c)	Rihand STPS	1000.00	665.76	1314.54
(d)	Dadri NCTPS	840.00	443.45	973.09
(e)	Unchahar-I TPS	420.00	270.26	526.82
(f)	Unchahar-II TPS	420.00	209.44	472.43
(g)	Tanda TPS	440.00	262.81	443.52
(h)	Anta GPS	419.33	209.09	452.89
(i)	Auraiya GPS	663.36	328.18	706.23
(j)	Dadri GPS	829.78	457.18	912.25
(k)	Faridabad GPS	431.57	244.33	485.38
	Total NTPC	8169.04	4713.61	9427.11
B	NHPC			
(a)	Bairasiul	180.00	75.31	133.75
(b)	Salal	690.00	419.49	680.55
(c)	Tanakpur HPS	94.20	28.32	47.95
(d)	Chamera HPS	540.00	266.47	403.62
(e)	Uri HPS	480.00	312.36	627.03
(f)	Chamera2 HPS	300.00	176.77	288.53
	Total NHPC	2284.20	1278.72	2181.43
C	Nathpa-Jhakri	500.00	596.41	935.06
D	NPC			
(a)	RAPS -A	300.00	122.79	158.67
(b)	RAPS -B	440.00	223.84	310.85
(c)	NAPS	440.00	230.37	460.13
	Total NPC	1180.00	576.99	929.65
2	JOINTLY OWNED (BBMB)			
(a)	Bhakra Complex	1490.15	426.39	760.18
(b)	Dehar	990.00	334.71	520.54
(c)	Pong	390.00	97.43	169.95
	Total BBMB	2870.15	858.53	1450.66
3	DELHI			
(a)	Indra Prastha	247.50	60.42	112.32
(b)	Rajghat	149.00	35.18	113.50
(c)	Gas Turbines	282.00	136.35	258.66
(d)	Pragati Gas	330.00	204.95	416.78
	Total DELHI	1008.50	436.89	901.26
4	HARYANA			
(a)	WYC	48.00	21.24	35.16
(b)	Faridabad (New)	165.00	61.63	130.29
(c)	Panipat	860.00	374.50	830.61
(d)	Magnum Diesel(IPP)	25.20	7.22	14.74
	Total Haryana	1098.20	464.59	1010.80

contd/-

5	HP			
(a)	Giri	60.00	5.81	10.41
(b)	Bassi	60.00	35.01	61.24
(c)	Binwa	6.00	2.89	4.82
(d)	Rongtong (+Nogli+Micro+Thirot+Sal-2)	15.25	1.52	2.72
(e)	Andhra	16.95	3.83	6.62
(f)	Bhabha (H)	120.00	76.22	122.67
(g)	Baner (H)	12.00	3.69	6.28
(h)	Gaj (H)	10.50	4.29	6.98
(i)	Gumma	3.00	0.59	1.17
(j)	Ghanvi	22.50	7.44	11.90
(k)	Malana (IPP)	86.00	26.58	41.18
(l)	Baspa (IPP)	300.00	123.01	173.45
	Total HP	712.20	290.88	449.42
6	J & K			
(a)	Lower Jhelum	105.00	51.23	107.32
(b)	Upper Sindh	127.60	11.91	24.86
(c)	Ganderbal	15.00	0.77	2.18
(d)	Mohra	9.00	0.00	0.00
(e)	Chenani	32.80	9.68	15.64
(f)	Stakna	9.75	0.00	0.00
(g)	Small Hydel	3.54	0.78	0.78
(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	74.37	150.77
7	PUNJAB			
(a)	Jogindernagar/ Shanan	110.00	65.59	112.21
(b)	UBDC	90.00	22.24	27.31
(c)	Mukerian	207.00	107.19	182.99
(d)	Anandpur Sahib (APS)	134.00	66.58	99.15
(e)	Ranjit Sagar HPS	600.00	64.84	79.32
(f)	Small Hydel	4.10	0.00	0.00
(g)	GNDTPS (Bhatinda)	440.00	133.05	244.76
(h)	GGSTPS (Ropar)	1260.00	665.61	1364.81
(i)	Jhalkeri	10.00	0.00	0.00
	Peda & Sugarmill		0.00	0.00
(j)	Lehra Mohabbat TPS	420.00	248.87	444.72
	Total Punjab	3275.10	1373.96	2555.25
8	RAJASTHAN			
(a)	Mahi Bajaj Sagar	140.00	22.29	48.53
(b)	Rana Pratap Sagar (RPS)	172.00	1.09	1.17
(c)	Jawahar Sagar (JS)	99.00	1.49	2.30
(d)	ACW	9.00	0.86	1.93
(e)	MMH	14.85	0.00	-0.01
(f)	Kota TPS	1045.00	513.76	1066.06
(g)	RAMGARH GT	3.00		
(h)	RAMGARH GT EXT	35.50	19.38	35.79
(i)	Suratgarh TPS	1250.00	746.41	1495.17
(j)	Wind Farm	14.01	41.83	61.51
(k)	Others (KPTL bio-mass)		2.51	3.00
	Total Rajasthan	2782.36	1349.62	2715.46

contd/-

9	U.P.			
	<u>HYDRO</u>			
(a)	Rihand	300.00	44.45	95.41
(b)	Obra	99.00	18.37	38.74
(c)	Matatilla	30.00	10.55	24.73
(d)	Ganga Canal	10.70	0.00	0.00
(e)	Small hydro	18.20	0.00	0.00
(f)	Khara	72.00	23.43	39.40
	Total U.P. (Hydro)	529.90	96.80	198.28
	<u>THERMAL</u>			
(e)	Obra	1442.00	388.15	738.55
(f)	Panki	242.00	87.91	173.48
(g)	Harduaganj	375.00	54.78	115.32
(h)	Paricha	220.00	81.16	160.23
(i)	Anpara	1630.00	791.83	1659.14
	Total U.P. (Thermal)	3909.00	1403.83	2846.73
	Total U.P.	4438.90	1500.63	3045.01
10	UTTRANCHAL			
(a)	Khatima	41.40	14.01	22.74
(b)	Ramganga	198.00	15.68	48.71
(c)	Ganga Canal	32.70	15.64	25.51
(d)	Yamuna (I & IV)	114.75	92.40	151.44
(e)	Chibro	240.00	53.14	88.75
(f)	Khodri	120.00	22.51	39.87
(g)	Chilla	144.00	54.24	83.79
(h)	Maneri Bhali	90.00	0.00	0.00
	Total Uttranchal	980.85	267.62	460.81
11	CHANDIGARH			
	Diesel gen set	1.40		
	Total Region	29794.77	13782.80	26212.69

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

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

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

-----Coal fired power stations

IP ----12% Rajghat----11% Faridabad----13.5% Panipat----12.0%

Suratgarh----10.0% KTPS----10% UP----12.5% Tanda----12.5%

Lehra Mohabbat----10.5% RTP----7.5% GNDTP----10.5%

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

(ALL FIGS IN MWH)

FROM / TO	PUNJAB	HARYANA	RAJASTHAN	DELHI	UP	UTTRANCHAL	HP	J & K	CHANDIGARH	MALANA
PUNJAB	-	-	-		-	16000****	12000****	8200****	-	-
HARYANA	-	-	-		-	-	50746***	-	-	7086*
RAJASTHAN		-	-		-	-	-	-		
DELHI	-		-		-	-	127990***	-	-	-
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 MAY 2004**(ALL FIGS IN MWH)**

FROM / TO	GRIDCO	MP	WBPCL	DVC	APTRCO	CSEB	GEB	GOA	ARUNANCHAL
PUNJAB	30950*	-		15675*	40590*		-	-	
HARYANA	2400***	-		21550*			-	2.692**	14475****
RAJASTHAN	-	-					-	-	
DELHI						--			
UTTRANCHAL	-	-		-	-	-	-	-	
J & K	-	-			-	-	-	-	
CHANDIGARH			875*	2825*					

* Through PTC

(+)

Import by NR constituents

(-)

Export by NR constituents

** Through Global Energy Limited

*** Throgh NVVN

**** Through ADANI

REMARKS : provisional and indicative only

XIV. Inter Regional Exchanges During May 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	50	-500	300	500	1.92	2.84	-0.92	-17	-18	0	19	0.00	0.64	-0.64
02	0	50	200	125	0.40	0.05	0.35	18	9	0	23	0.00	0.64	-0.64
03	0	0	50	50	0.17	0.13	0.04	18	-19	0	25	0.00	0.69	-0.69
04	0	150	300	0	1.62	0.00	1.62	-22	-20	0	24	0.00	0.70	-0.70
05	-50	50	150	50	0.55	0.05	0.49	-19	-18	0	24	0.00	0.69	-0.69
06	0	0	150	50	1.03	0.03	0.99	-19	-21	0	25	0.00	0.69	-0.69
07	0	150	350	0	2.51	0.00	2.51	-21	-13	0	25	0.00	0.68	-0.68
08	100	50	450	0	5.29	0.00	5.29	-25	-20	0	30	0.00	0.67	-0.67
09	200	300	500	0	7.77	0.00	7.77	-25	-20	0	30	0.00	0.72	-0.72
10	0	500	500	0	7.08	0.00	7.08	-25	-18	0	30	0.00	0.60	-0.60
11	50	500	500	0	6.43	0.00	6.43	-20	-6	0	20	0.00	0.61	-0.61
12	0	500	500	50	6.96	0.04	6.93	-22	-20	0	20	0.00	0.72	-0.72
13	0	350	450	0	5.25	0.00	5.25	-19	-14	0	24	0.00	0.72	-0.72
14	50	350	500	0	7.64	0.00	7.64	-15	-20	0	25	0.00	0.72	-0.72
15	0	250	350	100	4.39	0.02	4.36	-20	-25	0	29	0.00	0.73	-0.73
16	0	400	450	50	5.84	0.02	5.82	-21	-19	0	27	0.00	0.64	-0.64
17	0	400	450	100	4.57	0.02	4.56	0	-20	0	25	0.00	0.19	-0.19
18	100	200	500	108	4.34	0.20	4.14	-18	-19	0	25	0.00	0.42	-0.42
19	0	200	450	108	4.97	0.09	4.88	-16	-17	0	30	0.00	0.66	-0.66
20	0	200	450	0	4.18	0.00	4.18	-20	-15	0	25	0.00	0.71	-0.71
21	0	350	450	0	5.04	0.00	5.04	-15	-11	0	20	0.00	0.70	-0.70
22	0	92	450	0	3.41	0.00	3.41	-20	-25	0	35	0.00	0.73	-0.73
23	-250	0	92	400	0.97	2.01	-1.04	-13	-15	0	20	0.00	0.67	-0.67
24	75	-500	176	500	1.09	3.53	-2.44	0	0	0	0	0.00	0.00	0.00
25	-500	115	200	500	1.80	2.25	-0.44	-20	0	0	20	0.00	0.10	-0.10
26	73	-500	250	500	1.47	3.94	-2.47	-20	-18	0	20	0.00	0.64	-0.64
27	-250	210	210	500	2.18	2.26	-0.08	-25	-20	0	25	0.00	0.63	-0.63
28	70	-450	350	500	2.55	3.53	-0.97	-20	-25	0	25	0.00	0.70	-0.70
29	95	300	350	0	5.11	0.00	5.11	-17	-25	0	28	0.00	0.66	-0.66
30	200	337	500	0	7.30	0.00	7.30	-16	-16	0	28	0.00	0.63	-0.63
31	139	300	500	0	6.30	0.00	6.30	-27	-25	0	30	0.00	0.69	-0.69
Maximum	200	500	500	500	7.77	3.94	7.77	18	9	0	35	0.00	0.73	0.00
Minimum	-500	-500	50	0	0.17	0.00	-2.47	-27	-25	0	0	0.00	0.00	-0.73
Average	5	140	357	135	3.87	0.68	3.20	-16	-17	0	24	0.00	0.61	-0.61
Total					105.52	8.30	97.22					0.00	19.00	-19.00

XIV. Inter Regional Exchanges During MAY2004 (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	90	0.00	1.79	-1.79	300	-100	450	200	4.80	0.75	4.05
02	-90	-80	0	90	0.00	1.87	-1.87	139	300	350	0	3.91	0.00	3.91
03	-90	-80	0	90	0.00	1.68	-1.68	77	79	450	0	2.99	0.00	2.99
04	-95	-90	0	98	0.00	1.73	-1.73	179	378	379	0	6.98	0.00	6.98
05	-90	-80	0	98	0.00	1.67	-1.67	129	329	454	0	6.51	0.00	6.51
06	-95	-80	0	95	0.00	1.91	-1.91	80	76	480	0	6.31	0.00	6.31
07	-90	-80	0	90	0.00	1.92	-1.92	77	450	450	0	8.67	0.00	8.67
08	-60	-85	0	90	0.00	1.65	-1.65	402	400	450	0	10.02	0.00	10.02
09	-80	-50	0	90	0.00	1.38	-1.38	300	450	450	0	10.28	0.00	10.28
10	-80	-70	0	80	0.00	1.38	-1.38	450	500	500	0	11.12	0.00	11.12
11	-65	-70	0	70	0.00	1.62	-1.62	107	500	500	0	10.13	0.00	10.13
12	-110	-80	0	70	0.00	1.93	-1.93	105	450	450	0	8.98	0.00	8.98
13	-70	-80	0	95	0.00	2.04	-2.04	176	346	500	0	9.07	0.00	9.07
14	-100	-90	0	100	0.00	2.14	-2.14	126	450	450	0	9.66	0.00	9.66
15	-70	-100	0	100	0.00	1.84	-1.84	79	450	500	0	7.72	0.00	7.72
16	-65	-75	0	90	0.00	1.72	-1.72	225	450	450	0	8.77	0.00	8.77
17	0	-70	0	70	0.00	0.91	-0.91	74	450	450	0	7.74	0.00	7.74
18	0	0	0	0	0.00	0.00	0.00	223	400	500	0	9.77	0.00	9.77
19	0	0	0	0	0.00	0.00	0.00	173	500	500	0	5.16	0.00	5.16
20	-50	0	0	50	0.00	0.23	-0.23	350	450	450	0	9.62	0.00	9.62
21	-90	-60	0	90	0.00	1.54	-1.54	273	400	500	0	10.01	0.00	10.01
22	-90	-80	0	90	0.00	1.89	-1.89	250	473	473	0	10.92	0.00	10.92
23	-90	-80	0	90	0.00	1.72	-1.72	172	450	500	0	8.87	0.00	8.87
24	-60	-80	0	90	0.00	1.72	-1.72	0	0	100	0	0.14	0.00	0.14
25	-90	-80	0	90	0.00	1.94	-1.94	0	0	0	0	0.00	0.00	0.00
26	-50	-70	0	105	0.00	1.75	-1.75	0	0	0	0	0.00	0.00	0.00
27	-75	-60	0	85	0.00	1.76	-1.76	0	0	0	0	0.00	0.00	0.00
28	-85	-75	0	85	0.00	2.14	-2.14	0	0	0	0	0.00	0.00	0.00
29	-90	-75	0	95	0.00	2.09	-2.09	0	0	0	0	0.00	0.00	0.00
30	-70	-80	0	95	0.00	1.96	-1.96	0	0	0	0	0.00	0.00	0.00
31	-80	-80	0	100	0.00	1.75	-1.75	0	0	0	0	0.00	0.00	0.00
Maximum	0	0	0	105	0.00	2.14	0.00	450	500	500	210	11.12	0.75	11.12
Minimum	-110	-100	0	0	0.00	0.00	-2.14	0	-100	0	0	0.00	0.00	0.00
Average	-73	-70	0	83	0.00	1.60	-1.60	144	278	346	11	6.07	0.02	6.05
Total					0.00	49.99	-49.99					188.14	0.75	187.40

XV. Progress Of Installation Of Shunt Capacitors As On 31.05.2004**(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 31.05.2004	Balance not installed during 2004-05	Capacitors installed as on 31.05.2004
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 MAY 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 MAY 2004 (m)	450.45 1477.86	391.65 1284.93	254.36 834.50	344.62 1130.63	379.20 1244.10
Level on last day of MAY 2003 (m)	470.84 1544.75	394.34 1293.76	255.48 838.20	345.60 1133.85	380.16 1247.26
Live Capacity as on (mhmt) last day of MAY 2004 (maft)	0.02 0.20	0.07 0.56	0.04 0.30	0.05 0.37	0.00 0.00
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
Energy content as on last day of MAY 2004 (MU)	95.00	90.00	50.00	83.00	0.00
Energy content as on last day of MAY 2003 (MU)	610.00	135.00	225.00	60.00	0.00
Maximum level (m) (ft) (date)	455.83 1495.52 02.05.2004	396.54 1301.00 01.05.2004	255.67 838.80 01.05.2004	344.88 1131.48 01.05.2004	379.49 1245.04 01.05.2004
Minimum level (m) (ft) (date)	449.49 1474.70 17.05.2004	391.65 1284.93 31.05.2004	254.39 834.60 31.05.2004	1130.63 1131.49 31.05.2004	379.20 1244.10 31.05.2004

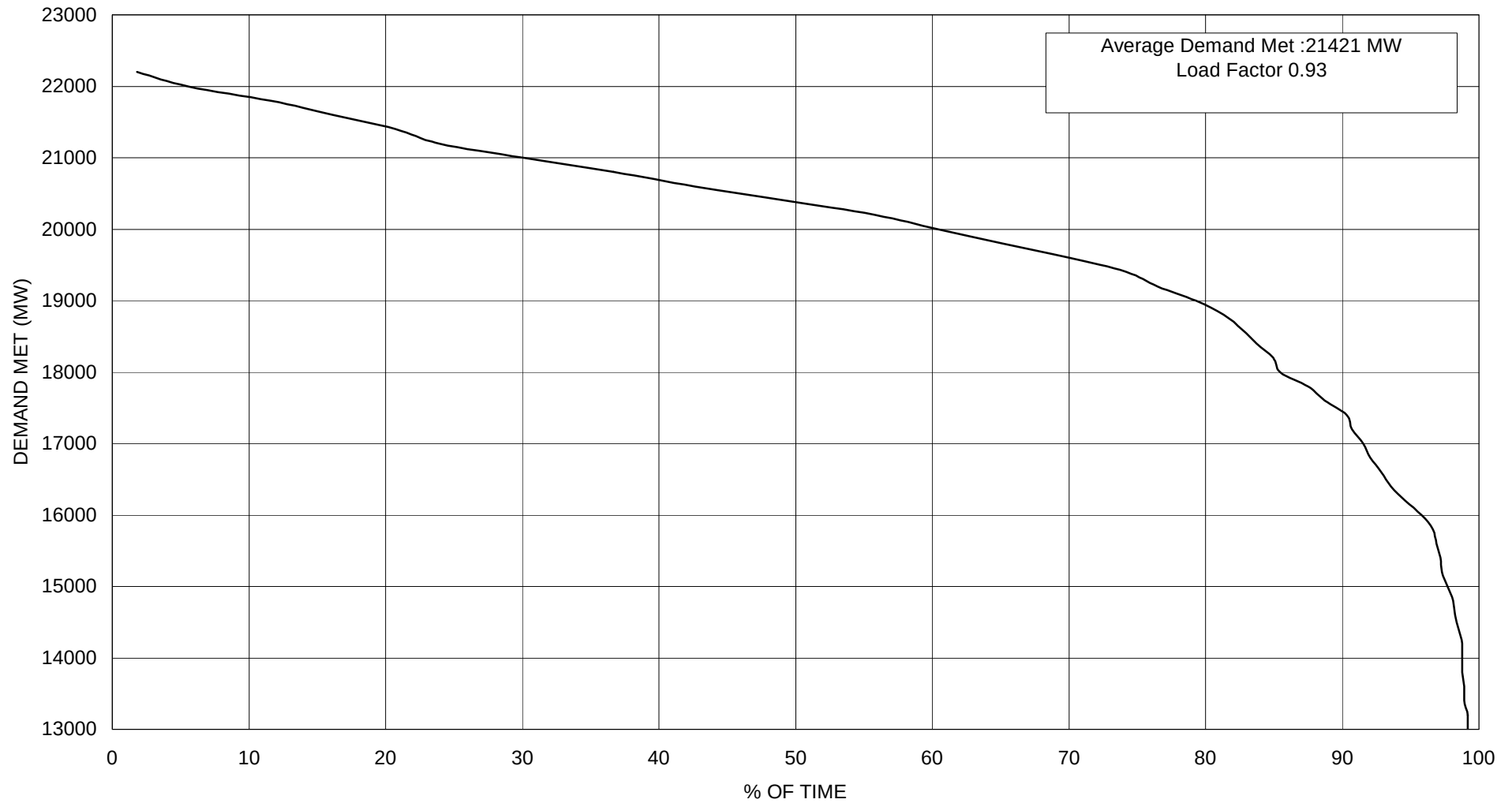
Energy content of Bhakra : Total Energy content at Bhakra, Ganguwal and Kotla power stations

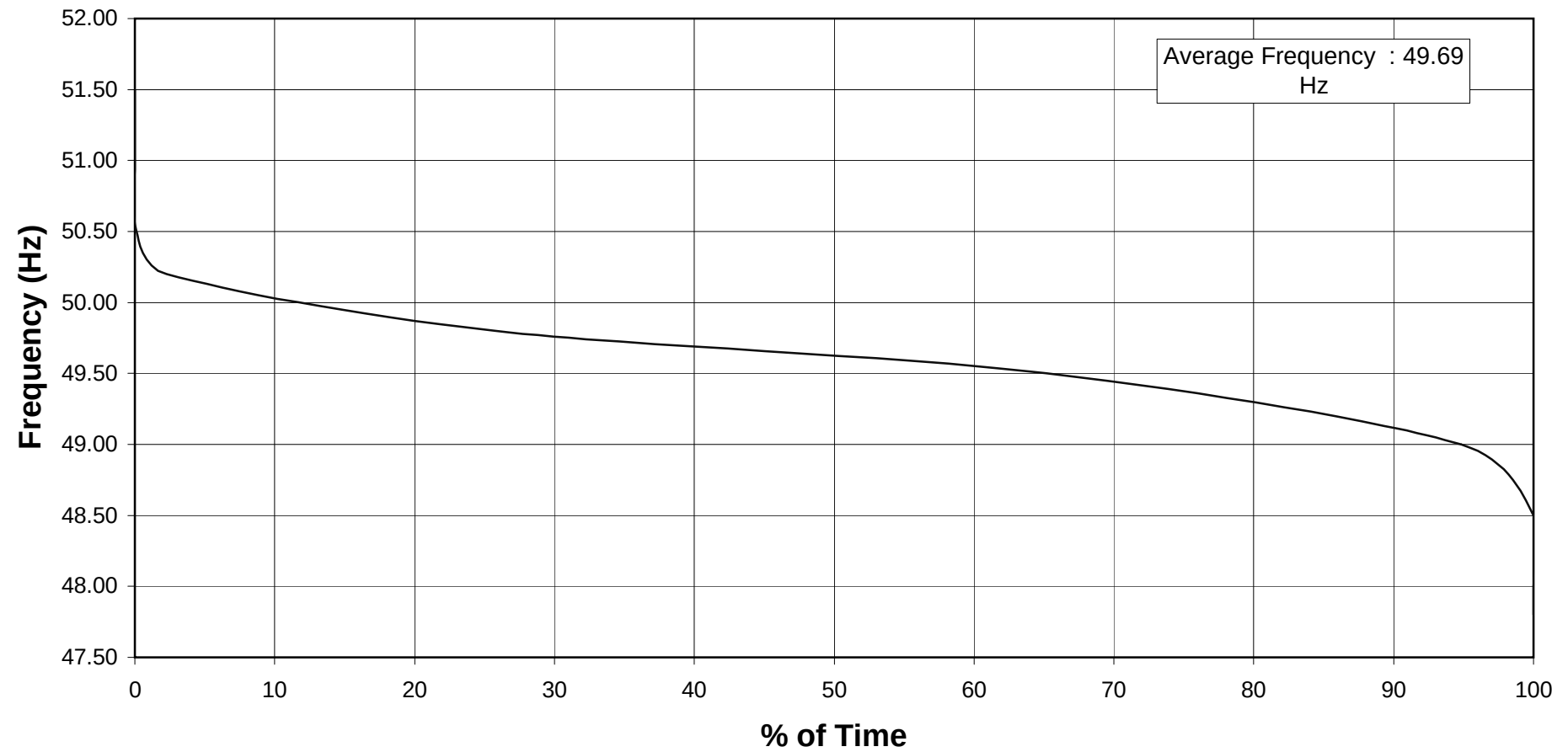
Energy content of Rihand : Total Energy content at Rihand & Obra power stations

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

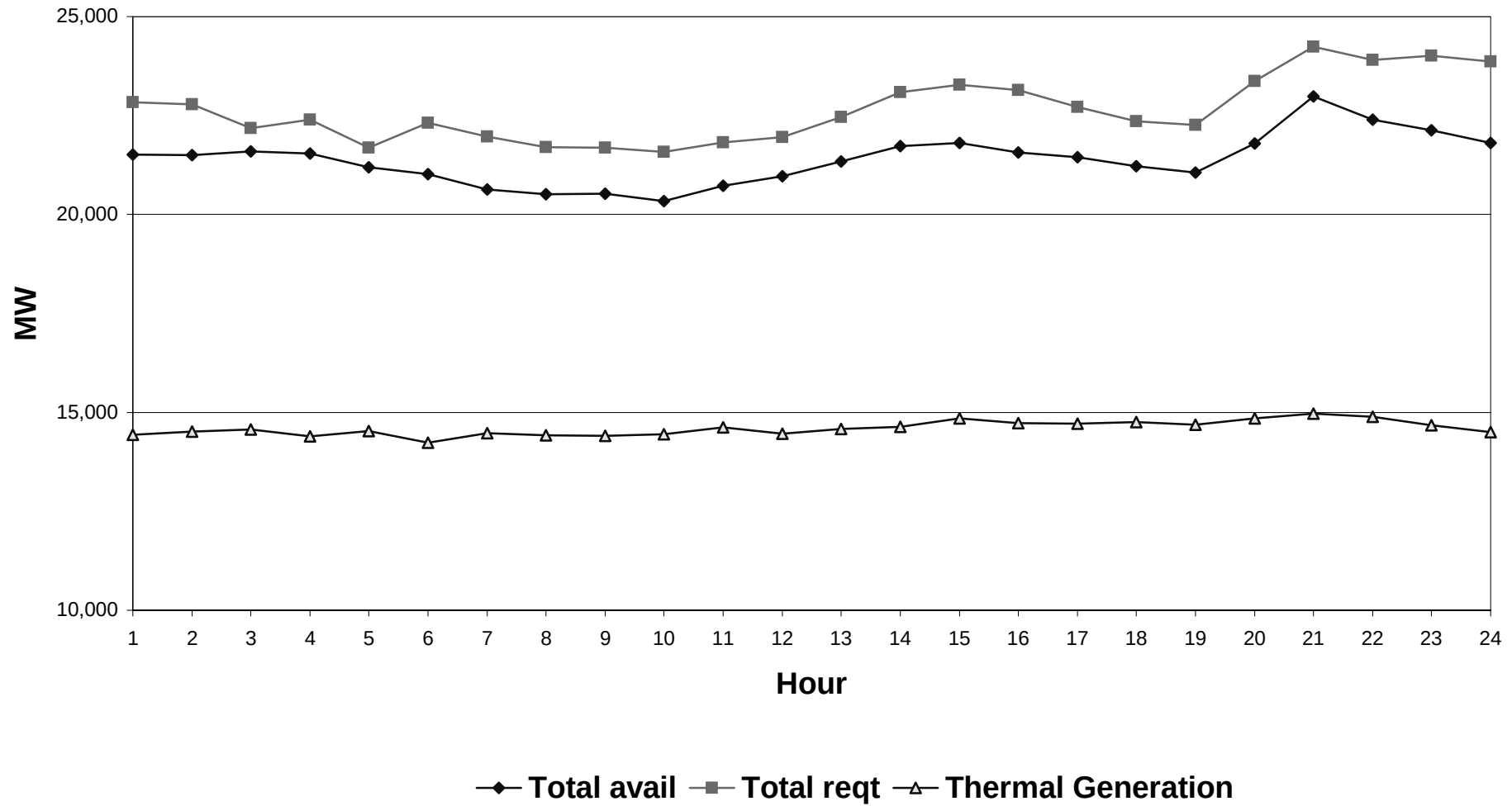
Energy Content of G. Sagar : Total Energy content at Gandhi Sagar, RP Sagar and Jawahar Sagar Power Stations.

Load Duration Curve For Northern Region For MAY 2004

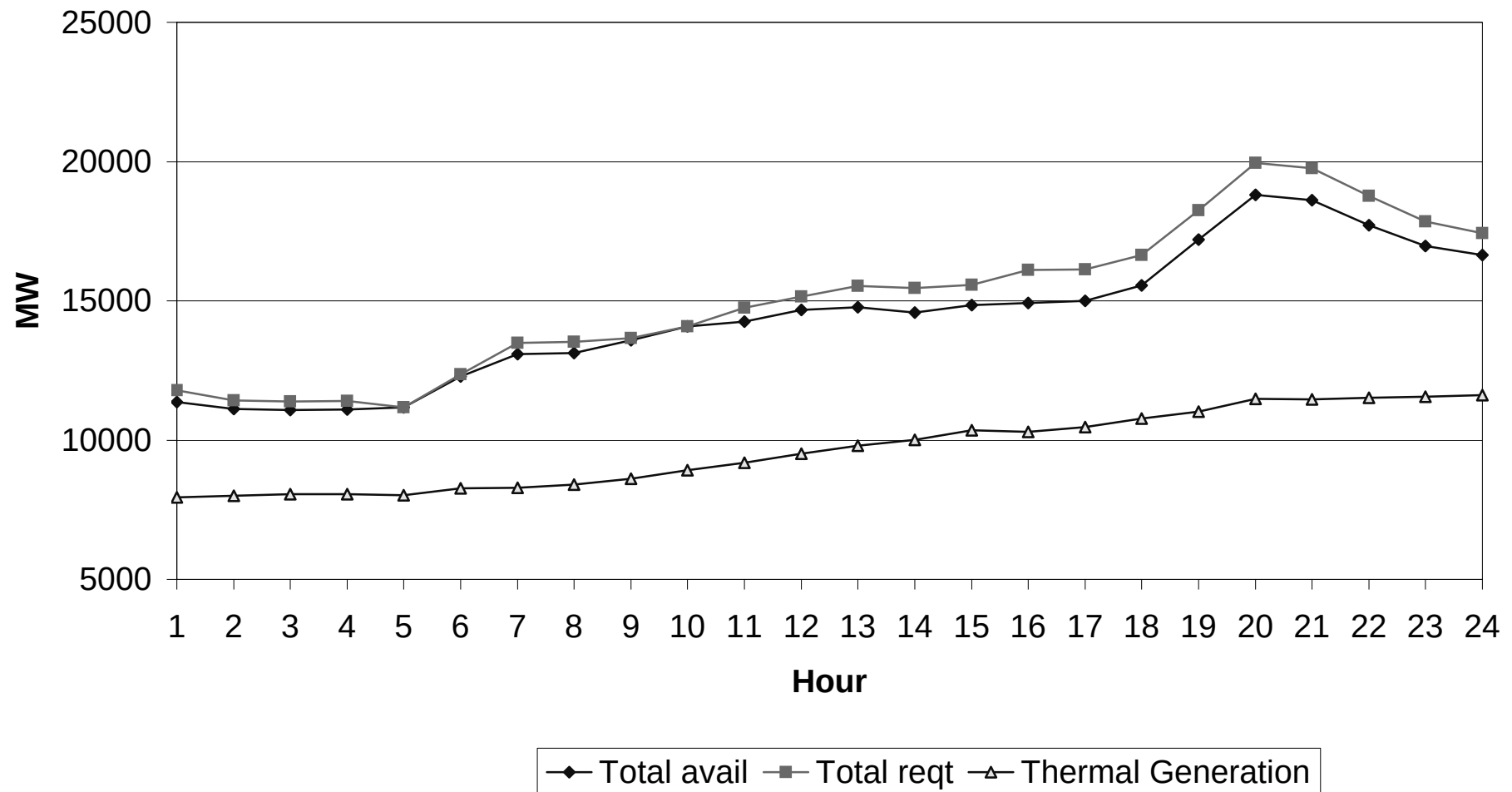


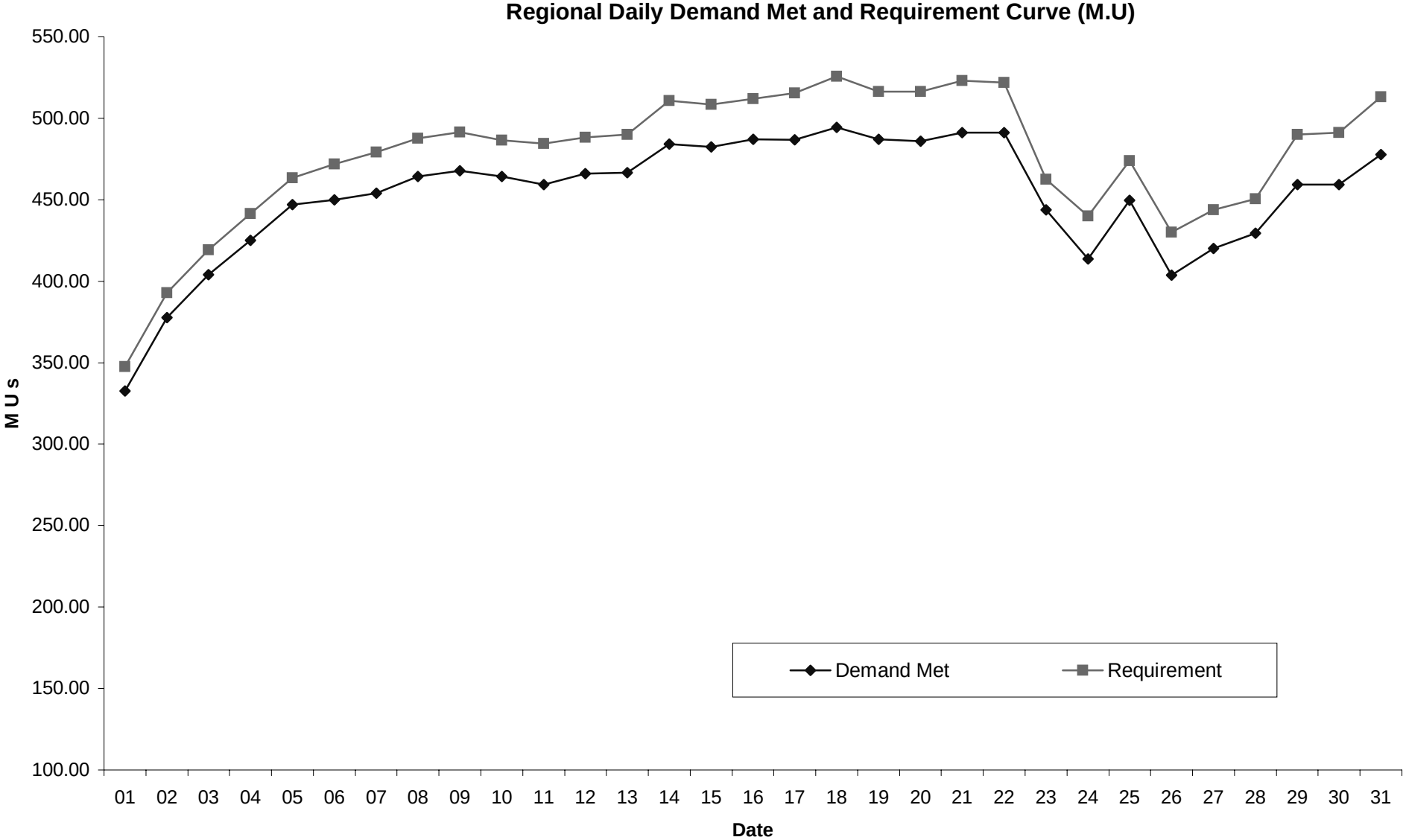
Frequency Duration Curve For Northern Region For April 2004

Load Curve Of Northern Region For Maximum Demand Met Day (20th May 2004)



Load Curve Of Northern Region For Minimum Demand Met Day (1st May 2004)





Grid Incident during MAY 2004		
DATE	TIME	INCIDENT
25.05.2004	14.58	AURIYA GPS: At 14.58 hrs. frequency suddenly shoot up to around 53 HZ with wide fluctuations in the units load. The power flow through 220 kv Agra lines I & II became zero from around 160 MW in each line. The line breakers, however remained in closed condition. subsequently 400 kv Agra I & II tripped . Both the steam turbines 1 & 2 were hand tripped. Frequency continued to hover around 53 HZ and all 4 gas turbines got desynchronised on auto at 15.00 hrs. The tripping of all running units at Auriya was caused mainly due to severe fault at 400 kv Agra(UPPCL) substation. 220 kv Agra Auriya I & II lines were synchronised at 17.26 hrs and all running units were brought back on bar by 19.30 hrs.
25.05.2004	21.54	SURATGARH TPS: At 21.54 hrs all running units of STPS tripped on turbine over speed due to load throw off conditions . The units tripped due to earth fault caused by earth switch of 400 kv Ratangarh ckt-I on the said feeder. At that moment high speed wind storm was flowing.
		RESTORATION: All the running units were brought back on bar by 12.40 hrs of 26.05.2004 and the system was fully normalised.