DELHI TRANSCO LTD.

STATE LOAD DISPATCH CENTER

PROGRESS REPORT

****

SEPTEMBER - 2009

1 SALIENT FEATURES OF DELHI POWER SYSTEM

Sr. No.	Features	SEP 2009	SEP 2008
1	**Effective Generation Capacity within Delhi in MW**		
	Indraprastha Power Station	247.5	247.5
	Rajghat Power House	135	135
	Gas Turbine	270	282
	Pragati Power Corporation Ltd.	330	330
	Badapur Thermal Power Station	705	705
	Total	1687.5	1699.5
2	**Maximum Unrestricted Demand (MW)**	**3944**	**3945**
	Date	01.09.09	05.09.09
	Time	15:04:37	19:58:01
3	**Peak Demand met (MW)**	**3892**	**3945**
	Date	01.09.09	05.09.09
	Time	15:04:37	19:58:01
4	Peak Availability (MW)	3589	3201
5	Shortage (-) / Surplus (+) in MW	(-)303	(-)744
6	Percentage Shortage (-) / Surplus (+)	(-)7.79	(-)18.86
7	Maximum Energy Consume in a day (Mus)	78.570	77.578
8	Energy Consumed during the month	**2130.418**	**2081.473**
9	**Load Shedding in Mus**		
A)	Due to Grid Restrictions		
i)	Under Frequency Relay Operations	1.516	7.277
ii)	Manual Load shedding from DTL S/Stns.	0.000	0.000
iii)	Load Shedding due to low frequency / Low Voltage / TTC/ATC Violation		
	NDPL	0.367	4.359
	BRPL	2.026	7.423
	BYPL	0.951	2.066
	NDMC	0.000	0.000
	MES	0.000	0.000
iv)	Due to transmission Constraints in Central Sector	0.000	0.000
	Total due to Grid Restriction	**4.860**	**21.125**
B)	Due to Constraints in System in Mus		
	DTL	1.860	0.439
	NDPL	3.585	0.187
	BRPL	0.804	1.858
	BYPL	0.246	0.097
	NDMC	0.000	0.007
	MES	0.000	0.000
	Other Agencies	0.023	0.006
	Total	**6.518**	**2.594**
11	**Grand Total in Mus**	**11.378**	**23.719**

2. PERFORMANCE OF GENERATING STATIONS WITHIN DELHI DURING SEPT. 2009

A) For the month of September 2009

All Figures in MUs

S. No	Stations	Gross Generation	Aux. Consumption	Net Generation	Availability (%)	Backing Down
1.	**IP**	40.1560	7.0400	33.476	20.64	0.00000
2.	**RPH**	40.4480	6.6020	33.846	39.75	0.00000
3.	**GT**	116.1000	3.9320	112.168	70.63	20.57086
4.	**PPCL**	215.4890	5.9290	209.560	90.24	0.782500
5.	**BTPS**	439.08719	48.29957	390.78762	87.53	10.71250
	TOTAL	**851.28019**	**71.80257**	**779.8376**		**32.06586**

B) For the Year 2009-10(Upto September 2009)

Power Station	Effecti ve Capaci ty (MW)	Net Gene- ration in MUs For Aug. 09	Avail -ability (%) For Aug.'09	PLF (%) For Aug. 09	Cumulative Generation in MUs upto Aug. 09 for the year 2009-10	Cumulative Availability in % upto Aug. 09 for the year 2009-10	Cumulative PLF in % upto Aug 09 for the year 2009-10
IP	247.5	33.476	20.64	20.64	353.658	35.86	35.86
RPH	135	33.846	39.75	39.75	307.255	58.64	58.64
GT	282	112.168	70.63	59.72	754.690	71.07	65.62
PPCL	330	209.560	90.24	89.90	1132.859	81.03	79.89
BTPS	705	390.78762	87.53	85.16	2562.82906	93.10	91.72
TOTAL	**1699.5**	**779.8376**			**5111.29106**		

3 DETAILS OF OUTAGES OF GENERATING STNS. WITHIN DELHI W.E.F. APRIL 2009

(A) IP STATION

Unit no.	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	62.5	03.04.09	07.02	03.04.09	08.58	D- Rediator Level not maintained.
		03.04.09	09.35	05.04.09	07.25	Loss of excitation
		21.04.09	05.22	27.04.09	23.05	Boiler Tube Leakage
		17.05.09	00.07	19.05.09	12.03	Problem in Bottom System
		19.05.09	21.20	20.05.09	02.15	Low vacuum
		22.05.09	14.39	22.05.09	16.15	Due to tripping of associated transmission lines.
		01.06.09	09.25	01.06.09	11.08	
		05.06.09	15.08	05.06.09	16.40	
		15.06.09	13.32	15.06.9	14.30	
		29.06.09	22.50	01.07.09	15.45	Boiler Tube Leakage
		06.07.09	12.40	06.07.09	13.53	Fire out.
		14.07.09	09.40	14.07.09	11.35	Due to tripping of associated transmission lines.
		28.07.09	10.53	28.07.09	20.15	Steam line burnt
		03.08.09	05.05	03.08.09	17.52	Problem in Boiler Feed Pump
		11.08.09	17.50	13.08.09	07.40	Boiler Tube Leakage
		27.08.09	17.30	08.09.09	20.28	Due to tripping of associated transmission lines. Could not synchronized due to Durator Valve Knob
		11.09.09	07.55	11.09.09	14.42	CHP Problem
		12.09.09	11.25	15.09.09	07.58	Boiler Tube Leakage
		26.09.09	21.45	29.09.09	17.52	Steam Leakage in Turbine
		29.09.09	20.15	30.09.09	08.18	Generator Stator Temp High
3	62.5	06.04.09	13.38	09.04.09	07.07	Boiler Tube Leakage
		06.05.09	06.30	08.05.09	21.55	Boiler Tube Leakage
		19.05.09	21.11	20.05.09	04.58	Low vacuum
		28.05.09	09.22	28.05.09	11.35	Bus differential operation.
		01.06.09	09.29	01.06.09	11.52	Due to tripping of associated transmission lines.
		10.06.09	09.52	10.06.09	12.10	Vacuum Problem
		14.06.09	00.01	28.06.09	08.35	Boiler Tube Leakage
		12.07.09	10.50	15.07.09	00.12	Boiler Tube Leakage
		31.07.09	20.30	01.08.09	04.44	Due to jerk
		02.08.09	22.58	03.08.09	10.30	Low coal flow
		05.08.09	00.10	08.08.09	01.50	Condenser Tube Leakage
		11.08.09	09.30	11.08.09	15.43	No Coal Flow
		17.08.09	08.55	17.08.09	11.43	Due to tripping of associated transmission lines.
		17.08.09	14.01	18.08.09	23.55	Problem in Coal Bunker
		24.08.09	21.10	25.08.09	20.25	Shortage of DM Water.
		27.08.09	17.50	28.08.09	00.50	Due to tripping of associated transmission lines.
		28.08.09	22.50	06.09.09	14.02	Boiler Tube Leakage
		08.09.09	23.40			Condenser Tube Leakage
		24.09.09	12.15	27.09.09	07.30	ID Fan problem
4	62.5	04.04.09	10.30	04.04.09	12.32	Electrocution Trip Device Alarm
		29.04.09	05.10	29.04.09	09.35	Coal mill problem
		29.04.09	12.43	13.05.09	16.43	Main Buchloz Relay Operated(Tx-4)

Unit no.	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
4	**62.5**	19.05.09	21.11	24.05.09	15.05	Low vacuum
		25.05.09	19.42	27.05.09	23.15	Boiler Tube Leakage
		28.05.09	09.25	28.05.09	10.34	Bus differential operation.
		01.06.09	09.25	12.06	18.45	Reduction Gear Problem
		15.06.09	13.32	15.06.09	15.10	Due to tripping of associated transmission lines.
		22.06.09	20.57	24.06.09	04.40	Boiler Tube Leakage
		29.06.09	22.50	30.06.09	01.40	Due to tripping of associated transmission lines.
		04.07.09	06.00	15.07.09	16.25	Shortage of DM water
		26.07.09	15.55	27.07.09	07.12	Due to fire in boiler
		28.07.09	05.30	30.07.09	01.10	Shortage of coal
		03.08.09	07.30	03.08.09	08.58	Low Vacuum
		10.08.09	04.25	10.08.09	22.55	Coal Bunker Empty
		17.08.09	08.55	17.08.09	10.05	Coal Bunker Empty
		18.08.09	05.40	18.05.09	06.58	Low Coal Flow
		18.08.09	07.10	28.08.09	11.55	Condenser Tube Leakage
		28.08.09	14.45	29.08.09	13.12	Heavy Steam Leakage in Boiler
		04.09.09	01.55	04.09.09	11.32	Tripped on ETD
		04.09.09	14.40	06.09.09	04.45	Boiler Tube Leakage
		12.09.09	16.37	12.09.09	20.55	Fire out
		17.09.09	19.45	19.09.09	23.55	Boiler Tube Leakage
5	**60**	31.03.09	04.03	04.04.09	05.58	Electrocution Trip Device Alarm
		09.04.09	02.40	12.04.09	00.35	Boiler Tube Leakage
		12.04.09	17.40	15.04.09	16.45	Electrocution Trip Device Alarm
		15.04.09	19.43	18.04.09	23.17	Electrocution Trip Device Alarm
		22.04.09	19.02	24.04.09	16.00	Condenser Tube Leakage
		04.05.09	09.45	04.05.09	10.26	Tripped due to jerk due to tripping of 33kV Bay-29
		04.05.09	20.56	11.05.09	05.15	Fire in PA Fan
		15.05.09	23.18	16.05.09	07.40	Problem in RC Feeder
		18.05.09	13.10	05.07.09	03.45	ID Fan Problem
		05.07.09	07.00	08.07.09	02.35	Boiler Tube Leakage
		08.07.09	10.30	12.07.09	03.24	Condenser Tube Leakage
		13.07.09	06.50	13.07.09	07.05	Drum level high
		13.07.09	07.50	13.07.09	23.25	Shortage of DM water
		14.07.09	09.42	14.07.09	18.55	Due to tripping of associated transmission lines
		26.07.09	16.02	28.07.09	20.05	Condenser Tube Leakage
		29.07.09	12.12.	29.07.09	12.55	Auxiliary supply failure
		31.07.09	07.35	31.07.09	08.35	Fire out
		06.08.09	20.48	11.08.09	08.30	Condenser Tube Leakage
		11.08.09	08.35	11.08.09	09.08	Low Vacuum
		15.08.09	05.02	15.08.09	17.10	Maintenance work
		17.08.09	11.28	19.08.09	18.50	Problem in coal bunker
		21.08.09	13.27	21.08.09	13.55	Tripped due to jerk
		23.08.09	21.01	29.08.09	22.50	Shortage of DM Water
		03.09.09	17.46	09.09.09	07.52	Vapour Fan5-1 & Mill 5-2 out
		09.09.09	13.40	13.09.09	13.15	Low vacuum
		17.09.09	12.45	17.09.09	18.25	Low vacuum
		19.09.09	18.22	19.09.09	19.20	Low vacuum
		20.09.09	12.42	27.09.09	12.47	Coal Mill Problem
		28.09.09	02.50	03.10.09	03.05	Boiler Tube Leakage

(B) RPH STATION

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	**67.5**	05.04.09	07.05	05.04.09	08.05	Bus Bar Protection Operated
		10.04.09	08.48	10.04.09	19.33	Condenser Tube Leakage
		09.05.09	03.16	09.05.09	09.46	Cooling Line Problem
		12.05.09	20.05	13.05.09	14.26	Turbine Vibration High
		22.05.09	14.39	22.05.09	10.02	Tripped due to tripping of associated transmission lines
		01.06.09	09.24	01.06.09	10.35	
		05.06.09	15.10	05.06.09	17.16	
		15.06.09	13.35	15.06.09	15.20	
		29.06.09	15.40	29.06.09	20.50	
		03.07.09	01.20	06.07.09	14.20	Thrust bearing maintenance.
		06.07.09	23.33	07.07.09	15.22	Condenser Vacuum low
		07.07.09	20.09	07.07.09	20.42	Flam failure
		14.07.09	09.42	14.07.09	14.48	Tripped due to tripping of associated transmission lines
		15.07.09	22.30	18.07.09	11.05	Condenser Tube Leakage
		18.07.09	11.20	18.07.09	12.05	Boiler Flame Failure
		28.07.09	15.27	28.07.09	16.22	Flame Failure
		28.07.09	18.03	28.07.09	18.39	Flame Failure
		30.07.09	10.52	31.07.09	11.40	Condenser Tube Leakage
		31.07.09	12.32	31.07.09	13.15	Drum level high
		01.08.09	07.52	01.08.09	08.55	Jerk due to appearance of money in yard
		01.08.09	18.20	01.08.09	19.01	Flame failure
		02.08.09	15.19	02.08.09	15.45	Flame failure
		07.08.09	10.44	07.08.09	11..31	Flame failure
		09.08.09	03.55	09.08.09	04.25	Flame failure
		21.08.09	14.34			Buchloz Relay operated
		23.08.09	19.31	23.08.09	20.07	Burner Pressure High
		25.08.09	17.50	25.08.09	18.25	High Furnace pressure.
		27.08.09	17.35	27.08.09	20.30	Boiler flame failure
		01.09.09	05.26	01.09.09	06.18	Flame failure
		01.09.09	10.17	02.09.09	11.48	Tripped due to tripping of associated transmission lines
		06.09.09	18.35	06.09.09	18.58	Flame failure
		11.09.09	04.38	11.09.09	05.05	Flame failure
		11.09.09	23.50	13.09.09	18.08	Boiler Tube Leakage
		13.09.09	19.51	13.09.09	22.32	Unit Auxiliary TX. tripped on E/F
		14.09.09	06.58	14.09.09	07.50	Flame failure
		16.09.09	05.24	16.09.09	05.59	Flame failure
2	**67.5**	05.04.09	07.05	05.04.09	08.05	Bus Bar Protection Operated
		09.04.09	02.26	09.04.09	23.20	Boiler Tube Leakage
		25.04.09	19.30	25.04.09	21.52	Shaft Vibration High
		08.05.09	08.54	09.05.09	10.05	Condenser Tube Leakage
		11.05.09	20.49	11.05.09	22.10	Turbine Vibration high
		20.05.09	10.04	20.05.09	12.05	Turbine Vibration high
		22.05.09	14.39	23.05.09	00.41	Tripped due to tripping of associated transmission lines
		01.06.09	09.24	01.06.09	11.10	

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	67.5	01.06.09	11.42	01.06.09	13.20	Low vacuum
		05.06.09	15.10	05.06.09	17.45	Tripped due to tripping of associated transmission lines
		07.06.09	07.25	07.06.09	21.06	To check Turbine in Auxiliary
		15.06.09	13.35	15.06.09	15.27	Tripped due to tripping of associated transmission lines
		06.07.09	23.34	07.07.09	15.20	Condenser Vacuum low
		10.07.09	22.08	10.07.09	23.08	Condenser Vacuum low
		14.07.09	09.42	14.07.09	15.20	Tripped due to tripping of associated transmission lines
		18.07.09	20.20	19.07.09	11.45	Electrical Fault
		01.08.09	01.15	03.08.09	05.58	Condenser Tube Leakage
		21.08.09	16.28	21.08.09	18.54	Furnace Pressure High
		27.08.09	17.51	27.08.9	22.08	Tripped due to tripping of associated transmission lines
		28.08.09	00.18	28.08.09	01.33	Turbine Tripped
		28.08.09	03.16	28.08.09	04.33	Turbine Tripped
		28.08.09	03.57	29.08.09	04.15	Turbine Tripped
		29.08.09	12.25	30.08.09	00.38	Condenser Tube Leakage
		31.08.09	18.03	31.08.09	19.07	Low Vacuum
		02.09.09	10.17	02.09.09	11.52	Tripped due to tripping of associated transmission lines
		10.09.09	08.23	10.09.09	17.20	Stator Earth Fault
		12.09.09	16.10	30.11.09	08.24	For major overhauling

(C) Gas Turbine

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	30	15.04.09	16.15	16.04.09	22.55	Due to overloading on 100 MVA Tr
		05.05.09	08.01	05.05.09	13.00	
		05.05.09	13.00	05.05.09	19.45	For installing the ABT Meter.
		12.06.09	15.15	12.06.09	15.44	FSNL due to tripping of 160 MVA Tx at both end
		28.06.09	06.02	29.06.9	00.28	To attend HSD leakage from the Nozzles.
		08.07.09	23.54	09.07.09	02.07	Due to combined cycle trip alarm.
		09.07.09	11.40	17.07.09	08.55	To attend the GT duct for HRSG# 1.
		17.07.09	13.16	17.07.09	16.14	Emergency manual trip alarm
		19.07.09	05.29	19.07.09	07.20	Tripped due to blast in the breaker of 5 MVA in switch gear room..
		21.08.09	16.49	21.08.09	18.11	SF6 gas pressure low
		23.08.09	06.05	23.08.09	21.10	Gas Restriction
		28.08.09	04.32	28.08.09	05.45	Exhaust Temperature High
		01.09.09	22.35	02.09.09	03.25	Electrical Problem
		13.09.09	11.35	13.09.09	18.25	To charge 66KV Dead Bus from Grid.
		17.09.09	10.54	17.09.09	16.50	Tripped due to Grid failure.
		17.09.09	19.40	17.09.09	22.55	Gas restriction
		20.09.09	06.02	20.09.09	09.45	Gas restriction
		23.09.09	06.27	23.09.09	08.02	Loss of flame.
		23.09.09	16.15	24.09.09	00.05	To repair liquid fuel pump
		24.09.09	11.30	24.09.09	20.10	To replace liquid fuel pump.
		26.09.09	08.05	26.09.09	08.10	Came on FSNL due to jerk
		26.09.09	22.15	26.09.09	23.13	High Exhaust Temperature
		30.09.09	11.47	30.09.09	13.55	Tripped on gen. over current alarm

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	**30**	02.04.09	12.47	03.04.09	05.55	Gas Restriction
		08.04.09	12.02	30.04.09	24.00	Major Overhauling
		01.05.09	00.00	19.05.09	13.35	Stopped for Major Inspection.
		22.05.09	20.10	23.05.09	21.50	Swapping of gas to PPCL
		24.05.09	11.05	26.05.09	14.20	Available on Open Cycle
		28.05.09	01.05	28.05.09	11.38	Gas Restriction
		28.05.09	12.00	28.05.09	13.14	Gas Restriction
		30.0.09	12.55	30.05.09	19.58	Gas Restriction
		30.05.09	22.32	31.05.09	23.59	Gas Restriction
		01.06.09	00.00	01.06.09	19.42	Gas Restriction
		03.06.09	05.50	03.06.09	17.14	Gas Restriction
		04.06.09	06.32	04.06.09	09.35	Gas Restriction
		05.06.09	11.30	05.06.09	19.35	Gas Restriction
		07.06.09	01.48	07.06.09	18.45	Gas Restriction
		08.06.09	00.10	08.06.09	18.20	To attending Leakages
		09.06.09	00.02	09.06.09	10.35	To attending Leakages
		10.06.09	07.09	10.06.09	17.50	To attending Leakages
		11.06.09	07.47	11.06.09	19.55	To attending Leakages
		12.06.09	03.02	15.06.09	19.20	Swapping of gas to PPCL
		16.06.09	06.02	16.06.09	15.25	Swapping of gas to PPCL
		16.06.09	15.55	16.06.09	20.45	Exhaust Temperature high
		16.06.09	20.45	17.06.09	01.20	Gas Restriction
		17.06.09	01.32	17.06.09	10.27	Exhaust Temperature high
		17.06.09	11.30	17.06.09	14.32	Gas Restriction
		18.06.09	00.02	21.06.09	11.20	Swapping of gas to PPCL
		24.06.09	00.32	25.06.09	09.50	Swapping of gas to PPCL
		26.06.09	22.25	26.06.09	22.55	Exhaust Temperature high
		30.06.09	20.20	02.07	14.05	Gas Restriction
		02.07.09	18.32	03.07.09	03.15	Gas Restriction
		03.07.09	18.02	03.07.09	23.50	Gas Restriction
		04.07.09	01.05	04.07.09	16.10	Gas Restriction
		19.07.09	05.29	19.07.09	06.38	Due to blast in the breaker of 5 MVA in switch gear room..
		22.07.09	04.04	23.07.09	13.20	To attend lube oil leakages.
		04.08.09	07.25	04.08.09	08.13	Tripped while changing over from Gas to liquid fuel as the Distilite fuel pump-1 did not start on Auto.
		05.08.09	15.04	05.08.09	15.40	Exhaust Temperature High
		23.08.09	21.15	23.08.09	23.11	Gas Restriction
		23.08.09	23.11	20.09.09	00.52	High vibration at 1800 RPM
3	**30**	29.04.09	00.50	29.04.09	03.29	LTTH High
		07.05.09	09.02	07.05.09	22.23	Swapping of gas to PPCL
		17.05.09	12.42	17.05.09	17.42	Lube oil temperature high
		19.05.09	12.45	22.05.09	19.40	Swapping of gas to PPCL
		02.06.09	00.25	02.06.09	19.28	Swapping of gas to PPCL
		09.06.09	23.02	10.06.09	06.52	Swapping of gas to PPCL
		12.06.09	00.00	12.06.09	12.13	Swapping of gas to PPCL
		12.06.09	15.15	12.06.09	20.07	Due to tripping of 160 MVA Tx at both end
		15.06.09	13.30	15.06.09	14.45	

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
3	30	16.06.09	19.10	17.06.09	09.45	Swapping of gas to PPCL
		17.06.09	19.45	18.06.09	12.55	Swapping of gas to PPCL
		21.06.09	12.30	22.06.09	00.28	Swapping of gas to PPCL
		22.06.09	03.00	22.06.09	09.57	Swapping of gas to PPCL
		22.06.09	22.15	23.06.09	12.40	Swapping of gas to PPCL
		29.06.09	11.45	29.06.09	19.27	To attend leakage in HRSG#3
		30.06.09	01.32	30.06.09	11.55	Swapping of gas to PPCL
		30.06.09	23.30	01.07.09	05.58	Swapping of gas to PPCL
		07.07.09	05.42	07.07.09	13.47	Malfunctioning of Battery Charger.
		19.07.09	05.29	19.07.09	08.50	Due to blast in the breaker of 5 MVA in switch gear room.
		27.07.09	20.50	27.07.09	23.07	Tripped on loss of flame.
		15.08.09	10.15	15.08.09	20.55	Gas Restriction
		21.08.09	14.38	21.08.09	16.58	Loss of flame
		31.08.09	21.50	31.08.09	23.59	Tripped without any Audio alarm.
		13.09.09	09.50	13.09.09	10.41	Tripped due to Grid failure.
		13.09.09	11.20	13.09.09	16.15	To charge 66 KV Dead Bus from Grid.
		17.09.09	10.54	17.09.09	12.20	Tripped due to Grid failure.
		20.09.09	09.55	21.09.09	23.34	To provide shut down on 160MVA Tx
4	30	10.04.09	11.32	10.04.09	15.20	Gas Restriction
		08.05.09	09.10	09.05.09	01.20	Swapping of gas to PPCL
		10.05.09	17.24	10.05.09	20.25	High exhaust temperature
		13.05.09	22.10	13.05.09	23.59	Swapping of gas to PPCL
		24.05.09	11.05	25.05.09	21.20	Gas Restriction
		31.05.09	08.35	31.05.09	08.42	To close 66 KV Bus Coupler.
		13.06.09	06.10	13.06.09	18.20	Swapping of gas to PPCL
		14.06.09	15.04	16.06.09	02.38	Swapping of gas to PPCL
		26.06.09	01.100	26.06.09	13.27	Swapping of gas to PPCL
		04.07.09	16.25	05.07.09	20.02	Swapping of gas to PPCL
		05.07.09	20.28	07.07.09	19.50	Lube oil pressure low
		13.07.09	16.03	28.07.09	15.28	High exhaust temperature
		11.08.09	13.55	11.08.09	18.50	Electrical trouble
		21.08.09	16.39	21.08.09	18.37	Electrical trouble
		21.08.09	18.40	21.08.09	22.15	Electrical trouble
		10.09.09	16.25	10.09.09	18.57	Came on FSNL & reverse power operated on protection panel.
		13.09.09	09.50	13.09.09	14.10	Came on FSNL due to Grid failure
		17.09.09	10.54	17.09.09	12.25	Tripped due to Grid failure
		20.09.09	01.15	21.09.09	22.50	Swapping of gas to PPCL.
		24.09.09	13.58	24.09.09	16.15	To check load hunting
		27.09.09	20.10	29.09.09	11.07	Swapping of gas to PPCL.
		29.09.09	11.41	29.09.09	12.40	Gas fuel hydraulic trip pressure low
		29.09.09	13.33	29.09.09	16.10	Gas fuel hydraulic trip pressure low
5	30	18.04.09	06.02	18.04.09	11.45	HRSG Leakage
		24.04.09	08.02	24.04.09	19.30	Due to planned shut-down of 220/66kV 160MVA Pr. Tr.
		26.04.09	09.35	26.04.09	21.18	
		09.05.09	00.56	09.05.09	17.25	C&I Problem
		10.05.09	14.52	10.05.09	17.15	High exhaust temp.
		31.05.09	08.32	31.05.09	12.38	To close 66 KV Bus Coupler

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
5	30	15.06.09	13.30	15.06.09	15.10	Due to tripping of 100 MVA Tx.
		16.07.09	11.45	16.07.09	23.05	C&I problem
		19.07.09	05.29	19.07.09	06.45	Due to blast in the breaker of 5 MVA in switch gear room..
		10.09.09	20.05	10.09.09	21.07	Swapping of gas to PPCL.
		12.09.09	13.17	13.09.09	11.53	Swapping of gas to PPCL.
		15.09.09	10.32	16.09.09	10.52	Swapping of gas to PPCL.
		17.09.09	10.54	17.09.09	12.00	Tripped due to Grid failure
6	30	29.04.09	17.26	29.04.09	22.55	Electrical Fault
		09.05.09	14.32	09.05.09	23.59	To install ABT -complaint meters.
		10.05.09	15.35	10.05.09	16.43	Tripped without out any alarm
		11.05.09	22.02	12.05.09	17.44	Swapping of gas to PPCL
		16.05.09	00.32	16.05.09	13.46	Swapping of gas to PPCL
		26.05.09	14.31	26.05.09	17.50	To replace Gen. differential relay.
		31.05.09	08.35	31.05.09	08.42	To close 66 KV Bus Coupler.
		15.06.09	13.30	15.06.09	14.10	Due to tripping of 100 MVA Tx at both end.
		30.06.09	2330	01.07.09	06.42	Swapping of gas to PPCL
		12.07.09	02.40	12.07.09	14.25	Loss of Excitation
		19.07.09	13.28	19.07.09	13.50	FSNL due to Gen. Over heating alarm appearing on protection panel
		19.07.09	17.50	19.07.09	18.35	
		29.07.09	15.40	29.07.09	20.25	Electrical Problem
		21.08.09	16.37	22.08.09	19.40	Tripped on preignition pressure p-2 high and Battery ground alarm
		04.09.09	18.15	06.09.09	15.55	Gas Restriction
		10.09.09	20.15	11.09.09	19.20	Lss of excitation.
		13.09.09	09.50	13.09.09	10.43	Came on FSNl due to Grid failure
		16.09.09	06.04	16.09.09	15.20	Gas Restriction
		17.09.09	10.54	17.09.09	12.32	Tripped due to failure of Grid
		17.09.09	22.20	17.09.09	23.40	Loss of Excitation
		26.09.09	08.05	26.09.09	08.21	Came on FSNL due to jerk
		28.09.09	18.55	29.09.09	12.05	Gas Restriction
STG1	34	06.04.09	10.30	08.04.09	12.00	BTL
		21.04.09	00.05	22.04.09	21.10	Maintenance work
		28.04.09	08.33	29.04.09	16.20	HRSG Leakage
		30.04.09	11.58	30.04.09	12.28	AVR System Problem
		01.05.09	16.58	01.05.09	20.33	Tripped due to CEP 1-A tripped.
		03.05.09	23.10	04.05.09	04.40	Tripped due to disappearance of drum parameters
		05.05.09	08.01	06.05.09	01.05	Stopped due to stopping of GT-1 since only HRSG-I in service.
		13.05.09	11.20	13.05.09	14.27	Tripped while change over Auxiliary supply from 7.5 MVA to 20 MVA.
		13.05.09	18.06	13.05.09	19.40	Tripped on false alarm of HRSG# I
		22.05.09	19.42	22.05.09	22.05	Malfunctioning of parameters
		31.05.09	08.35	31.05.09	21.28	Failure of 800 KVA transformer.
		02.06.09	18.13	02.06.09	19.20	Due to tripping of BFP-1A & HRSG# 1 & 2.
		06.06.09	22.02	07.06.09	23.40	Stopped to attend various leakages.
		12.06.09	15.15	12.06.09	16.53	Due to tripping of 160 MVA Tx at both end
		15.06.09	13.30	15.06.09	14.42	Due to tripping of 100 MVA Tx.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG1	34	20.06.09	06.02	20.06.09	23.48	Stopped to attend various leakages.
		26.06.09	04.05	26.06.09	04.25	Tripped on low ho twell level
		30.06.09	13.00	30.06.09	20.05	To attend leakage at PRDS station
		09.07.09	04.45	09.07.09	08.20	Due to malfunctioning of parameters
		14.07.09	00.05	17.07.09	17.25	Toto attend tube leakage in HRSG#2
		19.07.09	05.29	19.07.09	07.58	Due to blast in the breaker of 5 MVA in switch gear room..
		21.07.09	08.38	21.07.09	09.28	Tripped due to tripping of 800 KVA transformer on instantaneous O/C
		28.07.09	18.05	28.07.09	18.26	Due to tripping of 7.5 MVA Tx
		09.08.09	17.55	09.08.09	19.47	Tripped due to alarm of GT-1 Tripped appeared on STG# I BCD which led to tripping of HRSG-I & subsequently STG# I.
		23.08.09	00.05	24.08.09	19.10	To attend PRDS leakage.
		26.08.09	02.15	26.08.09	05.05	Tripped due to Closing of MS-1 Valve
		26.08.09	18.05	26.08.09	19.52	Channel-I & II operated.
		27.08.09	08.15	27.08.09	12.55	Tripped though all the parameters were normal at BCD.
		27.08.09	15.05	27.08.09	20.50	Control Oil pressure very low
		28.08.09	04.32	28.08.09	06.35	Tripped due to tripping of GT# 1.
		01.09.09	22.35	02.09.09	04.55	Tripped due to tripping of GT# 1
		02.09.09	07.31	02.09.09	22.55	C&I Problem
		07.09.09	02.20	07.09.09	20.04	Tripped due to GT# 1came on FSNL
		13.09.09	09.50	14.09.09	06.40	Tripped due to Grid failure.
		14.09.09	13.52	14.09.09	19.05	Exhaust Steam Pressure High.
		17.09.09	10.54	18.09.09	00.20	Tripped during Grid failure
		28.09.09	10.05	28.09.09	11.52	Turbine shaft vibration very high.
STG2	34	07.04.09	00.05	08.04.09	22.02	To attend leakage
		10.04.09	02.02	10.04.09	02.40	Class A relay group-2 operated
		30.04.09	11.58	30.04.09	12.28	Class 'B' trip relay operated& 40G
		06.05.09	09.05	06.05.09	21.06	To install ABT -complaint meters.
		13.05.09	11.20	13.05.09	11.40	Tripped while change over of Auxiliary supply from 7.5 MVA to 20 MVA.
		29.05.09	19.24	29.05.09	20.20	Tripped due to following relay i) Generator class-A group-II 86GA-2.
		29.05.09	20.31	29.05.09	21.55	
		31.05.09	07.37	31.05.09	09.55	Due to tripping of 100 MVA Tx-II.
		02.06.09	17.09	02.06.09	19.05	Due to tripping of HRSG# 4.
		15.06.09	13.30	15.06.09	17.05	Due to tripping of 100 MVA Tx.
		07.07.09	05.44	07.07.09	15.28	Tripped due to tripping of GT# 3
		19.07.09	05.29	19.07.09	12.08	Due to blast in the breaker of 5 MVA in switch gear room.
		21.07.09	08.38	21.07.09	09.18	Tripped due to tripping of 800 KVA transformer on instantaneous O/C
		23.07.09	12.27	23.07.09	13.13	Tripped without any abnormality of system.
		27.07.09	20.50	28.07.09	00.28	Tripped due to tripping of GT# 3 which is tripped on loss of flame.
		28.07.09	18.05	28.07.09	18.20	Due to tripping of 7.5 MVA Tx.
		31.07.09	13.32	31.07.09	19.15	To attend the condensate water transfer problem from hot well to dearater.
		15.08.09	21.25	15.08.09	22.28	Drum level very high.
		16.08.09	13.32	16.08.09	14.15	Due to tripping of BFP-2B.
		21.08.09	16.39	21.08.09	17.52	Due to tripping of GT#4.
		26.08.09	14.10	27.08.09	23.59	Shortage of DM water
		13.09.09	09.50	13.09.08	17.55	Tripped due to Grid failure.
		17.09.09	10.54	17.09.09	13.50	Tripped due to Grid failure.
		20.09.09	09.55	22.09.09	11.05	Swapping of gas to PPCL.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG3	34	05.05.09	16.15	05.05.09	16.50	To install ABT -complaint meters.
		09.05.09	09.02	09.05.09	21.25	To attend leakages
		10.05.09	15.35	10.05.09	19.15	Due to tripping of GT No. 6.
		11.05.09	17.42	11.05.09	18.35	Tripped due to disappearance of hot well level parameters.
		13.05.09	11.20	13.05.09	12.40	Tripped while change over of Auxiliary supply from 7.5 MVA to 20 MVA.
		31.05.09	08.35	31.05.09	10.29	Due to failure of 800 KVA Tx
		12.06.09	15.15	12.06.09	18.20	Tripped due to 160 MVA Tx at both end
		15.06.09	13.30	15.06.09	16.12	Due to tripping of 100 MVA Tx.
		19.07.09	05.29	19.07.09	08.28	Due to blast in the breaker of 5 MVA in switch gear room..
		21.07.09	08.38	21.07.09	09.35	Tripped due to tripping of 800 KVA transformer on instantaneous O/C
		23.07.09	14.02	23.07.09	21.50	Generator class -A relay operated.
		28.07.09	18.05	28.07.09	18.35	Due to tripping of 7.5 MVA Tx.
		28.08.09	03.10	11.09.09	02.02	Under shut-down due to Axial Shift Problem
		12.09.09	06.16	19.09.09	14.13	Channel-*I & II operated

(D) PRAGATI STATION

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
1	104	Date	Time	Date	Time	
		18.04.09	15.42	18.04.09	16.26	Tripped due to jerk
		27.04.09	10.48	28.04.09	13.25	Hydraulic Pressure Low
		19.05.09	20.55	19.05.09	22.17	Tripped due to tripping of associated transmission lines
		25.05.09	21.29	25.05.09	22.56	
		05.06.09	02.48	05.06.09	10.07	
		03.07.09	07.28	03.07.09	12.27	
		04.07.09	11.42	04.07.09	12.01	
		06.07.09	14.10	06.07.09	14.28	
		14.07.09	09.42	14.07.09	10.18	
		05.08.09	16.15	05.08.09	17.37	
		10.08.09	19.09	10.08.09	19.25	
		12.08.09	15.15	12.08.09	16.31	
		20.08.09	21.16	22.08.09	11.02	Internal Fault
		22.08.09	18.17	22.08.09	20.10	Internal Fault
		27.08.09	18.22	27.08.09	18.26	Tripped due to tripping of associated transmission lines
		06.09.09	17.00	06.09.09	17.14	
		13.09.09	09.52	13.09.09		
		17.09.09	10.57	17.09.09	11.50	
		22.09.09	10.45	22.09.09	14.56	Internal Fault
2	104	19.04.09	10.29	19.04.09	11.27	Tripped due to tripping of associated transmission lines
		19.05.09	20.55	19.05.09	22.07	
		22.05.09	14.39	22.05.09	14.28	
		22.05.09	15.36	22.05.09	15.51	
		01.06.09	09.26	01.06.09	09.52	
		04.06.09	00.00	05.06.09	05.26	Shut-down

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	**104**	05.06.09	15.06	05.06.09	17.21	Tripped due to tripping of associated transmission lines
		15.06.09	13.35	15.06.09	14.20	
		15.07.09	00.30	17.08.09	19.50	Shut-down.
		17.08.09	23.54	18.08.09	04.00	Tripped due to tripping of associated transmission lines
		21.08.09	14.42	21.08.09	15.27	
		27.08.09	17.53	27.08.09	19.18	
		01.09.09	05.05	01.09.09	05.52	
		02.09.09	10.17	02.09.09	11.41	
		08.09.09	12.05	08.09.09	13.25	Internal fault
		13.09.09	09.52	13.09.09	11.26	Tripped due to tripping of associated transmission lines
		13.09.09	18.30	13.09.09	19.52	Internal fault
		17.09.09	10.57	17.09.09	12.34	Tripped due to tripping of associated transmission lines
		18.09.09	02.47	18.09.09	04.20	
		19.09.09	10.22	19.09.09	11.26	
		28.09.09	07.39	28.09.09	08.30	
STG	**122**	07.04.09	06.34	07.04.09	07.45	Tripped due to tripping of associated transmission lines
		19.04.09	10.29	19.04.09	12.41	
		26.04.09	07.11	28.04.09	13.25	Tripped due to tripping of associated transmission lines
		16.05.09	18.44	16.05.09	20.24	
		19.05.09	20.55	19.05.09	23.20	
		22.05.09	14.39	22.05.09	15.39	
		01.06.09	09.26	01.06.09	10.41	
		04.06.09	11.25	04.06.09	15.32	Oil leakage from ESU
		05.06.09	15.06	05.06.09	16.40	Tripped due to tripping of associated transmission lines
		15.06.09	13.35	15.06.09	15.20	
		14.07.09	09.42	14.07.09	10.42	
		15.07.09	11.56	15.07.09	12.50	Problem in Boiler feed pump
		10.08.09	19.10	10.08.09	20.14	Tripped due to tripping of associated transmission lines
		12.08.09	15.15	12.08.09	17.20	
		18.08.09	00.15	18.08.09	01.55	Internal Fault
		21.08.09	14.43	21.08.09	16.17	Tripped due to tripping of associated transmission lines
		27.08.09	17.53	27.08.09	20.20	

(E) BADARPUR THERMAL POWER STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	95	30.07.09	06.45	14.09.09	17.00	Planned shut-down for major overhauling
		22.09.09	21.14	23.09.09	04.08	Vacuum problem
		23.09.09	04.15	23.09.09	07.02	Vacuum problem
		26.09.09	17.18	27.09.09	10.40	Drum main hole leakage
2	95	10.05.09	13.12	10.05.09	15.15	Bus differential operated
		16.07.09	17.42	18.07.09	05.25	Boiler Tube Leakage
		29.07.09	17.56	30.07.09	22.30	Furnace Failure
		11.08.09	21.29	11.08.09	22.50	Furnace problem
		30.08.09	14.50	31.08.09	11.00	DC Control failure

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
3	95	12.04.09	05.34	12.04.09	19.43	Electrical problem
		13.04.09	17.22	13.04.09	20.45	Electrical problem
		25.04.09	22.43	27.04.09	22.47	Planned Shut-down
		26.05.09	20.54	27.05.09	17.45	Boiler Tube Leakage
		01.09.09	08.40	02.09.09	15.37	Boiler Tube Leakage
4	210	01.04.09	12.18	17.04.09	23.59	Planned Shut-Down for over-hauling
		18.04.09	12.35	18.04.09	15.48	Tripped along with tripping of 220kV BTPS – Noida Ckt.
		18.05.09	13.12	10.05.09	22.13	Bus differential operated
		10.06.09	16.44	11.06.09	16.58	Boiler Tube Leakage
		19.06.09	09.52	20.06.09	09.23	Boiler Tube Leakage
5	210	07.08.09	17.43	07.08.09	19.40	Furnace Protection.

4 ALLOCATION OF POWER TO DELHI

A) Allocation from Central Sector Generating Stations to Delhi w.e.f. 30.08.09 to 14.11.09

i) TIME BLOCK - 00.00hrs & 12.00hrs. and 23.00-24.00hrs @ 0%

All figures in MW

Name of the Stn	Installed capacity	Total Un-allocated	Basic Allocation	Basic Allocation at periphery	Allocation out of Unallocated Quota	Allocation out of Un-allocation Quota at Delhi periphery	Total allocation at Delhi periphery
1	2	3	4	5	6	7	(8)=(5)+(7)
NTPC STATIONS							
Singrauli STPS	2000	300	150	130	0	0	130
Rihand	1000	150	100	87	0	0	87
Rihand Stage -II	1000	150	126	109	0	0	109
ANTA GPS	419	63	44	41	0	0	41
Auriya GPS	663.36	99	72	67	0	0	67
Dadri GPS	829.78	129	91	85	0	0	85
Dadri NCTPS (Th)	840	0	756	657	0	0	657
Unchahaar-I TPS	420	20	24	21	0	0	21
Unchahaar-II TPS	420	63	47	41	0	0	41
Unchahaar-III TPS	210	31	29	25	0	0	25
TOTAL	**7802**	**1005**	**1439**	**1263**	**0**	**0**	**1263**
NHPC							
Baira Suil HPS	180	0	20	19	0	0	19
Salal HPS	690	0	80	76	0	0	76
Tanakpur HEP	94	0	12	11	0	0	11
Chamera HEP	540	0	43	41	0	0	41
Chamera-II HEP	300	54	40	38	0	0	38
URI HEP	480	0	53	50	0	0	50
Dhauli Ganga HEP	280	42	37	35	0	0	35
Dulhasti HEP	390	58	50	48	0	0	48
TOTAL	**2954**	**154**	**335**	**318**	**0**	**0**	**318**
NPC							
Narora APS	440	64	47	41	0	0	41
RAPP(B) Unit-3 APS	220	33	0	0	0	0	0
RAPP(B) Unit-4 APS	220	33	0	0	0	0	0
TOTAL	**880**	**130**	**47**	**41**	**0**	**0**	**41**
SVJNL							
Nathpa Jhakri HEP	1500	149	142	123	0	0	123
THDC							
Tehri Hydro	1000	99	103	89	0	0	89
Total	**14136**	**1537**	**2066**	**1835**	**0**	**0**	**1835**
Allocation from ER and Tala HEP							
Farakka	1600	0	30	25	0	0	25
Kahalgaon	840	0	63	53	0	0	53
Talchar	1000	0	0	0	0	0	0
Tala HEP	1020	153	30	25	0	0	25
Mejia TPS Unit-6	250	0	29	25	0	0	25
Kahalgaon-II	1000	0	108	90	0	0	90
Total ER	**5710**	**153**	**260**	**217**	**0**	**0**	**217**
Grand Total	**19846**	**1690**	**2326**	**2052**	**0**	**0**	**2052**

ii) Time Block 12.00hrs. to 19hrs. @ 18.18%

All figures in MW

Name of the Stn	Installed capacity	Total Un-allocated	Basic Allocation	Basic Allocation at periphery	Allocation out of Unallocated Quota	Allocation out of Un-allocation Quota at Delhi periphery	Total allocation at Delhi periphery
1	2	3	4	5	6	7	(8)=(5)+(7)
NTPC STATIONS							
Singrauli STPS	2000	300	150	130	55	47	178
Rihand	1000	150	100	87	27	24	110
Rihand Stage -II	1000	150	126	109	27	24	133
ANTA GPS	419	63	44	41	11	11	52
Auriya GPS	663.36	99	72	67	13	12	79
Dadri GPS	829.78	129	91	85	11	10	95
Dadri NCTPS (Th)	840	0	756	657	0	0	657
Unchahaar-I TPS	420	20	24	21	4	3	24
Unchahaar-II TPS	420	63	47	41	11	10	51
Unchahaar-III TPS	210	31	29	25	6	5	30
TOTAL	**7802**	**1005**	**1439**	**1263**	**164**	**145**	**1408**
NHPC							
Baira Suil HPS	180	0	20	19	0	0	19
Salal HPS	690	0	80	76	0	0	76
Tanakpur HEP	94	0	12	11	0	0	11
Chamera HEP	540	0	43	41	0	0	41
Chamera-II HEP	300	54	40	38	10	9	47
URI HEP	480	0	53	50	0	0	50
Dhauli Ganga HEP	280	42	37	35	8	7	42
Dulhasti HEP	390	58	50	48	11	10	58
TOTAL	**2954**	**154**	**335**	**318**	**28**	**27**	**345**
NPC							
Narora APS	440	64	47	41	12	10	51
RAPP(B) Unit-3 APS	220	33	0	0	0	0	0
RAPP(B) Unit-4 APS	220	33	0	0	0	0	0
TOTAL	**880**	**130**	**47**	**41**	**12**	**10**	**51**
SVJNL							
Nathpa Jhakri HEP	1500	149	142	123	27	26	149
THDC							
Tehri Hydro	1000	99	103	89	18	17	107
Total	**14136**	**1537**	**2066**	**1835**	**249**	**224**	**2059**
Allocation from ER and Tala HEP							
Farakka	1600	0	30	25	0	0	25
Kahalgaon	840	0	63	53	0	0	53
Talchar	1000	0	0	0	0	0	0
Tala HEP	1020	153	30	25	0	0	25
Mejia TPS Unit-6	250	0	29	25	0	0	25
Kahalgaon-II	1000	0	108	90	11	9	99
Total ER	**5710**	**153**	**260**	**217**	**11**	**9**	**226**
Grand Total	**19846**	**1690**	**2326**	**2052**	**260**	**233**	**2285**

iii) Time Block 19.00hrs. to 23.00hrs. @ 20.18%

All figures in MW

Name of the Stn	Installed capacity	Total Un-allocated	Basic Allocation	Basic Allocation at periphery	Allocation out of Unallocated Quota	Allocation out of Un-allocation Quota at Delhi periphery	Total allocation at Delhi periphery
1	2	3	4	5	6	7	(8)=(5)+(7)
NTPC STATIONS							
Singrauli STPS	2000	300	150	130	61	53	183
Rihand	1000	150	100	87	30	26	113
Rihand Stage -II	1000	150	126	109	30	26	136
ANTA GPS	419	63	44	41	13	12	53
Auriya GPS	663.36	99	72	67	14	13	80
Dadri GPS	829.78	129	91	85	12	11	96
Dadri NCTPS (Th)	840	0	756	657	0	0	657
Unchahaar-I TPS	420	20	24	21	4	4	24
Unchahaar-II TPS	420	63	47	41	13	11	52
Unchahaar-III TPS	210	31	29	25	6	5	31
TOTAL	**7802**	**1005**	**1439**	**1263**	**182**	**161**	**1424**
NHPC							
Baira Suil HPS	180	0	20	19	0	0	19
Salal HPS	690	0	80	76	0	0	76
Tanakpur HEP	94	0	12	11	0	0	11
Chamera HEP	540	0	43	41	0	0	41
Chamera-II HEP	300	54	40	38	11	10	48
URI HEP	480	0	53	50	0	0	50
Dhauli Ganga HEP	280	42	37	35	8	8	43
Dulhasti HEP	390	58	50	48	12	11	59
TOTAL	**2954**	**154**	**335**	**318**	**31**	**30**	**348**
NPC							
Narora APS	440	64	47	41	13	11	52
RAPP(B) Unit-3 APS	220	33	0	0	7	6	6
RAPP(B) Unit-4 APS	220	33	0	0	7	6	6
TOTAL	**880**	**130**	**47**	**41**	**27**	**23**	**64**
SVJNL							
Nathpa Jhakri HEP	1500	149	142	123	30	29	152
THDC							
Tehri Hydro	1000	99	103	89	20	19	108
Total	**14136**	**1537**	**2066**	**1835**	**291**	**261**	**2096**
Allocation from ER and Tala HEP							
Farakka	1600	0	30	25	0	0	25
Kahalgaon	840	0	63	53	0	0	53
Talchar	1000	0	0	0	0	0	0
Tala HEP	1020	153	30	25	0	0	25
Mejia TPS Unit-6	250	0	29	25	0	0	25
Kahalgaon-II	1000	0	108	90	12	10	100
Total ER	**5710**	**153**	**260**	**217**	**12**	**10**	**227**
Grand Total	**19846**	**1690**	**2326**	**2052**	**302**	**271**	**2323**

5 ALLOCATION OF POWER TO VARIOUS LISCENCEES AS PER ORDER OF DERC AND DECISION OF GNCTD FOR ALLOCATION OF CENTRAL SECTOR STATIONS (EXCEPT DADRI THERMAL AND BTPS) AND STATE SECTOR GENERATING STATIONS w.e.f. 01.07.2009.

(Allocation In %)

i) Allocation during the period 00.00 - 10.00hrs. and 17.00 - 24.00hrs.

SOURCES	LICENSEES					
	NDMC	MES	NDPL	BRPL	BYPL	TOTAL
1. Central Sector without Dadri (Th)	00.00	00.00	29.18	43.58	27.24	100.00
2. Dadri (Th)	14.05	00.00	23.89	36.36	27.70	100.00
3. BTPS	15.07	7.09	21.61	32.90	23.33	100.00
4. IP	00.00	00.00	28.02	42.51	29.47	100.00
5. RPH	00.00	00.00	27.99	42.48	29.53	100.00
6. GT	00.00	00.00	27.99	42.48	29.53	100.00
7. Pragati	25.76	00.00	20.47	31.26	22.51	100.00

ii) Allocation during the period 10.00 - 17.00hrs.

SOURCES	LICENSEES					
	NDMC	MES	NDPL	BRPL	BYPL	TOTAL
1. Central Sector without Dadri (Th)	00.00	00.00	29.18	43.58	27.24	100.00
2. Dadri (Th)	14.91	00.00	23.89	35.50	25.70	100.00
3. BTPS	15.87	7.09	21.61	32.10	23.33	100.00
4. IP	00.83	00.00	28.02	41.68	29.47	100.00
5. RPH	00.86	00.00	27.99	41.62	29.53	100.00
6. GT	00.86	00.00	27.99	41.62	29.53	100.00
7. Pragati	26.61	00.00	20.47	30.41	22.51	100.00

6 POWER AVAILABILITY-DEMAND POSITION AT THE TIME OF PEAK DEMAND MET DURING SEPTEMBER 2009

All figures in MW

Date	Time of peak demand	Generation within Delhi						Import from the Grid	Schedule from the Grid	OD(-) / UD(+)	Demand met	Shedding	Un-Restricted Demand
		IP	RPH	GT	PPCL	BTPS	Total						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)= (3) to (7)	(9)	(10)	(11)= (10) -(9)	(12)= (10)+ (11)	(13)	(14)= (12)+ (13)
1	15:04:37	37	70	150	303	391	951	2941	2638	-303	3892	52	3944
2	15:04:07	38	68	143	306	412	967	2806	2684	-122	3773	49	3822
3	15:04:55	31	66	160	295	465	1017	2870	2700	-170	3887	45	3932
4	19:31:07	0	71	126	303	501	1001	2594	2700	106	3595	15	3610
5	19:32:35	0	66	134	304	475	979	2547	2754	207	3526	22	3548
6	22:53:11	41	74	164	304	449	1032	2357	2522	165	3389	0	3389
7	19:36:00	48	71	144	296	481	1040	2589	2731	142	3629	22	3651
8	19:17:40	57	75	161	305	486	1084	2500	2504	4	3584	41	3625
9	15:00:01	65	75	159	297	482	1078	2436	2649	213	3514	42	3556
10	18:57:41	52	63	128	299	403	945	2210	2431	221	3155	0	3155
11	19:08:37	62	64	140	296	420	982	2109	2506	397	3091	26	3117
12	19:30:36	0	0	139	297	488	924	1998	2341	343	2922	37	2959
13	19:47:23	15	30	148	0	490	683	2379	2629	250	3062	17	3079
14	19:31:30	37	46	155	301	507	1046	2396	2614	218	3442	16	3458
15	19:01:52	55	46	106	298	535	1040	2450	2486	36	3490	26	3516
16	19:28:59	106	48	157	297	575	1183	2412	2468	56	3595	27	3622
17	19:03:24	102	52	140	299	597	1190	2396	2344	-52	3586	26	3612
18	19:01:50	74	53	158	297	591	1173	2445	2436	-9	3618	0	3618
19	19:50:14	80	53	176	294	593	1196	2345	2585	240	3541	2	3543
20	22:27:03	84	54	116	301	596	1151	2241	2428	187	3392	0	3392
21	22:50:39	94	53	133	297	585	1162	2478	2319	-159	3640	0	3640
22	19:16:12	96	52	203	289	554	1194	2639	2521	-118	3833	4	3837
23	20:01:24	107	51	140	294	579	1171	2689	2520	-169	3860	0	3860
24	19:19:44	58	54	170	294	591	1167	2614	2748	134	3781	0	3781
25	19:02:01	60	54	202	296	534	1146	2653	2571	-82	3799	0	3799
26	18:54:43	55	53	207	293	524	1132	2519	2495	-24	3651	0	3651
27	0:02:11	23	51	187	295	518	1074	2433	2006	-427	3507	0	3507
28	0:02:07	49	51	188	287	550	1125	2145	2048	-97	3270	0	3270
29	18:39:24	75	46	197	286	578	1182	2574	2287	-287	3756	24	3780
30	19:33:36	84	53	202	292	602	1233	2583	2449	-134	3816	47	3863

7 POWER AVAILABILITY- DEMAND POSITION AT THE TIME OF MAXIMUM UNRESTRICTED DEMAND DURING SEPTEMBER 2009

All figures in MW

Date	Time of peak demand	Generation within Delhi						Import from the Grid	Schedule from the Grid	OD(-) / UD(+)	Demand met	Shedding	Un-Restricted Demand
		IP	RPH	GT	PPCL	BTPS	Total						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(3) to (7)	(9)	(10)	(11)= (10) -(9)	(12)=(10) + (11)	(13)	(14)= (12)+ (13)
1	15:04:37	37	70	150	303	391	951	2941	2638	-303	3892	52	3944
2	15:04:07	38	68	143	306	412	967	2806	2684	-122	3773	49	3822
3	15:04:55	31	66	160	295	465	1017	2870	2700	-170	3887	45	3932
4	19:31:07	0	71	126	303	501	1001	2594	2700	106	3595	15	3610
5	19:32:35	0	66	134	304	475	979	2547	2754	207	3526	22	3548
6	22:53:11	41	74	164	304	449	1032	2357	2522	165	3389	0	3389
7	19:36:00	48	71	144	296	481	1040	2589	2731	142	3629	22	3651
8	19:17:40	57	75	161	305	486	1084	2500	2504	4	3584	41	3625
9	15:00:01	65	75	159	297	482	1078	2436	2649	213	3514	42	3556
10	19:00:00	48	62	141	299	402	952	2188	2426	238	3140	21	3161
11	19:08:37	62	64	140	296	420	982	2109	2506	397	3091	26	3117
12	19:30:36	0	0	139	297	488	924	1998	2341	343	2922	37	2959
13	19:47:23	15	30	148	0	490	683	2379	2629	250	3062	17	3079
14	19:31:30	37	46	155	301	507	1046	2396	2614	218	3442	16	3458
15	19:01:52	55	46	106	298	535	1040	2450	2486	36	3490	26	3516
16	19:28:59	106	48	157	297	575	1183	2412	2468	56	3595	27	3622
17	19:03:24	102	52	140	299	597	1190	2396	2344	-52	3586	26	3612
18	19:01:50	74	53	158	297	591	1173	2445	2436	-9	3618	0	3618
19	19:50:14	80	53	176	294	593	1196	2345	2585	240	3541	2	3543
20	22:27:03	84	54	116	301	596	1151	2241	2428	187	3392	0	3392
21	22:50:39	94	53	133	297	585	1162	2478	2319	-159	3640	0	3640
22	19:30:00	100	52	160	299	580	1191	2573	2524	-49	3764	92	3856
23	20:01:24	107	51	140	294	579	1171	2689	2520	-169	3860	0	3860
24	19:19:44	58	54	170	294	591	1167	2614	2748	134	3781	0	3781
25	19:02:01	60	54	202	296	534	1146	2653	2571	-82	3799	0	3799
26	18:54:43	55	53	207	293	524	1132	2519	2495	-24	3651	0	3651
27	0:02:11	23	51	187	295	518	1074	2433	2006	-427	3507	0	3507
28	0:02:07	49	51	188	287	550	1125	2145	2048	-97	3270	0	3270
29	18:39:24	75	46	197	286	578	1182	2574	2287	-287	3756	24	3780
30	20:00:00	92	53	202	292	598	1237	2564	2446	-118	3801	64	3865

8 SOURCEWISE SCHEDULED DRAWL FROM NORTHERN GRID AS WELL AS AVAILABILITY WITHIN DELHI FOR SEPTEMBER 2009

A) AVAILABILITY FROM GENCO AND PRAGATI STNs. (all fig in MUs)

(I) IP	40.516
(II) 1/3rd HARYANA SHARE	10.803
JHAJJAR SHARE	0.390
(III)NET IP GENERATION	**29.323**
(IV) RPH	40.448
(V) GT+WHRU	116.100
(VI) PRAGATI	215.489
TOTAL (iii+iv+v+vi)	**401.360**
B) AVAILABILITY FROM BTPS	388.073
C) AUXILIARY CONSUMPTION OF GENERATING STNs. EXCLUDING BTPS	23.503
D) NET GENERATION AVAILABLE WITHIN DELHI(A+B-C)	**765.930**

B) SOURCE WISE SCHEDULED DRAWL FROM THE NORTHERN GRID

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT DELHI PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT DELHI PERIPHERY
BAIRA-SUIL	5.857	5.622	5.857	5.622
SALAL	35.205	33.786	35.205	33.786
TANAKPUR	7.133	6.845	7.133	6.845
CHAMERA	17.324	16.632	17.324	16.632
CHAMERA-II	23.361	22.420	23.361	22.420
DHAULI GANGA	24.910	23.909	24.910	23.909
SINGRAULI	105.841	101.568	105.461	101.204
URI	18.217	17.481	18.217	17.481
ANTA (GAS)	7.431	7.130	7.317	7.021
ANTA (LIQUID)	1.090	1.047	0.508	0.487
ANTA (RLNG)	23.271	22.336	9.901	9.495
RIHAND-I	77.919	74.774	77.540	74.411
RIHAND-II	43.164	41.430	42.933	41.208
AURAIYA (GAS)	36.060	34.606	35.897	34.450
AURAIYA (LIQUID)	14.941	14.339	5.707	5.472
AURAIYA (RLNG)	0.000	0.000	0.000	0.000
DADRI(GT) (GAS)	37.968	36.431	37.727	36.200
DADRI(GT) (LIQUID)	25.190	24.177	9.639	9.244
DADRI(GT) (RLNG)	1.381	1.330	0.265	0.255
UNCHAHAR-I	17.131	16.439	16.642	15.969
UNCHAHAR-III	21.664	20.790	21.043	20.194
DADRI(TH)	454.239	435.971	438.108	420.494
UNCHAHAR-II	17.900	17.178	17.406	16.703
NAPP	7.710	7.398	7.710	7.398
RAPP-B#4	0.000	0.000	0.000	0.000
RAPP-B#3	0.422	0.405	0.422	0.405
RAJASHTAN (JVVNL) PTC	54.000	51.822	54.000	51.822
GUJRAT	13.048	12.396	12.396	11.894
RAJASTHAN	20.274	19.381	19.381	18.600

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT DELHI PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT DELHI PERIPHERY
ORISSA	17.059	16.493	16.492	15.827
WEST BENGAL	2.312	2.234	2.234	2.142
WEST BENGAL	0.725	0.701	0.679	0.651
HIMACHAL PRADESH	41.445	39.770	41.445	39.770
DVC (ER)	43.091	41.675	41.673	40.009
ANDHRA PRADESH	38.958	37.537	34.842	33.436
CHATTISHGARH	3.591	3.411	3.241	3.105
UTTRANCHAL	37.181	35.680	37.181	35.680
KARNATAKA	8.531	8.208	7.609	7.291
PUNJAB	13.678	12.810	12.810	12.358
CHATTISHGARH	89.271	84.808	84.807	81.376
NRURS	0.300	0.289	0.300	0.289
MADHYA PRADESH	11.638	11.056	11.056	10.610
HARYANA	0.265	0.254	0.265	0.254
PUNJAB	0.648	0.622	0.648	0.622
CHATTISHGARH	1.399	1.329	1.329	1.273
UTTAR PRADESH	18.000	17.274	18.000	17.274
TO POWER EXCHANGE (IEX)	-1.975	-2.052	-1.975	-2.052
POWER EXCHANGE (IEX)	62.879	60.365	62.879	60.365
TO POWER EXCHANGE - PX	0.000	0.000	0.000	0.000
POWER EXCHANGE - PX	4.374	4.201	4.374	4.201
NATHPA JHAKHRI	88.462	84.909	88.462	84.909
DULASTI	38.530	36.976	38.530	36.976
TEHRI	13.353	12.813	13.353	12.813
KHELGAON -II	26.298	25.424	25.424	24.398
TALA	20.410	19.728	19.728	18.935
FRAKKA	10.399	10.053	9.860	9.464
KHELGAON	23.039	22.275	22.271	21.376
TALCHER	0.000	0.000	0.000	0.000
TOTAL SCHEDULE FROM THE GRID	1726.511	1656.486	1649.525	1582.974

C) AGENCY WISE BREAKUP OF ENERGY SCHEDULED DRAWL FROM THE GRID

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT POWER PERIPHERY
NTPC - NR	885.189	849.545	826.092	792.807
NTPC -ER	59.737	57.752	57.556	55.239
NHPC	170.535	163.672	170.535	163.672
NPC	8.132	7.803	8.132	7.803
GUJRAT	13.048	12.396	12.396	11.894
RAJASHTAN (JVVNL) PTC	54.000	51.822	54.000	51.822
WEST BENGAL	2.312	2.234	2.234	2.142
WEST BENGAL	0.725	0.701	0.679	0.651
HIMACHAL PRADESH	41.445	39.770	41.445	39.770
CHATTISHGARH	3.591	3.411	3.241	3.105
CHATTISHGARH	89.271	84.808	84.807	81.376
CHATTISHGARH	1.399	1.329	1.329	1.273

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT POWER PERIPHERY
UTTRANCHAL	37.181	35.680	37.181	35.680
MADHYA PRADESH	11.638	11.056	11.056	10.610
NRURS	0.300	0.289	0.300	0.289
PUNJAB	13.678	12.810	12.810	12.358
PUNJAB	0.648	0.622	0.648	0.622
KARNATAKA	8.531	8.208	7.609	7.291
DVC (ER)	43.091	41.675	41.673	40.009
RAJASTHAN	20.274	19.381	19.381	18.600
HARYANA	0.265	0.254	0.265	0.254
ORISSA	17.059	16.493	16.492	15.827
UTTAR PRADESH	18.000	17.274	18.000	17.274
ANDHRA PRADESH	38.958	37.537	34.842	33.436
POWER EXCHANGE (IEX)	62.879	60.365	62.879	60.365
NATHPA JHAKHRI	88.462	84.909	88.462	84.909
TEHRI	13.353	12.813	13.353	12.813
TALA	20.410	19.728	19.728	18.935
TALCHER	0.000	0.000	0.000	0.000
POWER EXCHANGE - PX	4.374	4.201	4.374	4.201
TOTAL SCHEDULE FROM THE GRID	**1728.485**	**1658.538**	**1651.500**	**1585.027**

D) AGENCY WISE BREAKUP OF ENERGY SCHEDULED BY NRLDC FOR EXPORT TO OTHER UTILITIES FROM DTL

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT POWER PERIPHERY
TO POWER EXCHANGE (IEX)	*-1.975*	*-2.052*	*-1.975*	*-2.052*
TOTAL	*-1.975*	*-2.052*	*-1.975*	*-2.052*
(G) TOTAL SCHEDULED DRAWL FROM THE GRID (G=Fa+Fb+Fc)	*1726.511*	*1656.486*	*1649.525*	*1582.974*
TOTAL CONSUMPTION INCLUDING AUX. OF GENERATING STNs. EXCLUDING BTPS				2153.921
NET CONSUMPTION				2130.418
AVAILABILITY WITHIN DELHI				765.930
ACTUAL DRAWAL FROM THE GRID				1364.488
OVER DRAWAL(+)/UNDER DRAWAL(-) FROM THE GRID ON THE BASIS OF SCHEDULED ALLOCATION MADE BY NRLDC TO DELHI AT PERIPHERY				-218.486
LOAD SHEDDING				11.378
UNRESTRICTED DEMAND (GROSS)				2165.299
UNRESTRICTED DEMAND (NET)				2141.796
MAX. NET CONSUMPTION				78.570 Mus. ON 24.09.2009
MAX. LOAD SHEDDING				417 MW ON 02.09.2009 AT 10.30.00HRS.
PEAK LOAD	Peak Demand during the month			SHEDDING AT PEAK TIME
DAY PEAK	3892MW AT 15.04.37HRS ON 01.09.2009			52
EVENING PEAK	3860MW AT 20.01.24HRS ON 23.09.2009			NIL
P.L.F. OF GENCO AND PRAGATI STNs.	IP			22.74%
	RPH			41.61%
	GT			59.72%
	PRAGATI			90.69%

9 SHEDDING DETAILS DURING THE MONTH OF SEPTEMBER 2009.

ALL FIGURES IN MUs

DATE	No. of Under Freq. Relay Operated	Shedding due to under frequency relay operation in MUs					Shedding due to Grid Restrictions (Over drawal / low freq.)			
		BSES		NDPL	NDMC	TOTAL	BSES		NDPL	NDMC
		BYPL	BRPL				BYPL	BRPL		
1	2	3	4	5	6	7=3 to 6	8	9	10	11
01-Sep-09	1	0.000	0.005	0.000	0.000	**0.005**	0.000	0.127	0.071	0.000
02-Sep-09	1	0.000	0.005	0.000	0.000	**0.005**	0.000	0.076	0.000	0.000
03-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
04-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
05-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
06-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
07-Sep-09	1	0.000	0.008	0.000	0.000	**0.008**	0.000	0.000	0.000	0.000
08-Sep-09	1	0.000	0.014	0.000	0.000	**0.014**	0.006	0.148	0.000	0.000
09-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
10-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
11-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
12-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
13-Sep-09	2	0.000	0.022	0.002	0.000	**0.024**	0.000	0.000	0.000	0.000
14-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
15-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
16-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
17-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
18-Sep-09	5	0.000	0.005	0.001	0.000	**0.006**	0.000	0.000	0.000	0.000
19-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
20-Sep-09	1	0.004	0.000	0.000	0.000	**0.004**	0.000	0.000	0.000	0.000
21-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.080	0.014	0.000
22-Sep-09	2	0.000	0.050	0.003	0.000	**0.053**	0.335	0.643	0.151	0.000
23-Sep-09	13	0.043	0.073	0.079	0.000	**0.195**	0.170	0.222	0.048	0.000
24-Sep-09	8	0.003	0.067	0.080	0.000	**0.150**	0.018	0.029	0.000	0.000
25-Sep-09	11	0.000	0.201	0.000	0.000	**0.201**	0.109	0.265	0.000	0.000
26-Sep-09	11	0.017	0.148	0.036	0.000	**0.201**	0.000	0.000	0.000	0.000
27-Sep-09	9	0.001	0.090	0.031	0.000	**0.122**	0.037	0.204	0.083	0.000
28-Sep-09	0	0.000	0.000	0.000	0.000	**0.000**	0.000	0.000	0.000	0.000
29-Sep-09	16	0.033	0.166	0.168	0.000	**0.367**	0.206	0.192	0.000	0.000
30-Sep-09	11	0.073	0.055	0.033	0.000	**0.161**	0.070	0.040	0.000	0.000
Total	**93**	**0.174**	**0.909**	**0.433**	**0.000**	**1.516**	**0.951**	**2.026**	**0.367**	**0.000**

ALL FIGURES IN MUs

Date	Shedding due to Transmission/Grid Constraints in Central Sector Stations / TTC / ATC VOILATION				TOTAL	TOTAL SHEDDING DUE TO GRID RESTRICTIONS	Due to T&D Constraints				
							DTL				
	BSES		NDPL	NDMC			BSES		NDPL	NDMC	MES
	BYPL	BRPL					BYPL	BRPL			
1	12	13	14	15	**16=8to15**	**17=16+7**	18	19	20	21	22
01-Sep-09	0.000	0.000	0.000	0.000	**0.198**	**0.203**	0.000	0.009	0.000	0.000	0.000
02-Sep-09	0.000	0.000	0.000	0.000	**0.076**	**0.081**	0.306	0.153	0.000	0.013	0.000
03-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.009	0.000	0.000	0.000	0.000
04-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	0.001	0.000	0.000
05-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	0.000	0.000	0.000
06-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	0.000	0.000	0.000
07-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.008**	0.000	0.029	0.000	0.000	0.000
08-Sep-09	0.000	0.000	0.000	0.000	**0.154**	**0.168**	0.000	0.032	0.000	0.000	0.000
09-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	0.000	0.000	0.000
10-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.013	0.002	0.000	0.000
11-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	0.000	0.000	0.000
12-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.001	0.000	0.000	0.000
13-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.024**	0.086	0.010	0.001	0.014	0.000
14-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	0.000	0.000	0.000
15-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	0.005	0.000	0.000
16-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.000	0.000	0.000	0.000	0.000
17-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.122	0.075	0.009	0.015	0.000
18-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.006**	0.018	0.054	0.015	0.000	0.000
19-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.222	0.000	0.000	0.000	0.000
20-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.004**	0.055	0.000	0.000	0.005	0.000
21-Sep-09	0.000	0.000	0.000	0.000	**0.094**	**0.094**	0.000	0.000	0.000	0.000	0.000
22-Sep-09	0.000	0.000	0.000	0.000	**1.129**	**1.182**	0.000	0.000	0.000	0.000	0.000
23-Sep-09	0.000	0.000	0.000	0.000	**0.440**	**0.635**	0.000	0.000	0.002	0.000	0.000
24-Sep-09	0.000	0.000	0.000	0.000	**0.047**	**0.197**	0.000	0.000	0.000	0.000	0.000
25-Sep-09	0.000	0.000	0.000	0.000	**0.374**	**0.575**	0.000	0.000	0.009	0.000	0.000
26-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.201**	0.002	0.000	0.001	0.000	0.000
27-Sep-09	0.000	0.000	0.000	0.000	**0.324**	**0.446**	0.013	0.000	0.000	0.000	0.000
28-Sep-09	0.000	0.000	0.000	0.000	**0.000**	**0.000**	0.053	0.013	0.000	0.000	0.000
29-Sep-09	0.000	0.000	0.000	0.000	**0.398**	**0.765**	0.000	0.252	0.000	0.000	0.000
30-Sep-09	0.000	0.000	0.000	0.000	**0.110**	**0.271**	0.026	0.201	0.014	0.000	0.000
Total	**0.000**	**0.000**	**0.000**	**0.000**	**3.344**	**4.860**	**0.912**	**0.842**	**0.059**	**0.047**	**0.000**

ALL FIGURES IN MUs

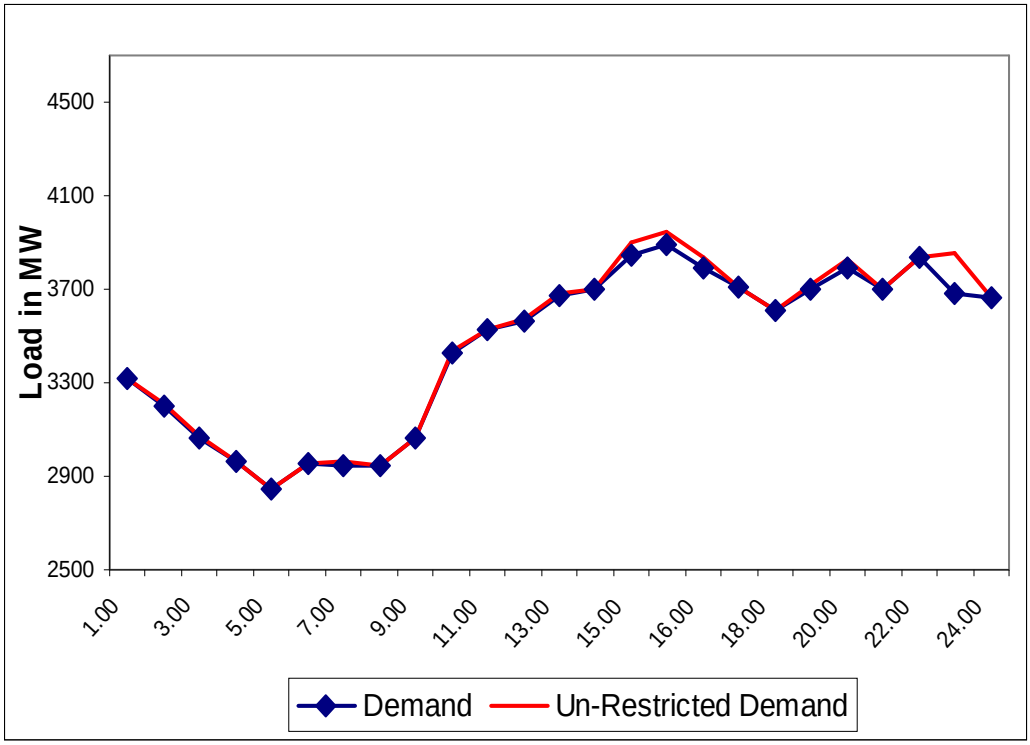
DATE	DUE TO T&D CONTRAINTS			OTHER AGENCIES LIKE GENCO, BBMB, BTPS ETC.	THEFT PRONE SHEDDING			TOTAL SHEDDING DUE TO T&D CONSTS. & THEFT PRONE	GRAND TOTAL
	DISCOMS								
	BSES		NDPL		BSES		NDPL		
	BYPL	BRPL			BYPL	BRPL			
1	23	24	25	2+	27	28	29	30=18 to29	31=30+17
01-Sep-09	0.000	0.020	0.006	0.007	0.000	0.000	0.151	**0.193**	**0.396**
02-Sep-09	0.007	0.000	0.014	0.000	0.000	0.000	0.140	**0.633**	**0.714**
03-Sep-09	0.000	0.034	0.002	0.000	0.000	0.000	0.145	**0.190**	**0.190**
04-Sep-09	0.006	0.038	0.000	0.000	0.000	0.000	0.131	**0.176**	**0.176**
05-Sep-09	0.011	0.006	0.003	0.000	0.000	0.000	0.147	**0.167**	**0.167**
06-Sep-09	0.018	0.000	0.000	0.000	0.000	0.000	0.143	**0.161**	**0.161**
07-Sep-09	0.000	0.014	0.010	0.000	0.000	0.000	0.131	**0.184**	**0.192**
08-Sep-09	0.000	0.019	0.002	0.000	0.000	0.000	0.151	**0.204**	**0.372**
09-Sep-09	0.000	0.020	0.001	0.000	0.000	0.000	0.126	**0.147**	**0.147**
10-Sep-09	0.000	0.035	0.000	0.000	0.000	0.000	0.110	**0.160**	**0.160**
11-Sep-09	0.064	0.005	0.000	0.000	0.000	0.000	0.110	**0.179**	**0.179**
12-Sep-09	0.010	0.034	0.015	0.000	0.000	0.000	0.107	**0.167**	**0.167**
13-Sep-09	0.000	0.033	0.000	0.000	0.000	0.000	0.144	**0.288**	**0.312**
14-Sep-09	0.000	0.047	0.034	0.000	0.000	0.000	0.127	**0.208**	**0.208**
15-Sep-09	0.006	0.002	0.002	0.000	0.000	0.000	0.137	**0.152**	**0.152**
16-Sep-09	0.048	0.017	0.001	0.000	0.000	0.000	0.154	**0.220**	**0.220**
17-Sep-09	0.000	0.028	0.000	0.000	0.000	0.000	0.149	**0.398**	**0.398**
18-Sep-09	0.041	0.013	0.000	0.000	0.000	0.000	0.085	**0.226**	**0.232**
19-Sep-09	0.008	0.060	0.008	0.000	0.000	0.000	0.105	**0.403**	**0.403**
20-Sep-09	0.000	0.012	0.006	0.000	0.000	0.000	0.091	**0.169**	**0.173**
21-Sep-09	0.000	0.006	0.002	0.000	0.000	0.000	0.000	**0.008**	**0.102**
22-Sep-09	0.004	0.158	0.013	0.000	0.000	0.000	0.014	**0.189**	**1.371**
23-Sep-09	0.000	0.041	0.012	0.000	0.000	0.000	0.097	**0.152**	**0.787**
24-Sep-09	0.000	0.034	0.004	0.000	0.000	0.000	0.099	**0.137**	**0.334**
25-Sep-09	0.000	0.054	0.007	0.000	0.000	0.000	0.087	**0.157**	**0.732**
26-Sep-09	0.000	0.000	0.018	0.000	0.000	0.000	0.092	**0.113**	**0.314**
27-Sep-09	0.000	0.000	0.000	0.000	0.000	0.000	0.085	**0.098**	**0.544**
28-Sep-09	0.000	0.000	0.001	0.000	0.000	0.000	0.000	**0.067**	**0.067**
29-Sep-09	0.000	0.070	0.013	0.000	0.000	0.000	0.169	**0.504**	**1.269**
30-Sep-09	0.023	0.004	0.009	0.016	0.000	0.000	0.175	**0.468**	**0.739**
Total	**0.246**	**0.804**	**0.183**	**0.023**	**0.000**	**0.000**	**3.402**	**6.518**	**11.378**

DATE	(NET CONS.)	MAXI. DEMAND MET DURING THE DAY	TIME OF OCCUR-RENCE OF MAX DEMAND	SHEDDING AT THIS TIME	UN-REST-RICTED DEMAND	MAXIMUM UN-REST-RICTED DEMAND DURING THE DAY	TIME OF MAX. UN-REST. DEMAND	DEMAND AT THAT TIME	SHEDDING AT THAT TIME
	In Mus.	IN MW	IN HRS.	IN MW	IN MW	IN MW	HRS.	IN MW	IN MW
1	32	33	34	35	36=33+35	37=39+40	38	39	40
01-Sep-09	78.018	3892	15:04:37	52	**3944**	**3944**	15:04:37	3892	52
02-Sep-09	76.892	3773	15:04:07	49	**3822**	**3822**	15:04:37	3773	49
03-Sep-09	75.476	3887	15:04:55	45	**3932**	**3932**	15:04:55	3887	45
04-Sep-09	70.286	3595	19:31:07	15	**3610**	**3610**	19:31:07	3595	15
05-Sep-09	70.038	3526	19:32:35	22	**3548**	**3548**	19:32:35	3526	22
06-Sep-09	67.494	3389	22:53:11	0	**3389**	**3389**	22:53:11	3389	0
07-Sep-09	72.854	3629	19:36:00	22	**3651**	**3651**	19:36	3629	22
08-Sep-09	74.066	3584	19:17:40	41	**3625**	**3625**	19:17:40	3584	41
09-Sep-09	70.806	3514	15:00:01	42	**3556**	**3556**	15:00:01	3514	42
10-Sep-09	62.598	3155	18:57:41	0	**3155**	**3161**	19:00	3140	21
11-Sep-09	58.951	3091	19:08:37	26	**3117**	**3117**	19:08:37	3091	26
12-Sep-09	54.506	2922	19:30:36	37	**2959**	**2959**	19:30:36	2922	37
13-Sep-09	55.247	3062	19:47:23	17	**3079**	**3079**	19:47:23	3062	17
14-Sep-09	65.800	3442	19:31:30	16	**3458**	**3458**	19:31:30	3442	16
15-Sep-09	66.927	3490	19:01:52	26	**3516**	**3516**	19:01:52	3490	26
16-Sep-09	70.446	3595	19:28:59	27	**3622**	**3622**	19:28:59	3595	27
17-Sep-09	71.620	3586	19:03:24	26	**3612**	**3612**	19:03:24	3586	26
18-Sep-09	73.211	3618	19:01:50	0	**3618**	**3618**	19:01:50	3618	0
19-Sep-09	75.978	3541	19:50:14	2	**3543**	**3543**	19:50:14	3541	2
20-Sep-09	69.196	3392	22:27:03	0	**3392**	**3392**	22:27:03	3392	0
21-Sep-09	74.084	3640	22:50:39	0	**3640**	**3640**	22:50:39	3640	0
22-Sep-09	77.516	3833	19:16:12	4	**3837**	**3856**	19:30	3764	92
23-Sep-09	78.412	3860	20:01:24	0	**3860**	**3860**	20:01:24	3860	0
24-Sep-09	78.570	3781	19:19:44	0	**3781**	**3781**	19:19:44	3781	0
25-Sep-09	77.197	3799	19:02:01	0	**3799**	**3799**	19:02:01	3799	0
26-Sep-09	75.373	3651	18:54:43	0	**3651**	**3651**	18:54:43	3651	0
27-Sep-09	71.361	3507	0:02:11	0	**3507**	**3507**	0:02:11	3507	0
28-Sep-09	64.342	3270	0:02:07	0	**3270**	**3270**	0:02:07	3270	0
29-Sep-09	74.689	3756	18:39:24	24	**3780**	**3780**	18:39:24	3756	24
30-Sep-09	78.464	3816	19:33:36	47	**3863**	**3865**	20:00	3801	64
Total	**2130.418**	**3892**			**3944**	**3944**			

10 LOAD PATTERN OF DELHI ON THE DAY OF PEAK DEMAND MET DURING SEPTEMBER 2009 ON 01.09.2009 – 3892 MW at 15:04:37HRS.

All figures in MW

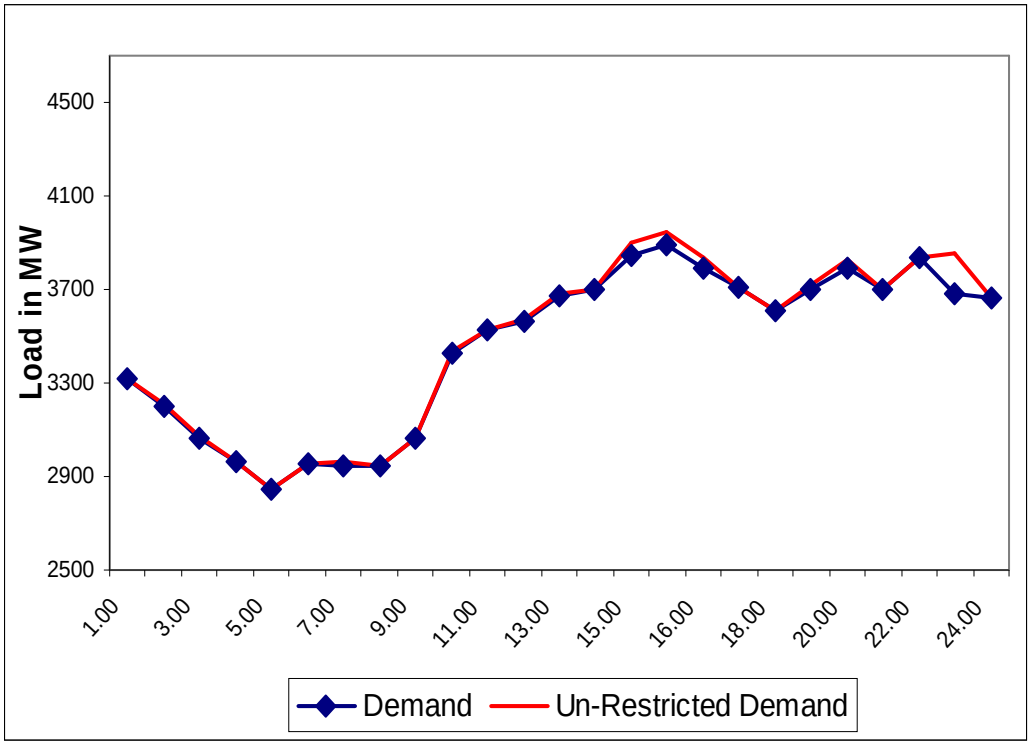
Hrs.	Demand	Load Shedding	Un-Restricted Demand
1.00	**3317**	**0**	3317
2.00	**3202**	**4**	3206
3.00	**3066**	**4**	3070
4.00	**2962**	**0**	2962
5.00	**2842**	**0**	2842
6.00	**2951**	**0**	2951
7.00	**2942**	**21**	2963
8.00	**2950**	**0**	2950
9.00	**3062**	**0**	3062
10.00	**3430**	**6**	3436
11.00	**3523**	**0**	3523
12.00	**3561**	**13**	3574
13.00	**3673**	**5**	3678
14.00	**3696**	**0**	3696
15.00	**3845**	**52**	3897
15:04:37	**3892**	**52**	3944
16.00	**3793**	**43**	3836
17.00	**3710**	**0**	3710
18.00	**3611**	**0**	3611
19.00	**3701**	**21**	3722
20.00	**3789**	**35**	3824
21.00	**3702**	**0**	3702
22.00	**3839**	**0**	3839
23.00	**3684**	**175**	3859
24.00	**3660**	**0**	3660
ENERGY IN Mus	**78.018**	**0.396**	78.414



11 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UN-RESTRICTED DEMAND DURING SEPTEMBER 2009 – 01.09.2009 – 3944MW at 15:04:37hrs.

All figures in MW

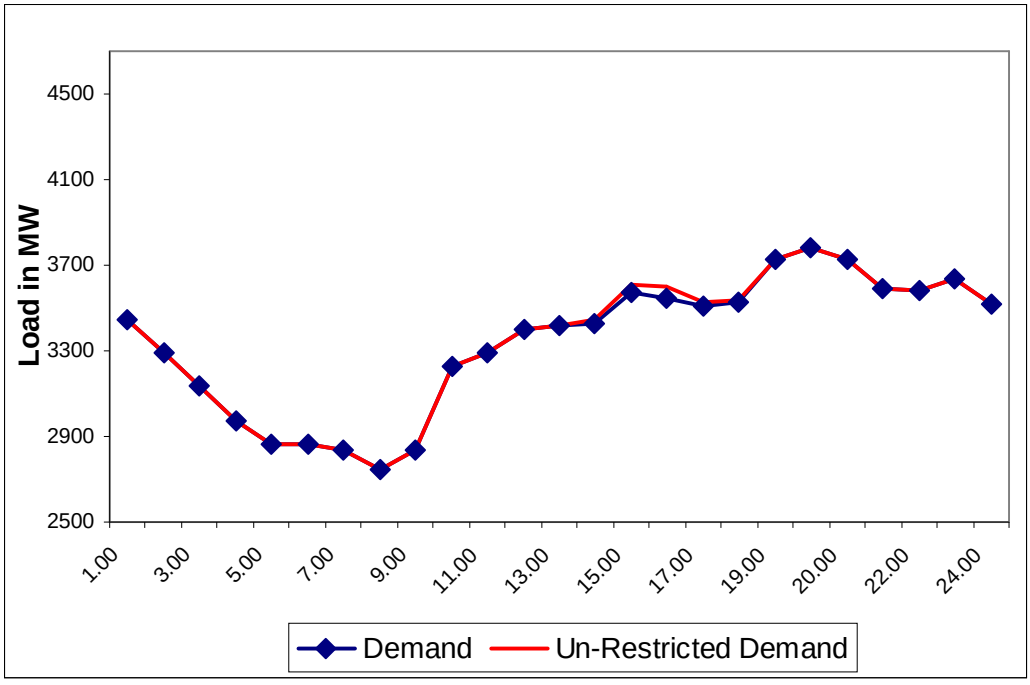
Hrs.	Demand	Load Shedding	Un-Restricted Demand
1.00	3317	0	3317
2.00	3202	4	3206
3.00	3066	4	3070
4.00	2962	0	2962
5.00	2842	0	2842
6.00	2951	0	2951
7.00	2942	21	2963
8.00	2950	0	2950
9.00	3062	0	3062
10.00	3430	6	3436
11.00	3523	0	3523
12.00	3561	13	3574
13.00	3673	5	3678
14.00	3696	0	3696
15.00	3845	52	3897
15:04:37	3892	52	**3944**
16.00	3793	43	3836
17.00	3710	0	3710
18.00	3611	0	3611
19.00	3701	21	3722
20.00	3789	35	3824
21.00	3702	0	3702
22.00	3839	0	3839
23.00	3684	175	3859
24.00	3660	0	3660
ENERGY IN Mus	78.018	0.396	78.414



12 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM ENERGY CONSUMED DURING SEPTEMBER 2009 – 24.09.2009 – 78.570Mus

All figures in MW

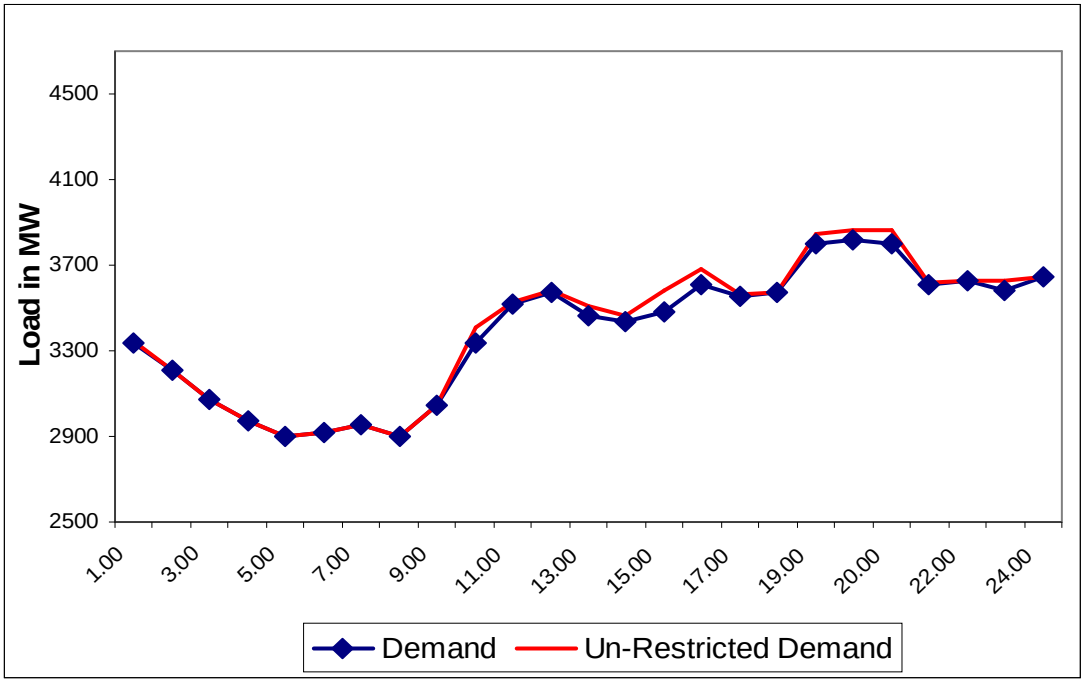
Hrs.	Demand	Load Shedding	Un-Restricted Demand
1.00	3444	0	3444
2.00	3287	0	3287
3.00	3134	0	3134
4.00	2973	0	2973
5.00	2865	0	2865
6.00	2861	0	2861
7.00	2840	0	2840
8.00	2744	0	2744
9.00	2835	0	2835
10.00	3228	0	3228
11.00	3295	0	3295
12.00	3404	0	3404
13.00	3417	0	3417
14.00	3430	17	3447
15.00	3572	41	3613
16.00	3546	50	3596
17.00	3509	19	3528
18.00	3525	7	3532
19.00	3729	0	3729
19.19.44	3781	0	3781
20.00	3726	0	3726
21.00	3589	0	3589
22.00	3581	0	3581
23.00	3635	0	3635
24.00	3518	0	3518
ENERGY IN Mus	**78.570**	0.334	78.904



13 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UNRESTRICTED ENERGY DEMAND DURING SEPTEMBER 2009 – 30.09.2009 – 79.203Mus

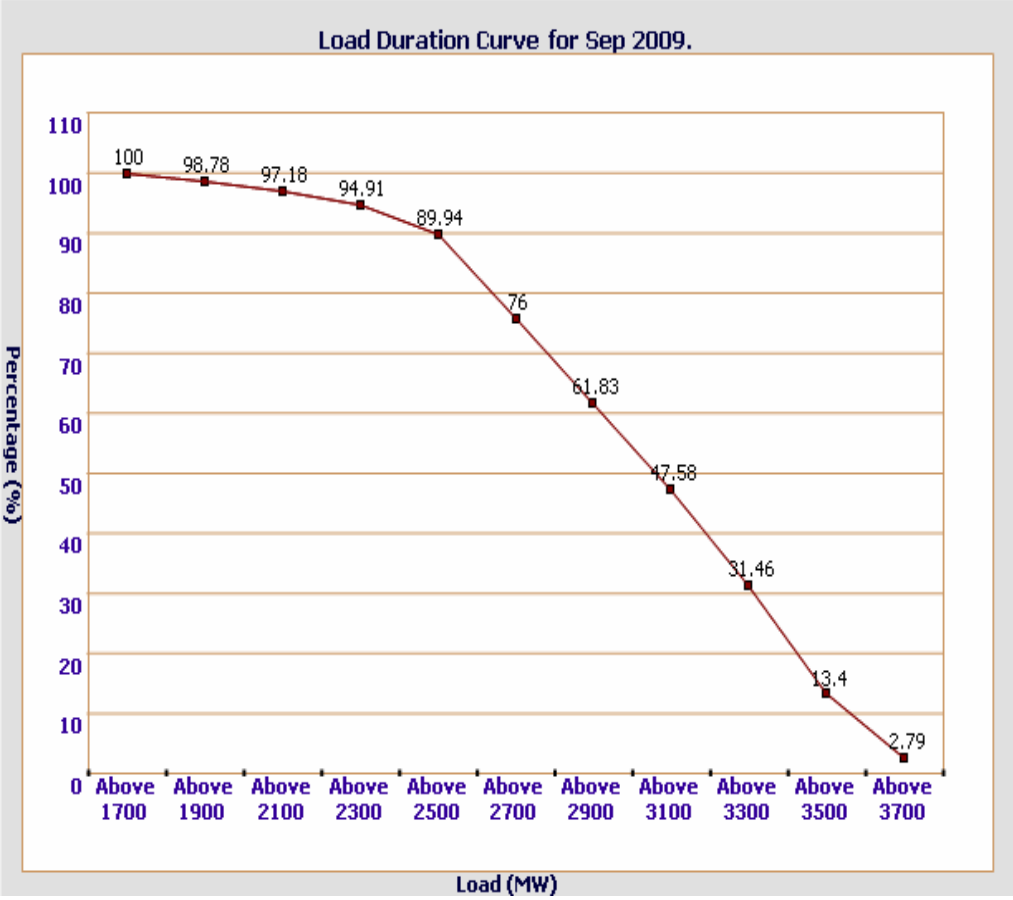
All figures in MW

Hrs.	Demand	Load Shedding	Un-Restricted Demand
1.00	3338	4	3342
2.00	3207	3	3210
3.00	3072	0	3072
4.00	2971	0	2971
5.00	2897	0	2897
6.00	2921	0	2921
7.00	2957	0	2957
8.00	2898	0	2898
9.00	3048	0	3048
10.00	3338	68	3406
11.00	3522	9	3531
12.00	3569	17	3586
13.00	3464	49	3513
14.00	3434	32	3466
15.00	3478	106	3584
16.00	3611	68	3679
17.00	3552	11	3563
18.00	3572	4	3576
19.00	3804	40	3844
19.33.36	3816	47	3863
20.00	3801	64	3865
21.00	3613	4	3617
22.00	3624	3	3627
23.00	3582	49	3631
24.00	3644	0	3644
ENERGY IN Mus	**78.464**	**0.739**	**79.203**



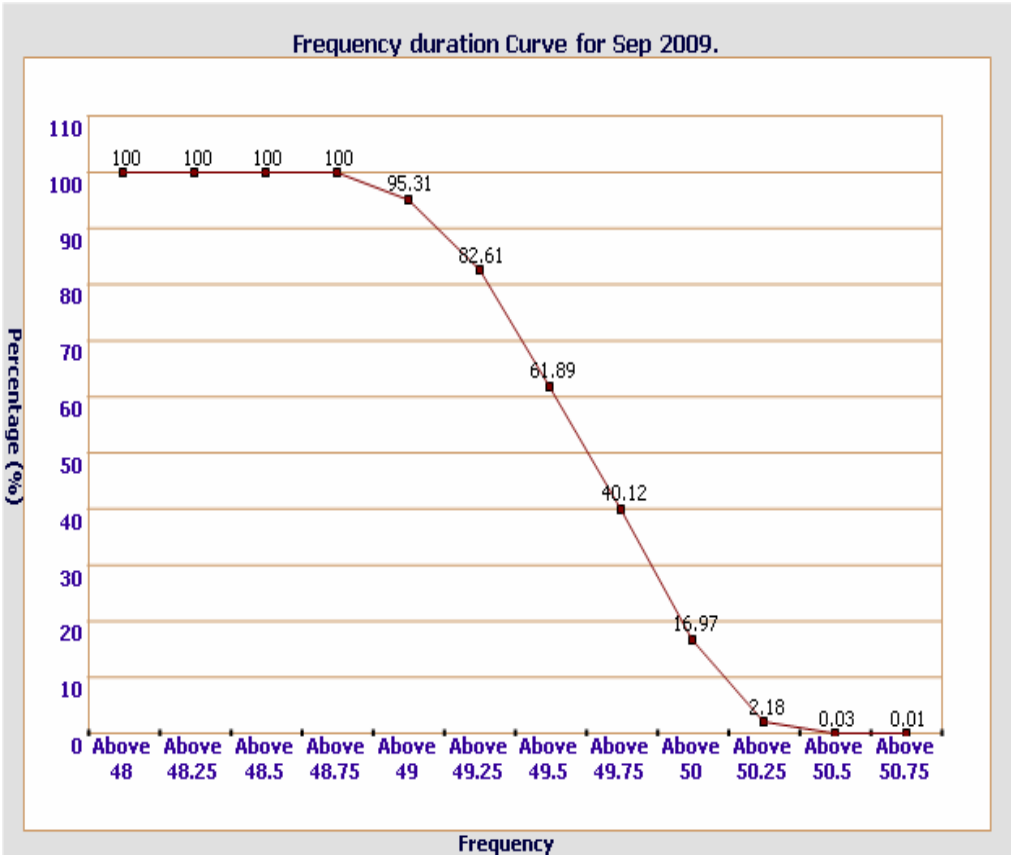
14 LOAD DURATION CURVE FOR SEPTEMBER 2009

Load in MW	Percentage of Time
Above 1700	100 %
Above 1900	98.78 %
Above 2100	97.18 %
Above 2300	94.91 %
Above 2500	89.94 %
Above 2700	76 %
Above 2900	61.83 %
Above 3100	47.58 %
Above 3300	31.46 %
Above 3500	13.4 %
Above 3700	2.79 %



15 FREQUENCY ANALYSIS FOR THE MONTH OF SEPTEMBER 2009

Frequency Range in Hz.	Percentage of time
Above 48.00	100 %
Above 48.25	100 %
Above 48.50	100 %
Above 48.75	100 %
Above 49.00	95.31 %
Above 49.25	82.61 %
Above 49.50	61.89 %
Above 49.75	40.12 %
Above 50.00	16.97 %
Above 50.25	2.18 %
Above 50.50	0.03 %
Above 50.75	0.01 %



16 VOLTAGE PROFILE OF 220 KV SUB-STATIONS IN DELHI DURING SEPTEMBER 2009

All figures in kV

Date	NARELA		GAZIPUR	
	Max	Min	Max	Min
01-Sep-09	221.44	204.03	222.21	201.84
02-Sep-09	219.12	201.84	220.54	201.84
03-Sep-09	--	--	--	--
04-Sep-09	222.09	206.35	224.41	--
05-Sep-09	219.76	201.06	221.57	206.09
06-Sep-09	220.92	204.80	221.83	206.22
07-Sep-09	--	--	--	--
08-Sep-09	218.99	203.64	221.83	206.61
09-Sep-09	219.89	204.16	222.34	208.54
10-Sep-09	228.02	218.35	225.70	212.41
11-Sep-09	232.02	217.83	227.63	214.09
12-Sep-09	230.60	211.38	227.50	210.09
13-Sep-09	228.66	214.99	226.99	211.38
14-Sep-09	228.79	211.25	225.05	208.67
15-Sep-09	227.50	209.96	224.79	208.80
16-Sep-09	224.92	210.22	223.76	195.65
17-Sep-09	224.41	207.25	222.47	207.51
18-Sep-09	222.47	205.32	220.28	203.38
19-Sep-09	219.76	205.06	218.86	--
20-Sep-09	222.09	206.35	221.44	206.35
21-Sep-09	218.22	200.81	215.64	203.64
22-Sep-09	221.18	201.58	221.05	202.87
23-Sep-09	219.51	201.71	218.35	201.19
24-Sep-09	223.12	202.22	221.05	201.84
25-Sep-09	219.25	198.48	218.22	--
26-Sep-09	218.99	200.29	217.18	202.87
27-Sep-09	218.86	203.38	219.51	203.77
28-Sep-09	224.66	207.38	223.63	205.32
29-Sep-09	224.02	198.23	224.41	198.48
30-Sep-09	215.38	194.10	215.25	191.52

17 VOLTAGE PROFILE OF 400 KV SUB-STATIONS IN DELHI DURING SEPTEMBER 2009

All figures in kV

Date	400kV Bamnauli Grid Sub-Station				
	Max KV	Max Time	Min KV	Min Time	Average KV
01-Sep-09	411.06	08.02.53	374.95	12.18.59	396.98
02-Sep-09	406.84	08.03.54	373.54	10.52.04	395.20
03-Sep-09	--	--	--	--	--
04-Sep-09	415.98	02.03.03	383.39	11.53.02	400.48
05-Sep-09	409.89	02.42.34	380.34	11.22.06	397.29
06-Sep-09	410..36	17.00.58	380.58	11.20.35	398.45
07-Sep-09	--	--	--	--	--
08-Sep-09	409.18	23.54.35	384.56	12.16.08	397.71
09-Sep-09	411.30	02.56.25	387.85	11.50.49	400.90
10-Sep-09	419.03	02.39.04	398.16	19.11.12	408.77
11-Sep-09	422.55	02.57.20	399.81	19.30.09	411.32
12-Sep-09	421.85	03.03.56	390.89	18.52.14	409.00
13-Sep-09	420.67	02.17.32	395.58	10.12.51	406.60
14-Sep-09	418.33	02.52.08	390.19	11.17.55	404.46
15-Sep-09	418.10	02.57.43	389.96	14.49.17	402.19
16-Sep-09	413.87	02.04.37	385.74	12.23.52	400.70
17-Sep-09	411.53	03.01.01	383.39	12.13.59	398.45
18-Sep-09	406.61	06.02.37	376.83	09.52.39	392.97
19-Sep-09	400.98	04.05.54	375.18	09.56.37	388.27
20-Sep-09	406.37	01.55.38	384.09	12.29.18	394.46
21-Sep-09	399.57	18.00.52	377.29	14.48.01	389.41
22-Sep-09	399.34	05.03.51	377.06	11.19.55	389.43
23-Sep-09	400.98	22.54.04	374.48	11.21.17	390.29
24-Sep-09	405.20	06.02.48	375.65	11.44.17	392.63
25-Sep-09	401.92	07.27.58	368.85	17.16.25	387.48
26-Sep-09	402.85	22.52.27	374.95	10.20.54	389.02
27-Sep-09	404.26	03.48.34	360.88	17.13.51	391.02
28-Sep-09	412.23	18.00.13	381.98	11.29.21	394.41
29-Sep-09	413.17	04.0550	371.20	16.27.58	389.53
30-Sep-09	398.16	02.45.26	360.65	11.52.38	385.11

Date	400kV Bawana Grid Sub-Station				
	Max KV	Max Time	Min KV	Min Time	Average KV
01-Sep-09	415.52	08.02.53	381.51	12.19.09	401.86
02-Sep-09	410.36	08.03.54	378.70	10.54.04	399.84
03-Sep-09	--	--	--	--	--
04-Sep-09	419.03	02.03.23	388.55	11.51.32	404.51
05-Sep-09	412.70	02.42.34	384.56	11.23.16	401.31
06-Sep-09	414.58	17.00.48	385.27	11.16.05	402.82
07-Sep-09	--	--	--	--	--
08-Sep-09	412.47	23.54.45	390.43	11.23.45	402.48
09-Sep-09	414.81	02.56.05	393.47	11.52.50	405.29
10-Sep-09	422.08	02.38.44	402.15	13.53.24	412.90
11-Sep-09	426.07	23.49.34	404.49	19.28.58	415.48
12-Sep-09	425.13	02.32.34	395.58	18.52.24	413.38
13-Sep-09	423.25	02.15.52	399.57	10.13.01	410.91
14-Sep-09	420.91	02.52.08	395.12	11.17.35	409.25
15-Sep-09	420.67	02.56.33	--	14.53.37	406.87
16-Sep-09	417.16	02.02.47	390.43	11.22.52	405.42
17-Sep-09	415.98	02.55.41	--	12.15.09	402.27
18-Sep-09	410.12	02.57.44	383.86	09.58.09	397.26
19-Sep-09	407.54	04.03.44	381.98	09.47.57	394.90
20-Sep-09	412.70	01.55.38	390.43	12.28.18	400.47
21-Sep-09	405.43	18.01.02	382.22	08.07.29	394.16
22-Sep-09	411.53	07.40.12	383.86	11.20.05	395.76
23-Sep-09	407.31	22.54.24	381.05	11.21.07	396.13
24-Sep-09	410.12	06.02.48	382.22	11.44.27	398.62
25-Sep-09	406.61	07.27.48	376.36	17.16.25	393.93
26-Sep-09	407.54	22.52.37	381.75	10.20.54	394.88
27-Sep-09	409.65	03.48.54	389.39	11.57.32	396.00
28-Sep-09	415.98	18.02.03	386.44	11.29.11	398.96
29-Sep-09	416.92	04.05.40	378.70	16.27.48	393.81
30-Sep-09	403.79	02.47.16	368.15	11.52.28	390.11

18 DETAILS OF LUMPED CAPACITORS AT NEAREST 220 KV SUBSTATION

a) Delhi Transco Limited (DTL)

Name of the Sub-stn	Voltage (KV)	Installed Capacity (MVAR)	Working Capacity (MVAR)	Remarks
Patparganj	66	20	20	
	66	20	20	
	33	10	10	
	33	10	10	
	11	5.04	5.04	
Kashmere Gate	11	5.04	5.04	
Gazipur	66	20	20	
	66	20	20	
	11	5.04	5.04	
Okhla	66	20	20	
	66	20	20	
	66	20	20	
	33	10	10	
	11	5.04	5.04	
Lodhi Road	33	10	10	
	33	10	10	
	11	5.976	0	TEMPORARILY DISMANTLED ON 11.11.2006 FOR TAKING OUT 100MVA PR. TX.-I
Sarita Vihar	66	20	20	
	11	5.04	5.04	
Vasant Kunj	66	20	20	
	66	20	20	
	11	5.04	5.04	
Mehrauli	66	20	20	
	66	20	20	
	66	20	20	
	66	20	20	
	11	5.04	5.04	
Najafgarh	66	20	20	
	66	20	20	
	66	20	20	
	11	5.04	5.04	
Narela	66	20	20	
	66	20	20	
	11	5.04	5.04	

Name of the sub-stn	Voltage (KV)	Installed Capacity (MVAR)	Working Capacity (MVAR)	Remarks
Shalimar Bagh	33	10	10	
	33	10	10	
	33	10	10	
	33	10	10	
	11	6	6	
Rohini	66	20	20	
	66	20	20	
	11	6	6	
Gopalpur	33	10	10	
	33	10	10	
	33	10	10	
	11	5.04	5.04	
Subzi Mandi	11	6	6	
Kanjhawala	66	20	20	
	11	5.04	5.04	
Park Street	66	20	20	
	33	10	10	
	33	10	10	
Papankalan-I	66	20	20	
	11	5.04	5.04	
Naraina	33	10	10	
	33	10	10	
	11	5.04	5.04	
	Total Capacity	749.496	743.700	

B. IPGCL

Name of the sub-stn	Voltage (KV)	Installed Capacity (MVAR)	Working Capacity (MVAR)	Remarks
IP	33	10	10	
	33	10	10	
	33	10	10	
	33	10	0	OUT SINCE 08.04.2005. CELLS DAMAGED, ORDER PLACED ON BHEL
RPH	11	5.04	5.04	
	33	10	10	
	33	10	10	
	Total Capacity	65.04	55.04	

Sl. No	Name of the Grid S/Sub-Station	INSTALLED CAPACITY IN MVAR			
		66KV	33kV	11kV	**TOTAL**
1	**IP STATION**		30		**30**
1	Kamla Market			9.65	**9.65**
2	Minto Road			5.45	**5.45**
3	GB Pant Hosp			5.45	**5.45**
4	Delhi Gate			10.9	**10.9**
5	Tilakmarg			5.04	**5.04**
6	Electric Lane			5.04	**5.04**
7	Cannaught Place			5.04	**5.04**
8	Kilokri		10.08	10.48	**20.56**
9	NDSE				
10	AIIMS		13.26	5.04	**18.3**
11	Nizamuddin			5.04	**5.04**
12	Exhibition-I		10		**10**
13	Exhibition-II				
14	Defence Colony			10.9	**10.9**
15	IG Stadium		10.08		**10.08**
16	Lajpat Nagar			5.04	**5.04**
					156.49
2	**IP Extn.**				
1	School Lane			5.04	**5.04**
2	Scindia House			5.04	**5.04**
3	Vidyut Bhawan			10.08	**10.08**
4	Nirman Bhawan			5.04	**5.04**
5	Dalhousie Road			5.04	**5.04**
					30.24
3	**RPH Station**		20	5.04	**25.04**
1	Lahori Gate			10.45	**10.45**
2	Jama Masjid			5.03	**5.03**
3	Kamla Market			5.45	**5.45**
4	Minto Road			5.45	**5.45**
5	GB Pant Hosp			5.03	**5.03**
6	IG Stadium			5.45	**5.45**
					61.9

Sl. No	Name of the Grid S/Sub-Station	INSTALLED CAPACITY IN MVAR			
		66KV	33kV	11kV	TOTAL
4	**Park Street S/stn**	20	20		**40**
1	Shastri Park		10.896	5.45	**16.346**
2	Faiz Road			10.9	**10.9**
3	Motia Khan			16.3	**16.3**
4	Parshad Nagar			16.3	**16.3**
5	Anand Parbat			10.8	**10.8**
6	Shankar Road			5.04	**5.04**
7	Rama Road			14.4	**14.4**
8	Baird Road			10.08	**10.08**
9	Hanuman Road			5.04	**5.04**
10	Pusa			7.2	**7.2**
11	Ridge Valley				
12	SJ Airport			5.04	**5.04**
13	B. D. Marg				
					157.446
5	**Naraina S/stn**		20	5.04	**25.04**
1	DMS			10.45	**10.45**
2	Mayapuri		10.87	5	**15.87**
3	Inderpuri		13.27	5.04	**18.31**
4	Rewari line			7.2	**7.2**
5	Khyber Lane		10		**10**
6	Kirbi Place			5	**5**
					91.87
6	**Mehrauli S/stn**	80		5.04	**85.04**
1	Adchini			15.12	**15.12**
2	Andheria Bagh			10.85	**10.85**
3	IIT			10.9	**10.9**
4	JNU		10.03	10.08	**20.11**
5	Bijwasan			10.08	**10.08**
6	DC Saket		10.08	4.54	**14.62**
7	Malviya Nagar	21.79			**21.79**
8	C Dot				
9	Vasant kunj B-Blk	21.79		10.9	**32.69**
10	Vasant kunj C-Blk		5.45	**5.45**	**5.45**
11	Palam				
12	IGNOU				
13	R. K. Puram-I			10.08	**10.08**
14	Vasant Vihar			10.08	**10.08**
15	Bhikaji Cama Place	10	10.08	**20.08**	**20.08**
7	**Vasantkunj S/stn**	40		5.04	**45.04**
1	R. K. Puram-II			3.6	**3.6**
2	Vasant kunj C-Blk		5.04	**5.04**	**5.04**
3	Vasant kunj D-Blk	20.16		10.25	**30.41**
4	Race Course			5.04	**5.04**
5	Bapu Dhaam			5.04	**5.04**
6	Nehru Park			5.04	**5.04**
7	Ridge Valley				
					99.21

Sl. No	Name of the Grid S/Sub-Station	INSTALLED CAPACITY IN MVAR			
		66KV	33kV	11kV	**TOTAL**
8	**Okhla S/stn**	60	10	5.04	**75.04**
1	Balaji			7.2	**7.2**
2	East of Kailash			10	**10**
3	Alaknanda			10.85	**10.85**
4	Malviya Nagar		20	10.49	**30.49**
5	Masjid Moth			15.94	**15.94**
6	Nehru Place			21.35	**21.35**
7	Okhla Ph-I	21.79		10.9	**32.69**
8	Okhla Ph-II		20.93	10.49	**31.42**
9	Shivalik			10.9	**10.9**
10	Batra			15.8	**15.8**
11	VSNL			10.8	**10.8**
12	Siri Fort			10.49	**10.49**
13	Tuglakabad			10.8	**10.8**
					293.77
9	**Lodhi Road S/stn**	20		**20**	**20**
1	Defence Colony				
2	Hudco			10.9	**10.9**
3	Lajpat Nagar			5.04	**5.04**
4	Nizamuddin			5.45	**5.45**
5	Vidyut Bhawan			10.08	**10.08**
6	Kidwai Nagar			5.04	**5.04**
7	Ex. Gr. II				
8	IHC				
					56.51
10	**Sarita Vihar S/stn**	20		5.04	**25.04**
1	Sarita Vihar			10.08	**10.08**
2	MCIE			10.06	**10.06**
3	Mathura Road	20.16		10.08	**30.24**
4	Jamia Millia			5.4	**5.4**
5	Sarai Julena			10.9	**10.9**
					91.72
11	**South of Wazirabad**				
1	Bhagirathi		10.03	10.9	**20.93**
2	Ghonda	21.79	22.56	15.94	**60.29**
3	Seelam Pur		10.08	21.39	**31.47**
4	Dwarkapuri			10.06	**10.06**
5	Nandnagri	20.16		16.35	**36.51**
6	Yamuna Vihar			10.8	**10.8**
7	East of Loni Road			10.8	**10.8**
8	Shastri Park			10.9	**10.9**
9	Karawal Nagar			5.4	**5.4**
					197.16

Sl. No	Name of the Grid S/Sub-Station	INSTALLED CAPACITY MVAR			
		66KV	33kV	11kV	**TOTAL**
12	**Geeta Colony**				
1	Geeta Colony			10.49	**10.49**
2	Kanti Nagar			10.9	**10.9**
3	Kailash Nagar			15.48	**15.48**
4	Seelam Pur				
5	Shakar Pur				
					36.87
13	**Gazipur S/stn**	40		5.04	**45.04**
1	Dallupura	21.79		10.9	**32.69**
2	Vivek Vihar			9.57	**9.57**
3	GT Road			10.85	**10.85**
4	Kondli	20.16		10.45	**30.61**
5	MVR-I			10.9	**10.9**
6	MVR-II	20.16		10.9	**31.06**
7	PPG Ind. Area			10.06	**10.06**
					180.78
14	**Patparganj S/stn**	40	20	5.04	**65.04**
1	GH-I	19.89		10.45	**30.34**
2	GH-II	20.09		10.9	**30.99**
3	CBD		10.03	14.94	**24.97**
4	Guru Angad Nagar			15.49	**15.49**
5	Karkadooma		10.8	10.44	**21.24**
6	Preet Vihar			10.07	**10.07**
7	CBD-II			10.8	**10.8**
8	Shakarpur			5.4	**5.4**
9	Jhilmil			10.8	**10.8**
10	Dilshad Garden	20.16		16.35	**36.51**
11	Khichripur	21.79		10.49	**32.28**
12	Mother Dairy				
13	Scope Building				
14	Vivek Vihar				
					293.93
15	**Najafgarh S/stn**	60		5.04	**65.04**
1	A4 Paschim Vihar			10.9	**10.9**
2	Nangloi	21.73		15.85	**37.58**
3	Nangloi W/W	20.89		5.45	**26.34**
4	Pankha Road			15.69	**15.69**
5	Jaffarpur			15.49	**15.49**
6	Inst. Area Janakpuri			15.9	**15.9**
7	Paschimpuri		10.05	15.53	**25.58**
8	Paschim Vihar	41.83		15.44	**57.27**
9	Mukherjee Park			15.49	**15.49**
10	Udyog Nagar			5.04	**5.04**
11	Choukhandi			10.08	**10.08**
					300.4

Sl. No	Name of the Grid S/Sub-Station	INSTALLED CAPACITY			
		66KV	33kV	11kV	**TOTAL**
16	**Pappankalan-I S/stn**	20		5.04	**25.04**
1	Bindapur Grid G-3 PPK	21.73		15.9	**37.63**
2	Bodella-I	20.1		15.9	**36**
3	Bodella-II	21.73		14.53	**36.26**
4	DC Janakpuri			10.04	**10.04**
5	G-2 PPK			10.9	**10.9**
6	G-5 PPK			15.53	**15.53**
7	G-6 PPK			5.45	**5.45**
8	Hari Nagar	21.18		10.49	**31.67**
					208.52
17	**BBMB Rohtak Road**				
1	S.B. Mill			10.08	**10.08**
2	GTK Road			12.64	**12.64**
3	Ram Pura			12.25	**12.25**
4	Rohtak Road			10.08	**10.08**
5	Vishal		10.05	5	**15.05**
6	Madipur			10.43	**10.43**
7	Sudershan Park			10.99	**10.99**
					81.52
18	**Shalimarbagh S/stn**		40	6	**46**
1	S.G.T. Nagar			13.15	**13.15**
2	Wazirpur-1			18.8	**18.8**
3	Wazirpur-2			14.4	**14.4**
4	Shalimarbagh			5.44	**5.44**
5	Ashok Vihar			20.47	**20.47**
6	Rani Bagh			14.4	**14.4**
7	Haiderpur			5.95	**5.95**
					138.61
19	**Subzimandi S/stn**			6	**6**
1	Shakti Nagar			5.04	**5.04**
2	Gulabibagh			7.32	**7.32**
3	Shahzadabagh			18.19	**18.19**
4	Tripolia			14.4	**14.4**
5	B. G. Road				
					50.95
20	**Narela S/stn**	40		5.04	**45.04**
1	A-7 Narela			14.4	**14.4**
2	AIR Kham pur			13.15	**13.15**
3	Badli	20		5.95	**25.95**
4	DSIDC Narela	26.64		5.95	**32.59**
5	DSIDC Narela-2			14.4	**14.4**
6	Jahangirpuri				
					145.53

Sl. No	Name of the Grid S/Sub-Station	INSTALLED CAPACITY IN MVAR			
		66KV	33kV	11kV	**TOTAL**
21	**Gopalpur S/stn**		30	5.04	**35.04**
1	Azad Pur			22.8	**22.8**
2	Hudson Lane			5.95	**5.95**
3	Wazirabad			7.2	**7.2**
4	Indra Vihar			5.95	**5.95**
5	Tri Nagar			14.4	**14.4**
6	GTK Road			12.64	**12.64**
7	Jahangirpuri	26.64	20	5.95	**52.59**
8	Civil lines				
					156.57
22	**Rohini S/stn**	40		6	**46**
1	Rohini Sec-24 Ckt-I			14.4	**14.4**
2	Rohini Sec-24 Ckt-II	26.64		5.95	**32.59**
3	Rohini-1			5.95	**5.95**
4	Rohini-2			13.15	**13.15**
5	Rohini-3			5.95	**5.95**
6	Rohini-4			11.9	**11.9**
7	Rohini-5			13.15	**13.15**
8	Rohini-6	26.64		5.95	**32.59**
9	Mangolpuri-1			20.35	**20.35**
10	Mangolpuri-2	26.64		6	**32.64**
11	Saraswati Garden			11.9	**11.9**
12	Pitam Pura-1	20	20	12.6	**52.6**
13	Pitam Pura-2			5.95	**5.95**
14	Pitam Pura-3			7.32	**7.32**
					306.44
23	**Kanjhawala S/stn**	20		5.04	**25.04**
1	Bawana Clear Water				
2	Pooth Khoord				
					25.04
24	**BAWANA S/stn**				
1	Bawana S/stn No. 6			14.64	**14.64**
2	Bawana S/stn No. 7			7.2	**7.2**
					21.84
25	**Kashmeregate S/stn**			5.04	**5.04**
1	Civil lines			12	**12**
2	Town Hall			10.49	**10.49**
3	Fountain			5.45	**5.45**
					32.98
26	**Pappankalan-II**				
1	DMRC-I				
2	DMRC-II				
					3483.186

20 DETAILS OF BREAK-DOWNS

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	01.09.09	10.07	220KV BTPS – MEHRAULI CKT-II	01.09.09	10.25	CKT. TRIPPED ON 30A, 30G AT BTPS AND ON DIST PROT `A' PHASE ZONE-I, 186 AT MEHRAULI
02	02.09.09	12.32	220KV MEHRAULI – VASANT KUNJ CKT-II	02.09.09	12.46	CKT. TRIPPED ON DIST PROT `A' PHASE AT MEHRAULI AND ON DIST PROT `A' PHASE, 186A, 186 AT VASANT KUNJ
03	02.09.09	07.56	220KV MANDOLA – WAZIRABAD CKT-I & IV	02.09.09	08.31	CKT-I TRIPPED ON DIST PROT `R' PH. ZONE-III & CKT-IV TRIPPED ON `R' PH ZONE-II AT MANDOLA. NO TRIPPING AT WAZIRABAD. CKT.-I & IV CHARGED AT 08.31HRS. AND 08.28HRS RESPECTIVELY.
04	02.09.09	07.56	220/66KV 100MVA PR. TR.-III AT WAZIRABAD	02.09.09	08.19	TR. TRIPPED ON 86, THREE PHASE TRIP, NON DIRECTIONAL E/F ALONG WITH 66KV I/C-III WHICH TRIPPED ON 86.
05	02.09.09	07.56	220KV WAZIRABAD – GEETA COLONY CKT-II	02.09.09	08.19	CKT. TRIPPED ON MAIN-I : ACTIVE GROUP-I, DIST PROT `ABC' PHASE ZONE-I, MAIN-II : DIST PROT `ABC' PHASE ZONE-II AT GEETA COLONY. NO TRIPPING AT WAZIRABAD.
06	02.09.09	07.47	220/33KV 100MVA PR. TR.-II AT LODHI ROAD	02.09.09	12.05	TR. TRIPPED ON POLE DISCREPANCY.
07	02.09.09	10.20	VARIOUS TRIPPING IN DTL SYSTEM			DETAILED REPORT IS AVAILABLE AT SR. NO.`**A**'
08	03.09.09	22.45	220/33KV 100MVA PR. TR.-I AT PARK STREET	30.09.09	24.00	TR. TRIPPED ON BUCHLOZ ALARM, 30A, 30B, 30S, 30G, 30H, 30J, 86B, 86B, INSTAN-TANEOUS E/F ALONG WITH 33KV I/C-I
09	04.09.09	05.31	220/66KV 100MVA PR. TR. AT BAWANA	04.09.09	10.55	TR. TRIPPED ON TR TROUBLE TRIP, 86A, 86B, RE RELIEVE BULB TRIP2.
10	05.09.09	00.05	220/66KV 100MVA PR. TR. AT BAWANA	05.09.09	09.58	TR. TRIPPED ON 86/86A, TRIP GROUP`B', 86B, AUX PR. ½, 30LM, 30MRPRELVAL TRIP ALONG WITH 66KV I/C WHICH TRIPPED ON INTERTRIPPING.
11	05.09.09	17.52	220KV GEETA COLONY – PATPARGANJ CKT-I	05.09.09	18.52	CKT. TRIPPED ON DIST PROT `ABC' PHASE ZONE-I, MAIN-I : 27RYBM 86, 30E, MAIN-II : DIST PROT `ABC' PHASE ZONE-I AT GEETA COLONY
12	06.09.09	17.03	220KV PATPARGANJ – IP CKT-I	06.09.09	17.17	CKT. TRIPPED ON BUS BAR PROT. 96A, 96E, 96G, 96C, 96K, 87A, 87CH, 30A.
13	07.09.09	08.05	66/11KV 20MVA PR. TR.-I AT PAPPANKALNA-II	07.09.09	10.40	TR. TRIPPED ON O/C, 86, LBB PROT.ECTION, PRC CLOSED, BACK UP PROTECTION.
14	07.09.09	14.08	220KV GEETA COLONY – PATPARGANJ CKT-II	07.09.09	14.58	CKT. TRIPPED ON MAIN-I DIST PROT ZONE-I, MAIN-II, DIST PROT `AB' PHASE ZONE-II, 27RYB, 86 AT GEETA COLONY. NO TRIPPING AT PATPARGANJ.
15	09.09.09	14.32	220KV BTPS – MEHRAULI CKT-II	09.09.09	14.34	CKT. TRIPPED ON 186 AT MEHRAULI. NO TRIPPING AT BTPS.
16	10.09.09	03.34	220/66KV 100MVA PR. TR.-III AT NARELA	10.09.09	12.40	TR. TRIPPED ON OLTC BUCHLOZ.
17	10.09.09	04.09	220KV PANIPAT – NARELA CKT-I	10.09.09	04.29	CKT. TRIPPED ON 30G, 186A&B, MICROOHM, CNZ-1 AT NARELA.

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
18	10.09.09	08.58	220/66KV 100MVA PR. TR.-II AT VASANT KUNJ	10.09.09	16.28	TR. TRIPPED ON 30E, 30K, 30, 86 ALONG WITH 33KV I/C-II WHICH TRIPPED ON 86
19	10.09.09	11.01	220/66KV 100MVA PR. TR. AT BAWANA	10.09.09	15.24	TR. TRIPPED ON 86AB, 30A.
20	10.09.09	14.12	220KV BAMNAULI – MEHRAULI CKT-I	10.09.09	20.20	CKT. TRIPPED ON AUTO RECLOSE LOCK OUT, 186A&B, CB POLE DISCREPANCY, 47TF AT BAMNAULI.
21	10.09.09	14.30	33/11KV 20MVA PR. TR.-I AT KASHMIRI GATE	10.09.09	15.30	TR. TRIPPED ON 86, 30G ALONG WITH 11KV I/C-I WHICH TRIPPED ON INTERTRIPPING.
22	11.09.09	19.00	220KV BAMNAULI – PAPPANKALAN-II CKT-II	12.09.09	17.33	CKT. TRIPPED ON DIST PROT `C' PHASE 186A&B AT BAMNAULI. NO TRIPPING AT PAPPANKALAN-II
23	13.09.09	09.50	VARIOUS TRIPPINGS IN DTL SYSTEM			
24	17.09.09	10.54	VARIOUS TRIPPINGS IN DTL SYSTEM			
25	18.09.09	02.43	220KV IP – PRAGATI CKT-I & II	18.09.09	03.11	CKT.-I TRIPPED ON 96F AT PRAGATI. 96F ALSO OPERATED ON CKT-II AT PRAGATI BUT CKT DID NOT TRIP.
26	18.09.09	02.43	220KV PRAGATI – PARK STREET CKT-II	18.09.09	03.14	CKT. TRIPPED ON 96, BUS BAR PROTECTION AT PRAGATI.
27	18.09.09	18.32	220KV GOPALPUR – SUBZI MANDI CKT-II	18.09.09	18.50	CKT. TRIPPED ON DIST PROT `RYB' PHASE ZONE-I AT GOPALPUR. NO TRIPPING AT SUBZI MANDI.
28	18.09.09	19.30	220/66KV 100MVA PR. TR.-III AT NAJAFGARH	18.09.09	19.35	TR. TRIPPED ON 86
29	18.09.09	19.30	66/11KV 20MVA PR. TR.-III AT NAJAFGARH	19.09.09	00.05	TR. TRIPPED ON 51ABC, E/F, 30J
30	19.09.09	10.22	220KV PRAGATI – PARK STREET CKT-II	19.09.09	10.28	CKT. TRIPPED WITHOUT INDICAITON AT BOTH ENDS.
31	19.09.09	17.34	400KV BAWANA – HISSAR CKT.	19.09.09	18.12	CKT. TRIPPED ON 186A&B, Z/AA TIMER CKT. TRIED AT 17.24HRS THROUGH CB-852 BUT AGAIN TRIPPED. CKT. FINALLY CHARGED AT 18.12HRS. THROUGH CB-952
32	20.09.09	13.52	220/66KV 100MVA PR. TR.-II AT PATPARGANJ	20.09.09	14.30	TR. TRIPPED ON 996CB, 86, 64RLV.
33	20.09.09	21.04	220/33KV 100MVA PR. TR.-II AT PARK STREET	21.09.09	03.20	TR. TRIPPED ON 86 ALONG WITH 33KV I/C-II WHICH TRIPPED ON E/F.
34	21.09.09	11.30	220/66KV 100MVA PR. TR.-I AT PAPPANKALAN-II	21.09.09	12.47	TR. TRIPPED ON AIR PRESSURE LOW, LBB PROTECTION RELAY ALONG WITH 66KV I/C-I WHICH TRIPPED ON LBB PROTECTION, E/F, 86
35	25.09.09	07.25	66/11KV 20MVA PR. TR.-I AT KANJHAWALA	25.09.09	15.10	TR. TRIPPED ON 30D, PRV-I, 86 ALONG WITH 11KV I/C-I WHICH TRIPPED ON 86.
36	26.09.09	08.04	220KV SARITA VIHAR – PRAGATI CKT.	26.09.09	08.29	CKT. TRIPPED ON DIST PROT ZONE-I, AUTO RECLOSE LOCK OUT, 186A&B AT SARITA VIHAR AND ON DIST PROT ZONE-I, 186, 186 AT PRAGATI.

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
37	26.09.09	15.13	220KV PATPARGANJ – IP CKT-I	26.09.09	17.10	CKT. TRIPPED ON DIST PROT `ABC' PHASE ZONE-I AT PATPARGANJ AND ON DIST PROT `RYB' PHASE ZONE-I AT IP STATION.
38	28.09.09	07.40	220KV GEETA COLONY – PATPARGANJ CKT-I	28.09.09	07.45	CKT. TRIPPED ON ACTIVE GROUP-I, DIST PROT ZONE-II, MAIN-I : ACTIVE GROUP-I, DIST PROT ZONE-II ABC PHASE MAIN-II, DIST PROT ABC PHASE ZONE-II AT GEETA COLONY. NO TRIPPING AT PATPARGANJ
39	28.09.09	07.40	220KV PATPARGANJ – IP CKT-I	28.09.09	07.58	CKT. TRIPPED ON DIST PROT `ABC' PHASE ZONE-I, AUTO RECLOSE LOCK OUT 186 AT IP AND ON DIST PROT `ABC' PHASE ZONE-II, AUTO RECLOSE LOCK OUT AT PATPARGANJ.
40	28.09.09	09.24	220KV MANDOLA – WAZIRABAD CKT-IV	28.09.09	09.52	CKT. TRIPPED ON CB AUTO RECLOSE, CB AUTO TRIP AT MANDOLA AND ON DIST PROT DIST PROT `RYB' PHASE ZONE-I AT WAZIRABAD
41	30.09.09	12.53	220KV BAMNAULI – MEHRAULI CKT-II	30.09.09	12.59	CKT. TRIPPED ON DIST PROT `C' PHASE ZONE-I AT BAMNAULI AND ON DIST PROT `C' PHASE ZONE-I, ACTIVE GROUP-I, 186 AT MEHRAULI.

A) Subject : Report on Grid Incident on 02.09.2009 in Delhi system.

The following trippings occurred in Delhi system on 02.09.2009 at 10:20Hrs due to reason that Top Bus conductor of R-Phase of 220kV Patparganj – Geeta Colony Ckt-I snapped at 220kV Patparganj S/stn and fell on 220kV Bus-II due to which Bus Protection operated at Patparganj.

(a) 220kV Patparganj

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Geeta Colony Ckt-I	186, Bus Bar prot.	10:20	18:37	
02	220kV IP Ckt-I	186, Bus Bar prot	10:20	18:58	
03	220kV IP Ckt-II	186, Bus Bar prot	10:20	18:58	
04	220/33kV 100MVA Transformer No. 1	86, Bus Bar prot	10:20	10:43	
05	220/33kV 50MVA Transformer No. 2	86, Bus Bar prot	10:20	10:43	
06	220/66kV 100MVA Transformer No. 1	86, Bus Bar prot	10:20	10:43	
07	220kV Geeta Colony Ckt-II	Supply failed	10:20	10:40	

(b) 220kV Geeta Colony

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Patparganj Ckt-I	Supply failed	10:20	18:35	
02	220kV Patparganj Ckt-II	Supply failed	10:20	10:40	
03	220kV Wazirabad Ckt-II	Main-I&II, Dist. Prot. Zone-2, Phase AN	7:56	17:22	At the time of disturbance the Ckt was under S/D for changing LA of R-Phase at SOW end

(c) 220kV South of Wazirabad-II Stn

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Geeta Colony Ckt-II	Supply failed	07:56	17:22	R-phase L.A. damaged
02	220/66kV 100MVA Transformer No. 1II	E/F	07:56	08:55	Load affected 62 MW.
03	220kV Mandola Ckt-I	Supply failed	07:56	08:30	Load affected 52 MW.
04	220kV Mandola Ckt-IV	Supply failed	07:56	08:25	Load affected 30 MW.

(d) 220kV IP Stn

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Patparganj Ckt-I	Dist. Prot. 3-phase trip, Zone-I	10:20	18:09	
02	220kV Patparganj Ckt-II	Dist. Prot. 3-phase trip, Zone-I	10:20	18:18	
03	33kV Bay-2,4, 6, 9, 10, 19, 38, 42	Under Frequency	10:20	10:32	Load relief through Under Frequency Relay Operation was 60MW
04	33kV Bay - 24	Under Frequency	10:20	11:32	Load relief through Under Frequency Relay Operation was 20MW
05	33kV Bay-37, 53 & 54	Under Frequency	10:20	11:32	Load relief through Under Frequency Relay Operation was 27MW
06	33kV Bay- 25	Under Frequency	10:20	12:00	Load relief through Under Frequency Relay Operation was 10MW
07	33kV Bay-5,13,17,30, 34	Under Frequency	10:20	12:40	Load relief through Under Frequency Relay Operation was 30MW

(e) 220kV RPH

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	33kV Bay-1, 2, 5, 6,12, 13, 16, 17,18, 19	Under Frequency	10:20	10:35	Load relief through Under Frequency Relay Operation was 60 MW

System configuration during the incident

At the time of incident, IP, RPH, Pragati (Unit-2 & STG) were connected to Mandola side through 220kV IP Ext – IP – Patparganj – Geeta Colony – Wazirabad – Mandola Ckts. GT Station and Pragati (Unit-II) were connected to BTPS side through 220kV Pragati – Maharani Bagh - Sarita Vihar – BTPS Ckts.

Tripping of 220kV Patparganj - I.P.Ckt-I&II at Patparganj resulting into the tripping of generating units of IP, RPH and Pragati Unit No. 2 & STG. At the time of tripping 220kV Geeta Colony-Wazirabad Ckt-II was under shutdown for replacement of damaged L.A. at Wazirabad .

The load generation position prior to the grid incident was as under:-

Sub-Station	Connected Load in MW	Generation position prior to the incident in MW
Patparganj	150	Nil
IP	147	35
RPH	60	74
Pragati	Nil	203
Geeta Colony	78	
Total	**435**	**312**

The generating units affected was normalized as under :

Generating Station Name	Unit No.	Time of trippings	Time of synchronization	Generation prior to the incident
RPH	1	10:20	11.45	44
	2	10:20	11.52	30
IP	4	10:20	11:38	27
	5	10:20	12.23	8
Pragati	2	10:20	11.41	93
	STG	10:20	11.06	110

Load affected due to the above tripping is as under :-

Duration in hrs.		**Quantum in MW**	**Grid**	**Name of the Ckt.**
From	**To**			
10:15	10:35	28	**RPH**	33kV Bay-12, 16, 17, 19
10:15	10:30	32		33kV Bay-1, 2, 5, 6, 13, 18
10:20	10:32	60	**IP**	33kV Bay-2,4, 6, 9, 10, 19, 38, 42
10:20	11:32	20		33kV Bay - 24
10:20	11:32	27		33kV Bay-37, 53 & 54
10:20	12:00	10		33kV Bay- 25
10:20	12:40	30		33kV Bay-5,13,17,30, 34
10:20	10:43	150	**Patparganj**	Entire Load

20 DETAILS OF UNDERFREQUENCY TRIPPINGS

DATE	S N.	TIME IN HRS.		LOAD AFFECTED IN MW	STAGE / FREQ.	AREAS/ GROUP AFFECTED
		OUT	IN			
01.09.09	1	11:15	11:29	21	**STAGE-I**	33KV LODI ROAD - LAJPAT NAGAR-II CKT.I&II , 11KV FEEDERS
02.09.09	1	19:10	19:15	61	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'C' BLK CKT. I & II
07.09.09	1	22:15	22:25	51	**STAGE-I**	66KV OKHLA - BATRA CKT 33KV OKHLA -TUGLAKABAD CKT, 33KV OKHLA - ALAKNANDA CKT-I
08.09.09	1	19:05	19:15	83	**STAGE-I**	66KV NAJAFGARH - BODELA -II CKT. I & II
13.09.09	1	15:12	15:17	23	**Df/dt Mode**	33KV SHALIMAR BAGH - RANI BAGH CKT.I&II, 33KV SHALIMARBAGH - S.G.T.NAGAR CKT.
	2	19:03	19:27	56	**STAGE-I**	66KV MEHRAULI - VASANT KUNJ `C' BLOCK CKT-I & II
18.09.09	1	21:08	21:10	3	**STAGE-I**	KASHMIRI GATE(220KV) 11KV FEEDERS
	2	18:50	18:57	37	**STAGE-I**	66KV OKHLA - BATRA CKT 33KV OKHLA -TUGLAKABAD CKT, 33KV OKHLA - ALAKNANDA CKT-I
	3	19:10	19:15	0	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'C' BLK CKT. I & II
	4	20:20	20:27	12	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'D' BLOCK CKT I&II AND 02 NOS 11KV FEEDER
	5	19:12	19:14	32	**STAGE-I**	33KV SHALIMAR BAGH - RANI BAGH CKT.I&II, 33KV SHALIMARBAGH - S.G.T.NAGAR CKT.
20.09.09	1	00:38	00:55	15	**STAGE-I**	33KV SUBZI MANDI - B.G.ROAD CKT-I & II, 11KV FEEDERS
22.09.09	1	19:50	19:55	41	**STAGE-I**	66Kv NARELA - JAHANGIRURI CKT.-I&II, 11KV FEEDERS
	2	21:02	21:50	63	**STAGE-I**	33KV OKHLA - OKHLA PH-II CKT I & II, 33KV OKHLA(- BALAJI CKT. -I &II, 33KV OKHLA (220KV) - NEHRU PLACE CKT. IV
23.09.09	1	12:38	12:53	11	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'D' BLOCK CKT I&II,02 NOS 11KV FEEDER
	2	17:20	18:02	4	**STAGE-I**	33KV LODI ROAD - LAJPAT NAGAR-II CKT.I&II , 11KV FEEDERS
	3	18:14	18:30	26	**STAGE-I**	66KV NAJAFGARH - G-5 PAPANKALAN CKT. I&II, 11KV FEEDERS, 20MVA PR. TR. -III AT NAJAFGARH 220KV
	4	18:38	19:01	41	**STAGE-I**	66KV NAJAFGARH - G-5 PAPANKALAN CKT. I&II, 11KV FEEDERS, 20MVA PR. TR. -III AT NAJAFGARH 220KV
	5a	21:12	21:45	20	**STAGE-I**	66KV OKHLA - OKHLA PH -I CKT. I & II
	5b	21:12	21:28	15	**STAGE-I**	33KV OKHLA - MASJID MOTH CKT
	6	21:45	22:00	35	**STAGE-I**	66KV OKHLA - OKHLA PH -I CKT. I & II, 33KV OKHLA - MASJID MOTH CKT

DATE	S N.	TIME IN HRS.		LOAD AFFECTED IN MW	STAGE / FREQ.	AREAS/ GROUP AFFECTED
		OUT	IN			
23.09.09	7	22:45	23:06	60	**STAGE-I**	33KV OKHLA - OKHLA PH-II CKT I & II, 33KV OKHLA(- BALAJI CKT. -I &II, 33KV OKHLA (220KV) - NEHRU PLACE CKT. IV
	8	17:44	18:04	43	**STAGE-I**	66KV WAZIRABAD -II - SHASTRI PARK CKT. I & II
	9	18:37	19:02	68	**STAGE-I**	66KV WAZIRABAD -II (220KV) - GONDA CKT. I & II
	10	17:25	18:00	51	**STAGE-I**	33KV SUBZI MANDI - TRIPOLIA CKT, 33KV SUBZI MANDI – SHAKTI NAGAR CKT, 33KV SUBZI MANDI - GULABI BAGH CKT.
	11	20:33	20:39	62	**STAGE-I**	66kV NARELA - JAHANGIRURI CKT.-I&II, 11KV FEEDERS
	12	21:12	21:31	53	**STAGE-I**	66kV NARELA - BADLI CKT.-I&II, 11KV FEEDERS
	13	21:45	22:15	53	**STAGE-I**	66kV NARELA - BADLI CKT.-I&II, 11KV FEEDERS
24.09.09	1	10:11	10:59	43	**STAGE-I**	66KV OKHLA - OKHLA PH -I CKT. I & II, 33KV OKHLA - MASJID MOTH CKT
	2	11:14	11:30	81	**STAGE-I**	33KV OKHLA - OKHLA PH-II CKT I & II, 33KV OKHLA(- BALAJI CKT. -I &II, 33KV OKHLA (220KV) - NEHRU PLACE CKT. IV
	3	12:35	12:45	17	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'C' BLK CKT. I & II
	4	13:40	14:22	12	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'D' BLOCK CKT I&II,02 NOS 11KV FEEDER
	5	14:08	14:22	10	**STAGE-I**	KASHMIRI GATE(220KV) 11KV FEEDERS
	6	14:32	14:44	10	**STAGE-I**	KASHMIRI GATE(220KV) 11KV FEEDERS
	7	10:10	10:36	48	**STAGE-I**	66kV NARELA - BADLI CKT.-I&II, 11KV FEEDERS
	8	21:05	21:48	80	**STAGE-I**	66kV NARELA - JAHANGIRURI CKT.-I&II, 11KV FEEDERS
25.09.09	1	00:10	00:20	58	**STAGE-I**	66KV OKHLA - BATRA CKT 33KV OKHLA -TUGLAKABAD CKT, 33KV OKHLA - ALAKNANDA CKT-I
	2	00:20	01:20	92	**STAGE-I**	66KV SARITA VIHAR - MATHURA ROAD CKT. I & II
	3	00:30	01:15	58	**STAGE-I**	66KV OKHLA - BATRA CKT 33KV OKHLA -TUGLAKABAD CKT, 33KV OKHLA - ALAKNANDA CKT-I
	4	00:58	01:22	24	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'C' BLK CKT. I & II
	5	02:10	02:25	30	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'C' BLK CKT. I & II 66KV VASANT KUNJ - VASANT KUNJ 'D' BLK CKT I&II, 02 NOS 11KV FEEDER
	6	06:52	06:56	2	**STAGE-I**	33KV LODI ROAD - LAJPAT NAGAR-II CKT.I&II , 11KV FEEDERS

DATE	S N.	TIME IN HRS.		LOAD AFFECTED IN MW	STAGE / FREQ.	AREAS/ GROUP AFFECTED
		OUT	IN			
25.09.09	7	07:15	07:20	24	**STAGE-I**	33KV LODI ROAD - DEFENCE COLONY CKT. I & II, 33KV LODI ROAD - NDSE CKT., 33KV LODI ROAD - NIZAMUDDIN CKT. AND 11KV FEEDERS
	8	09:45	09:59	74	**STAGE-I**	66KV NAJAFGARH - BODELA -II CKT. I & II
	9	12:15	12:33	24	**STAGE-I**	33KV OKHLA -TUGLAKABAD CKT, 33KV OKHLA - ALAKNANDA CKT-I
	10	14:35	15:08	22	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'D' BLOCK CKT I&II,02 NOS 11KV FEEDER
	11	18:11	18:14	3	**STAGE-I**	33KV LODI ROAD - LAJPAT NAGAR-II CKT.I&II , 11KV FEEDERS
26.09.09	1	00:15	01:15	20	**STAGE-I**	33KV OKHLA - OKHLA-II CKT I&II, 33KV OKHLA - NEHRU PLACE CKT III & IV
	2	03:22	03:24	81	**STAGE-I**	66KV SARITA VIHAR - MATHURA ROAD CKT. I & II
	3	05:24	05:34	83	**STAGE-I**	66KV SARITA VIHAR - MATHURA ROAD CKT. I & II
	4	07:18	07:27	1	**STAGE-I**	33KV LODI ROAD - LAJPAT NAGAR-II CKT.I&II , 11KV FEEDERS
	5	22:10	22:55	61	**STAGE-I**	66KV PAPANKALAN-I - BINDAPUR CKT. I & II, 11KV FEEDERS
	6	22:10	22:40	110	**STAGE-I**	66KV NAJAFGARH - BODELA -II CKT. I & II
	7	22:45	22:53	80	**STAGE-I**	66KV NAJAFGARH - BODELA -II CKT. I & II
	8	04:15	04:38	7	**STAGE-I**	KASHMIRI GATE(220KV) 11KV FEEDERS
	9	22:20	22:53	28	**STAGE-I**	66KV GAZIPUR - VIVEK VIHAR CKT. I & II, 11KV FEEDERS
	10	06:20	06:27	17	**STAGE-I**	33KV SUBZI MANDI - SHAHZADAWALA BAGH CKT. I & II, 11KV FEEDERS
	11	23:05	23:35	65	**STAGE-I**	66kV NARELA - JAHANGIRURI CKT.-I&II, 11KV FEEDERS
27.09.09	1	00:31	01:02	26	**STAGE-I**	66KV OKHLA - OKHLA PH -I CKT. I & II, 33KV OKHLA - MASJID MOTH CKT
	2	02:04	03:00	54	**STAGE-I**	66KV OKHLA - BATRA CKT 33KV OKHLA -TUGLAKABAD CKT, 33KV OKHLA - ALAKNANDA CKT-I
	3	03:23	04:03	38	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'C' BLOCK CKT. I & II
	4	04:25	04:45	2	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'D' BLOCK CKT I&II,02 NOS 11KV FEEDER
	5	08:40	09:11	1	**STAGE-I**	LODI ROAD (220KV) 11KV LOAD
	6	04:32	04:47	5	**STAGE-I**	33KV KASHMIRI GATE(220KV)-FOUNTAIN CKT- II

DATE	S N.	TIME IN HRS.		LOAD AFFECTED IN MW	STAGE / FREQ.	AREAS/ GROUP AFFECTED
		OUT	IN			
27.09.09	7	05:23	05:25	4	**STAGE-I**	KASHMIRI GATE(220KV) 11KV FEEDERS
	8	00:31	01:04	25	**STAGE-I**	66kV NARELA - BADLI CKT.-I&II, 11KV FEEDERS
	9	03:35	04:04	35	**STAGE-I**	33KV SHALIMAR BAGH - RANI BAGH CKT.I&II, 33KV SHALIMARBAGH - S.G.T.NAGAR CKT.
29.09.09	1	13:45	14:10	87	**STAGE-I**	66kV NARELA - JAHANGIRURI CKT.-I&II, 11KV FEEDERS
	2	14:07	15:01	32	**STAGE-I**	66kV NARELA - BADLI CKT.-I&II, 11KV FEEDERS
	3	21:04	22:10	21	**STAGE-I**	33KV SUBZI MANDI - SHAHZADAWALA BAGH CKT. I & II, 11KV FEEDERS
	4	22:10	23:10	43	**STAGE-I**	33KV SUBZI MANDI - TRIPOLIA CKT, 33KV SUBZI MANDI – SHAKTI NAGAR CKT, 33KV SUBZI MANDI - GULABI BAGH CKT.
	5	14:10	15:10	37	**STAGE-I**	66KV PAPANKALAN-I - BODELA-I CKT. 66KV PAPANKALAN-I - G-6 PAPANKALAN CKT. I & II, 66KV PAPANKALAN - REWARI LINE CKT.
	6	11:30	11:32	110	**STAGE-I**	66KV SARITA VIHAR - MATHURA ROAD CKT. I & II
	7	11:30	11:32	3	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'D' BLOCK CKT I&II,02 NOS 11KV FEEDER
	8	11:35	11:37	14	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'C' BLK CKT. I & II
	9	14:10	15:05	40	**STAGE-I**	66KV OKHLA - OKHLA PH -I CKT. I & II, 33KV OKHLA - MASJID MOTH CKT
	10	19:12	19:22	5	**STAGE-I**	66KV MEHRAULI - MALVIYA NAGAR CKT. I & II, 11KV I/C -I
	11	20:20	20:30	67	**STAGE-I**	66KV MEHRAULI - VASANT KUNJ `C' BLOCK CKT-I & II
	12	20:45	21:30	67	**STAGE-I**	66KV MEHRAULI - VASANT KUNJ `C' BLOCK CKT-I & II
	13	21:05	22:05	10	**STAGE-I**	66KV MEHRAULI - VASANT KUNJ `D' BLOCK CKT-I & II
	14	20:18	20:35	17	**STAGE-I**	33KV SUBZI MANDI - B.G.ROAD CKT. I & II, 11KV FEEDERS
	15	20:42	21:42	17	**STAGE-I**	33KV SUBZI MANDI - B.G.ROAD CKT. I & II, 11KV FEEDERS
	16	23:40	23:52	58	**STAGE-I**	66KV WAZIRABAD -II - SHASTRI PARK CKT. I & II
30.09.09	1	14:25	14:51	45	**STAGE-I**	66kV NARELA - JAHANGIRURI CKT.-I&II, 11KV FEEDERS
	2	22:05	22:58	15	**STAGE-I**	33KV SUBZI MANDI - SHAHZADAWALA BAGH CKT. I & II, 11KV FEEDERS
	3	05:40	05:50	78	**STAGE-I**	66KV OKHLA - TUGLAKABAD CKT, 33KV OKHLA - ALAKHNANDA CKT.–I, 66KV OKHLA - BATRA CKT , 66KV OKHLA - MALVIYA NAGAR CKT. -III

DATE	S N.	TIME IN HRS.		LOAD AFFECTED IN MW	STAGE / FREQ.	AREAS/ GROUP AFFECTED
		OUT	IN			
30.09.09	4	10:20	10:24	130	**STAGE-I**	66KV SARITA VIHAR - MATHURA ROAD CKT. I & II
	5	10:22	10:23	22	**STAGE-I**	66KV VASANT KUNJ - VASANT KUNJ 'D' BLK CKT I&II 66KV VASANT KUNJ - VASANT KUNJ 'C' BLK CKT. I & II, 02 NOS 11KV FEEDER
	6	13:45	14:00	79	**STAGE-I**	66KV NAJAFGARH - BODELA -II CKT. I & II
	7	14:25	14:51	0	**STAGE-I**	66KV NAJAFGARH - JAFFARPUR CKT. I & II
	8	14:45	14:50	63	**STAGE-I**	66KV PAPANKALAN-i G-2 PAPANKALAN CKT. I & II AND 11KV I/C II & III
	9	22:05	22:58	9	**STAGE-I**	66KV MEHRAULI - VASANT KUNJ `D' BLOCK CKT-I & II
	10	14:43	14:51	30	**STAGE-I**	66KV GAZIPUR - KONDLI CKT. I & II, 11KV FEEDERS
	11	22:35	23:24	84	**STAGE-I**	66KV PATPARGANJ - GROUP HOUSING–I CKT. 66KV PATPARGANJ (220KV) - KHICHRIPUR CKT, 33KV PATPARGANJ - PREET VIHAR CKT, 11KV FEEDERS