



GRID REPORT

June 2001

SYSTEM OPERATION REPORT OF NORTHERN REGION FOR THE MONTH OF JUNE, 2001

A. SUMMARY REPORT:

I Important events:

(a) Commissioning of new units /lines/transformers during the month.

400 kV Biharsharif-Sarnath-I & II line was commissioned at 16:18 hrs and 17:02hrs of 12.06.2001 linking Eastern grid with Northern grid.

(b) Major problems / constraints affecting grid operation including major grid disturbances.

The average system frequency during the month of June 2001, was 49.50 Hz and frequency remained between 49.0 & 50.5 Hz for 72.55 % of time. The system voltage condition was satisfactory during the month and was well within the prescribed limits.

There was no transmission constraint during the month except on few occasions when generation backing down had to be done in Uri HEP due to overloading of 220 kV Kishenpur-Pampore D/C and in Tanakpur HEP due to tripping of 220 kV Tanakpur-Bareilly D/C.

During the month, power flow from Eastern region was started through 400 kV Biharsharif-Sarnath D/C line at 16:18hrs of 12.06.2001. A part of Varanasi area is being fed radially from Eastern region. Power imported from Eastern region was in the range of 60 to 70 Lus per day.

There was no major grid disturbance in the region during June 2001.

(c) Important decisions taken during the month in various meeting / other forums.

NIL

II. CENTRAL GENERATING STATIONS SHARE vs DRAWAL OF ALL CONSTITUENTS DURING JUNE 2001

(All figs. in MU)

Sl. No.	State/UT/ System	NTPC (Excl. BTPS, Tanda & FGPS) Entitlement	Actual	NHPC Entitlement	Actual	NPC (Excl. RAPS-A) Entitlement	Actual	BBMB Entitlement	Actual	TOTALS Entitlement	Actual
1	Chandigarh	41.01	35.44	17.75	17.72	3.61	2.18	44.79	45.05	107.16	100.39
2	Delhi	835.96	860.30	115.55	115.55	36.16	34.98	0.00	0.00	987.67	1010.84
3	Haryana	333.94	374.85	164.85	164.86	27.05	64.03	270.83	273.75	796.67	877.49
4	H.P.	67.33	70.49	54.76	54.76	6.99	7.42	20.30	20.49	149.38	153.16
5	J & K	148.84	129.21	237.22	237.23	16.68	13.50	0.00	0.00	402.74	379.94
6	Punjab	417.15	408.98	215.67	215.67	46.51	49.35	390.24	394.28	1069.57	1068.28
7	Rajasthan	500.94	549.25	111.07	111.08	133.95	124.98	192.61	193.94	938.57	979.25
8	U.P.	1356.03	1291.54	121.76	121.76	81.65	56.16	0.00	0.00	1559.44	1469.46
9	MP / N.F.F.	5.46	10.84	0.00	0.00	0.00	0.00	14.40	5.66	19.86	16.50
10	Bihar	0.00	6.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.94
11	Trans. Losses	98.41	98.41	18.68	18.68	8.01	8.01	42.55	42.55	167.65	167.65
12	Others	55.03	23.85	0.00	0.00	0.00	0.00	0.00	0.00	55.03	23.85
	Total	3860.10	3860.10	1057.31	1057.31	360.62	360.62	975.72	975.72	6253.74	6253.74

III. INTER REGIONAL EXCHANGES IN MU AND PEAK MW

	Energy (MU)	Peak MW
a. Import over HVDC Back to Back at Vindhyachal	34.22	500
b. M.P. to Rajasthan(Ujjain - Kota)	0.00	0
c. Eastern region to Northern region (Import)	103.85	315
d. Export over HVDC Back to Back at Vindhyachal	45.54	500
e. 220 KV Auraiya -Malanpur	10.00	24
f. Northern region to Bihar (Export)	10.81	50
g. Tanakpur to Mahendranagar(NEPAL) (Export)	1.05	5

IV. FREQUENCY PROFILE

a. Maximum frequency	51.40	Hz	at	13:19hours on	04.06.2001
Minimum frequency	48.00	Hz	at	17:55hours on	21.06.2001
Average frequency	50.05	Hz			

b. Frequency distribution in %

Hz	< 48.0	48.0-49.0	49.0-49.5	49.5-50.5	50.5-51.0	> 51.0
%	0.00	3.19	13.82	58.02	21.54	3.43

c. Frequency Variation Index

Monthly Average	3.59
Maximum	11.15
Minimum	1.81

V. POWER SUPPLY POSITION IN NORTHERN REGION

a. Average Energy/day (Net)

State / U.T.	Availability MU/Day	Requirement MU/Day	Shortage MU/Day	Shortage %
Chandigarh	3.34	3.34	0.00	0.00
Delhi	56.41	57.39	0.98	1.71
Haryana	48.67	48.74	0.07	0.14
H.P.	8.95	8.96	0.01	0.11
J & K	14.40	16.03	1.63	10.17
Punjab	87.73	93.33	5.60	6.00
Rajasthan	61.23	61.37	0.14	0.23
U.P.	114.84	125.06	10.22	8.17
N.F.F./Rail	0.99	0.99	0.00	0.00
Total	396.56	415.21	18.65	4.49

b. Peak MW

State / U.T.	MAX. Availability MW	MAX. Requirement MW	Shortage MW		Shortage %	
			ARITH- METICAL	AT MAXM. REQT HR	ARITH- METICAL	AT MAXM. REQT HR
	A	B	C=B-A	D	(C/B)*100	(D/B)*100
Chandigarh	180	180	0	0	0.00	0.00
Delhi	2779	3021	242	307	8.01	10.16
Haryana	2805	2805	0	0	0.00	0.00
H.P. *	496	496	0	0	0.00	0.00
J & K *	941	1039	98	98	9.43	9.43
Punjab	4656	4989	333	500	6.67	10.02
Rajasthan	3130	3130	0	0	0.00	0.00
U.P.	6149	7039	890	1301	12.64	18.48
N.F.F./Rail	50	50	0	0	0.00	0.00
Region	20122	21873	1751	1751	8.01	8.01

Diversity Factor = 1.05

* Approximate and Estimated

B. DETAILED REPORT

I. 1. INSTALLED / EFFECTIVE CAPACITY AT THE END OF JUNE 2001

-	STATION	INSTALLED CAPACITY (MW)		EFFECTIVE CAPACITY	
-	-	-	-	-	-
1 CENTRAL SECTOR					
A	NTPC				
(a)	Badarpur TPS	3x100+2x210	720.00	3x95+2x210	705.00
(b)	Singrauli STPS	5x200+2x500	2000.00	5x200+2x500	2000.00
(c)	Rihand STPS	2x500	1000.00	2x500	1000.00
(d)	Dadri NCTPS	4x210	840.00	4x210	840.00

(e)	Unchahar TPS	2x210 + 2x210	840.00	2x210 + 2x210	840.00
(f)	Tanda TPS	4x110	440.00	4x110	440.00
(g)	Anta GPS	3x88.71+1x153.20	419.33	3x88.71+1x153.20	419.33
(h)	Auraiya GPS	4x111.19+2x109.30	663.36	4x111.19+2x109.30	663.36
(i)	Dadri GPS	4x130.19+2x154.51	829.78	4x130.19+2x154.51	829.78
(j)	Faridabad GPS	2x137.75 +1x156.07	431.57	2x137.75 +1x156.07	431.57
	Sub-Total		8184.04		8169.04
B	NHPC				
(a)	Bairasiul	3x60	180.00	3x60	180.00
(b)	Salal Stage - I	3x115	345.00	3x115	345.00
(c)	Salal Stage - II	3x115	345.00	3x115	345.00
(d)	Tanakpur HPS	3x40	120.00	3x31.4	94.20
(e)	Chamera HPS	3x180	540.00	3x180	540.00
(f)	URI	4x120	480.00	4x120	480.00
	Sub-Total		2010.00		1984.20
C.	NPC				
(a)	RAPS -A	2x220	440.00	1x100+1x200	300.00
(b)	RAPS -B	2x220	440.00	2x220	440.00
(c)	NAPS	2x235	470.00	2x220	440.00
	Sub-Total		1350.00		1180.00
Total Central Sector (A + B + C)			11544.04		11333.24
2	BBMB				
(a)	Bhakra Complex				
(i)	Bhakra (L)	5x108	540.00	5x108	540.00

	(ii) Bhakra (R)	5x157	785.00	5x157	785.00
	(iii) Ganguwal	1x29.25+1x27.63+1x26.7	83.58	1x29.25+1x27.63+1x26.7	83.58
	(iv) Kotla	1x29.25+1x24.2+1x28.12	81.57	1x29.25+1x24.2+1x28.12	81.57
	Sub-Total		1490.15		1490.15
(b)	Dehar	6x165	990.00	6x165	990.00
(c)	Pong	4x60 + 2x66	372.00	4x60 + 2x66	372.00
	Total BBMB		2852.15		2852.15
3 CHANDIGARH					
(a)	Diesel Gen Sets		2.00		1.40
4 DVB					
	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
	Total DVB		679.50		678.50
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+1x210	650.00	4x110+1x210	650.00
	Total Thermal		830.00		815.00

(d)	Magnum Diesel (IPP)	4x6.3	25.20	4x6.3	25.20
	Total Haryana		903.20		888.20
6 HPSEB					
	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 Hydrel+Killar+Thirot		9.22		8.52
(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	3.00	3	3.00
(m)	Ghanvi	2x11.25	22.50	2x11.25	22.50
(n)	Diesel Gen. Sets		0.13		0.13
	Total HPSEB		326.80		326.10
7 J & K					
	HYDRO				
(a)	Lower Jhelum	3x35.0	105.00	3x35.0	105.00
(b)	Upper Sindh	2x11.30+1x35.0	57.60	2x11.30+1x35.0	57.60
(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	25.30	5x4.66 +2X1.0	25.30
(f)	Stakna	2x2.0 +3x1.25 +2.0	9.75	2x2.0 +3x1.25 +2.0	9.75
(g)	Small Hydrel		3.54		3.54
	Total Hydro		225.19		225.19

J & K (Contd.)					
(h)	GAS TURBINES				
	Pampore GT St - I	3x25.0	75.00	3x25.0	
	Pampore GT St - II	4x25.0	100.00	4x25.0	
	Total Gas		175.00	175.00	
(l)	Diesel Gen. Sets		8.94	7.18	
	Total J & K		409.13	407.37	
8 PSEB					
(a)	HYDRO				
	Jogindernagar/ Shanan	4x15+1x50	110.00	4x15+1x50	
	Upper Behari Doab Canal (UBDC)	3x15+3x15	90.00	3x15+3x15	
	Mukerian	6x15+6x19.5	207.00	6x15+6x19.5	
	Anandpur Sahib (APS)	4x33.5	134.00	4x33.5	
	Ranjit Sagar HPS	4x150	600.00	4x150	
	Small Hydel		4.10	4.10	
	Total Hydro		1145.10	1145.10	
	(g)	THERMAL			
		Guru Nanak Dev TPS (Bhatinda)	4x110	440.00	4x110
Guru Gobind Singh TPS (Ropar)		6x210	1260.00	6x210	
Lehra Mohabbat TPS		2x210	420.00	2x210	
Jhalkeri Rice Straw Fired		1x10	10.00	1x10	

	Total Thermal		2130.00		2130.00
	Total PSEB		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		14.32		14.32
	Total Hydro		434.32		434.32
	THERMAL				
(f)	Kota TPS	2x110+3x210	850.00	2x110+3x210	850.00
(g)	Suratgarh TPS	2x250	500.00	2x250	500.00
(g)	Ramgarh GT	1x3	3.00	1x3	3.00
(i)	Ramgarh GT EXT.	1x35.5	35.50	1x35.5	35.50
	Total Thermal		1388.50		1388.50
(J)	Wind farm	2+2	4.00	2+2	4.00
	Total Rajasthan		1826.82		1826.82
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)	Khatima	3x13.8	41.40	3x13.8	41.40
(e)	Ramganga	3x66.0	198.00	3x66.0	198.00
(f)	Ganga Canal				

	Bhola	4x.375+2x.6+	4x.375+2x.6+	
	Salara	2x1.5+	2x1.5+	
	Chitwa	2x1.5+	2x1.5+	
	Nirgazni	2x2.5+	2x2.5+	
	Mohamedpur	3x3.1+	3x3.1+	
	Pathri	3x6.8	43.403x6.8	43.40
(g)	Yamuna (I & IV)			
	- Dhalipur	3x17.00+	3x17.00+	
	- Dhakrani	3x11.25+	3x11.25+	
	- Kulhal	3x10.00	114.753x10.00	114.75
(h)	Chibro	4x60.0	240.004x60.0	240.00
(i)	Khodri	4x30.0	120.004x30.0	120.00
(j)	Chilla	4x36.0	144.004x36.0	144.00
(k)	Maneri Bhali	3x30.0	90.003x30.0	90.00
(l)	Khara	3x24.0	72.003x24.0	72.00
(m)	Sobla & small hydro	6 +12.2	18.206 +12.2	18.20
	Total Hydro		1510.75	1510.75
	THERMAL			
(m)	Obra	5x50	250.004x40	160.00
(n)	Obra Extn. - I	3x100	300.003x94	282.00
(o)	Obra Extn. - II	5x200	1000.005x200	1000.00
(p)	Panki	1x32	32.001x32	32.00
(q)	Panki Extn.	2x110	220.002x105	210.00
(r)	Harduaganj - A	3x30	90.000	0.00
(s)	Harduaganj - B	2x50+2x60	220.001x40+2x55	150.00
(t)	Harduaganj - C	2x60+1x110	230.002x60+1x105	225.00
(u)	Paricha	2x110	220.002x110	220.00
(v)	Anpara - A	3x210	630.003x210	630.00
(w)	Anpara - B	2x500	1000.002x500	1000.00

	Total Thermal	4192.00	3909.00
	Total UP	5702.75	5419.75
			-
	Total Region (1 to 9)	27521.49	27008.63

2. SUMMARY OF THE EFFECTIVE GENERATING CAPACITY(MW) IN THE NORTHERN REGION AT THE END OF JUNE 2001

Agency / Source	Hydro	Thermal	Gas/Diesel/Wind	Nuclear	Total	% of Total
NTPC	---	5825.00	2344.04	---	8169.04	30.25%
NHPC	1984.20	---	---	---	1984.20	7.35%
NPC	---	---	---	1180.00	1180.00	4.37%
BBMB	2852.15	---	---	---	2852.15	10.56%
CHANDIGARH	---	---	1.40	---	1.40	0.01%
DVB	---	396.50	282.00	---	678.50	2.51%
HARYANA	48.00	815.00	25.20	---	888.20	3.29%
HPSEB	325.97	---	0.13	---	326.10	1.21%
PDD, J&K	225.19	---	182.18	---	407.37	1.51%
PUNJAB	1145.10	2130.00	---	---	3275.10	12.13%
RAJASTHAN	434.32	1350.00	42.50	---	1826.82	6.76%
UP	1510.75	3909.00	---	---	5419.75	20.07%
Total	8525.68	14425.50	2877.45	1180.00	27008.63	100.00%
% of TOTAL	31.57%	53.41%	10.65%	4.37%	100.00%	

Notes The above table doesn't take into account the shares of a state in power stations located in the neighbouring state. Details of this is as under :

- (i) Haryana has one-third share in unit Nos. 2, 3, 4 at Indraprastha power stations of DVB viz. 62.5 MW.
- (ii) HP has 25 % share in the Dhalipur, Dhakrani, Chibro and Khodri power houses of UPSEB viz. 111.20 MW. It also has a 20 % share in the Kulhal and Khara hydro power houses viz. 20.40 MW. However, these shares are subject to actual physical drawals over designated transmission lines.
- (iii) HP has a fixed energy share every month in the Shanan power house of PSEB.
- (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

PROJECTS	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 = <u>99</u>
	Total	386

Rajasthan has 50 % share in these 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 viz. 125 MW in the first five units of Satpura TPS.

If the above shares of Rajasthan are included, the regional effective generating capacity would be 27076.63 MW.

3. BREAKUP OF EFFECTIVE HYDRO CAPACITY (MW) IN NORTHERN REGION AS ON 30.06.2001

Agency / Source	Run-of -the -river	Reservoir	Total
NHPC	1444.20	540.00	1984.20
BBMB	1155.15	1697.00	2852.15
DVB	0.00	0.00	0.00
HARYANA	48.00	0.00	48.00
HPSEB	325.97	0.00	325.97
PDD, J&K	225.19	0.00	225.19
PUNJAB	545.10	600.00	1145.10
RAJASTHAN	262.32	172.00	434.32
UP	1012.75	498.00	1510.75
Total	5018.68	3507.00	8525.68

4. Generation Addition/ Deletion During The Month

NIL.

3. Peak Power Supply Position

State/UT	June 2001			June 2000			Percentage increase over 2000	
	Peak (MW)			Peak (MW)				
	Demand met	Reqt.	%Shortage	Demand met	Reqt.	%Shortage	Demand met	Reqt.
Chandigarh	180	180	0.00	170	170	0.00	5.88	5.88
Delhi	2779	3021	8.01	2670	2847	6.22	4.08	6.11
Haryana	2805	2805	0.00	2619	2619	0.00	7.10	7.10
HP	496	496	0.00	557	557	0.00	-10.95	-10.95
J&K	941	1039	9.43	916	1001	8.49	2.73	3.80
Punjab	4656	4989	6.67	4806	4806	0.00	-3.12	3.81
Rajasthan	3130	3130	0.00	3370	3490	3.44	-7.12	-10.32
UP	6149	7039	12.64	5699	6595	13.59	7.90	6.73
NFF/Rail	50	50	0.00	8	8	0.00	525.00	525.00
REGION	20122	21873	8.01	19842	21469	7.58	1.41	1.88

III. FREQUENCY PROFILE DURING JUNE 2001

DATE	Average	MAX.		MIN.		Std dev	Frequency
	Hz	Hz	Time	Hz	Time	Hz	Var. Index(FVI)
1	49.97	51.24	1037	48.20	2214	0.64	4.14
2	49.77	51.20	0601	48.64	1355	0.52	3.26
3	50.12	51.32	1830	48.92	1449	0.43	1.99
4	50.39	51.40	1319	48.68	2015	0.48	3.88
5	50.15	51.20	0324	48.20	2003	0.64	4.47
6	49.90	51.24	0805	48.64	0450	0.55	3.15
7	50.19	51.32	1900	48.20	2222	0.56	2.93
8	49.99	51.24	1830	48.32	2340	0.54	2.35
9	50.02	51.32	0902	48.24	1946	0.48	2.75
10	50.20	51.20	1835	48.64	2024	0.49	2.50

11	49.91	51.20	0806	48.56	1245	0.49	6.01
12	49.38	51.20	0907	48.20	1936	0.47	4.72
13	49.57	51.12	1813	48.20	1957	0.54	4.00
14	50.33	51.28	1829	48.16	1956	0.54	2.12
15	50.17	51.36	0806	49.04	2005	0.43	2.12
16	50.42	51.36	1329	48.96	1953	0.39	3.36
17	50.50	51.36	0902	49.00	2010	0.38	3.90
18	50.12	51.24	0601	48.24	2110	0.50	2.62
19	49.87	51.20	0805	48.32	1950	1.05	11.15
20	49.49	51.34	0802	48.14	2105	0.43	3.85
21	50.21	51.18	0803	48.00	1755	0.54	3.34
22	49.85	50.96	1805	48.60	2211	0.58	3.52
23	50.34	51.20	1854	49.32	0020	0.42	2.90
24	50.41	51.16	0905	48.24	1950	0.44	3.61
25	50.48	51.20	0808	48.28	2020	0.41	3.97
26	50.14	51.36	1836	48.96	2034	0.45	2.23
27	50.06	51.16	2158	48.52	2111	0.42	1.81
28	49.94	51.24	1829	48.52	2114	0.60	3.63
29	49.68	51.28	2003	48.24	2308	0.48	3.29
30	49.96	51.20	1901	48.20	0053	0.54	2.92
Monthly	50.05	51.40		48.00		0.59	3.55

Note :
$$FVI = \frac{10 \sum (F - 50)^2}{24 \times 60 \times 6}$$

where F =
frequency measured at
10 second interval

IV. VOLTAGE PROFILE DURING JUNE 2001

Date	Kanpur (400 KV)		Dadri (400 KV)		Jaipur (400 KV)		Moga (400 KV)		B.T.P.S.(220 KV)	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	417	384	412	368	420	383	410	385	210	179
2	413	386	406	368	416	385	413	389	207	207
3	417	389	414	380	422	394	415	392	207	189
4	419	402	416	386	431	398	412	395	210	194
5	420	391	422	378	436	392	421	319	215	188
6	413	388	410	378	420	389	413	393	206	184
7	419	391	418	380	433	398	415	392	209	192
8	415	388	412	372	427	392	412	389	208	183
9	415	391	410	384	425	396	412	392	206	191
10	411	395	408	390	427	400	409	398	207	191
11	413	386	406	368	420	387	405	386	203	177
12	415	382	402	364	418	383	408	379	198	172
13	411	384	400	3710	420	389	406	389	195	174
14	415	388	412	378	431	392	410	390	204	185
15	415	388	410	384	427	400	412	390	206	178
16	417	395	418	390	429	403	414	395	207	191
17	417	404	420	398	436	407	416	402	212	200
18	415	399	414	378	429	396	411	390	209	186
19	417	391	408	372	427	392	407	386	208	183
20	415	388	410	358	404	352	407	378	204	182
21	415	388	412	370	429	385	409	385	206	184
22	415	393	412	374	427	392	411	389	198	183
23	419	402	414	390	431	403	415	383	208	194
24	420	408	412	392	433	407	412	395	213	198
25	414	404	406	384	428	406	414	396	211	195
26	417	400	414	380	433	400	410	385	210	190
27	417	402	412	386	433	403	407	389	212	191
28	417	397	412	384	436	403	408	391	213	191
29	415	389	414	374	422	387	406	386	204	189
30	417	406	412	390	431	405	410	392	213	197

Month 420 382 422 358 436 352 421 319 215 172

V. PERFORMANCE OF GENERATING STATIONS DURING JUNE 2001

S.No.	Power Station	Effective Capacity MW	Energy Generated		Cumulative from 01.04.2001	
			Gross MU	Ex Bus MU	Gross MU	Ex-bus MU
1	CENTRAL SECTOR					
A	NTPC (Thermal)					
(a)	Badarpur TPS	705.00	451.39	408.32	1283.83	1159.68
(b)	Singrauli STPS	2000.00	1102.07	1024.69	3523.99	3271.60
(c)	Rihand STPS	1000.00	686.96	630.15	2017.62	1852.21
(d)	Dadri NCTPS	840.00	559.88	513.34	1609.80	1474.69
(e)	Unchahar-I TPS	420.00	257.82	231.03	850.43	770.17
(f)	Unchahar-II TPS	420.00	282.17	250.32	759.86	682.63
(g)	Tanda TPS	440.00	122.42	107.28	368.54	322.67
(h)	Anta GPS	419.33	260.83	254.77	784.83	766.72
(i)	Auraiya GPS	663.36	413.25	406.45	1263.92	1244.77
(j)	Dadri GPS	829.78	470.55	456.82	1505.31	1466.83
(k)	Faridabad GPS	431.57	254.93	248.02	766.45	746.81
	Total NTPC	8169.04	4862.27	4531.19	14734.58	13758.78
B	NHPC					
(a)	Bairasiul	180.00	61.18	61.18	194.10	191.12
(b)	Salal	690.00	436.97	432.39	995.25	985.17
(c)	Tanakpur HPS	94.20	50.26	49.99	101.89	99.85
(d)	Chamera HPS	540.00	304.69	304.48	662.72	662.33
(e)	Uri HPS	480.00	212.54	210.31	778.30	770.73
	Total NHPC	1984.20	1065.64	1058.35	2732.27	2709.20
C	NPC					
(a)	RAPS -A	300.00	125.48	114.38	358.67	329.58

(b)	RAPS -B	440.00	146.72	132.02	643.44	581.21
(c)	NAPS	440.00	255.76	228.60	607.00	541.05
	Total NPC	1180.00	527.96	475.00	1609.11	1451.84
2	JOINTLY OWNED (BBMB)					
(a)	Bhakra Complex	1465.15	487.97	485.41	1092.46	1086.50
(b)	Dehar	990.00	422.39	422.39	929.43	923.49
(c)	Pong	366.00	67.90	67.90	139.93	135.97
	Total BBMB	2821.15	978.26	975.70	2161.82	2145.96
3	DVB					
(a)	Indra Prastha	247.50	72.08	63.43	228.13	200.75
(b)	Rajghat	149.00	40.74	36.26	104.34	92.86
(c)	Gas Turbines	282.00	110.25	106.94	306.40	297.21
	Total DVB	678.50	223.07	206.63	638.87	590.83
4	HARYANA					
(a)	WYC	48.00	20.71	20.50	54.04	53.50
(b)	Faridabad (New)	165.00	51.92	44.91	152.27	131.71
(c)	Panipat	650.00	282.43	248.54	801.51	705.33
(d)	Magnum Diesel(IPP)	25.20	4.93	4.88	15.86	15.70
	Total Haryana	888.20	359.99	318.83	1023.68	906.24
5	HPSEB					
(a)	Giri	60.00	16.82	16.75	41.58	41.30
(b)	Bassi	60.00	38.30	38.24	92.90	92.44
(c)	Binwa	6.00	2.16	2.15	6.74	6.70
(d)	Rongtong	15.02	2.35	2.31	6.26	6.18
	(+Nogli+Micro+Thirot+Sal-2)					
(e)	Andhra	16.95	6.80	6.78	16.95	16.84
(f)	Bhabha (H)	120.00	83.76	83.68	124.34	123.90
(g)	Baner (H)	12.00	3.54	3.53	9.86	9.81
(h)	Gaj (H)	10.50	4.35	4.34	11.50	11.39
(i)	Gumma	3.00	0.87	0.86	2.20	2.18

(j)	Ghanvi	22.50	4.61	4.61	9.46	9.41
	Total HPSEB	325.97	163.55	163.25	321.79	320.15
6	J & K					
(a)	Lower Jhelum	105.00	36.85	36.48	111.41	110.30
(b)	Upper Sindh	57.60	26.31	26.05	70.53	69.82
(c)	Ganderbal	15.00	2.48	2.45	6.76	6.69
(d)	Mohra	9.00	0.00	0.00	0.00	0.00
(e)	Chenani	25.30	7.77	7.69	24.22	23.97
(f)	Stakna	9.75	0.00	0.00	0.00	0.00
(g)	Small Hydel	3.54	0.00	0.00	0.00	0.00
(h)	Pampore GT St - I	75.00	0.00	0.00	0.00	0.00
	Pampore GT St - II	100.00				
	Total J & K	400.19	73.40	72.67	212.91	210.78
7	PSEB					
(a)	Jogindernagar/ Shanan	110.00	71.80	71.08	177.68	176.24
(b)	UBDC	90.00	53.39	52.85	91.52	90.58
(c)	Mukerian	207.00	87.68	86.81	169.47	167.92
(d)	Anandpur Sahib (APS)	134.00	84.71	83.86	110.93	109.82
(e)	Ranjit Sagar HPS	600.00	150.18	148.68	475.08	473.56
(f)	Small Hydel	4.10	1.00	0.99	1.89	1.87
(g)	GNDTPS (Bhatinda)	440.00	255.01	230.89	685.97	620.92
(h)	GGSTPS (Ropar)	1260.00	689.20	615.17	1985.32	1807.97
(i)	Jhalkeri Rice Straw Fired	10.00	0.00	0.00	0.00	0.00
(j)	Lehra Mohabbat TPS	420.00	254.62	230.03	688.81	621.08
	Total PSEB	3275.10	1647.58	1520.36	4386.68	4069.95
8	RSEB					
(a)	Mahi Bajaj Sagar	140.00	0.00	0.00	0.01	0.01
(b)	Rana Pratap Sagar (RPS)	172.00	4.65	4.56	9.04	8.94
(c)	Jawahar Sagar (JS)	99.00	7.13	7.13	10.92	10.90
(d)	Anoopgarh	9.00	0.00	0.00	0.10	0.10

(e)	Small Hydro	14.32	1.17	1.17	1.63	1.63
(f)	Kota TPS	850.00	495.41	446.74	1498.94	1354.05
(g)	RAMGARH GT	3.00				
(h)	RAMGARH GT EXT	35.50	16.76	16.76	43.15	43.15
(i)	Suratgarh TPS	500.00	310.94	281.48	920.76	837.10
(j)	Wind Farm	4.00	0.00	0.00	0.67	0.67
	Total RSEB	1826.82	836.05	757.84	2485.22	2256.55
9 U.P.						
	<u>HYDRO</u>					
(a)	Rihand	300.00	53.08	52.55	113.05	111.92
(b)	Obra	99.00	23.05	22.82	45.48	45.03
(c)	Matatilla	30.00	1.30	1.28	2.82	2.79
(d)	Khatima	41.40	0.00	0.00	12.15	12.03
(e)	Ramganga	198.00	21.89	21.67	103.24	102.21
(f)	Ganga Canal	43.40	15.34	15.18	43.35	42.91
(g)	Yamuna (I & IV)	114.75	51.59	51.08	117.13	115.96
(h)	Chibro	240.00	88.96	88.07	191.90	189.98
(i)	Khodri	120.00	42.76	42.34	93.86	92.92
(j)	Chilla	144.00	56.24	55.68	137.20	135.83
(k)	Maneri Bhali	90.00	64.27	63.63	133.73	132.39
(l)	Khara	72.00	35.71	35.35	85.79	84.93
	Total U.P. (Hydro)	1492.55	454.20	449.66	1079.68	1068.89
	<u>THERMAL</u>					
(m)	Obra	160.00	8.90	7.79	47.14	41.25
(n)	Obra Extn. - I	282.00	50.27	43.98	123.07	107.68
(o)	Obra Extn. - II	1000.00	363.99	318.49	1146.54	1003.22
(p)	Panki	32.00	0.00	0.00		
(q)	Panki Extn.	210.00	98.10	85.83	279.95	244.96

(r)	Harduaganj - A	0.00	0.00	0.00		
(s)	Harduaganj - B	150.00	0.00	0.00		
(t)	Harduaganj - C	225.00	49.13	42.99	159.06	139.18
(u)	Paricha	220.00	63.99	55.99	182.24	159.46
(v)	Anpara - A	630.00	321.04	280.91	1066.69	933.36
(w)	Anpara - B	1000.00	708.66	620.08	2109.56	1845.87
	Total U.P. (Thermal)	3909.00	1786.98	1563.61	5114.26	4474.97
	Total U.P.	5401.55	2241.18	2013.26	6193.94	5543.86
Total Region		26950.72	12978.94	12093.08	36500.86	33964.13

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%

Nuclear stations-----12.5%

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

-----Coal fired power stations

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

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

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

2. The generation on small hydro& Sobla in U.P. and on small diesel gen. Sets in UT Chandigarh, H.P. and J&K has been neglected.

V. PERFORMANCE OF GENERATING STATIONS DURING MAY 2001

S.No.	Power Station	Effective Capacity MW	Energy Generated		Cumulative from 01.04.2000	
			Gross MU	Ex Bus MU	Gross MU	Ex-bus MU
1	CENTRAL SECTOR					
A	NTPC (Thermal)					
(a)	Badarpur TPS	705.00	451.39	408.32	1283.83	751.36
(b)	Singrauli STPS	2000.00	1102.07	1024.69	3523.99	3271.60
(c)	Rihand STPS	1000.00	686.96	630.15	2017.62	1852.21
(d)	Dadri NCTPS	840.00	559.88	513.34	1609.80	1474.69
(e)	Unchahar-I TPS	420.00	257.82	231.03	850.43	770.17
(f)	Unchahar-II TPS	420.00	282.17	250.32	759.86	682.63
(g)	Tanda TPS	440.00	122.42	107.28	368.54	322.67
(h)	Anta GPS	419.33	260.83	254.77	784.83	766.72
(i)	Auraiya GPS	663.36	413.25	406.45	1263.92	1244.77
(j)	Dadri GPS	829.78	470.55	456.82	1505.31	1466.83
(k)	Faridabad GPS	432.00	254.93	248.02	766.45	746.81
	Total NTPC	8169.47	4862.27	4531.19	14734.58	13758.78
B	NHPC					
(a)	Bairasiul	180.00	61.18	61.18	194.10	191.12
(b)	Salal	690.00	436.97	432.39	995.25	985.17
(c)	Tanakpur HPS	94.20	50.26	49.99	101.89	99.85
(d)	Chamera HPS	540.00	304.69	304.48	662.72	662.33
(e)	Uri HPS	480.00	212.54	210.31	778.30	770.73
	Total NHPC	1984.20	1065.64	1058.35	2732.27	2709.20
C	NPC					
(a)	RAPS -A	300.00	125.48	114.38	358.67	329.58
(b)	RAPS -B	440.00	146.72	132.02	643.44	581.21

(c)	NAPS	440.00	255.76	228.60	607.00	541.05
	Total NPC	1180.00	527.96	475.00	1609.11	1451.84
2	JOINTLY OWNED (BBMB)					
(a)	Bhakra Complex	1465.15	487.97	485.41	1092.46	1086.50
(b)	Dehar	990.00	422.39	422.39	929.43	923.49
(c)	Pong	366.00	67.90	67.90	139.93	135.97
	Total BBMB	2821.15	978.26	975.70	2161.82	2145.96
3	DVB					
(a)	Indra Prastha	247.50	72.08	63.43	228.13	200.75
(b)	Rajghat	149.00	40.74	36.26	104.34	92.86
(c)	Gas Turbines	282.00	110.25	106.94	306.40	297.21
	Total DVB	678.50	223.07	206.63	638.87	590.83
4	HARYANA					
(a)	WYC	48.00	20.71	20.50	54.04	53.50
(b)	Faridabad (New)	165.00	51.92	44.91	152.27	131.71
(c)	Panipat	650.00	282.43	248.54	801.51	705.33
(d)	Magnum Diesel(IPP)	25.20	4.93	4.88	15.86	15.70
	Total Haryana	888.20	359.99	318.83	1023.68	906.24
5	HPSEB					
	Total HPSEB	326.10	163.55	163.25	320.34	319.81
6	J & K					
(a)	J&K Hydel	224.59	36.85	36.48	6.26	6.18
(b)	Pampore GT St - I	75.00				
	Pampore GT St - II	100.00	0.00	0.00	16.95	16.84
	Total J & K	399.59	73.40	72.67	212.92	210.79
7	PSEB					
(a)	Jogindernagar/ Shanan	110.00	71.80	71.08	177.68	176.24

(b)	UBDC	90.00	53.39	52.85	91.52	90.58
(c)	Mukerian	207.00	87.68	86.81	169.47	167.92
(d)	Anandpur Sahib (APS)	134.00	84.71	83.86	110.93	109.82
(e)	Ranjit Sagar HPS	600.00	150.18	148.68	475.08	473.56
(f)	Small Hydel	4.10	1.00	0.99	1.89	1.87
(g)	GNDTPS (Bhatinda)	440.00	255.01	230.89	685.97	620.92
(h)	GGSTPS (Ropar)	1260.00	689.20	615.17	1985.32	1807.97
(i)	Jhalkeri Rice Straw Fired	10.00	0.00	0.00	0.00	0.00
(j)	Lehra Mohabbat TPS	420.00	254.62	230.03	688.81	621.08
	Total PSEB	3275.10	1647.58	1520.36	4386.68	4069.95
8	RSEB					
(a)	Mahi Bajaj Sagar	140.00	0.00	0.00	0.01	0.01
(b)	Rana Pratap Sagar (RPS)	172.00	4.65	4.56	9.04	8.94
(c)	Jawahar Sagar (JS)	99.00	7.13	7.13	10.92	10.90
(d)	Anoopgarh	9.00	0.00	0.00	0.10	0.10
(e)	Small Hydro	14.32	1.17	1.17	1.63	1.63
(f)	Kota TPS	850.00	495.41	446.74	1498.94	1354.05
(g)	RAMGARH GT	3.00	0.00	0.00	0.00	0.00
(h)	RAMGARH GT EXT	35.50	16.76	16.76	43.15	43.15
(i)	Suratgarh TPS	500.00	310.94	281.48	920.76	837.10
(j)	Wind Farm	4.00	0.00	0.00	0.67	0.67
	Total RSEB	1826.82	836.05	757.84	2485.22	2256.55
9	U.P.					
(a)	HYDRO	1492.55	382.16	378.34	1079.68	1068.89
(b)	THERMAL	3909.00	254.62	230.03	688.81	621.08
	Total U.P.	5401.55	1647.58	1520.36	4386.68	4069.95
Total Region		26950.68	0.00	0.00	0.01	0.01

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%

Nuclear stations-----12.5%

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

-----Coal fired power stations

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

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

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

2. The generation on small hydro& Sobla in U.P. and on small diesel gen. Sets in UT Chandigarh, H.P. and J&K has been neglected.

VI. CENTRAL GENERATING STATIONS SHARE vs DRAWAL OF ALL CONSTITUENTS DURING JUNE 2001

(All figs. in MU)

Sl. No.	State/UT/ System	Singrauli STPS		Rihand STPS		BTPS	W. Grid	VSTPS
		Entitlement	Actual	Entitlement	Actual	Actual	Actual	(WR) Actual
1	Chandigarh	5.34	5.34	9.50	8.52	0.00	0.28	0.00
2	Delhi	107.81	107.81	84.63	84.96	408.32	3.77	0.00
3	Haryana	123.77	123.77	58.21	57.96	0.00	2.70	0.00
4	H.P.	0.00	0.00	21.30	21.22	0.00	0.80	0.00
5	J & K	0.85	0.85	43.12	42.64	0.00	3.47	0.00
6	Punjab	111.55	111.55	77.89	78.25	0.00	4.11	0.00
7	Rajasthan	175.47	175.47	79.43	79.77	0.00	3.89	0.00
8	U.P.	420.41	420.41	234.09	234.85	0.00	8.58	0.00
9	MP	0.00	0.00	0.00	0.00	0.00	5.46	0.00
10	Unallocated	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Bihar	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Trans. Losses	33.95	33.95	21.98	21.98	0.00	1.16	0.00
	TOTAL	979.15	979.15	630.15	630.15	408.32	34.22	0.00

Note :- Singrauli sentout excludes 45.54 MU supplied to Western Grid

Sl. No.	State/UT/	Dadri NCTPS		Unchahar-I TPS		Unchahar-II TPS	
	System	Entitlement	Actual	Entitlement	Actual	Entitlement	Actual
1	Chandigarh	0.00	0.02	1.17	0.68	3.67	1.98
2	Delhi	431.62	426.05	13.74	15.05	11.37	30.90
3	Haryana	8.66	9.31	6.91	7.02	14.00	54.66
4	H.P.	0.00	0.22	3.11	2.56	8.28	14.87
5	J & K	2.08	2.29	6.57	6.08	21.83	5.17
6	Punjab	1.80	2.90	18.32	18.43	44.36	32.15
7	Rajasthan	4.22	4.70	11.39	10.88	33.40	76.50
8	U.P.	64.95	61.10	161.70	162.21	104.67	25.35
9	MP	0.00	2.97	0.00	0.00	0.00	0.00
10	Unallocated	0.00	0.00	0.00	0.00	0.00	0.00
11	Bihar	0.00	3.77	0.00	0.00	0.00	0.00
12	Trans. Losses	0.00	0.00	8.12	8.12	8.74	8.74
	Total	513.33	513.33	231.03	231.03	250.32	250.32

Sl. No.	State/UT/ System	Anta GPS		Auraiya GPS		Uri HPS	
		Entitlement	Actual	Entitlement	Actual	Entitlement	Actual
1	Chandigarh	4.29	4.04	5.14	4.15	1.20	1.20
2	Delhi	35.28	35.32	57.83	58.20	22.98	22.98
3	Haryana	21.54	21.57	35.13	33.01	11.25	11.25
4	H.P.	8.71	8.72	13.05	11.65	5.57	5.57
5	J & K	17.12	17.15	26.40	24.46	70.92	70.92
6	Punjab	33.01	33.05	56.07	55.42	28.65	28.65
7	Rajasthan	57.26	57.29	49.92	50.45	18.57	18.57
8	U.P.	67.38	67.45	148.64	149.26	49.07	49.07
9	MP	0.00	0.00	0.00	2.41	0.00	0.00
10	Unallocated	0.00	0.00	0.00	0.00	0.00	0.00

11	Bihar	0.00	0.00	0.00	3.17	0.00	0.00
12	Trans. Losses	10.19	10.19	14.27	14.27	2.10	2.10
	TOTAL	254.78	254.78	406.45	406.45	210.31	210.31
Sl. No.	State/UT/	Dadri GPS		Bairasiul HPS		Salal HPS	
	System	Entitlement	Actual	Entitlement	Actual	Entitlement	Actual
1	Chandigarh	4.88	3.69	0.00	0.00	1.15	1.15
2	Delhi	60.04	68.37	6.46	6.46	49.53	49.53
3	Haryana	33.25	35.08	17.91	17.91	64.03	64.03
4	H.P.	12.08	10.45	7.05	7.05	4.22	4.22
5	J & K	27.40	27.10	0.00	0.00	148.40	148.40
6	Punjab	70.04	73.12	27.31	27.31	113.38	113.38
7	Rajasthan	85.96	90.30	0.00	0.00	12.58	12.58
8	U.P.	108.14	124.86	0.00	0.00	34.78	34.78
9	MP	0.00	0.00	0.00	0.00	0.00	0.00
10	Railways	55.03	23.85	0.00	0.00	0.00	0.00
11	Bihar	0.00	0.00	0.00	0.00	0.00	0.00
12	Trans. Losses	0.00	0.00	2.45	2.45	4.33	4.33
	Total	456.82	456.82	61.18	61.18	432.40	432.40

[illegible]

10	Trans. Losses	1.52	1.52	8.28	8.28	0.00	0.00	0.00	0.00
11	Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total	48.94	48.94	304.48	304.48	114.38	132.02	132.02	107.28
Sl. No.	State/UT/	Narora APS		Bhakra HPS		Dehar HPS	Pong	F'bad GPS	ER import
	System	Entitlement	Actual	Entitlement	Actual	Actual	Actual	Actual	Actual
1	Chandigarh	3.61	2.02	44.79	45.05	0.00	0.00	0.00	6.74
2	Delhi	31.90	30.27	0.00	0.00	0.00	0.00	0.00	29.87
3	Haryana	20.58	31.57	133.01	135.93	127.11	10.71	248.02	29.77
4	H.P.	6.99	7.42	12.02	12.21	8.28	0.00	0.00	0.00
5	J & K	16.68	13.50	0.00	0.00	0.00	0.00	0.00	0.00
6	Punjab	29.45	36.74	183.51	187.55	190.67	16.06	0.00	0.00
7	Rajasthan	29.73	42.91	75.45	76.78	79.44	37.72	0.00	0.00
8	U.P.	81.65	56.16	0.00	0.00	0.00	0.00	0.00	37.47
9	N.F.F.	0.00	0.00	14.40	5.66	0.00	0.00	0.00	0.00
10	Unallocated	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Trans. Losses	8.01	8.01	22.24	22.24	16.89	3.42	0.00	0.00
	Total	228.60	228.60	485.42	485.42	422.39	67.91	248.02	103.85

Note : - The above figures are based on the daily energy accounts prepared by NRLDC.

VII. BILATERAL EXCHANGES IN THE NORTHERN REGION DURING JUNE 2001

	Chandigarh	DVB	HVPNL	HPSEB	PDD ,J & K	PSEB	RRVNL	UPPCL	MPEB	BSEB	Others	Total
Chandigarh	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DVB	0.000	0.000	0.000	88.235	0.000	0.000	0.000	0.000	0.000	0.000	0.785	89.020
HVPNL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HPSEB	0.000	-88.235	0.000	0.000	0.000	-22.800	0.000	0.000	0.000	0.000	0.000	-111.035
PDD , J & K	0.000	0.000	0.000	0.000	0.000	-17.900	0.000	0.000	0.000	0.000	0.000	-17.900
PSEB	0.000	0.000	0.000	22.800	17.900	0.000	0.000	0.000	0.000	0.000	0.000	40.700
RRVNL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UPPCL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MPEB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BSEB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Others	0.000	-0.785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.785
Total	0.000	-89.020	0.000	111.035	17.900	-40.700	0.000	0.000	0.000	0.000	0.785	0.000

The above figures do not indicate the following shares in common projects/ bilateral agreements:

- | | |
|--|-----------------|
| i) HVPNL's share in IP station of DVB | 18.496MU |
| ii) HPSEB's share in Shanan power station of PSEB | 5.844MU |
| iii) HPSEB's share in Yamuna hydro power complex of UP | 51.313MU |
| iv) Maruti to HVPNL | 9.286MU |

Note: The above figures are based on the daily energy accounts prepared by NRLDC.

VIII. PROGRESS OF INSTALLATION OF SHUNT CAPACITORS IN NORTHERN REGION

AS ON 30.06.2001

CONSTITUENT	REQUIREMENT AT THE END OF 2001-2002	CAPACITORS AS ON 30.06.2001	CAPACITORS ADDITION DURING		ADDITIONAL REQUIRED DURING 2001-2002
		INSTALLED	2000-2001	April 01 - Jun 01	
Chandigarh	127	96	60	3	34
Delhi	2734	2272	201	36	462
Haryana	3080	1670	368	27	1410
H.P.	335	180	46	44	216
J & K	880	147	0	0	733
Punjab	4950	4462	384	31	519
Rajasthan	3300	2362	176	5	943
U.P.	5654	4238	279	32	1448
BBMB	381	381	0	0	0
TOTAL	21441	15808	1514	178	5765

SOURCE: Minutes of 317th OCC meeting of NREB held on 11th June, 2001.

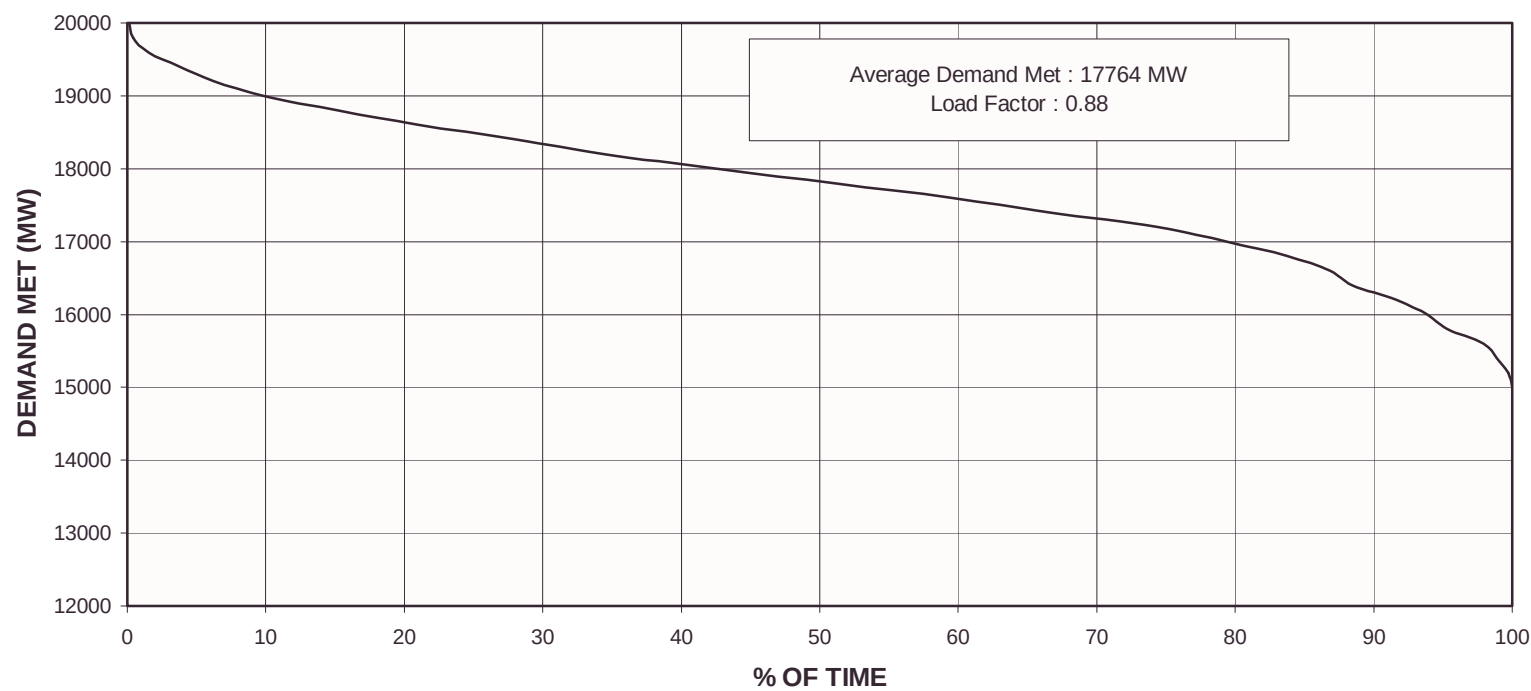
IX. HYDRAULIC DATA FOR RESERVOIRS DURING JUNE 2001

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 2001 (m) (ft)	464.75 1524.78	393.14 1289.82	257.19 843.80	345.59 1133.84	380.57 1248.58
Level on last day of June 2000 (m) (ft)	464.35 1523.46	394.70 1294.94	256.46 841.40	346.96 1138.31	382.80 1255.89
Live Capacity as on last day of June 2001 (mhmt) (maft)	0.12 0.98	0.09 0.74	0.12 1.00	0.03 0.27	0.00 0.00
Live Capacity as on last day of June 2000 (mhmt) (maft)	0.12 0.96	0.11 0.88	0.10 0.80	0.05 0.44	0.03 0.26
Energy content as on last day of June 2001 (MU)	410.00	100.00	200.00	60.00	0.00
Energy content as on last day of June 2000 (MU)	400.00	135.00	150.00	100.00	80.00

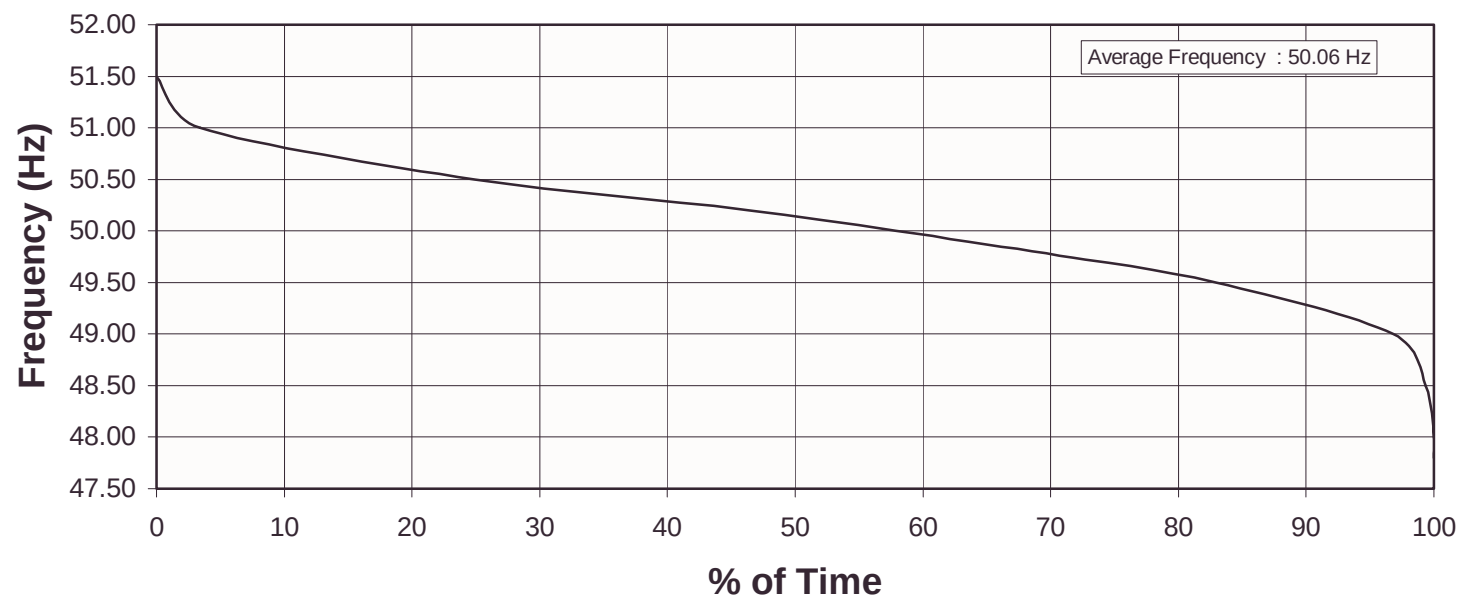
Maximum level	(m)	464.75	393.14	257.25	345.59
	(ft)	1524.78	1289.82	844.00	1133.84
	(date)	30.06.01	30.06.01	30.06.01	30.06.01
Minimum level	(m)	457.08	391.71	256.70	344.01
	(ft)	1499.61	1285.15	842.20	1128.63
	(date)	02.06.01	12.06.01	01.06.2001	10.06.01

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.

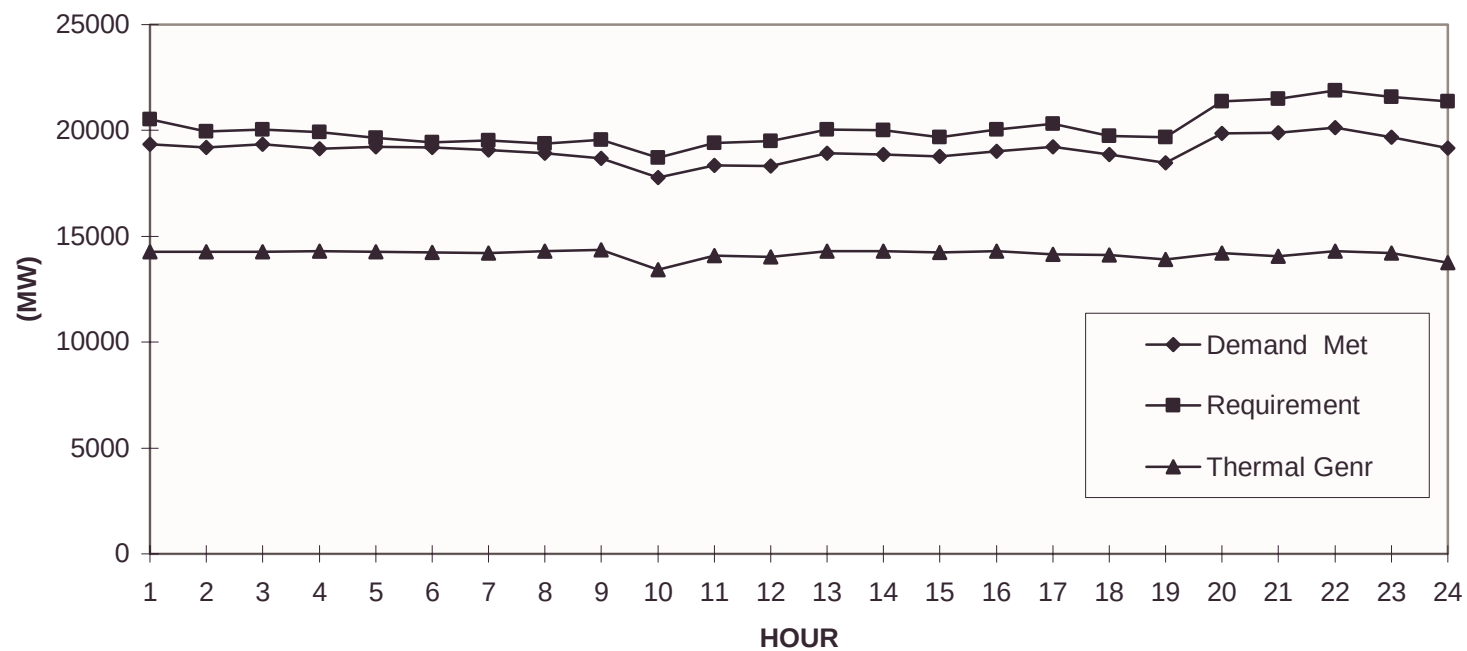
LOAD DURATION CURVE OF NORTHERN REGION FOR JUNE 2001



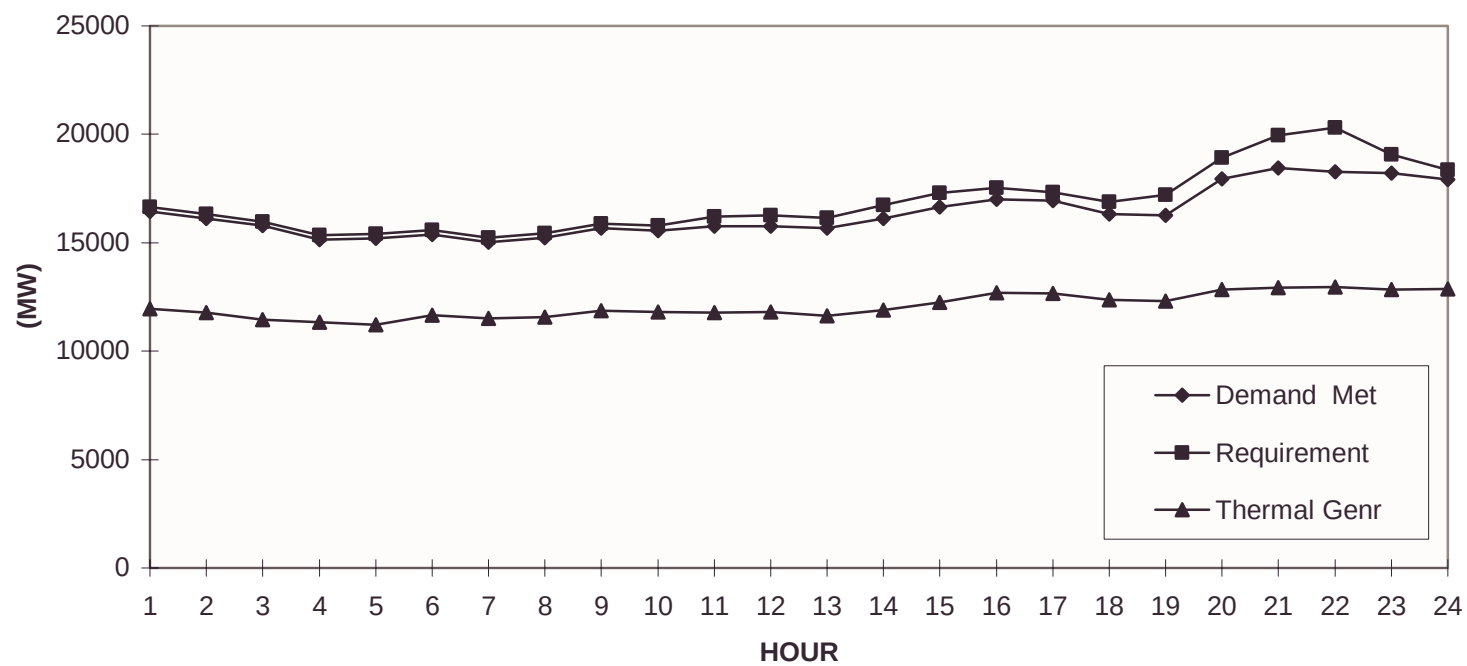
FREQUENCY DURATION CURVE OF NORTHERN REGION FOR JUNE 2001



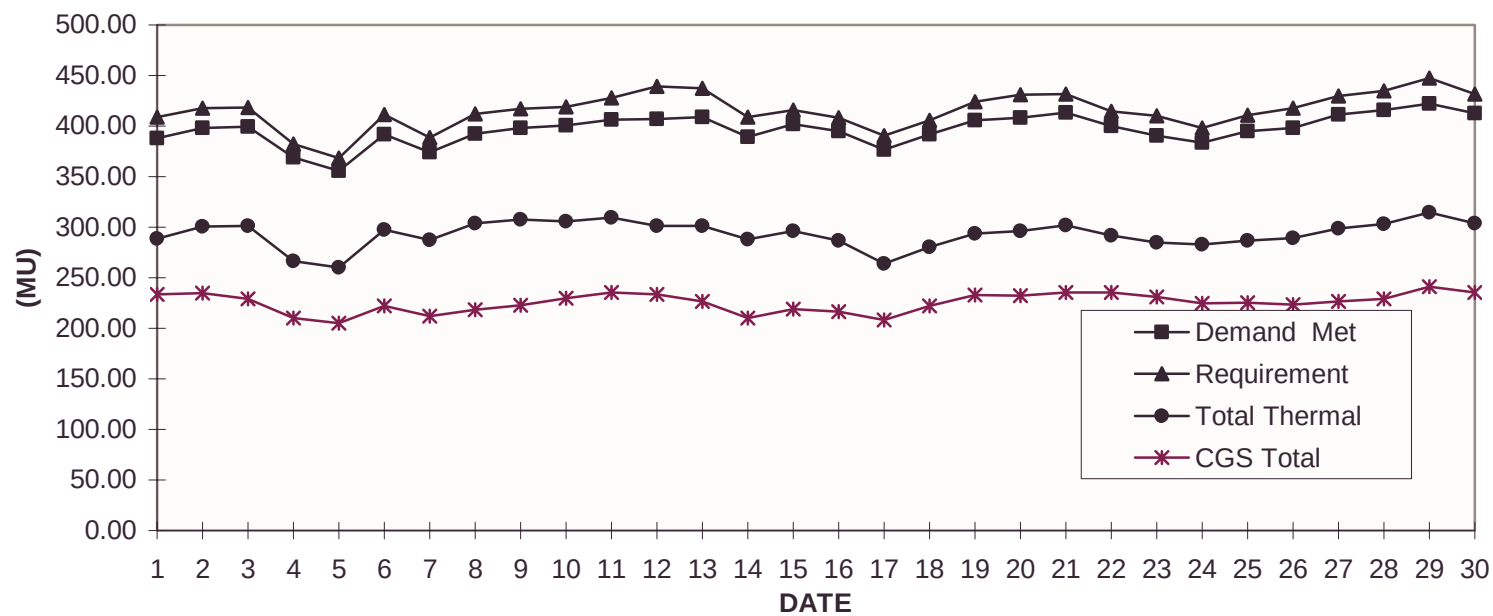
LOAD CURVE OF NORTHERN REGION FOR MAXIMUM DEMAND MET DAY (29.06.2001)



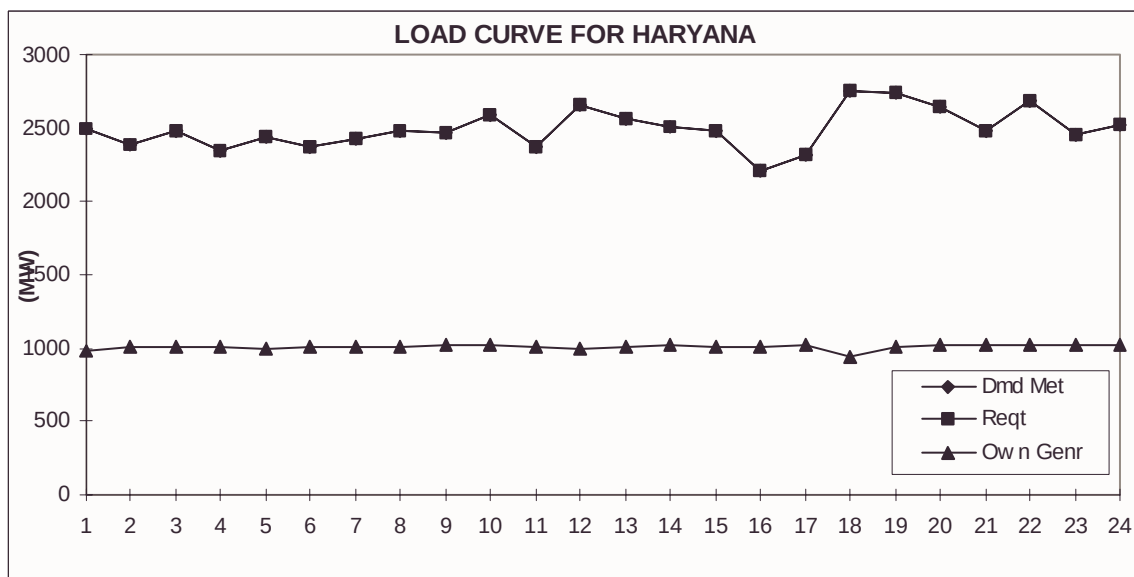
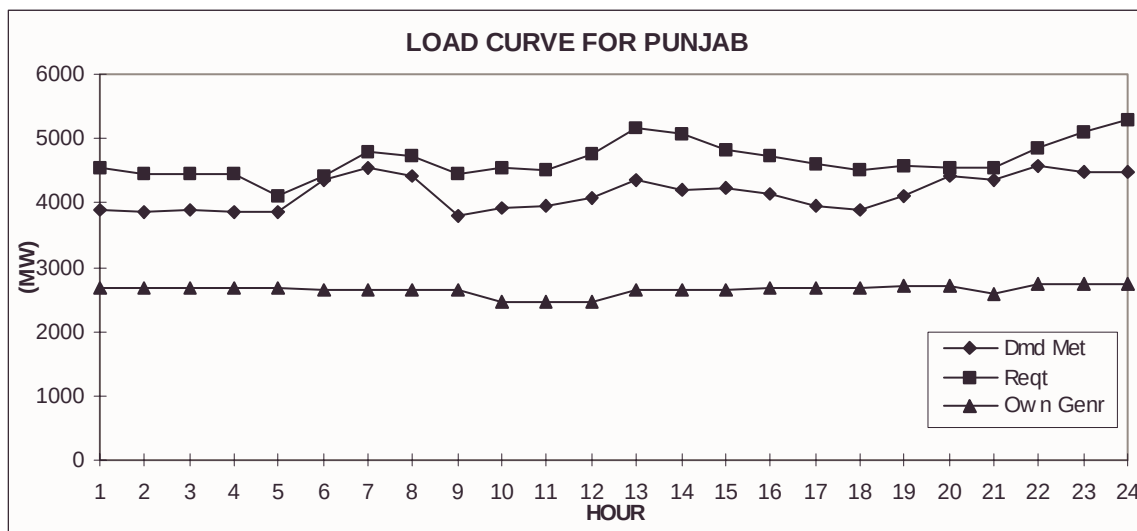
LOAD CURVE OF NORTHERN REGION FOR MINIMUM DEMAND MET DAY (05.06.2001)

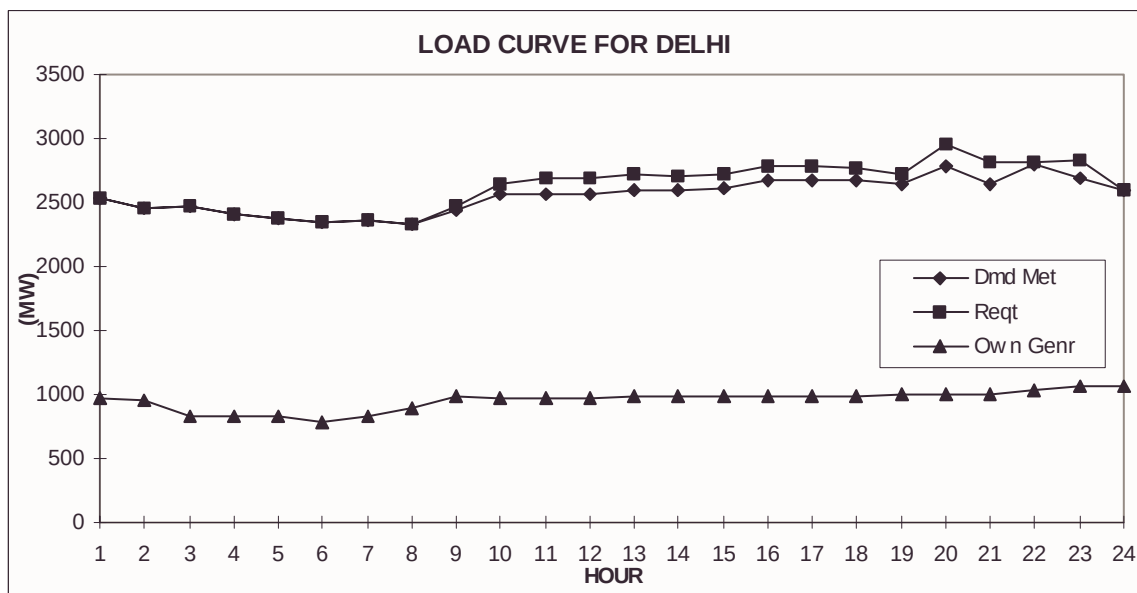
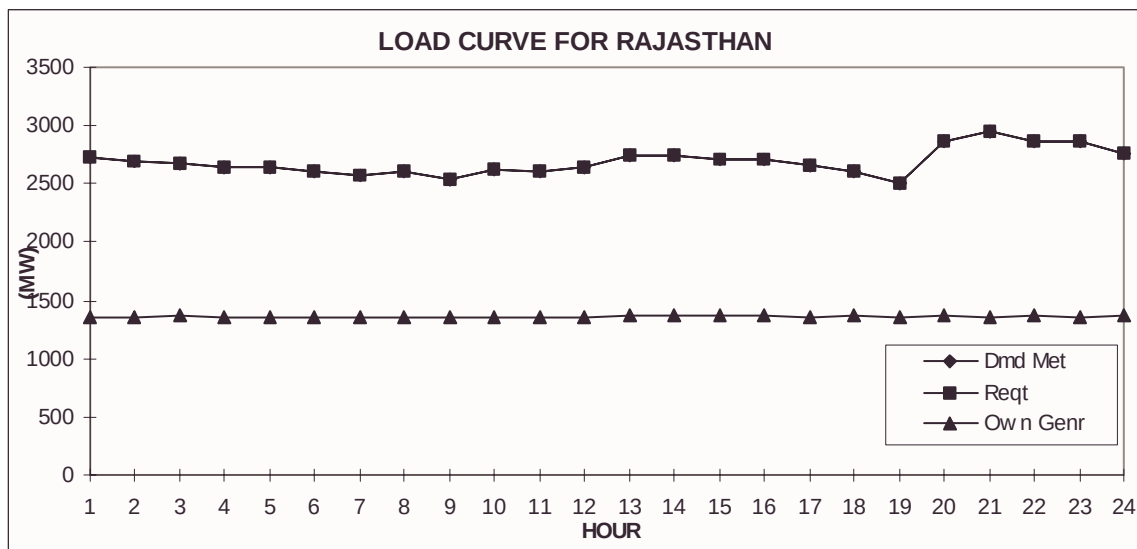


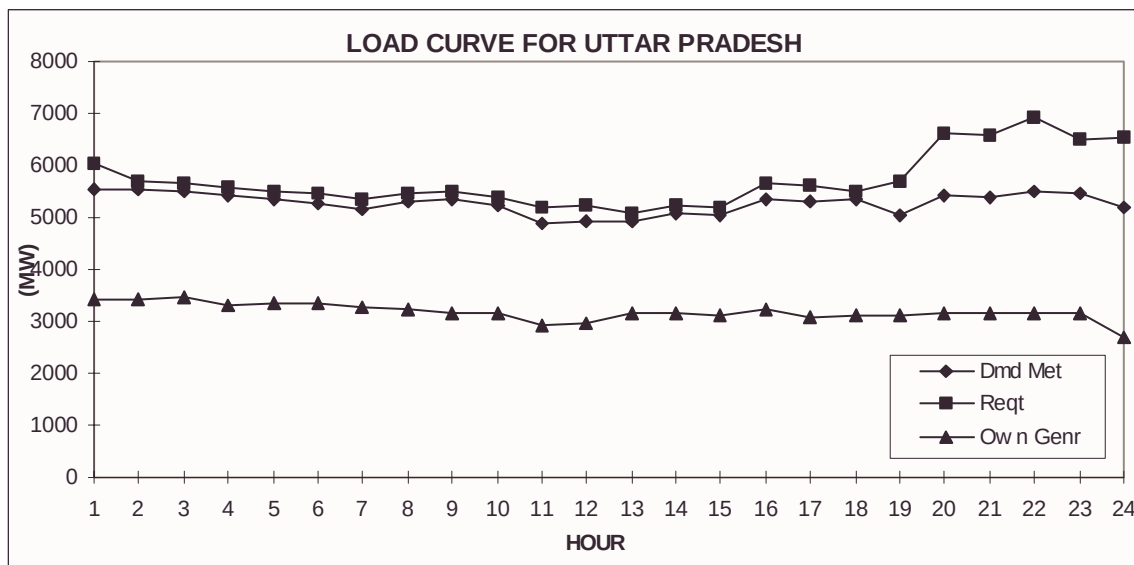
DAYWISE DEMAND MET AND REQUIREMENT (In MU) OF NORTHERN REGION DURING JUNE 2001



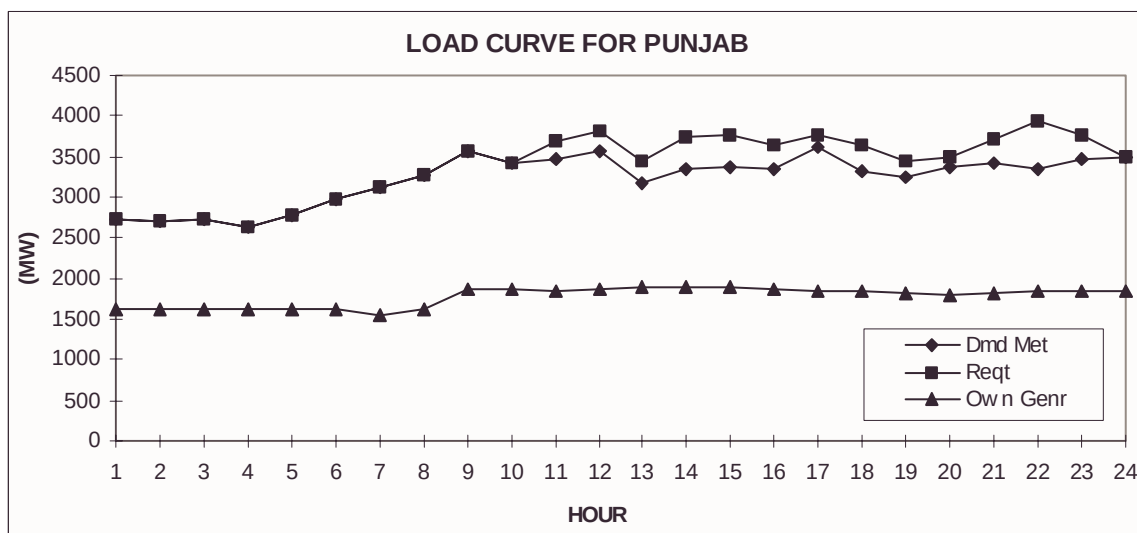
STATE LOAD CURVES FOR REGIONAL MAXIMUM DEMAND MET DAY(29.06.2001)

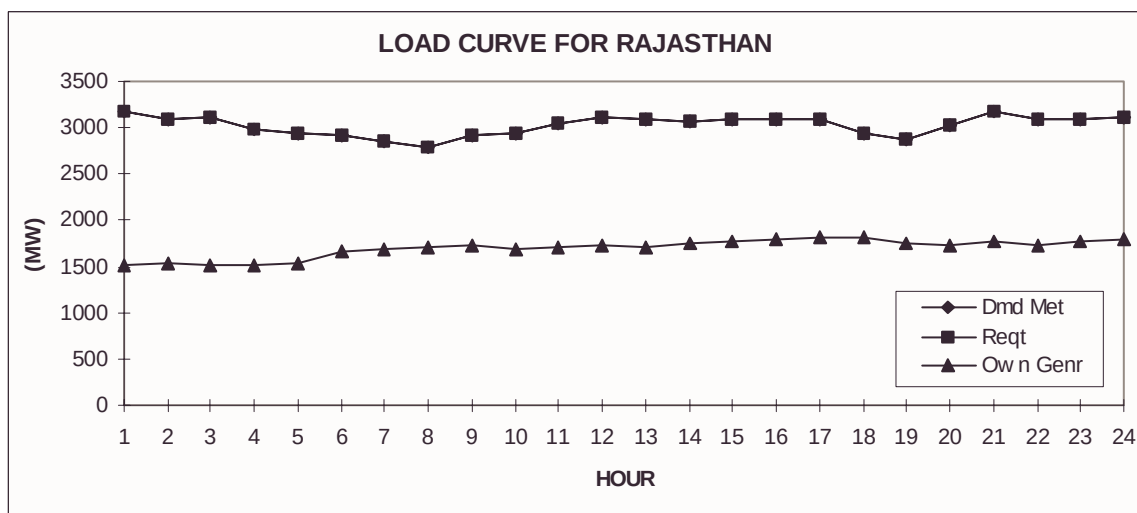
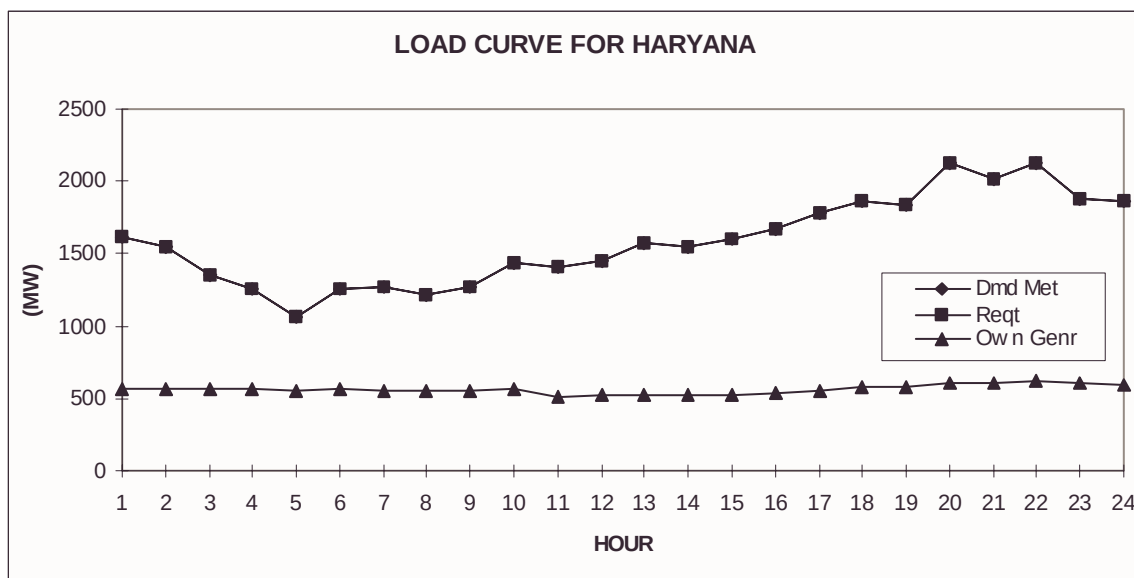


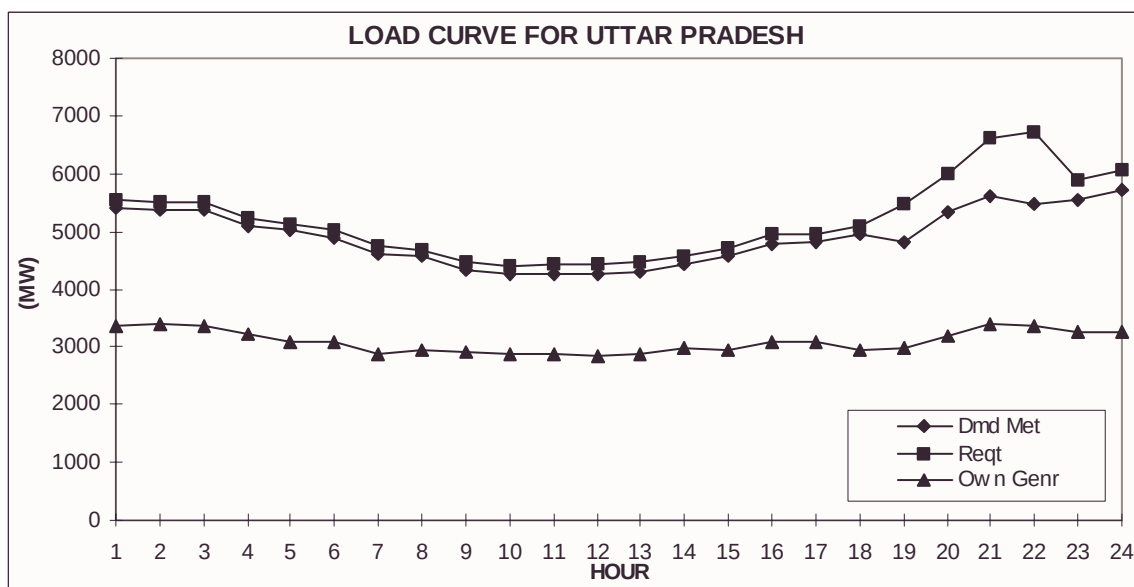
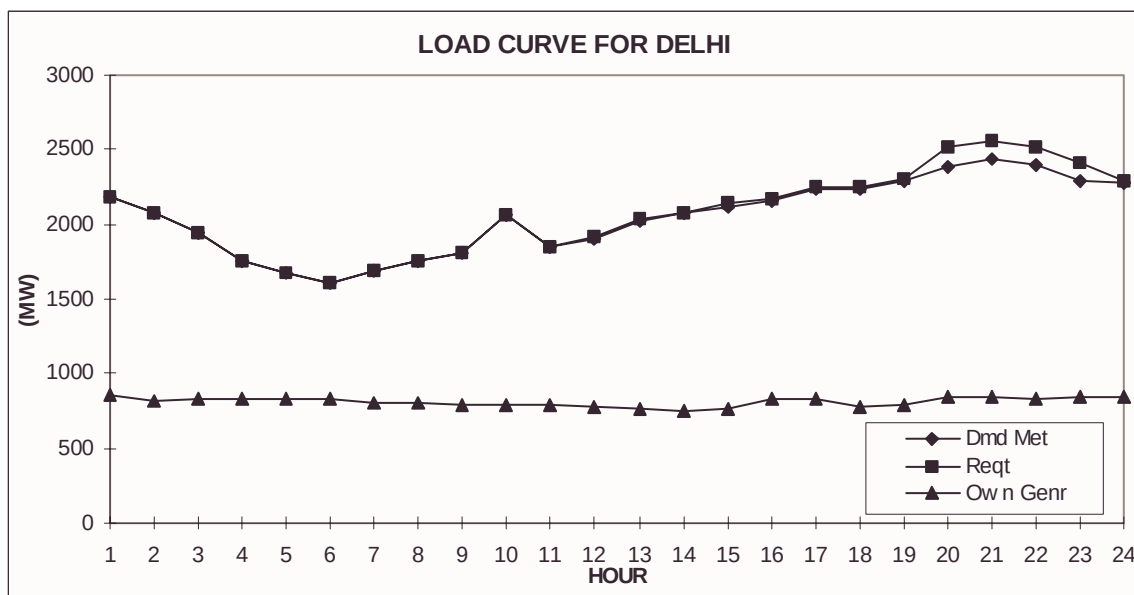




STATE LOAD CURVES FOR REGIONAL MINIMUM DEMAND MET DAY(05.06.2001)







MINOR GRID INCIDENTS DURING JUNE 2001

S No.	DATE	TIME	INCIDENT
1	20.06.2001	04:40	During heavy rains and thunderstorm 400 kV bus-bar protection operated at Muradnagar substation of UPPCL resulting in tripping of all 400kV lines and all 400/220kV transformers. Complete system was normalized by 06:50 of 20.06.2001.