

# DELHI TRANSCO LIMITED.

(A Govt. of NCT of Delhi Undertaking)



## STATE LOAD DESPATCH CENTER

REGD. OFFICE : SHAKTI SADAN, KOTLA MARG, NEW DELHI-110002

SLDC Building, 33kV Minto Road Grid Sub-Station, New Delhi-110002

# **Annual Report**

## **2007-08**

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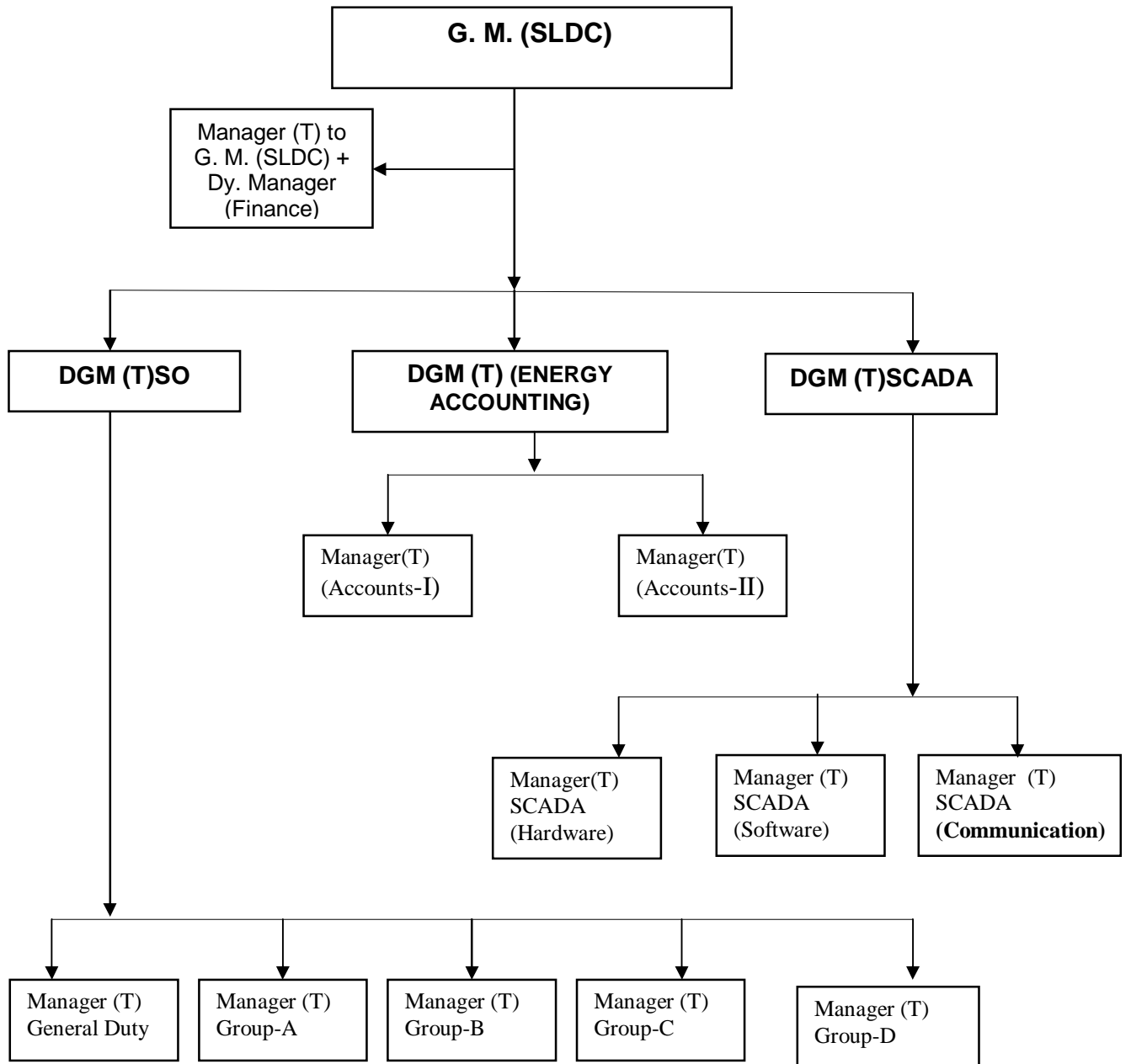
# 1 INTRODUCTION

Delhi Transco Limited is the State Transmission Utility of the National Capital Territory of Delhi. It is responsible for transmission of power at 220KV and 400KV level, besides up gradation operation and maintenance of EHV Network as per system requirements.

After the enactment of Electricity Act 2003, a new department under the name and style of **State Load Despatch Centre (SLDC)** under Delhi Transco Limited was created, as an Apex body to ensure integrated operation of the power system in Delhi. Earlier the department was part of O&M Department of Delhi Transco Ltd / Delhi Vidyut Board. SLDC Delhi started its function on the First of January 2004. SLDC is responsible for the real time Load Despatch function, O&M of SCADA System and Energy Accounting.

It's mission is to facilitate intra and inter state transfer of power with Responsibility, Security and Economy on sound commercial principles.

## 2 ORGANISATIONAL SETUP OF SLDC DEPARTMENT



### **3 Functions of various circles of SLDC**

- i) System Operation
- ii) SCADA Division
- iii) Energy Accounting

#### **3.1 System Operation**

System Operation Circle is mainly responsible for techno-economic scheduling and dispatch of electricity within the NCT of Delhi in accordance with the contracts entered into with the licensees or the generating companies operating in Delhi.

The System Operation Division monitors grid operations, exercise supervision and control over the intra-state transmission system and carry out the real time operation of grid control and dispatch of electricity within Delhi through secure and economic operations of the State Grid in accordance with the Grid standards and the State Grid Code.

The responsibility for implementation of these procedures lies with the Managers (System Operation) General Shift as well as in Manager (System Operation) shifts round the clock under the overall supervision and control of Dy.G.M.(S.O).

#### **3.2 Supervisory Control and Data Acquisition (SCADA)**

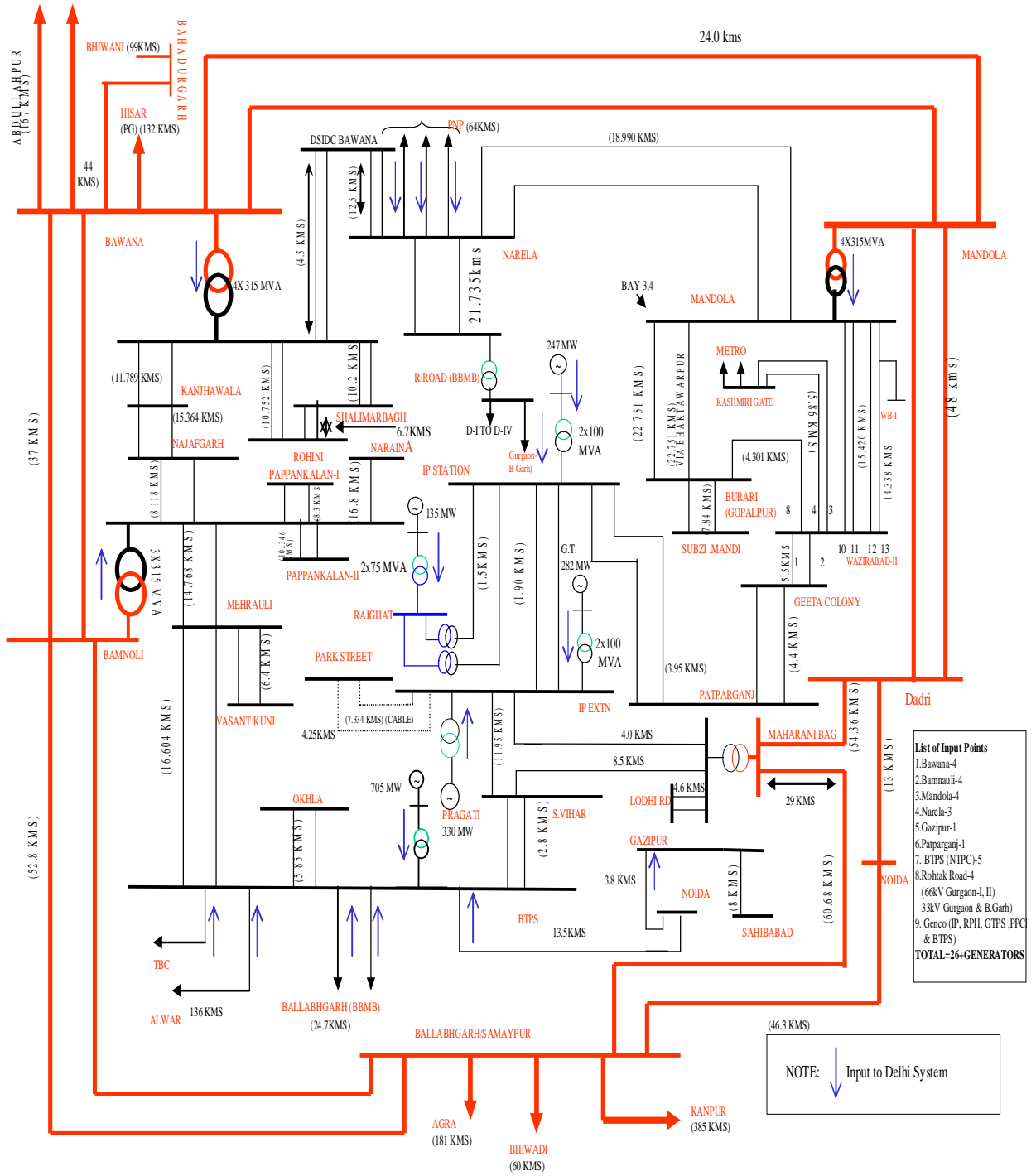
SLDC has a state of art Load despatch centre having SCADA (Supervisor Control And Data Acquisition System) for retrieving information from generating stations and grid sub stations consisting of analog data (like Mega Watt, Voltage, Current, MVar) and digital status of various elements (like Circuit Breaker, Isolator etc.) for real time operation of grid, enabling it to operate safely, securely and economically.

The data from sub station is received through an existing communication ring comprising of OPGW, Microwave and PLCC links. For indicating this data on control room monitors, the hardware and communication links at sub stations are maintained round the clock by the hardware and PLCC sub division of SCADA. The software sub division of SCADA has developed in-house softwares for various activities. Recently scheduling software as per ABT, energy accounting and the transmission system availability have been developed and are in use.

#### **3.3 Energy Accounting**

The circle is to undertake the accounting of the quantity of electricity transmitted through the state grid as envisaged in the Electricity Act. This includes the preparation of State Energy Accounts indicating Availability, Scheduled Generation, Plant Load Factor computation, Open Cycle Operation of Gas Turbines etc. in respect of Generating Stations within Delhi. It has to prepare weekly UI Accounts as per Intrastate UI bills and Reactive Energy transactions. At present, this circle's responsibilities are being discharged by System Operation circle.

### 3.4 Single Line Diagram of Delhi Power System



#### 4 MAJOR ACTIVITIES OF SLDC DURING 2007-08.

In the second phase of power reforms undertaken in Delhi, the power purchase agreements executed by DESU / DVB / DTL have been reassigned to Distribution Licensees / Deemed Distribution Licensees from 01.04.2007. Subsequently, Intrastate ABT has also been introduced in Delhi w.e.f. 01.04.2007 which is first in the country. In discharging statutory responsibilities, so many coordinating activities have been undertaken in SLDC during the year. The details are as under :-

S. No.	Date of meeting	Decision on the issue(s)
1	31.03.2007	a) Distribution Licensees authorized SLDC to schedule from available sources as per requirement of the Grid following the introduction of ABT in Intra State ABT in Delhi b) Operating instructions to be followed in the Intra state ABT regime have been formulated.
2	04.04.2007	a) The UI settlement for Intrastate ABT Operations mechanism has been devised. b) Apportionment of supply of surplus power of Delhi to other states during off peak hours finalized.
3	07.04.2007	Methodology for preparation of UI accounts considering the 11kV feeders through which inter disom transfer power take place in which ABT compliant meters are not installed has been finalized.
4	10.04.2007	Settlement of Intrastate UI Accounts finalized in line with Interstate UI Accounts with the concurrence of all stakeholders.
5	18.04.2007	a. Methodology has been drawn out for provision of actual Ex-bus generation through SCADA values in Control Room at SLDC and its website of Generating stations within Delhi. b. Methodology for drawing out UI accounts for generating stations affected due to the tripping of 220kV BTPS-Sarita Vihar Ckt-I & II thereof islanding of GT & Pragati units and its trippings on 11.04.07 at 10.45hrs.
6	28.04.2007	Methodology drawn out in the wake of change of UI vector following the CERC notification applicable from 30.04.2007.
7	31.05.2007	a. Data acquisition strategy for IP & GT Stn whose actual Ex-bus generation are not available in SLDC in real time basis has been dawn out. b. Scheduling methodology in respect of revision of schedules by SLDC according to the grid conditions has been finalized. c. UI and Reactive Pool Account opened at Connaught Place branch of Corporation Bank has been approved by the stake holders provided the RTGS charges are waived off. d. Operation of IPGCL's GT stations on Open Cycle mode according to the merit order scheduling and dispatch principle has been approved. e. Methodology for UI computation of RPH units which tripped on 08.05.2007 due to bus differential operation on account of kite flying which is not attributable to generator has been finalized. f. The proposal of absorbing night surplus power of Delhi by Rajasthan for the coming winter season was put up before the stake holders for which they agreed to look into the proposal and to discuss in the Delhi Power Procurement Group meeting for taking final decision. g. Scheduling of Pragati power station in the event of closing the units down on account of load crash restricted to 48% of the capacity due to technical reasons.



<b>S. No.</b>	<b>Date of meeting</b>	<b>Decision on the issue(s)</b>
8	09.08.2007	Drawn out strategies to minimize outages and trippings of generating units within Delhi on Independence Day due to kite flying.
9	13.08.2007	Further discussion and decisions to finalize the strategies to meet the eventualities emerging out of frequent trippings of transmission lines due to kite flying on Independence day
10	23.08.2007	To draw out the procedure for Intra Discom transfer of surplus power in the wake of DERC order dated 14.08.2007 on the subject and other related issues of intra state ABT operation in Delhi
11	05.10.2007	To finalize the reply to the petition filed by NRLDC to maintain the transfer capability of inter regional links fixed by NRLDC for safe and secure operation of the combined grid. It was also decided to revise the bills from 9 <sup>th</sup> Week to 19 <sup>th</sup> Week of 2007-08 due to some discrepancies in BRPL, BYPL and NDMCs meter drawal.
12	13.10.2007	Scheduling procedure for surplus power available for inter discom transfer has been finalized.
13	26.11.2007	Regarding provision of Under frequency Relay in Discoms as per the requirement finalized in NRPC and manual shedding in exigency
14	05.12.2007	Swapping procedure of gas allocation between Pragati and Gas Station has been finalized.
15	04.01.2008	Contingency plan to meet the shortage owing to the reduction in availability in Gas Plants due to Gas Platform shut-down for the period 03.01.2008 to 24 days. The auxiliary consumption of IP Station in UI computation has also been decided to revise 11.64% as approved by DERC from 01.04.2007 and revised the UI accounts from the date. The auxiliary consumption of DTL Sub-Station from 01.04.2007 onwards has also been decided to credit to respective discoms from 01.04.2007. To exploit maximum possible generation, it was decided to except the schedule revision of BTPS and other utilities less than 2% of the previous revisions.
16	29.01.2008	The power arrangement of summer 2008 has been reviewed.
17	31.01.2008	The methodology for disposing off surplus power of NDMC after meeting the requirement of discoms of Delhi has been finalized and scheduling thereof.

## 5. SALIENT FEATURES OF DELHI POWER SYSTEM

S.N.	FEATURES	2006-07	2007-08
1.	<b>Effective Generation Capacity within Delhi</b>	(MW)	(MW)
	IP	247.5	247.5
	RPH	135.0	135.0
	GT	282.0	282.0
	PPCL	330.0	330.0
	BTPS	705.0	705.0
	<b>Total</b>	<b>1699.5</b>	<b>1699.5</b>
2.	<b>Maximum Unrestricted Demand (MW)</b>	<b>3983</b> on 07.07.06 at 16:00 hrs	<b>4075</b> on 11.06.07 at 16:00 hrs
3.	<b>Peak Demand met (MW)</b>	<b>3639</b> on 14.07.06 at 20:00 hrs	<b>4030</b> on 11.06.07 at 16:20 hrs
4.	<b>Peak Availability (MW)</b>	<b>3353</b>	<b>3782</b>
5.	<b>Assistance from Grid to balance demand &amp; supply</b>	<b>-286</b>	<b>-247</b>
6.	<b>Load shedding at the time of peak demand met in MW</b>	<b>NIL</b>	<b>15</b>
7.	<b>Load shedding at the time of unrestricted demand in MW</b>	<b>739</b>	<b>186</b>
8.	<b>Shortage(-) / Surplus(+) (MW)</b>	<b>-7.86</b>	<b>-6.13</b>
9.	<b>Maximum Energy consumed in a day(MUs)</b>	<b>76.498</b> On 18.07.06	<b>85.075</b> on 11.06.07
10.	<b>Energy Consumed (MUs.)</b>	<b>21977</b>	<b>22370</b>
11.	<b>Load Shedding in MUs</b>		
	<b>(a)Due to Grid Restrictions</b>		
	<b>(i)Under Frequency Relay Operations</b>	<b>72.394</b>	<b>20.283</b>
	<b>(ii) Load Shedding by</b>		
	NDPL	85.327	38.393
	BSES	197.715	12.385
	NDMC	0.032	0.00
	MES	0.00	0.00
	<b>(iii)due to Transmission constraints in Central Sector</b>		
	<b>Total due to Grid Restrictions</b>	<b>4.747</b>	<b>22.708</b>
	<b>(b)Due to Constraints in Delhi System</b>		
	DTL	12.577	7.591
	NDPL	14.950	14.782
	BSES	21.759	18.498
NDMC	0.000	0.00	
MES	0.000	0.00	
Other	1.780	1.478	
<b>Total</b>	<b>51.066</b>	<b>42.349</b>	
<b>Grand Total</b>	<b>411.370</b>	<b>136.118</b>	
12	<b>Load shedding in %age of Energy Consumption</b>	<b>1.872</b>	<b>0.608</b>

**6. PERFORMANCE OF GENERATING STATIONS WITHIN DELHI DURING YEAR 2007-08**

Power Station	Effective Capacity (MW)	Generation In MUs	%age Availability	% PLF
IP TPS	247.5	1027.499	45.63	45.59
Rajghat TPS	135	897.665	73.5	73.43
Total Thermal	382.5	1925.164	55.47	55.42
Gas Turbine	282	1280.14	60.98	50.89
PPCL	330	2366.037	84.08	80.94
Total Gas	612	3646.177	73.44	67.09
Total Delhi GENCOs	994.5	5571.341	66.52	62.60
BTPS	705	3148.017	91.81	88.8
<b>Total within Delhi</b>	<b>1699.5</b>	<b>8719.358</b>	<b>77.01</b>	<b>73.47</b>

**7. DETAILS OF OUTAGES OF GENERATING STATIONS WITHIN DELHI FOR 2007-08**

**7.1 IP STATION**

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	62.5	08.04.07	21:45	09.04.07	02:30	Turbine Problem
		10.04.07	09:55	10.04.07	11:40	Steam Leakage in Turbine
		10.04.07	15:15	12.04.07	05:45	Steam Leakage in Turbine
		14.04.07	09:20	17.04.07	06:35	Boiler Tube Leakage
		23.04.07	10:40	23.04.07	11:55	Battery Problem
		02.05.07	23:22	04.05.07	14:55	Boiler Tube Leakage
		17.05.07	00:05	18.05.07	11:00	Boiler Tube Leakage
		23.05.07	15:10	23.05.07	16:37	Due to tripping of associated transmission system
		28.05.07	11:25	31.05.07	22:05	Boiler Tube Leakage
		09.06.07	09:40	09.06.07	11:08	Due to tripping of associated transmission system
		13.06.07	06:15	13.06.07	07:50	Due to Differential Relay operated
		01.07.07	17:50	05.07.07	06:00	Boiler Tube Leakage

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	62.5	15.07.07	19:18	20.07.07	20:10	Leakage in Economizer tube
		25.07.07	11:35	27.07.07	10:10	Boiler Tube Leakage
		13.08.07	07:33	13.08.07	17:00	Fire in Electrical Panel Board
		29.08.07	00:15	31.08.07	05:20	Boiler Tube Leakage
		04.09.07	09:37	07.09.07	22:10	Boiler Tube Leakage
		13.09.07	12:30	13.09.07	14:06	Due to Differential Relay operated
		13.09.07	19:25	17.09.07	04:25	Due to unit Transformer problem
		23.09.07	00:15	23.09.07	23:13	Boiler Tube Leakage
		26.09.07	00:13	26.09.07	02:20	Fire in boiler tube
		28.09.07	06:25	28.09.07	07:28	Tripped on furnace disturbance
		01.10.07	07:32	03.10.07	13:25	Boiler Tube Leakage
		18.10.07	16:45	18.10.07	21:20	Bus Differential Operated
		03.11.07	21:02	04.11.07	19:45	Boiler Tube Leakage
		20.11.07	12:25	21.11.07	23:25	Boiler Tube Leakage
		15.12.07	09:32	16.12.07	21:45	Boiler Tube Leakage
		18.12.07	14:25	20.12.07	16:45	Boiler Tube Leakage
		22.12.07	11:55	24.12.07	06:35	Boiler Tube Leakage
		28.01.08	07:35	03.02.08	12:55	Boiler Tube Leakage
		07.02.08	05:20	09.02.08	01:45	Boiler Tube Leakage
		14.02.08	17:25	16.02.08	05:15	Boiler Tube Leakage
		19.02.08	13:35	19.02.08	16:28	Control valve not working
		16.03.08	11:25	17.03.08	23:25	Fire flame out
		18.03.08	06:55	19.03.08	06:35	Boiler Tube Leakage
24.03.08	07:14	25.03.08	21:00	Boiler Tube Leakage		
25.03.08	22:04	26.03.08	00:25	Boiler Tube Leakage		
29.03.08	21:43	29.03.08	22:35	To maintain boiler temp.		
3	62.5	02.04.07	11:03	21.04.07	15:35	Boiler Tube Leakage
		23.05.07	15:10	23.05.07	18:10	Due to tripping of associated transmission system
		25.05.07	17:02	25.05.07	18:12	Boiler Tube Leakage
		30.05.07	02:50	31.05.07	18:30	Boiler Tube Leakage
		01.06.07	16:30	01.06.07	18:32	Due to West Bus no. 1 differential operated
		08.06.07	09:05	11.06.07	04:30	Boiler Tube Leakage
		13.06.07	06:15	13.06.07	07:47	Due to Differential Relay operated
		24.06.07	11:42	24.06.07	20:50	Due to Ash Plant Problem
		07.07.07	00:16	09.07.07	01:27	To attend Boiler Tent House Leakage

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
3	62.5	29.07.07	02:12	31.07.07	03:55	Boiler Tube Leakage & Coal Mill Problem
		10.08.07	12:10	10.08.07	13:20	Electrical Problem
		26.08.07	18:35	28.08.07	04:30	Boiler Tube Leakage
		13.09.07	12:30	13.09.07	18:55	Due to Differential Relay operated
		13.09.07	19:43	14.09.07	02:25	Generator relay Operated
		18.09.07	03:10	20.09.07	21:50	Boiler Tube Leakage
		02.10.07	19:10	05.10.07	10:32	Boiler Tube Leakage
		12.10.07	08:10	18.10.07	14:56	Boiler Tube Leakage
		25.10.07	12:05	26.10.07	17:30	Boiler Tube Leakage
		07.12.07	01:15	09.12.07	01:20	Boiler Tube Leakage
		04.02.08	02:08	07.02.08	04:42	Boiler Tube Leakage
		05.03.08	21:48	09.03.08	05:45	Boiler Tube Leakage
4	62.5	08.04.07	06:57	08.04.07	09:00	Maintenance Work
		13.04.07	19:20	13.04.07	20:22	Flame Failure
		20.04.07	13:06	20.04.07	16:40	Oil Leakage in Generator Transformer Bushing
		25.04.07	00:08	26.04.07	07:10	Boiler Tube Leakage
		12.05.07	00:25	12.05.07	05:58	T/F Oil Leakage, Buchholz Relay operates
		23.05.07	15:10	23.05.07	22:32	Due to System Disturbance
		27.05.07	17:45	27.05.07	23:05	Heavy Leakage in Steam Ejector
		01.06.07	16:35	02.06.07	02:15	Due to West Bus no. 1 differential operated
		13.06.07	06:15	13.06.07	08:45	Due to Differential Relay operated
		16.06.07	00:10	20.06.07	19:31	Problem in Bearing of Sealing Oil Pump
		01.07.07	13:30	03.07.07	09:01	Boiler Tube Leakage
		11.07.07	17:10	14.07.07	00:45	Boiler Tube Leakage
		13.08.07	07:05	14.08.07	00:50	Forced Shut down
		14.08.07	02:53	19.08.07	00:50	Low Vacuum
		19.08.07	02:00	19.08.07	02:40	Machine high Vibration
		01.09.07	16:07	03.09.08	04:45	Boiler Tube Leakage
		13.09.07	12:30	13.09.07	15:02	Differential Relay operated
		13.09.07	19:45	14.09.07	05:45	Damage of Tie Breaker
		05.10.07	21:12	08.10.07	12:40	Boiler Tube Leakage
		18.10.07	17:10	19.10.07	00:15	Bud Differential Operated
		19.01.08	22:28	26.01.08	05:10	Heavy skin casing leakage
		29.01.08	00:52	31.01.08	01:10	Boiler Tube Leakage
		22.03.08	07:27	24.03.08	02:15	Boiler Tube Leakage
30.03.08	13:08	30.03.08	13:55	Fire Flame out		

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
5	60	05.05.07	21:37	07.05.07	10:05	Steam Leakage of Denigrator
		14.05.07	10:05	14.05.07	13:58	Low Vacuum
		21.05.07	16:25	21.05.07	17:35	SF6 Breaker Problem
		23.05.07	15:10	23.05.07	18:40	Due to tripping of associated transmission system
		27.05.07	09:10	03.06.07	08:00	Due to ID Fan Checking
		05.06.07	14:22	05.06.07	21:40	Due to Burning of Lube Oil Pump of Boiler Feed Pump
		09.06.07	03:30	10.06.07	00:50	Due to Heavy Leakage in feed line
		11.06.07	15:02	13.06.07	08:14	S/D due to Vibration in ID Fan 51
		30.06.07	07:10	30.06.07	20:22	Coal Mill Problem
		05.07.07	06:25	10.07.07	12:15	Heavy Leakage in main Oil Pump
		16.07.07	11:10	16.07.07	12:10	Flame failure
		19.07.07	09:41	19.07.07	11:50	Due to Tripping of 33 kV bus 4 & 5 breaker
		25.07.07	12:20	30.07.07	00:55	Boiler Tube Leakage
		03.08.07	13:10	05.08.07	16:02	Oil leakage in Boiler Feed Pump
		06.08.07	09:05	06.08.07	22:46	Coal mill problem
		07.08.07	07:10	07.08.07	23:05	Coal mill problem
		08.08.07	16:22	09.08.07	21:37	Electrical problem
		13.08.07	06:50	14.08.07	05:42	Fire out
		14.08.07	12:43	14.08.07	13:18	Electrical problem
		18.08.07	21:05	19.08.07	03:30	Due to Vacuum Problem
		20.08.07	10:13	21.08.07	00:13	Vacuum low
		23.08.07	07:05	24.08.07	01:58	Leakage in Boiler feed pump
		24.08.07	16:47	24.08.07	20:50	For Aux transformer Connection
		25.08.07	12:17	25.08.07	17:40	Planned S/D
		29.08.07	16:35	29.08.07	18:00	Tripped due to red hot
		29.08.07	21:10	01.09.07	03:55	Heavy BTL
		01.09.07	22:28	19.12.07	20:45	Capital Maintenance
		20.12.07	01:50	20.12.07	08:20	Oil Leakage
		21.12.07	12:10	21.12.07	16:12	Field Earth Fault
		24.12.07	13:00	24.12.07	15:12	Boiler Feed Pump Problem
		25.12.07	13:32	01.01.08	17:53	Boiler Tube Leakage
		03.01.08	14:02	07.04.08	20:10	Stator Problem

7.2 RPH STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	67.5	18.04.07	16:23	18.04.07	17:50	Low Air Pressure
		26.04.07	21:18	27.04.07	03:07	Oil Leakage
		27.04.07	12:26	27.04.07	16:02	Turbine Problem
		29.04.07	18:40	30.04.07	00:10	High Vibration in Turbine
		30.04.07	00:42	30.04.07	01:54	High Drum Level
		13.05.07	07:08	13.05.07	10:12	High Shaft Vibration in Turbine
		23.05.07	15:10	29.05.07	07:45	Due to tripping of associated transmission system
		01.06.07	22:54	09.06.07	22:08	Fire in Turbine
		11.06.07	17:34	01.07.07	00:20	C.W. Line Leakage
		09.07.07	09:00	09.07.07	10:43	Due to tripping of associated transmission system
		26.07.07	13:20	26.07.07	14:59	Control supply problem
		26.07.07	15:17	26.07.07	15:44	Control supply problem
		26.07.07	17:00	26.07.07	18:40	Due to Drum Level Low
		01.08.07	16:14	01.08.07	18:25	Boiler Tube Leakage
		12.08.07	04:22	13.08.07	23:00	Boiler Tube Leakage
		15.08.07	06:48	15.08.07	16:13	Due to tripping of associated transmission system
		16.08.07	17:05	16.08.07	18:56	Due to Bus Differential Relay
		26.08.07	19:03	26.08.07	20:50	Due to Bus Differential Relay
		01.09.07	21:03	02.09.07	08:08	Deairator Problem
		09.09.07	18:05	09.09.07	19:24	Electrical Fault
		09.09.07	20:07	09.09.07	23:37	Level Low
		11.09.07	20:58	11.09.07	22:58	Flame Failure
		17.09.07	00:56	17.09.07	04:40	Due to Control Supply fail
		14.10.07	11:40	14.10.07	12:57	Bus Bar Protection Relay Operated
		14.10.07	13:22	14.10.07	13:40	Tripped in jerk.
		25.10.07	18:08	25.10.07	18:50	Due to Flame Failure
		09.11.07	20:30	11.11.07	02:35	Boiler Tube Leakage
		14.11.07	18:55	15.11.07	05:28	Condenser Tube Leakage
		09.12.07	03:20	10.12.07	04:50	P/L Shut Down
		14.12.07	03:58	14.12.07	05:45	Technical Problem
		14.12.07	06:03	14.12.07	06:25	Tripped in jerk.
		28.12.07	11:05	28.12.07	12:10	Drum Level Low
		28.12.07	13:30	28.12.07	16:05	Boiler Flame Failure
28.12.07	17:06	28.12.07	17:27	Drum Level Low		
25.01.08	13:48	25.01.08	14:40	Flame failure		

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
<b>1</b>	<b>67.5</b>	31.01.08	00:11	16.02.08	06:36	Shut Down
		16.02.08	10:01	16.02.08	14:17	Low oil Pressure
		18.02.08	07:22	19.02.08	07:34	Tripped due to over fluxing in generator
		21.02.08	15:07	21.02.08	18:48	Electrical Fault
		21.02.08	20:35	21.02.08	21:15	Flame Failure
		22.02.08	04:54	22.02.08	11:06	Over Fluxing
		16.03.08	11:31	16.03.08	14:40	Tripped due to switchyard problem
		21.03.08	08:03	21.03.08	09:08	Due to monkey jumping on bay 22
		31.03.08	16:08	03.04.08	14:12	Electrical problem
<b>2</b>	<b>67.5</b>	22.04.07	03:42	22.04.07	05:54	Vibration in Generator
		27.04.07	02:45	27.04.07	04:26	Tripped due to Generator back-up Impedance Relay 21G
		03.05.07	13:24	03.05.07	16:07	Electrical Fault
		08.05.07	18:10	08.05.07	20:25	Bus Differential Relay/C,E/F
		08.05.07	20:45	08.05.07	22:09	Boiler Flame Failure
		17.05.07	11:52	17.05.07	13:01	Tripping of Boiler Feed Pump
		17.05.07	13:17	17.05.07	13:55	Low Drum Level
		23.05.07	15:10	23.05.07	16:58	Due to tripping of associated transmission system
		26.05.07	19:35	26.05.07	20:42	Tripping of Turbine
		02.06.07	10:25	02.06.07	11:50	Due to Generator Shield Failure
		04.06.07	01:30	04.06.07	03:15	To Check the DVR (Digital Voltage Regulator)
		09.06.07	09:40	09.06.07	12:38	Due to tripping of associated transmission system
		11.06.07	17:32	13.06.07	12:33	C.W. Line Leakage
		23.06.07	16:32	25.06.07	10:46	Cooling Tower Leakage
		30.06.07	11:54	30.06.07	14:45	Low Air Pressure
		02.07.07	14:22	02.07.07	16:12	Due to High Vibration in Turbine Shaft
		09.07.07	00:54	10.07.07	00:10	Leakage in Economizer
		28.07.07	00:35	29.07.07	18:20	Boiler Tube Leakage
		05.08.07	02:32	06.08.07	05:45	Boiler Tube Leakage
		12.08.07	10:17	13.08.07	20:58	Shut Down
15.08.07	14:18	15.08.07	17:12	Due to tripping o transmission lines in kite flying		



Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	67.5	16.08.07	17:05	16.08.07	18:56	Due to Bus Differential relay Operated
		28.09.07	15:35	28.09.07	17:02	Supply Problem of Boiler
		06.11.07	03:10	06.11.07	05:05	Due to Furnace Problem
		11.11.07	04:57	11.11.07	07:00	Boiler Tube Leakage
		01.12.07	00:55	02.12.07	08:05	Leakage in Turbine Side
		12.12.07	00:16	14.12.07	14:58	Boiler Feed Pump Trip
		14.12.07	17:24	14.12.07	19:27	Generator Class Relay Trip
		15.12.07	19:42	15.12.07	20:35	Digital Voltage Regulator not operate
		15.12.07	21:02	15.12.07	22:52	Digital Voltage Regulator not operate
		15.12.07	22:58	15.12.07	23:55	Digital Voltage Regulator not operate
		15.12.07	23:57	16.12.07	14:30	Digital Voltage Regulator not operate
		16.12.07	15:07	17.12.07	05:55	Excitation Problem
		17.12.07	06:08	18.12.07	19:02	Boiler Tube Leakage
		22.12.07	11:55			Boiler Tube Leakage
		27.01.08	15:05	28.01.08	06:45	Boiler Tripped
		01.02.08	17:20	01.02.08	18:53	Electrical problem
		06.02.08	00:22	06.02.08	03:27	Due to Excitation Problem
		09.02.08	00:28	09.02.08	06:25	Shut-down
		02.03.08	17:39	03.03.08	11:58	Condenser tube leakage
		06.03.08	00:25	07.03.08	14:00	Boiler Tube Leakage
		08.03.08	00:16	08.03.08	01:56	Turbine tripped
		14.03.08	21:24	15.03.08	09:11	Condenser tube leakage
16.03.08	11:31	16.03.08	15:07	Tripped due to switchyard problem		

### 7.3 GT STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	30	09.04.07	10:10	09.04.07	11:05	Due to Jerk, Auxiliary Supply failed
		22.04.07	09:30	22.04.07	18:56	Backing Down
		23.04.07	08:25	23.04.07	10:15	Electrical Fault
		06.05.07	15:17	06.05.07	21:28	Backing Down
		09.05.30	04:10	09.05.07	17:32	High Vibration in Generator
		10.05.07	01:20	11.05.07	19:20	Unbalanced Load
		11.05.07	21:05	29.05.07	15:58	Electrical Trouble
		14.06.07	20:04	14.06.07	20:13	Due to tripping of associated transmission system
		15.06.07	08:05	16.06.07	12:29	Due to High Frequency

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
<b>1</b>	<b>30</b>	17.06.07	07:10	21.06.07	19:05	Backing Down
		22.06.07	01:40	22.06.07	20:20	Stopped by GT Station due to High Frequency
		23.06.07	01:20	23.06.07	18:45	Stopped by GT Station due to High Frequency
		23.06.07	23:15	25.06.07	10:35	Stopped by GT Station due to High Frequency
		29.06.07	00:35	29.06.07	11:58	Stopped by GT Station due to High Frequency
		02.08.07	03:20	02.08.07	12:40	Backing Down
		06.08.07	02:20	06.08.07	09:10	Backing Down
		09.08.07	14:46	09.08.07	18:57	Reverse Power Relay
		10.08.07	00:20	10.08.07	05:58	Stopped by GT
		11.08.07	02:16	11.08.07	05:55	Due to Gas Restriction
		12.08.07	00:02	12.08.07	05:10	Due to Gas Restriction
		30.08.07	00:35	30.08.07	05:50	Due to Gas Restriction
		01.09.07	12:02	01.09.07	16:05	Planned Shut down
		19.09.07	19:04	19.09.07	19:18	Due to tripping of associated transmission system
		23.09.07	07:40	26.09.07	17:50	Stopped due to Gas Restriction
		29.10.07	11:15	29.10.07	23:20	Due to gas Restriction
		11.11.07	09:25	11.11.07	10:15	Grid Disturbance
		11.11.07	22:25	11.11.07	23:12	Due to jerk
		29.11.07	06:03	29.11.07	08:20	Due to technical Problem
		10.12.07	11:58	10.12.07	14:55	Gas Restriction
		15.12.07	01:28	15.12.07	02:45	FSNL
		21.12.07	16:35	21.12.07	17:40	Tripped on Heavy Jerk
		26.12.07	01:57	26.12.07	02:10	FSNL
		14.01.08	06:01	17.01.08	19:07	Gas Restriction
		28.01.08	20:02	29.01.08	11:55	Gas Restriction
		02.02.08	16:32	04.02.08	17:20	Gas Restriction
		05.02.08	05:02	06.02.08	20:25	Gas Restriction
		11.02.08	14:45	12.02.08	12:40	Gas Restriction
		23.02.08	12:22	23.02.08	13:58	Lube oil Temp. high
		05.03.08	15:22	05.03.08	19:14	Due to fire in STG-I
07.03.08	04:45	07.03.08	05:03	System Disturbance		
07.03.08	06:55	07.03.08	09:22	Tripped on over frequency		
<b>2</b>	<b>30</b>	03.04.07	22:40	06.04.07	14:05	Gas Restriction
		09.04.07	10:10	09.04.07	11:15	Due to Jerk
		22.04.07	09:30	22.04.07	18:54	Backing Down
		06.05.07	11:20	08.05.07	14:12	Backing Down
		08.05.07	16:10	08.05.07	18:43	Lubricating Oil Problem
		09.05.07	18:02	09.05.07	19:44	For Maintaining DC by GT
		11.05.07	22:25	15.05.07	15:40	Backing Down
		16.05.07	21:20	18.05.07	10:42	Backing Down

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	30	18.05.07	12:43	18.05.07	12:56	Due to tripping of associated transmission system
		19.05.07	16:17	20.05.07	01:05	Rectifier Fuse
		20.05.07	17:50	22.05.07	23:34	Backing Down
		23.05.07	15:29	23.05.07	15:56	Due to tripping of associated transmission system
		26.05.07	08:25	26.05.07	11:15	Emergency Shut Down to attend Hot Spot
		06.06.07	12:05	07.06.07	01:10	Stopped due to Gas Restriction
		14.06.07	20:04	14.06.07	20:13	Due to tripping of associated transmission system
		15.06.07	08:05	21.06.07	20:25	Backing Down
		22.06.07	01:10	22.06.07	20:12	Stopped by GT Due to High Frequency
		22.06.07	23:10	23.06.07	19:35	Stopped by GT Due to High Frequency
		23.06.07	23:50	25.06.07	12:05	Stopped by GT Due to High Frequency
		28.06.07	00:05	28.06.07	06:35	Gas Restriction
		28.06.07	13:40	28.06.07	19:12	Stopped by GT Due to High Frequency
		29.06.07	00:05	29.06.07	12:15	Stopped by GT Due to High Frequency
		29.06.07	13:38	30.06.07	15:20	Stopped by GT Due to High Frequency
		15.07.07	16:32	16.07.07	14:10	Stopped BY GT to Maintain Schedule
		06.08.07	06:05	06.08.07	14:55	Backing down
		09.08.07	16:08	09.08.07	16:47	Due to tripping of associated transmission system
		14.08.07	07:20	14.08.07	07:50	Due to tripping of associated transmission system
		25.08.07	03:05	25.08.07	19:05	To attend Bleed Valve problem
		19.09.07	19:04	22.09.07	20:35	Backing down
		27.09.07	02:05	27.09.07	07:50	Backing down
		02.10.07	18:40	03.10.07	05:55	Gas Restriction
		03.10.07	16:35	04.10.07	15:26	Gas Restriction
		04.10.07	22:15	05.10.07	12:20	Gas Restriction
		07.10.07	19:50	08.10.07	12:32	Gas Restriction
		08.10.07	22:10	09.10.07	11:45	Gas Restriction

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	30	09.10.07	20:35	10.10.07	11:45	Gas Restriction
		11.10.07	22:02	12.10.07	13:34	Bleed Valve Mtc.
		21.10.07	16:47	21.10.07	19:23	Stator Earth fault
		11.11.07	09:25	17.11.07	12:05	Gas Restriction
		17.11.07	17:06	20.11.07	19:55	Available on Spot
		20.11.07	20:15	21.11.07	11:58	Gas Restriction
		28.11.07	10:45	28.11.07	11:32	Tripped on Generator Over Voltage
		28.11.07	17:26	28.11.07	18:20	Failure of Mark 4 System
		15.12.07	01:28	15.12.07	02:25	Due to tripping of associated transmission system
		21.12.07	16:50	21.12.07	17:40	Due to tripping of associated transmission system
		26.12.07	01:57	26.12.07	02:28	Tripped on Jerk
		09.01.08	19:02	10.01.08	05:55	Gas Restriction
		10.01.08	19:16	11.01.08	06:20	Gas Restriction
		14.01.08	11:10	19.01.08	11:05	Gas Restriction
		31.01.08	06:05	10.02.08	01:15	Gas Restriction
		13.02.08	15:15	13.02.08	22:15	Gas Restriction
		16.02.08	16:45	16.02.08	20:32	Gas Restriction
		05.03.08	15:22	05.03.08	19:14	Gas Restriction.
		09.03.08	22:46	10.03.08	18:25	Gas Restriction
3	30	06.04.07	00:10	11.05.07	18:25	Planned Shut Down for Overhauling
		14.05.07	20:06	15.05.07	13:07	Heavy Jerk
		18.05.07	03:10	18.05.07	10:45	Backing Down
		18.05.07	12:43	18.05.07	12:56	Full Speed No Load due to Jerk
		20.05.07	04:58	20.05.07	09:14	Start Up Lock Out
		20.05.07	11:00	22.05.07	23:10	Backing Down
		23.05.07	15:29	23.05.07	16:58	Full Speed No Load due to Jerk
		28.05.07	14:20	28.05.07	16:45	Electrical Trouble
		31.05.07	01:05	31.05.07	06:32	Gas Restriction
		01.06.07	14:27	03.06.07	16:15	Due to low vacuum
		13.06.07	04:06	13.06.07	18:20	Tripped on Low Pressure
		14.06.07	20:04	14.06.07	20:16	Due to tripping of associated transmission system
		16.06.07	08:25	21.06.07	19:15	Gas Restriction.
		23.06.07	12:35	23.06.07	20:45	Stopped by GT Due to High Frequency

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
3	30	23.06.07	20:50	25.06.07	12:05	Stopped by GT Due to High Frequency
		29.06.07	01:25	29.06.07	10:50	Backing Down
		06.07.07	18:38	07.07.07	23:25	Tripped
		14.07.07	06:00	14.07.07	20:55	Stopped BY GT to Maintain Schedule
		15.07.07	01:35	16.07.07	18:46	Stopped BY GT to Maintain Schedule
		18.07.07	00:02	18.07.07	06:58	Backing Down
		22.07.07	00:02	22.07.07	06:28	Gas Restriction
		22.07.07	07:45	23.07.07	11:23	Gas Restriction
		01.08.07	02:28	01.08.07	07:47	Gas Restriction
		02.08.07	03:20	04.08.07	09:29	Gas Restriction
		04.08.07	14:46	04.08.07	19:12	Gas Restriction
		05.08.07	06:16	16.08.07	19:20	Gas Restriction
		15.08.07	07:28	15.08.07	22:55	Gas Restriction
		20.08.07	00:02	20.08.07	21:35	Gas Restriction
		06.09.07	03:37	06.09.07	10:18	Gas Restriction
		06.09.07	13:05	06.09.07	17:28	Gas Restriction
		10.09.07	11:00	19.09.07	13:55	Capital Maintenance
		19.09.07	19:04	19.09.07	19:55	Gas Restriction
		12.10.07	15:40	12.10.07	23:32	Gas Restriction
		08.11.07	21:25	09.11.07	09:10	Gas Restriction
		10.11.07	05:27	10.11.07	11:32	Turbine Air Differential Problem
		11.11.07	09:25	11.11.07	12:28	Gas Restriction
		11.11.07	22:25	11.11.07	23:23	Heavy jerk
		17.11.07	12:10	17.11.07	17:04	Gas Restriction
		21.11.07	18:28	25.11.07	22:00	Gas Restriction
		26.11.07	10:21	28.11.07	00:25	Gas Restriction
		28.11.07	10:35	29.11.07	03:25	Gas Restriction
		29.11.07	11:05	02.12.07	02:57	Gas Restriction
		07.12.07	01:20	07.12.07	11:58	Gas Restriction (Available on spot)
		07.12.07	17:05	10.12.07	06:45	Gas Restriction (Available on spot)
		15.12.07	06:05	22.12.07	20:55	Gas Restriction (Available on spot)
		24.12.07	15:05	29.12.07	05:55	Gas Restriction (Available on spot)
29.12.07	14:02	30.12.07	10:20	Gas Restriction (Available on spot)		
30.12.07	12:16	02.01.08	08:55	Gas Restriction (Available on spot)		
08.01.08	23:02	09.01.08	05:57	Gas Restriction		

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
3	30	07.03.08	04:45	07.03.08	04:55	Due to tripping of associated transmission system
		17.03.08	12:17	17.03.08	17:54	Stopped due to overloading of tr.
		21.03.08	10:25	21.03.08	16:24	Shut down of 100MVA Tx.
		22.03.08	18:20	24.03.08	09:40	Backing down
4	30	03.04.07	23:40	04.04.07	12:15	Gas Restriction
		09.04.07	10:35	09.04.07	11:28	High Temperature of Lubricating Oil
		06.05.07	15:17	08.05.07	14:23	Backing Down
		11.05.07	22:25	14.05.07	20:32	Backing Down
		16.05.07	21:25	18.05.07	10:40	Backing Down
		18.05.07	12:43	18.05.07	12:56	Full Speed No Load due to Jerk
		19.05.07	18:20	20.05.07	00:47	Backing Down
		20.05.07	17:50	22.05.07	23:20	Backing Down
		23.05.07	15:29	23.05.07	16:55	Full Speed No Load due to Jerk
		26.05.07	08:15	26.05.07	11:18	Emergency Shut Down to attend Hot Spot
		30.05.07	22:45	31.05.07	06:28	Gas Restriction
		31.05.07	13:58	01.06.07	14:53	Due to tripping of associated transmission system
		14.06.07	20:04	14.06.07	20:11	Due to System Disturbance
		16.06.07	02:17	16.06.07	12:35	Backing Down
		17.06.07	07:10	18.06.07	17:10	Backing Down
		21.06.07	04:45	21.06.07	12:20	Backing Down
		23.06.07	07:15	23.06.07	19:55	Stopped by GT Due to High Frequency
		23.06.07	22:55	24.06.07	06:58	Stopped by GT Due to High Frequency
		24.06.07	05:55	24.06.07	04:55	Backing Down
		24.06.07	05:40	25.06.07	10:36	Backing Down
		29.06.07	01:25	01.07.07	00:28	Backing Down
		06.07.07	03:05	06.07.07	18:58	Backing Down
		08.07.07	02:01	08.07.07	20:15	Due to Gas Restriction
		08.07.07	21:50	09.07.07	19:10	Backing Down
		10.07.07	03:10	10.07.07	11:25	Due to Gas Restriction
		15.07.07	16:16	16.07.07	11:10	Backing Down
20.07.07	00:15	20.07.07	05:50	Due to Gas Restriction		

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
4	30	22.07.07	12:02	22.07.07	06:20	Due to Gas Restriction
		25.07.07	01:02	25.07.07	09:17	Due to Gas Restriction
		01.08.07	19:46	03.08.07	20:24	Due to Gas Restriction
		04.08.07	16:46	06.08.07	19:18	Backing Down
		12.08.07	00:02	12.08.07	05:10	Due to Gas Restriction
		15.08.07	07:15	15.08.07	22:58	Due to Gas Restriction
		20.08.07	00:02	20.08.07	09:57	Due to Gas Restriction
		22.08.07	22:15	23.08.07	05:55	Due to Gas Restriction
		30.08.07	22:40	31.08.07	05:45	Due to Gas Restriction
		31.08.07	21:02	01.09.07	05:58	Due to Gas Restriction
		02.09.07	20:07	03.09.07	05:00	Due to Gas Restriction
		03.09.07	21:05	04.09.07	05:57	Due to Gas Restriction
		04.09.07	22:10	05.09.07	05:58	Due to Gas Restriction
		05.09.07	19:23	06.09.07	10:19	Due to Gas Restriction
		06.09.07	13:03	10.09.07	07:43	Due to Gas Restriction
		19.09.07	19:04	19.09.07	19:58	Backing Down
		05.10.07	22:05	06.10.07	18:45	Gas Restriction
		12.10.07	23:32	14.10.07	00:16	Backing Down
		06.11.07	17:20	06.11.07	19:38	Due to Gas Restriction
		11.11.07	09:25	11.11.07	09:32	Due to Gas Restriction
		11.11.07	22:25	11.11.07	22:48	Tripped
		22.11.07	13:32	24.11.07	00:59	Gas Restriction
		24.11.07	10:03	01.12.07	00:40	Gas Restriction
		01.12.07	12:05	03.12.07	02:52	Gas Restriction
		03.12.07	14:27	04.12.07	07:58	Gas Restriction
		04.12.07	15:05	08.12.07	04:10	Gas Restriction
		08.12.07	11:05	09.12.07	23:32	Gas Restriction
		10.12.07	10:20	10.12.07	11:58	Gas Restriction
		10.12.07	14:55	11.12.07	16:50	Gas Restriction
		19.12.07	14:35	20.12.07	12:10	Gas Restriction
		20.12.07	20:02	21.12.07	23:43	Gas Restriction
		22.12.07	01:20	22.12.07	05:25	Gas Restriction
		22.12.07	14:35	26.12.07	04:28	Gas Restriction
		26.12.07	08:10	29.12.07	07:59	Gas Restriction
		29.12.07	14:02	30.12.07	10:29	Gas Restriction
		30.12.07	12:16	31.12.07	06:16	Gas Restriction
		04.01.08	02:35	04.01.08	17:55	Tripped on Class A relay
		17.02.08	19:37	23.02.08	16:20	Gas Restriction
		23.02.08	21:30	28.02.08	12:10	Gas Restriction
		29.02.08	04:30	29.02.08	18:18	Gas Restriction
		29.02.08	18:37	01.03.08	18:25	Gas Restriction
		02.03.08	16:32	03.03.08	18:05	Gas Restriction
04.03.08	18:31	05.03.08	15:50	Gas Restriction		
07.03.08	04:45	07.03.08	04:58	System disturbance		
07.03.08	16:56	08.03.08	02:55	Technical problem		

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
4	30	08.03.08	21:53	09.03.08	09:45	Gas Restriction
		12.03.08	17:35	13.03.08	09:55	Gas Restriction
		13.03.08	12:52	16.03.08	11:55	Gas Restriction
		17.03.08	12:07	17.03.08	19:14	Due to Gas Restriction
		21.03.08	10:27	21.03.08	16:29	S/D of 100 MVA Tx.
		23.03.08	13:15	24.03.08	06:58	Backing down
5	30	11.04.07	10:45	11.04.07	18:46	Due to Jerk
		14.04.07	07:05	14.04.07	19:10	Maintenance Work
		05.05.07	16:12	05.05.07	17:13	Low Oil
		05.05.07	22:02	06.05.07	09:50	Shut Down to attend Leakage
		23.05.07	15:10	23.05.07	16:28	Due to tripping of associated transmission system
		03.06.07	14:25	03.06.07	15:42	Tripped Due to Loss of Excitation
		18.06.07	17:10	21.06.07	03:35	Stopped for Testing
		21.06.07	10:40	21.06.07	11:08	Due to tripping of associated transmission system
		24.06.07	04:40	24.06.07	11:45	Due to High Frequency
		01.07.07	01:29	11.07.07	14:25	Due to Fire in Starting Diesel Engine
		15.07.07	16:22	16.07.07	11:20	Due to High Frequency
		20.07.07	00:15	20.07.07	05:50	Due to Gas Restriction
		29.07.07	08:35	29.07.07	12:55	Due to Electrical Problem
		30.08.07	12:10	30.08.07	18:35	Electrical Trouble
		09.09.07	02:20	11.09.07	16:02	Backing Down
		19.09.07	19:04	19.09.07	22:20	Backing Down
		27.09.07	07:08	27.09.07	18:45	Electrical Trouble
		14.10.07	02:18	10.11.07	15:50	Major Overhauling
		11.11.07	09:25	11.11.07	14:16	Gas Restriction
		11.11.07	22:25	12.11.07	11:35	Retching Problem
		25.11.07	12:37	25.11.07	12:40	Tripped on Loss of excitation
		30.11.07	23:55	01.12.07	01:10	Tripped on Loss of excitation
		01.12.07	04:02	01.12.07	09:25	Turbine Air Differential.
		10.12.07	16:48	11.12.07	06:20	To attend Hot Spot
		12.12.07	02:02	12.12.07	08:22	Tripped on Loss of excitation
		15.12.07	01:28	15.12.07	01:55	Due to tripping of associated transmission system
		21.12.07	16:50	21.12.07	18:40	Due to tripping of associated transmission system



Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
5	30	26.12.07	01:57	26.12.07	04:28	Tripped on jerk
		06.01.08	12:20	07.01.08	08:45	Gas Restriction
		07.01.08	15:32	12.01.08	12:35	Gas Restriction
		14.01.08	20:47	15.01.08	15:25	Gas Restriction
		19.01.08	12:05	28.01.08	12:25	Gas Restriction.
		10.02.08	03:02	11.02.08	14:35	Gas Restriction
		25.02.08	19:02	26.02.08	14:55	Gas Restriction
		27.02.08	08:15	29.02.08	18:35	Gas Restriction
		06.03.08	17:32	07.03.08	16:45	C & I problem
		08.03.08	02:26	12.03.08	16:44	C & I problem
6	30	06.04.07	07:35	06.04.07	08:50	Turbine Compartment Problem
		16.04.07	14:48	16.04.07	16:30	Electrical Trouble
		18.05.07	12:43	18.05.07	19:07	Due to Tripping
		23.05.07	15:29	23.05.07	15:50	Full Speed No Load due to Jerk
		03.06.07	09:35	03.06.07	14:18	Due on Gas Fuel Hydraulic Trip Low Pressure
		04.06.07	02:32	05.06.07	23:42	Due to Oil Leakage and Hydraulic Trip Pressure very Low
		16.06.07	08:35	16.06.07	09:55	Shut Down due to Electrical Trouble
		21.06.07	10:40	21.06.07	11:10	Due to tripping of associated transmission system
		21.06.07	12:22	22.06.07	18:55	Due to Boiler no. 6 is not in Service.
		29.06.07	02:05	29.06.07	03:35	Due to High Frequency
		30.06.07	15:25	02.07.07	23:45	Stopped to Attend HRSG problem.
		10.07.07	11:32	10.07.07	21:35	Technical Fault
		11.07.07	02:32	12.07.07	17:58	Backing Down
		14.07.07	06:00	15.07.07	16:17	Backing Down
		09.09.07	01:25	10.09.07	15:10	Backing Down
		19.09.07	19:04	19.09.07	19:26	Backing Down
		09.10.07	15:50	09.10.07	17:04	Electrical trouble with HRSG
		10.10.07	12:37	10.10.07	16:35	Electrical Trouble
		11.10.07	22:20	11.10.07	22:55	Electrical Trouble
		21.10.07	21:31	21.10.07	23:45	Control System Failed
		11.11.07	09:25	11.11.07	09:32	Gas restriction
		11.11.07	22:25	11.11.07	23:50	Jerk in the sytem
		25.11.07	11:32	25.11.07	16:25	Stopped for Maintenance
		30.11.07	21:22	01.12.07	01:56	Jerk in the sytem
		15.12.07	01:28	15.12.07	01:46	Jerk in the sytem
		18.12.07	11:50	18.12.07	13:10	Technical Problem

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
		21.12.07	16:50	21.12.07	17:20	Due to tripping of associated transmission system
		26.12.07	01:57	26.12.07	02:07	Backing down
		31.12.07	06:20	02.01.08	09:28	Backing down
		08.01.08	06.15	12.01.08	20.28	Gas Restriction
		13.01.08	01.30	14.01.08	11.08	Gas Restriction
		16.01.08	19.05	17.01.08	13.25	Gas Restriction
		27.01.08	16.32	27.01.08	17.51	Numerical Relay Operated
		12.02.08	13:55	13.02.08	15:10	Gas restriction
		13.02.08	22:20	16.02.08	00:50	Gas restriction
		16.02.08	18:15	17.02.08	18:52	Gas restriction
		18.02.08	14:02	18.02.08	16:50	Gas restriction
		07.03.08	04:45	07.03.08	04:50	Due to tripping of associated transmission system
STG1	34	27.11.06	07.35	29.05.07	14.58	Major overhauling.
		29.05.07	15:26	30.05.07	19:15	High Vibration
		30.05.07	23:52	31.05.07	12:40	Vacuum Problem
		31.05.07	22:15	01.06.07	16:35	Tripped without any Abnormality
		01.06.07	18:32	01.06.07	19:20	Low Vacuum
		03.06.07	13:24	20.07.07	14:48	Low Vacuum
		20.07.07	23.04	21.07.07	13:23	Technical Problem
		21.07.07	16:22	21.07.07	21:35	Technical Problem
		23.07.07	18:01	24.07.07	09:45	Electrical Trouble
		28.07.07	21:55	01.08.07	20:15	High Vibration in Bearing
		02.08.07	16:25	02.08.07	16:55	Relay Operated
		05.08.07	13:15	06.08.07	12:58	Stopped for Turbine Analysis Inspection
		09.08.07	16:08	09.08.07	17:58	Due to tripping of associated transmission system
		09.08.07	19:30	10.08.07	01:25	Tripped due to 66kV breaker tripping.
		28.08.07	08:18	28.08.07	16:07	Aux. Supply Fail
		29.08.07	06:50	30.08.07	16:35	Short Ckt in CEP Pump
		14.09.07	03.02	21.11.07	18.35	Problem in Exciter.
		23.11.07	14:25	23.11.07	15:56	Tripped due to boiler feed pump tripping
		26.11.07	18:05	26.11.07	22:45	Technical problem
		04.12.07	18.25	05.12.07	06.42	Leakage in Lube oil
		12.12.07	04.07	13.12.07	08.05	Tubine air differential high
		15.12.07	01.28	15.12.07	04.50	Jerk in the system
		21.12.07	16.35	21.12.07	20.15	Tripped on jerk
		22.12.07	08.32	22.12.07	11.32	Class `A` Relay
		04.01.08	02.35	04.01.08	17.55	Tripped on Class `A`
		14.01.08	11.12	17.01.08	23.53	Stopped due to GT-I & II
29.01.08	17.10	29.01.08	18.06	C&I Problem.		

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG1	34	12.02.08	14:55	12.02.08	18:40	To clean BFP Suction Stainer
		12.02.08	20:25	12.02.08	22:22	Stopped for maintenance work.
		16.02.08	15:15	16.02.08	17:25	Boiler feed pump problem
		01.03.08	19:25	01.03.08	20:45	Shut-down
		01.03.08	22:10	02.03.08	02:10	Due to Ch. 1 & 2 operated
		05.03.08	15:22	11.03.08	22:25	Due to fire in HSRG Unit
		12.03.08	22:53	12.03.08	23:07	C & I Problem
		14.03.08	15.10	14.03.08	16.02	Class `A` Protection
		14.03.08	16.05	14.03.08	18.25	Class `A` Protection
		25.03.08	20:30	26.03.08	11:40	Channel 1 & 2
		31.03.08	01:22	31.03.08	02:12	Channel 1 & 2
STG2	34	14.12.06	12.45	01.10.08	20.52	Tripped on Channel-1 & 2. Taken for major overhauling.
STG3	34	09.04.07	10.10	09.04.07	11.35	Due to jerk
		21.04.07	02.00	22.04.07	19.50	To attend leakage in PRDS
		25.04.07	04:40	25.04.07	08:17	Due to Failure of Parameter
		28.04.07	06:31	28.04.07	20:05	Tripped due to Heavy Jerk
		18.05.07	12:43	18.05.07	13:55	Due to tripping of associated transmission system
		23.05.07	15:10	23.05.07	16:58	Due to tripping of associated transmission system
		14.06.07	19.50	14.06.07	20.25	Tripped alongwith GT-5&6
		16.06.07	16:45	16.06.07	17:10	Tripped due to Heavy Jerk
		21.06.07	10:40	21.06.07	12:25	Due to tripping of associated transmission system
		29.06.07	00:55	24.07.07	17:10	Tripped due to Puncture of Diaphragm of Steam Turbine
		25.07.07	02:55	25.07.07	16:10	Technical Problem
		10.08.07	12:35	11.08.07	19:10	Due to Channel I & II Operated
		11.08.07	23.20	12.08.07	02.16	Stopped due to low oil pressure.
		09.09.07	00:05	16.09.07	01:40	To attend the fault of oil wapers leakage
		19.09.07	18:58	19.09.07	22:40	Backing down of GTs
19.09.07	22:55	19.09.07	23:20	Backing down of GTs		

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG3	34	09.10.07	16:20	09.10.07	16:45	Channel I & II tripped
		21.10.07	21:31	22.10.07	01:48	Tripping
		11.11.07	09:25	11.11.07	12:40	Due to tripping of associated transmission system
		11.11.07	22:25	12.11.07	00:35	Tripped with Heavy Jerk
		20.11.07	14:50	20.11.07	16:19	Technical Problem
		25.11.07	12:37	25.11.07	12:56	Due to tripping of associated transmission system
		25.11.07	13:22	25.11.07	13:35	Due to tripping of GT-V
		30.11.07	23:55	01.12.07	01:58	Tripped on Loss of Excitation
		11.12.07	16:45	11.12.07	18:55	To Attend the Hot Spot
		15.12.07	01:28	15.12.07	02:40	Due to tripping of associated transmission system
		19.12.07	16:10	19.12.07	16:40	Tripped on jerk
		20.12.07	13:37	20.12.07	16:28	Tripped on jerk
		21.12.07	16:35	21.12.07	18:50	Tripped on Jerk
		08.01.08	06:15	12.01.08	19:46	Stopped along with GT-6
		18.01.08	18:28	18.01.08	19:05	Channel 1 & 2 operated
		18.01.08	19:35	18.01.08	20:05	Channel 1 & 2 operated
		18.01.08	20:15	18.01.08	20:35	Channel 1 & 2 operated
		19.01.08	06:45	19.01.08	14:30	Technical problem
		27.01.08	16:32	27.01.08	18:37	Electrical problem
		07.03.08	04:45	07.03.08	11:55	Due to tripping of associated transmission system
		11.03.08	11:45	11.03.08	13:06	Ch. 1 & 2 operated
		11.03.08	22:15	13.03.08	01:40	To attend leakage
		13.03.08	13:05	13.03.08	18:58	Shut-down

#### 7.4 PRAGATI STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	104	<b>Date</b>	<b>Time</b>	<b>Date</b>	<b>Time</b>	
		06.05.07	15:20	07.05.07	17:11	Backing Down
		23.05.07	15:10	23.05.07	16:44	Due to Grid Disturbance
		14.06.07	19:46	15.06.07	02:43	Due to High Frequency & System Disturbance
		21.06.07	10:48	21.06.07	11:56	Due to tripping of associated transmission system

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
<b>1</b>	<b>104</b>	15.09.07	14:26	15.09.07	19:46	Planned Shut down
		06.11.07	13:50	07.11.07	16:35	Technical problem
		14.11.07	06:05	15.11.07	19:10	S/D for Boiler Inspection
		24.11.07	16:45	24.11.07	19:40	Technical problem
		14.12.07	05:22	14.12.07	06:05	Tripped on Jerk
		11.01.08	15:15	14.01.08	12:22	Gas Restriction
		23.01.08	12:52	23.01.08	13:20	Technical Problem
		23.02.08	08:58	23.02.08	10:49	Electrical Fault
		05.03.08	21:15	24.04.08	14:31	Planned shut-down.
<b>2</b>	<b>104</b>	26.04.07	16:30	26.04.07	19:09	Surge Ratio Problem
		23.05.07	15:10	23.05.07	17:23	Due to tripping of associated transmission system
		02.06.07	09:13	02.06.07	11:40	Hot Spot
		05.06.07	09:55	05.06.07	10:28	Fault in Mark 5
		09.06.07	09:43	09.06.07	10:22	Due to tripping of associated transmission system
		13.06.07	06:15	13.06.07	06:23	FSNL
		27.06.07	01:10	29.06.07	15:25	Due to Technical Problem
		02.07.07	16:44	03.07.07	19:36	Due to Auto Reignition in Primary Zone
		13.08.07	17:26	13.08.07	20:58	Due to tripping of associated transmission system
		15.09.07	06:55	15.09.07	12:43	Due to tripping of associated transmission system
		19.09.07	18:56	19.09.07	19:18	Due to tripping of associated transmission system
		02.01.08	12:01	08.01.08	09:49	Due to non availability of gas
		23.01.08	12:52	23.01.08	13:25	Technical Problem
		23.02.08	08:58	23.02.08	15:35	Electrical Fault
19.03.08	11:45	19.03.08	12:05	Due to high frequency		
<b>STG</b>	<b>122</b>	23.05.07	15:10	23.05.07	19:30	Due to tripping of associated transmission system
		05.06.07	10:21	05.06.07	10:58	Tripped due to Instability

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG	122	09.06.07	09:43	09.06.07	11:46	Due to tripping of associated transmission system
		14.06.07	19:46	14.06.07	21:26	Due to tripping of associated transmission system
		19.06.07	12:20	19.06.07	13:05	Tripping
		21.06.07	10:48	21.06.07	11:24	Due to tripping of associated transmission system
		09.08.07	15:03	09.08.07	17:05	Due to technical problem
		14.09.07	17:16	14.09.07	18:50	Control Ckt Problem
		12.10.07	12:58	12.10.07	15:15	Due to tripping of associated transmission system
		14.12.07	05:22	14.12.07	12:55	Due to tripping of associated transmission system
		25.12.07	06:34	25.12.07	09:31	Tripped on Heavy Jerk
		12.01.08	04:58	12.01.08	05:50	Technical Problem
		13.01.08	22:06	13.01.08	23:05	Tripped due to internal Technical problem
		27.01.08	15:08	27.01.08	16:10	Tripped on Heavy Jerk
		23.02.08	08:58	23.02.08	12:25	Electrical Problem
		01.03.08	14:32	11.03.08	00:10	S/D for maintenance work
		11.03.08	00:50	11.03.08	01:32	Electrical problem
		21.03.08	17:23	28.03.08	19:02	Due to heavy vibration.

## 7.5 BADARPUR THERMAL POWER STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	95	11.04.07	21:01	12.04.07	22:12	Boiler Tube Leakage
		01.05.07	22:33	02.05.07	23:17	Boiler Tube Leakage
		19.05.07	19:28	21.05.07	10:36	Backing Down due to High Frequency
		16.06.07	10:14	18.06.07	08:45	Backing Down due to High Frequency
		29.07.07	23:09	31.07.07	01:59	Boiler Tube Leakage
		28.08.07	20:42	29.08.07	19:35	Boiler Tube Leakage
		01.10.07	00:04	12.10.07	16:19	Shut Down for Mtc.
		12.10.07	16:54	12.10.07	17:30	Tripped on AVR Problem
		19.12.07	20:08	19.12.07	21:53	Due to Furnace Vacuum
		19.12.07	22:08	19.12.07	22:23	Due to Control Valve Problem

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	95	19.12.07	22:36	20.12.07	02:59	Due to Control Valve Problem
		19.03.08	11:29	20.03.08	00:28	Bus tripping
2	95	16.06.07	10:08	25.06.07	13:25	Backing Down
		30.01.08	01:20	21.02.08	00:45	Shut-down for Boiler Overhauling
		19.03.08	11:35	19.03.08	14:32	Bus tripping
		19.03.08	17:25	19.03.08	19:44	Bus tripping
		28.03.08	22:53	29.03.08	23:57	Boiler Tube Leakage
3	95	05.07.07	01:08	27.07.07	01:58	Capital Shut Down
		27.07.07	03:37	27.07.07	04:53	Furnace pressure high (backing down)
		27.07.07	23:22	28.07.07	01:18	Under Reserve Shut down
		28.07.07	18:06	28.07.07	20:07	Tripped due to Furnace Problem
		04.08.07	17:27	04.08.07	18:24	Furnace Pressure high.
		19.08.07	11:22	20.08.07	06:08	Backing down.
		21.08.07	09:48	21.08.07	12:43	Due to Electrical Protection
		21.08.07	13:16	21.08.07	14:54	Due to Electrical Protection
		16.12.07	05:22	16.12.07	07:57	Auxiliary supply problem.
		19.03.08	11:29	19.03.08	14:58	Bus tripping
4	210	07.04.07	12:31	08.04.07	09:31	Boiler Tube Leakage
		18.04.07	18:26	18.04.07	21:41	Electrical Fault
		12.05.07	10:50	14.05.07	08:57	Backing Down
		10.06.07	15:06	11.06.07	14:45	Boiler Tube Leakage
		28.07.07	15:35	28.07.07	16:46	Furnace Problem
		24.08.07	21:07	27.08.07	11:34	Boiler Tube Leakage
		03.09.07	16:14	04.09.07	05:18	Electrical Fault
		16.01.08	07:35	16.01.08	16.42	Compiling failure.
		15.03.08	00:05	05.04.08	05:50	Planned shut-down
5	210	10.04.07	14:05	21.04.07	15:37	Problem in Seal Oil System
		27.07.07	19:02	08.09.07	00:53	Turbine Bearing Vibration High
		11.09.07	14:12	12.09.07	00:28	Turbine vibration Problem
		28.09.07	23:54	29.09.07	14:30	Back down
		18.10.07	16:44	19.10.07	23:09	Boiler tube leakage
		16.12.07	20:02	16.12.07	22:13	Due to Furnace protection
		19.03.08	11:29	19.03.08	16:36	Bus tripping
		31.03.08	23:30	02.04.08	05:52	Boiler tube leakage

## 8. POWER SUPPLY POSITION OF DELHI DURING 2007-08

### 8.1 Power supply position during the month of April 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	78.698	76.146	78.698	76.146
2	RIHAND-I	69.438	67.187	69.438	67.187
3	RIHAND-II	90.183	87.259	90.183	87.259
4	UNCHAHAR-I	15.924	15.408	15.863	15.349
5	UNCHAHAR-II	33.113	32.040	32.991	31.921
6	UNCHAHAR-III	19.772	19.131	19.668	19.031
7	DADRI(TH)	510.494	493.946	507.469	491.019
8	FARAKA	1.923	1.860	1.906	1.844
9	KHELGAON	34.209	33.100	33.669	32.578
10	TALA	5.742	5.556	5.742	5.556
11	ANTA(GT)	26.377	25.520	26.257	25.404
12	ANTA(Liquid)	0.000	0.000	0.000	0.000
13	ANTA(RLNG)	3.306	3.200	3.278	3.173
14	AURAIYA(GT)	34.536	33.415	34.361	33.247
15	AURAIYA(Liquid)	0.000	0.000	0.000	0.000
16	AURAIYA(RLNG)	7.679	7.432	7.601	7.357
17	DADRI(GT)	50.816	49.166	50.572	48.930
18	DADRI(Liquid)	0.000	0.000	0.000	0.000
19	DADRI (RLNG)	8.939	8.652	8.851	8.567
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	<b>991.149</b>	<b>959.018</b>	<b>986.547</b>	<b>954.568</b>
20	TANAKPUR	2.885	2.792	2.885	2.792
21	CHAMERA-I	26.066	25.221	22.916	22.172
22	CHAMERA-II	25.867	25.030	24.235	23.451
23	BAIRA-SUIL	13.622	13.180	12.541	12.134
24	SALAL	45.514	44.039	45.514	44.039
25	DULASTI	28.778	27.848	27.428	26.542
26	DAULI GANGA	17.416	16.854	9.636	9.324
27	URI(HEP)	37.383	36.171	37.383	36.171
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>197.531</b>	<b>191.135</b>	<b>182.538</b>	<b>176.625</b>
28	NAPP	0.000	0.000	0.000	0.000
29	RAPP(B-4)	0.000	0.000	0.000	0.000
30	RAPP(B-3)	1.066	1.031	1.063	1.028
C	<b>TOTAL NPC (28 TO 30)</b>	<b>1.066</b>	<b>1.031</b>	<b>1.063</b>	<b>1.028</b>
31	TEHRI	9.388	9.084	9.388	9.084
32	NATHPA JHAKHRI	45.602	44.127	45.602	44.127
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1244.736</b>	<b>1204.395</b>	<b>1225.138</b>	<b>1185.432</b>



Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	HPSEB	68.023	65.810	68.023	65.810
34	DVC(ER)	56.237	54.543	54.543	52.779
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 34)</b>	<b>124.260</b>	<b>120.353</b>	<b>122.566</b>	<b>118.589</b>
	<b>EXPORT OF POWER</b>				
35	TATA POWER CO.LTD.(TPCL)	0.145	0.150	0.145	0.150
36	UTTAR PRADESH	51.217	52.938	51.217	52.938
<b>F</b>	<b>TOTAL EXPORT (TOTAL 35 TO 36)</b>	<b>51.362</b>	<b>53.088</b>	<b>51.362</b>	<b>53.088</b>
	<b>INFIRM POWER</b>				
37	DULASTI	2.334	2.258	2.334	2.258
38	KHELGAON	0.000	0.000	0.000	0.000
39	TEHRI	0.000	0.000	0.000	0.000
<b>G</b>	<b>TOTAL INFORM POWER (TTAL 37 TO 39)</b>	<b>2.334</b>	<b>2.258</b>	<b>2.334</b>	<b>2.258</b>
H	TOTAL DRAWAL FROM THE NORTHERN GRID	1319.968	1273.918	1298.676	1253.191
I	OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID				-115.514 (-102.268)
	<b>AVAILABILITY FROM OWN SOURCES</b>	-			
40	IP				81.213
41	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				18.881
42	NET GENERATION AVAILABILITY FOR DELHI IN IP (40-41)				62.332
43	RPH				63.192
44	GT				107.826
45	PRAGATI				217.783
46	TOTAL AVAIL.FROM OWN SOURCES (42+43+44+45)				451.133
47	IMPORT FROM BTPS				351.368
J	TOTAL AVAILABILITY WITHIN DELHI (46+47)				802.501
K	TOTAL CONSUMPTION				1940.178
L	LOAD SHEDDING				6.835
M	REQUIREMENT				1947.013
N	% DEPENDENCE ON N.GRID				64.592
O	AUX. CON. OF STATIONS WITHIN DELHI				25.130
P	<b>NET CONSUMPTION OF DELHI</b>				<b>1915.048</b>

Figures in parenthesis correspond to the UI billing figures

## 8.2 Power supply position during the month of May 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	116.735	113.368	116.527	113.166
2	RIHAND-I	72.246	70.173	72.092	70.024
3	RIHAND-II	98.661	95.823	98.469	95.637
4	UNCHAHAR-I	17.471	16.968	16.916	16.429
5	UNCHAHAR-II	23.282	22.618	22.670	22.022
6	UNCHAHAR-III	22.514	21.867	21.809	21.181
7	DADRI(TH)	522.971	507.953	505.965	491.417
8	FARAKA	2.248	2.183	2.248	2.183
9	KHELGAON	36.134	35.097	36.134	35.097
10	TALA	6.271	6.090	6.271	6.090
11	ANTA(GT)	22.419	21.776	21.723	21.100
12	ANTA(Liquid)	0.000	0.000	0.000	0.000
13	ANTA(RLNG)	11.039	10.719	2.130	2.068
14	AURAIYA(GT)	31.677	30.768	30.762	29.879
15	AURAIYA(Liquid)	0.000	0.000	0.000	0.000
16	AURAIYA(RLNG)	21.913	21.282	4.278	4.155
17	DADRI(GT)	41.796	40.598	40.502	39.340
18	DADRI(Liquid)	0.000	0.000	0.000	0.000
19	DADRI (RLNG)	24.950	24.231	4.906	4.766
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	<b>1072.327</b>	<b>1041.514</b>	<b>1003.402</b>	<b>974.554</b>
20	TANAKPUR	3.646	3.541	3.646	3.541
21	CHAMERA-I	30.106	29.247	22.765	22.117
22	CHAMERA-II	32.129	31.208	30.003	29.147
23	BAIRA-SUIL	14.064	13.663	9.193	8.932
24	SALAL	50.076	48.649	50.076	48.649
25	DULASTI	34.391	33.406	34.391	33.406
26	DAULI GANGA	26.107	25.359	14.723	14.301
27	URI(HEP)	37.860	36.775	37.860	36.775
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>228.379</b>	<b>221.848</b>	<b>202.657</b>	<b>196.868</b>
28	NAPP	0.895	0.866	0.895	0.866
29	RAPP(B-4)	0.760	0.737	0.760	0.737
30	RAPP(B-3)	0.922	0.896	0.922	0.896
C	<b>TOTAL NPC (28 TO 30)</b>	<b>2.577</b>	<b>2.499</b>	<b>2.577</b>	<b>2.499</b>
31	TEHRI	12.335	11.981	12.335	11.981
32	NATHPA JHAKHRI	84.557	82.149	84.557	82.149
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1400.175</b>	<b>1359.991</b>	<b>1305.528</b>	<b>1268.051</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	HPSEB	123.189	119.640	123.189	119.640
34	DVC(ER)	70.971	68.635	68.635	66.661
35	KSEB-IR (WR-SR)	13.003	12.512	11.921	11.591
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 35)</b>	<b>207.163</b>	<b>200.787</b>	<b>203.745</b>	<b>197.892</b>
	<b>EXPORT OF POWER</b>				
36	UTTAR PRADESH	3.367	3.463	3.367	3.463
<b>F</b>	<b>TOTAL EXPORT (TOTAL 36 TO 36)</b>	<b>3.367</b>	<b>3.463</b>	<b>3.367</b>	<b>3.463</b>
	<u>INFIRM POWER</u>				
37	DULASTI	0.000	0.000	0.000	0.000
38	KHELGAON	0.027	0.026	0.027	0.026
39	TEHRI	0.000	0.000	0.000	0.000
<b>G</b>	<b>TOTAL INFORM POWER (TOTAL 37 TO 39)</b>	<b>0.027</b>	<b>0.026</b>	<b>0.027</b>	<b>0.026</b>
<b>H</b>	<b>TOTAL DRAWAL FROM THE NORTHERN GRID</b>	<b>1603.998</b>	<b>1557.341</b>	<b>1505.933</b>	<b>1462.508</b>
<b>I</b>	<b>OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID</b>				<b>-188.119</b> <b>(-163.629)</b>
	<u>AVAILABILITY FROM OWN SOURCES</u>	-			
40	IP				96.788
41	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				24.105
42	NET GENERATION AVAILABILITY FOR DELHI IN IP (40 – 41)				72.683
43	RPH				86.158
44	GT				94.294
45	PRAGATI				214.033
46	TOTAL AVAIL.FROM OWN SOURCES (42+43+44+45)				467.168
47	IMPORT FROM BTPS				438.270
<b>J</b>	<b>TOTAL AVAILABILITY WITHIN DELHI</b>				<b>905.438</b>
<b>K</b>	<b>TOTAL CONSUMPTION (H+I+J)</b>				<b>2179.827</b>
<b>L</b>	<b>LOAD SHEDDING</b>				<b>3.768</b>
<b>M</b>	<b>REQUIREMENT</b>				<b>2183.595</b>
<b>N</b>	<b>% DEPENDENCE ON N.GRID</b>				<b>67.093</b>
<b>O</b>	<b>AUX. CON. OF STATIONS WITHIN DELHI</b>				<b>29.946</b>
<b>P</b>	<b>NET CONSUMPTION OF DELHI</b>				<b>2149.881</b>

Figures in parenthesis correspond to the UI billing figures

### 8.3 Power supply position during the month of June 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	113.150	109.159	113.017	109.031
2	RIHAND-I	76.840	74.132	76.727	74.023
3	RIHAND-II	97.800	94.353	97.659	94.216
4	UNCHAHAR-I	8.521	8.222	8.430	8.135
5	UNCHAHAR-II	35.704	34.443	34.962	33.727
6	UNCHAHAR-III	20.302	19.586	19.800	19.102
7	DADRI(TH)	512.610	494.543	480.249	463.325
8	FARAKA	6.122	5.904	6.085	5.868
9	KHELGAON	41.621	40.150	41.479	40.012
10	TALA	8.791	8.479	8.791	8.479
11	ANTA(GT)	22.115	21.335	21.730	20.963
12	ANTA(Liquid)	0.000	0.000	0.000	0.000
13	ANTA(RLNG)	7.811	7.535	4.415	4.261
14	AURAIYA(GT)	27.325	26.364	26.669	25.731
15	AURAIYA(Liquid)	2.196	2.119	0.000	0.000
16	AURAIYA(RLNG)	12.185	11.755	5.502	5.310
17	DADRI(GT)	42.998	41.482	42.193	40.705
18	DADRI(Liquid)	0.000	0.000	0.000	0.000
19	DADRI (RLNG)	19.898	19.196	8.502	8.207
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	<b>1055.989</b>	<b>1018.757</b>	<b>996.210</b>	<b>961.095</b>
20	TANAKPUR	5.593	5.395	5.593	5.395
21	CHAMERA-I	25.231	24.337	25.231	24.337
22	CHAMERA-II	30.078	29.017	30.078	29.017
23	BAIRA-SUIL	6.280	6.059	6.280	6.059
24	SALAL	49.139	47.400	49.139	47.400
25	DULASTI	39.045	37.668	39.045	37.668
26	DAULI GANGA	22.520	21.722	22.520	21.722
27	URI(HEP)	35.095	33.858	35.070	33.833
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>212.981</b>	<b>205.456</b>	<b>212.956</b>	<b>205.431</b>
28	NAPP	11.558	11.150	11.554	11.146
29	RAPP(B-4)	1.383	1.335	1.379	1.330
30	RAPP(B-3)	1.253	1.209	1.249	1.204
C	<b>TOTAL NPC (28 TO 30)</b>	<b>14.194</b>	<b>13.694</b>	<b>14.182</b>	<b>13.680</b>
31	TEHRI	23.590	22.752	23.590	22.752
32	NATHPA JHAKHRI	100.888	97.316	100.888	97.316
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1407.642</b>	<b>1357.975</b>	<b>1347.826</b>	<b>1300.274</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	HPSEB	151.639	146.283	151.639	146.283
34	DVC(ER)	71.222	68.871	68.873	66.449
35	KRL -IR (ER-SR)	48.237	46.302	44.465	42.931
36	LIQUID FIRED GEN. FROM AURAIYA	0.001	0.001	0.001	0.001
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 36)</b>	<b>271.099</b>	<b>261.457</b>	<b>264.978</b>	<b>255.664</b>
	<b>EXPORT OF POWER</b>				
37	HARYANA	4.790	4.963	-4.790	4.963
38	PUNJAB	5.200	5.388	-5.200	5.388
<b>F</b>	<b>TOTAL EXPORT (TOTAL 37 TO 38)</b>	<b>9.990</b>	<b>10.351</b>	<b>-9.990</b>	<b>10.351</b>
	<u>INFIRM POWER</u>				
39	DULASTI	0.000	0.000	0.000	0.000
40	KHELGAON	0.000	0.000	0.000	0.000
41	TEHRI	0.000	0.000	0.000	0.000
<b>G</b>	<b>TOTAL INFORM POWER (TOTAL 39 TO 41)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
<b>H</b>	<b>TOTAL DRAWAL FROM THE NORTHERN GRID</b>	<b>1668.751</b>	<b>1609.081</b>	<b>1622.794</b>	<b>1545.588</b>
<b>I</b>	<b>OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID</b>				<b>-85.804 (-76.291)</b>
	<b><u>AVAILABILITY FROM OWN SOURCES</u></b>	<b>-</b>			
42	IP				95.148
43	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				23.756
44	NET GENERATION AVAILABILITY FOR DELHI IN IP (42-43)				71.392
45	RPH				43.683
46	GT				94.385
47	PRAGATI				195.334
48	TOTAL AVAIL.FROM OWN SOURCES (44+45+46+47)				404.794
49	IMPORT FROM BTPS				407.595
<b>J</b>	<b>TOTAL AVAILABILITY WITHIN DELHI (48+49)</b>				<b>812.389</b>
<b>K</b>	<b>TOTAL CONSUMPTION</b>				<b>2272.173</b>
<b>L</b>	<b>LOAD SHEDDING</b>				<b>4.951</b>
<b>M</b>	<b>REQUIREMENT</b>				<b>2277.124</b>
<b>N</b>	<b>% DEPENDENCE ON N.GRID</b>				<b>68.022</b>
<b>O</b>	<b>AUX. CON. OF STATIONS WITHIN DELHI</b>				<b>25.430</b>
<b>P</b>	<b>NET CONSUMPTION OF DELHI</b>				<b>2246.743</b>

Figures in parenthesis correspond to the UI billing figures

## 8.4 Power supply position during the month of July 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	89.640	86.562	89.453	86.382
2	RIHAND-I	80.506	77.759	80.352	77.610
3	RIHAND-II	100.763	97.325	100.543	97.114
4	UNCHAHAR-I	14.524	14.036	14.206	13.729
5	UNCHAHAR-II	35.582	34.372	34.898	33.713
6	UNCHAHAR-III	22.828	22.050	22.393	21.629
7	DADRI(TH)	526.500	508.541	495.499	478.642
8	FARAKA	10.106	9.769	10.106	9.769
9	KHELGAON	43.170	41.709	43.170	41.709
10	TALA	13.948	13.477	13.948	13.477
11	ANTA(GT)	24.968	24.119	24.667	23.828
12	ANTA(Liquid)	0.000	0.000	0.000	0.000
13	ANTA(RLNG)	8.192	7.905	1.182	1.139
14	AURAIYA(GT)	27.827	26.888	27.573	26.643
15	AURAIYA(Liquid)	2.065	1.996	0.044	0.042
16	AURAIYA(RLNG)	9.821	9.482	1.309	1.264
17	DADRI(GT)	39.018	37.678	38.500	37.179
18	DADRI(Liquid)	0.000	0.000	0.000	0.000
19	DADRI (RLNG)	15.629	15.080	2.187	2.111
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	<b>1065.087</b>	<b>1028.748</b>	<b>1000.030</b>	<b>965.980</b>
20	TANAKPUR	5.765	5.569	5.765	5.569
21	CHAMERA-I	25.716	24.834	25.716	24.834
22	CHAMERA-II	32.206	31.106	32.206	31.106
23	BAIRA-SUIL	7.179	6.932	7.179	6.932
24	SALAL	52.854	51.061	52.854	51.061
25	DULASTI	39.005	37.677	39.005	37.677
26	DAULI GANGA	27.539	26.596	27.539	26.596
27	URI(HEP)	37.496	36.216	37.496	36.216
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>227.760</b>	<b>219.991</b>	<b>227.760</b>	<b>219.991</b>
28	NAPP	11.987	11.578	11.987	11.578
29	RAPP(B-4)	1.453	1.403	1.453	1.403
30	RAPP(B-3)	1.169	1.129	1.169	1.129
C	<b>TOTAL NPC (28 TO 30)</b>	<b>14.609</b>	<b>14.110</b>	<b>14.609</b>	<b>14.110</b>
31	TEHRI	38.806	37.487	38.806	37.487
32	NATHPA JHAKHRI	112.269	108.438	112.269	108.438
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1458.531</b>	<b>1408.774</b>	<b>1393.474</b>	<b>1346.006</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	HPSEB	314.740	303.998	314.740	303.998
34	GUJRAT	5.264	5.027	5.027	4.850
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 34)</b>	<b>320.004</b>	<b>309.025</b>	<b>319.767</b>	<b>308.848</b>
	<b>EXPORT OF POWER</b>				
<b>F</b>	<b>TOTAL EXPORT</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
	<u>INFIRM POWER</u>				
35	DULASTI	0.000	0.000	0.000	0.000
36	KHELGAON	0.000	0.000	0.000	0.000
37	TEHRI	1.275	1.232	1.275	1.232
<b>G</b>	<b>TOTAL INFORM POWER (TOTAL 35 TO 37)</b>	<b>1.275</b>	<b>1.232</b>	<b>1.275</b>	<b>1.232</b>
<b>H</b>	<b>TOTAL DRAWAL FROM THE NORTHERN GRID</b>	<b>1779.810</b>	<b>1719.031</b>	<b>1714.516</b>	<b>1656.085</b>
<b>I</b>	<b>OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID</b>				<b>-130.920</b> <b>(-118.848)</b>
	<u>AVAILABILITY FROM OWN SOURCES</u>	-			
38	IP				85.802
39	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				21.613
40	NET GENERATION AVAILABILITY FOR DELHI IN IP (38-39)				64.189
41	RPH				84.568
42	GT				100.755
43	PRAGATI				211.311
44	TOTAL AVAIL.FROM OWN SOURCES (40+41+42+43)				460.823
45	IMPORT FROM BTPS				372.696
<b>J</b>	<b>TOTAL AVAILABILITY WITHIN DELHI (44+45)</b>				<b>833.519</b>
<b>K</b>	<b>TOTAL CONSUMPTION</b>				<b>2358.684</b>
<b>L</b>	<b>LOAD SHEDDING</b>				<b>3.230</b>
<b>M</b>	<b>REQUIREMENT</b>				<b>2361.914</b>
<b>N</b>	<b>% DEPENDENCE ON N.GRID</b>				<b>70.212</b>
<b>O</b>	<b>AUX. CON. OF STATIONS WITHIN DELHI</b>				<b>29.338</b>
<b>P</b>	<b>NET CONSUMPTION OF DELHI</b>				<b>2329.346</b>

Figures in parenthesis correspond to the UI billing figures

## 8.5 Power supply position during the month of August 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	104.446	100.271	104.435	100.260
2	RIHAND-I	79.977	76.791	79.882	76.700
3	RIHAND-II	53.024	50.918	52.911	50.810
4	UNCHAHAAR-I	17.529	16.829	17.363	16.669
5	UNCHAHAAR-II	36.591	35.133	36.254	34.809
6	UNCHAHAAR-III	20.725	19.901	20.520	19.704
7	DADRI(TH)	504.781	484.784	489.697	470.276
8	FARAKA	29.558	28.379	29.558	28.379
9	KHELGAON	46.844	44.979	46.844	44.979
10	TALA	19.108	18.348	19.108	18.348
11	ANTA(GT)	23.933	22.980	23.840	22.890
12	ANTA(Liquid)	0.476	0.457	0.000	0.000
13	ANTA(RLNG)	8.739	8.391	6.681	6.407
14	AURAIYA(GT)	34.669	33.286	34.538	33.160
15	AURAIYA(Liquid)	10.192	9.788	0.634	0.609
16	AURAIYA(RLNG)	9.935	9.539	6.989	6.706
17	DADRI(GT)	33.087	31.767	32.945	31.629
18	DADRI(Liquid)	8.720	8.361	0.408	0.392
19	DADRI(RLNG)	3.669	3.529	0.889	0.855
A.	<b>TOTAL NTPC (TOTAL 1 TO 19)</b>	<b>1046.003</b>	<b>1004.431</b>	<b>1003.496</b>	<b>963.582</b>
20	TANAKPUR	6.300	6.051	6.300	6.051
21	CHAMERA-I	22.596	21.702	22.596	21.702
22	CHAMERA-II	32.369	31.083	32.369	31.083
23	BAIRA-SUIL	6.573	6.312	6.573	6.312
24	SALAL	54.346	52.185	54.346	52.185
25	DULASTI	38.688	37.147	38.688	37.147
26	DAULI GANGA	28.103	26.982	28.103	26.982
27	URI(HEP)	27.955	26.840	27.955	26.840
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>216.930</b>	<b>208.302</b>	<b>216.930</b>	<b>208.302</b>
28	NAPP	10.904	10.472	10.904	10.472
29	RAPP(B-4)	1.376	1.321	1.376	1.321
30	RAPP(B-3)	1.185	1.138	1.185	1.138
C	<b>TOTAL NPC (28 TO 30)</b>	<b>13.465</b>	<b>12.931</b>	<b>13.465</b>	<b>12.931</b>
31	TEHRI	43.530	41.798	43.530	41.798
32	NATHPA JHAKHRI	77.013	73.926	77.013	73.926
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1396.941</b>	<b>1341.388</b>	<b>1354.434</b>	<b>1300.539</b>



Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	HPSEB	269.765	259.003	268.235	257.530
34	GUJRAT	23.785	22.833	22.592	21.662
35	GRIDCO	9.079	8.757	8.757	8.383
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 35)</b>	<b>302.629</b>	<b>290.593</b>	<b>299.584</b>	<b>287.575</b>
	<b>EXPORT OF POWER</b>				
<b>F</b>	<b>TOTAL EXPORT</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
	<u>INFIRM POWER</u>				
36	DULASTI	0.000	0.000	0.000	0.000
37	KHELGAON	0.000	0.000	0.000	0.000
38	TEHRI				
G	TOTAL INFORM POWER (36+37+38)	0.000	0.000	0.000	0.000
H	TOTAL DRAWAL FROM THE NORTHERN GRID	1699.570	1631.981	1654.018	1588.115
I	OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID				-80.154 (-57.047)
	<b><u>AVAILABILITY FROM OWN SOURCES</u></b>	-			
39	IP				93.165
40	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				24.336
41	NET GENERATION AVAILABILITY FOR DELHI IN IP (39-40)				68.829
42	RPH				82.294
43	GT				123.272
44	PRAGATI				214.503
45	TOTAL AVAIL.FROM OWN SOURCES (41+42+43+44)				488.898
46	IMPORT FROM BTPS				295.775
J	TOTAL AVAILABILITY WITHIN DELHI (45+46)				784.673
K	TOTAL CONSUMPTION				2292.634
M	LOAD SHEDDING				12.130
M	REQUIREMENT				2304.764
N	% DEPENDENCE ON N.GRID				69.270
O	AUX. CON. OF STATIONS WITHIN DELHI				30.897
P	<b>NET CONSUMPTION OF DELHI</b>				<b>2261.737</b>

Figures in parenthesis correspond to the UI billing figures

## 8.6 Power supply position during the month of September 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	121.748	116.987	121.748	116.987
2	RIHAND-I	71.528	68.731	71.528	68.731
3	RIHAND-II	65.018	62.464	65.018	62.464
4	UNCHAHAR-I	16.592	15.942	16.564	15.916
5	UNCHAHAR-II	36.386	34.961	36.338	34.914
6	UNCHAHAR-III	22.078	21.213	22.051	21.187
7	DADRI(TH)	418.318	401.956	405.642	389.777
8	FARAKA	21.669	20.815	20.789	19.973
9	KHELGAON	54.095	51.950	51.886	49.857
10	TALA	17.809	17.112	17.809	17.112
11	ANTA(GT)	20.957	20.136	20.957	20.136
12	ANTA(Liquid)	7.442	7.153	0.372	0.359
13	ANTA(RLNG)	4.039	3.879	1.491	1.436
14	AURAIYA(GT)	31.353	30.124	31.353	30.124
15	AURAIYA(Liquid)	7.273	6.984	0.194	0.187
16	AURAIYA(RLNG)	14.482	13.919	7.252	6.973
17	DADRI(GT)	39.114	37.582	39.113	37.581
18	DADRI(Liquid)	23.745	22.814	0.412	0.398
19	DADRI (RLNG)	1.452	1.394	0.553	0.531
A.	<b>TOTAL NTPC (TOTAL 1 TO 19)</b>	<b>995.098</b>	<b>956.116</b>	<b>931.070</b>	<b>894.643</b>
20	TANAKPUR	5.205	5.004	5.205	5.004
21	CHAMERA-I	10.734	10.309	10.734	10.309
22	CHAMERA-II	18.724	17.988	18.724	17.988
23	BAIRA-SUIL	3.621	3.479	3.621	3.479
24	SALAL	40.653	39.064	40.653	39.064
25	DULASTI	39.140	37.604	39.140	37.604
26	DAULI GANGA	20.846	20.035	20.846	20.035
27	URI(HEP)	19.134	18.384	19.134	18.384
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>158.057</b>	<b>151.867</b>	<b>158.057</b>	<b>151.867</b>
28	NAPP	6.448	6.192	6.448	6.192
29	RAPP(B-4)	0.858	0.823	0.858	0.823
30	RAPP(B-3)	1.051	1.010	1.051	1.010
C	<b>TOTAL NPC (28 TO 30)</b>	<b>8.357</b>	<b>8.025</b>	<b>8.357</b>	<b>8.025</b>
31	TEHRI	26.855	25.796	26.855	25.796
32	NATHPA JHAKHRI	84.594	81.274	84.594	81.274
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1272.961</b>	<b>1223.078</b>	<b>1208.933</b>	<b>1161.605</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	HPSEB	208.095	199.902	208.104	199.918
34	ANDHRA PRADESH	17.556	16.905	16.192	15.596
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 34)</b>	<b>225.651</b>	<b>216.807</b>	<b>224.296</b>	<b>215.514</b>
	<b>EXPORT OF POWER</b>				
35	TATA POWER CO.LTD.(TPCL)	8.066	8.363	8.363	8.705
36	RELIANCE	7.696	7.980	7.980	8.305
<b>F</b>	<b>TOTAL EXPORT (TOTAL 50 TO 64)</b>	<b>15.762</b>	<b>16.343</b>	<b>16.343</b>	<b>17.010</b>
	<u>INFIRM POWER</u>				
37	DULASTI	0.000	0.000	0.000	0.000
38	KHELGAON	0.000	0.000	0.000	0.000
39	TEHRI				
G	TOTAL INFORM POWER (TOTAL 37 TO 39)	0.000	0.000	0.000	0.000
H	TOTAL DRAWAL FROM THE NORTHERN GRID	1482.850	1423.542	1416.886	1360.106
I	OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID				-72.015 (-59.151)
	<b><u>AVAILABILITY FROM OWN SOURCES</u></b>	-			
40	IP				76.736
41	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				22.679
42	NET GENERATION AVAILABILITY FOR DELHI IN IP (40-41)				54.057
43	RPH				83.014
44	GT				108.383
45	PRAGATI				200.839
46	TOTAL AVAIL.FROM OWN SOURCES (42+43+44+45)				446.293
47	IMPORT FROM BTPS				392.327
J	TOTAL AVAILABILITY WITHIN DELHI (46+47)				838.620
K	TOTAL CONSUMPTION				2126.711
M	LOAD SHEDDING				4.517
M	REQUIREMENT				2131.228
N	% DEPENDENCE ON N.GRID				63.953
O	AUX. CON. OF STATIONS WITHIN DELHI				26.708
P	<b>NET CONSUMPTION OF DELHI</b>				<b>2100.003</b>

Figures in parenthesis correspond to the UI billing figures

## 8.7 Power supply position during the month of October 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	125.110	119.867	125.110	119.867
2	RIHAND-I	53.429	51.184	53.421	51.177
3	RIHAND-II	99.448	95.277	99.431	95.262
4	UNCHAHAR-I	17.347	16.620	17.347	16.620
5	UNCHAHAR-II	37.732	36.150	37.732	36.150
6	UNCHAHAR-III	22.751	21.797	22.751	21.797
7	DADRI(TH)	439.392	420.944	438.053	419.661
8	FARAKA	29.812	28.572	28.572	27.372
9	KHELGAON	54.313	52.024	52.024	49.846
10	TALA	12.885	12.318	12.318	11.801
11	ANTA(GT)	19.435	18.618	19.434	18.617
12	ANTA(Liquid)	3.589	3.440	0.044	0.042
13	ANTA(RLNG)	0.000	0.000	0.000	0.000
14	AURAIYA(GT)	36.199	34.680	36.199	34.680
15	AURAIYA(Liquid)	13.152	12.600	0.374	0.358
16	AURAIYA(RLNG)	0.000	0.000	0.000	0.000
17	DADRI(GT)	39.657	37.994	39.657	37.994
18	DADRI(Liquid)	23.350	22.372	0.496	0.475
19	DADRI (RLNG)	0.000	0.000	0.000	0.000
A.	<b>TOTAL NTPC (TOTAL 1 TO 19)</b>	<b>1027.601</b>	<b>984.457</b>	<b>982.963</b>	<b>941.719</b>
20	TANAKPUR	7.509	7.194	7.509	7.194
21	CHAMERA-I	4.566	4.374	4.566	4.374
22	CHAMERA-II	9.281	8.892	9.281	8.892
23	BAIRA-SUIL	2.229	2.136	2.229	2.136
24	SALAL	15.716	15.056	15.716	15.056
25	DULASTI	24.274	23.256	24.274	23.256
26	DAULI GANGA	17.981	17.225	17.981	17.225
27	URI(HEP)	10.180	9.751	10.180	9.751
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>91.736</b>	<b>87.884</b>	<b>91.736</b>	<b>87.884</b>
28	NAPP	7.190	6.889	7.190	6.889
29	RAPP(B-4)	0.800	0.766	0.782	0.749
30	RAPP(B-3)	1.064	1.019	1.064	1.019
C	<b>TOTAL NPC (28 TO 30)</b>	<b>9.054</b>	<b>8.674</b>	<b>9.036</b>	<b>8.657</b>
31	TEHRI	20.949	20.071	20.949	20.071
32	NATHPA JHAKHRI	40.687	38.980	40.687	38.980
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1190.027</b>	<b>1140.066</b>	<b>1145.371</b>	<b>1097.311</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	HPSEB	55.264	52.946	55.264	52.946
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 33)</b>	<b>55.264</b>	<b>52.946</b>	<b>55.264</b>	<b>52.946</b>
	<b>EXPORT OF POWER</b>				
34	TATA POWER CO.LTD.(TPCL)	8.578	8.921	8.921	9.313
35	RELIANCE	13.354	13.895	13.895	14.505
36	HPSEB	22.839	23.840	22.839	23.840
37	UTTAR PRADESH	16.772	17.510	16.772	17.510
38	PUNJAB	8.344	8.700	8.344	8.700
39	MAHARASHTRA	10.535	10.960	10.960	11.440
<b>F</b>	<b>TOTAL EXPORT (TOTAL 34 TO 39)</b>	<b>80.422</b>	<b>83.826</b>	<b>81.731</b>	<b>85.308</b>
	<u>INFIRM POWER</u>				
40	DULASTI	0.000	0.000	0.000	0.000
41	KHELGAON	0.000	0.000	0.000	0.000
42	TEHRI				
<b>F</b>	<b>TOTAL INFORM POWER (TOTAL 40 TO 42)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
<b>H</b>	<b>TOTAL DRAWAL FROM THE NORTHERN GRID</b>	<b>1164.869</b>	<b>1109.186</b>	<b>1118.904</b>	<b>1064.948</b>
<b>I</b>	<b>OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID</b>				<b>-272.083</b> <b>(-254.976)</b>
	<u>AVAILABILITY FROM OWN SOURCES</u>	-			
43	IP				75.653
44	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				22.536
45	NET GENERATION AVAILABILITY FOR DELHI IN IP (43-44)				53.117
46	RPH				87.543
47	GT				112.350
48	PRAGATI				215.324
49	TOTAL AVAIL.FROM OWN SOURCES				468.334
50	IMPORT FROM BTPS				438.995
<b>J</b>	<b>TOTAL AVAILABILITY WITHIN DELHI</b>				<b>907.329</b>
<b>K</b>	<b>TOTAL CONSUMPTION</b>				<b>1700.194</b>
<b>L</b>	<b>LOAD SHEDDING</b>				<b>4.674</b>
<b>M</b>	<b>REQUIREMENT</b>				<b>1704.868</b>
<b>N</b>	<b>% DEPENDENCE ON N.GRID</b>				<b>62.637</b>
<b>O</b>	<b>AUX. CON. OF STATIONS WITHIN DELHI</b>				<b>26.371</b>
<b>P</b>	<b>NET CONSUMPTION OF DELHI</b>				<b>1673.823</b>

Figures in parenthesis correspond to the UI billing figures

## 8.8 Power supply position during the month of November 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	102.958	98.701	102.954	98.697
2	RIHAND-I	63.365	60.755	63.365	60.755
3	RIHAND-II	90.866	87.110	90.862	87.107
4	UNCHAHAR-I	16.794	16.100	16.794	16.100
5	UNCHAHAR-II	32.870	31.512	32.870	31.512
6	UNCHAHAR-III	20.481	19.635	20.481	19.635
7	DADRI(TH)	517.318	495.935	516.483	495.133
8	FARAKA	37.735	36.328	36.328	34.823
9	KHELGAON	62.951	60.604	60.604	58.104
10	TALA	5.916	5.696	5.697	5.462
11	ANTA(GT)	16.221	15.550	16.221	15.550
12	ANTA(Liquid)	9.927	9.517	0.000	0.000
13	ANTA(RLNG)	0.000	0.000	0.000	0.000
14	AURAIYA(GT)	26.683	25.580	26.683	25.580
15	AURAIYA(Liquid)	10.197	9.774	0.000	0.000
16	AURAIYA(RLNG)	0.000	0.000	0.000	0.000
17	DADRI(GT)	27.722	26.580	27.722	26.580
18	DADRI(Liquid)	22.677	21.739	0.000	0.000
19	DADRI (RLNG)	0.000	0.000	0.000	0.000
A.	<b>TOTAL NTPC (TOTAL 1 TO 19)</b>	<b>1064.681</b>	<b>1021.116</b>	<b>1017.064</b>	<b>975.038</b>
20	TANAKPUR	4.358	4.178	4.358	4.178
21	CHAMERA-I	3.838	3.680	3.838	3.680
22	CHAMERA-II	6.085	5.834	6.085	5.834
23	BAIRA-SUIL	1.469	1.408	1.469	1.408
24	SALAL	10.949	10.497	10.949	10.497
25	DULASTI	15.483	14.844	15.483	14.844
26	DAULI GANGA	8.672	8.314	8.672	8.314
27	URI(HEP)	6.205	5.949	6.205	5.949
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>57.059</b>	<b>54.704</b>	<b>57.059</b>	<b>54.704</b>
28	NAPP	6.326	6.064	6.326	6.064
29	RAPP(B-4)	1.241	1.190	1.241	1.190
30	RAPP(B-3)	0.984	0.944	0.984	0.944
C	<b>TOTAL NPC (28 TO 30)</b>	<b>8.551</b>	<b>8.198</b>	<b>8.551</b>	<b>8.198</b>
31	TEHRI	17.292	16.578	17.292	16.578
32	NATHPA JHAKHRI	25.971	24.899	25.971	24.899
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1173.554</b>	<b>1125.495</b>	<b>1125.937</b>	<b>1079.417</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	TATA POWER CO. LTD.(TPCL)-TATA	3.119	2.979	2.835	2.715
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 33)</b>	<b>3.119</b>	<b>2.979</b>	<b>2.835</b>	<b>2.715</b>
	<b>EXPORT OF POWER</b>				
34	RELIANCE	0.367	-0.384	0.384	0.400
35	HPSEB	27.920	29.124	27.920	29.124
36	UTTAR PRADESH	14.811	15.443	14.811	15.443
37	MAHARASHTRA	26.386	27.610	27.610	28.800
38	RAJASTHAN	58.580	61.086	58.580	61.086
<b>F</b>	<b>TOTAL EXPORT (TOTAL 34 TO 38)</b>	<b>128.064</b>	<b>132.879</b>	<b>129.305</b>	<b>134.853</b>
	<u>INFIRM POWER</u>				
39	DULASTI	0.000	0.000	0.000	0.000
40	KHELGAON	0.000	0.000	0.000	0.000
41	TEHRI				
<b>G</b>	<b>TOTAL INFORM POWER ( TOTAL 39 TO 41)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
<b>H</b>	<b>TOTAL DRAWAL FROM THE NORTHERN GRID</b>	<b>1048.609</b>	<b>995.595</b>	<b>999.467</b>	<b>947.279</b>
<b>I</b>	<b>OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID</b>				<b>-350.807 (-337.715)</b>
	<b><u>AVAILABILITY FROM OWN SOURCES</u></b>	<b>-</b>			
42	IP				89.982
43	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				27.019
44	NET GENERATION AVAILABILITY FOR DELHI IN IP (42-43)				62.963
45	RPH				81.899
46	GT				107.802
47	PRAGATI				182.262
48	TOTAL AVAIL.FROM OWN SOURCES (44+45+46+47)				434.926
49	IMPORT FROM BTPS				461.513
<b>J</b>	<b>TOTAL AVAILABILITY WITHIN DELHI (48+49)</b>				<b>896.439</b>
<b>K</b>	<b>TOTAL CONSUMPTION</b>				<b>1492.911</b>
<b>L</b>	<b>LOAD SHEDDING</b>				<b>3.547</b>
<b>M</b>	<b>REQUIREMENT</b>				<b>1496.458</b>
<b>N</b>	<b>% DEPENDENCE ON N.GRID</b>				<b>63.452</b>
<b>O</b>	<b>AUX. CON. OF STATIONS WITHIN DELHI</b>				<b>26.792</b>
<b>P</b>	<b>NET CONSUMPTION OF DELHI</b>				<b>1466.119</b>

Figures in parenthesis correspond to the UI billing figures

## 8.9 Power supply position during the month of December 2007

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	112.995	107.931	112.912	107.852
2	RIHAND-I	71.276	68.082	71.203	68.013
3	RIHAND-II	83.983	80.266	83.887	80.174
4	UNCHAHAR-I	17.438	16.656	17.438	16.656
5	UNCHAHAR-II	34.895	33.331	34.895	33.331
6	UNCHAHAR-III	21.099	20.154	21.099	20.154
7	DADRI(TH)	537.941	513.816	537.444	513.339
8	FARAKA	38.587	37.250	37.085	35.424
9	KHELGAON	69.696	67.286	66.947	63.943
10	TALA	3.550	3.427	3.426	3.274
11	ANTA(GT)	18.808	17.965	18.808	17.965
12	ANTA(Liquid)	10.488	10.022	1.519	1.450
13	ANTA(RLNG)	0.000	0.000	0.000	0.000
14	AURAIYA(GT)	31.366	29.960	31.366	29.960
15	AURAIYA(Liquid)	12.296	11.756	1.040	0.993
16	AURAIYA(RLNG)	0.000	0.000	0.000	0.000
17	DADRI(GT)	26.521	25.317	26.521	25.317
18	DADRI(Liquid)	26.099	24.919	2.658	2.536
19	DADRI (RLNG)	0.000	0.000	0.000	0.000
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	<b>1117.038</b>	<b>1068.138</b>	<b>1068.248</b>	<b>1020.381</b>
20	TANAKPUR	2.558	2.445	2.558	2.445
21	CHAMERA-I	3.904	3.729	3.904	3.729
22	CHAMERA-II	5.028	4.803	5.028	4.803
23	BAIRA-SUIL	1.365	1.304	1.365	1.304
24	SALAL	9.278	8.863	9.278	8.863
25	DULASTI	11.802	11.274	11.802	11.274
26	DAULI GANGA	5.967	5.701	5.967	5.701
27	URI(HEP)	6.453	6.163	6.453	6.163
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>46.355</b>	<b>44.282</b>	<b>46.355</b>	<b>44.282</b>
28	NAPP	3.770	3.609	3.770	3.609
29	RAPP(B-4)	0.725	0.693	0.725	0.693
30	RAPP(B-3)	0.390	0.372	0.390	0.372
C	<b>TOTAL NPC (28 TO 30)</b>	<b>4.885</b>	<b>4.674</b>	<b>4.885</b>	<b>4.674</b>
31	TEHRI	21.180	20.228	21.180	20.228
32	NATHPA JHAKHRI	21.182	20.236	21.182	20.236
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1210.640</b>	<b>1157.558</b>	<b>1161.850</b>	<b>1109.801</b>



Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	DVC(ER)	12.126	11.699	11.699	11.165
34	RELIANCE(WR)	1.625	1.552	1.477	1.406
35	TATA POWER CO. LTD.(TPCL)-TATA	7.429	7.102	6.758	6.454
36	LIQUID FIRED GEN. FROM AURAIYA				
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 36)</b>	<b>21.180</b>	<b>20.353</b>	<b>19.934</b>	<b>19.025</b>
	<b>EXPORT OF POWER</b>				
37	UTTRANCHAL	59.833	62.706	59.833	62.706
38	HPSEB	40.653	42.559	40.653	42.559
39	PUNJAB	14.911	15.586	14.911	15.586
40	MAHARASHTRA	27.179	28.426	28.426	29.760
41	RAJASTHAN	72.980	76.432	72.980	76.432
42	MPTCL	0.000	0.000	0.000	0.000
<b>F</b>	<b>TOTAL EXPORT (TOTAL 37 TO 42)</b>	<b>215.556</b>	<b>225.709</b>	<b>216.803</b>	<b>227.043</b>
	<u>INFIRM POWER</u>				
43	DULASTI	0.000	0.000	0.000	0.000
44	KHELGAON	0.000	0.000	0.000	0.000
45	TEHRI				
<b>G</b>	<b>TOTAL INFORM POWER (TOTAL 43 TO 45)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
<b>H</b>	<b>TOTAL DRAWAL FROM THE NORTHERN GRID</b>	<b>1016.264</b>	<b>952.202</b>	<b>964.981</b>	<b>901.781</b>
<b>I</b>	<b>OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID</b>				<b>-258.693</b> <b>(-242.171)</b>
	<b><u>AVAILABILITY FROM OWN SOURCES</u></b>	<b>-</b>			
46	IP				89.477
47	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				26.029
48	NET GENERATION AVAILABILITY FOR DELHI IN IP (46-47)				63.448
49	RPH				73.690
50	GT				123.938
51	PRAGATI				212.197
52	TOTAL AVAIL.FROM OWN SOURCES (48+49+50+51)				473.273
53	IMPORT FROM BTPS				485.949
<b>J</b>	<b>TOTAL AVAILABILITY WITHIN DELHI</b>				<b>959.222</b>
<b>K</b>	<b>TOTAL CONSUMPTION</b>				<b>1602.310</b>
<b>L</b>	<b>LOAD SHEDDING</b>				<b>5.970</b>
<b>M</b>	<b>REQUIREMENT</b>				<b>1608.280</b>
<b>N</b>	<b>% DEPENDENCE ON N.GRID</b>				<b>56.280</b>
<b>O</b>	<b>AUX. CON. OF STATIONS WITHIN DELHI</b>				<b>27.920</b>
<b>P</b>	<b>NET CONSUMPTION OF DELHI</b>				<b>1574.390</b>

Figures in parenthesis correspond to the UI billing figures

## 8.10 Power supply position during the month of January 2008

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	104.693	99.767	104.274	99.369
2	RIHAND-I	73.014	69.580	72.757	69.336
3	RIHAND-II	93.874	89.460	93.448	89.055
4	UNCHAHAR-I	16.768	15.981	16.747	15.961
5	UNCHAHAR-II	34.489	32.867	34.447	32.828
6	UNCHAHAR-III	21.236	20.238	21.214	20.217
7	DADRI(TH)	534.951	509.818	534.316	509.215
8	FARAKA	41.088	39.481	39.481	37.622
9	KHELGAON	67.633	65.013	65.013	61.965
10	TALA	2.326	2.236	2.236	2.131
11	ANTA(GT)	14.868	14.166	14.868	14.166
12	ANTA(Liquid)	8.730	8.319	4.305	4.103
13	ANTA(RLNG)	0.000	0.000	0.000	0.000
14	AURAIYA(GT)	26.054	24.821	26.108	24.872
15	AURAIYA(Liquid)	9.361	8.918	4.496	4.284
16	AURAIYA(RLNG)	0.000	0.000	0.000	0.000
17	DADRI(GT)	21.793	20.768	21.791	20.766
18	DADRI(Liquid)	30.346	28.915	15.470	14.741
19	DADRI (RLNG)	0.000	0.000	0.000	0.000
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	<b>1101.224</b>	<b>1050.348</b>	<b>1070.971</b>	<b>1020.631</b>
20	TANAKPUR	1.474	1.405	1.474	1.405
21	CHAMERA-I	4.759	4.534	4.759	4.534
22	CHAMERA-II	4.853	4.624	4.853	4.624
23	BAIRA-SUIL	2.223	2.118	2.223	2.118
24	SALAL	11.953	11.390	11.953	11.390
25	DULASTI	10.432	9.940	10.432	9.940
26	DAULI GANGA	4.779	4.554	4.779	4.554
27	URI(HEP)	10.547	10.047	10.547	10.047
B	<b>TOTAL NHPC (TOTAL 20 - 27)</b>	<b>51.020</b>	<b>48.612</b>	<b>51.020</b>	<b>48.612</b>
28	NAPP	0.000	0.000	0.000	0.000
29	RAPP(B-4)	0.000	0.000	0.000	0.000
30	RAPP(B-3)	0.000	0.000	0.000	0.000
C	<b>TOTAL NPC (28 TO 30)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
31	TEHRI	26.379	25.138	26.379	25.138
32	NATHPA JHAKHRI	19.591	18.671	19.591	18.671
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1198.214</b>	<b>1142.769</b>	<b>1167.961</b>	<b>1113.052</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	DVC(ER)	5.689	5.472	5.472	5.218
34	RELIANCE(WR)	1.670	1.598	1.521	1.451
35	TISCO (TATA)	2.030	1.956	1.901	1.813
36	KAWAS	0.409	0.391	0.391	0.373
37	CESC (RELIANCE)	0.290	0.280	0.268	0.256
38	TATA POWER CO. LTD.(TPCL)-TATA	4.773	4.565	4.344	4.141
39	LIQUID FIRED GEN. FROM AURAIYA				
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 39)</b>	<b>14.861</b>	<b>14.262</b>	<b>13.897</b>	<b>13.252</b>
	<b>EXPORT OF POWER</b>				
40	UTTRANCHAL	45.039	47.269	45.039	47.269
41	HPSEB	36.056	37.842	36.056	37.842
42	PUNJAB	-0.497	0.522	0.497	0.522
43	MAHARASHTRA	17.605	18.412	18.412	19.320
44	RAJASTHAN	96.902	101.721	97.092	101.921
45	MPTCL	0.897	0.939	0.939	0.987
<b>F</b>	<b>TOTAL EXPORT (TOTAL 40 TO 45)</b>	<b>196.002</b>	<b>206.705</b>	<b>198.035</b>	<b>207.861</b>
	<u>INFIRM POWER</u>				
46	DULASTI	0.000	0.000	0.000	0.000
47	KHELGAON	0.000	0.000	0.000	0.000
48	TEHRI				
G	TOTAL INFIRM POWER (TOTAL 46 TO 48)	0.000	0.000	0.000	0.000
H	TOTAL DRAWAL FROM THE NORTHERN GRID	1017.073	950.326	983.823	918.443
I	OVER DRAWAL(+)/UNDERDRAWAL(-) FROM THE GRID				-138.466 (-101.326)
	<b>AVAILABILITY FROM OWN SOURCES</b>				
49	IP				81.343
50	1/3rd HSEB SHARE+JHAZZAR SHARE IN IP				24.222
51	NET GENERATION AVAILABILITY FOR DELHI IN IP (49-50)				57.121
52	RPH				81.802
53	GT				83.057
54	PRAGATI				194.884
55	TOTAL AVAIL.FROM OWN SOURCES (51+52+53+54)				416.864
56	IMPORT FROM BTPS				481.790
J	TOTAL AVAILABILITY WITHIN DELHI (55+56)				898.654
K	TOTAL CONSUMPTION				1678.631
L	LOAD SHEDDING				25.164
M	REQUIREMENT				1703.795
N	% DEPENDENCE ON N.GRID				54.714
O	AUX. CON. OF STATIONS WITHIN DELHI				26.234
P	<b>NET CONSUMPTION OF DELHI</b>				<b>1652.397</b>

Figures in parenthesis correspond to the UI billing figures

## 8.11 Power supply position during the month of February 2008

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	93.730	89.211	93.630	89.117
2	RIHAND-I	68.747	65.440	68.675	65.371
3	RIHAND-II	88.211	83.967	88.113	83.874
4	UNCHAHAR-I	16.244	15.462	16.052	15.280
5	UNCHAHAR-II	32.399	30.840	32.009	30.469
6	UNCHAHAR-III	19.631	18.687	19.623	18.679
7	DADRI(TH)	506.797	482.418	506.697	482.323
8	FARAKA	39.523	37.816	37.009	35.233
9	KHELGAON	65.612	62.769	62.232	59.215
10	TALA	1.839	1.760	1.760	1.675
11	ANTA(GT)	20.584	19.593	20.584	19.593
12	ANTA(Liquid)	7.874	7.495	5.170	4.921
13	ANTA(RLNG)	0.000	0.000	0.000	0.000
14	AURAIYA(GT)	29.585	28.160	29.585	28.160
15	AURAIYA(Liquid)	7.664	7.296	5.064	4.820
16	AURAIYA(RLNG)	0.000	0.000	0.000	0.000
17	DADRI(GT)	24.413	23.232	24.413	23.232
18	DADRI(Liquid)	30.298	28.840	21.007	19.994
19	DADRI (RLNG)	0.000	0.000	0.000	0.000
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	<b>1053.151</b>	<b>1002.986</b>	<b>1031.623</b>	<b>981.956</b>
20	TANAKPUR	0.030	0.029	0.030	0.029
21	CHAMERA-I	6.673	6.351	6.673	6.351
22	CHAMERA-II	4.975	4.734	4.975	4.734
23	BAIRA-SUIL	3.889	3.700	3.889	3.700
24	SALAL	11.261	10.717	11.261	10.717
25	DULASTI	9.091	8.652	9.091	8.652
26	DAULI GANGA	3.902	3.714	3.902	3.714
27	URI(HEP)	16.245	15.459	16.245	15.459
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>56.066</b>	<b>53.356</b>	<b>56.066</b>	<b>53.356</b>
28	NAPP	0.693	0.660	0.693	0.660
29	RAPP(B-4)	0.000	0.000	0.000	0.000
30	RAPP(B-3)	0.000	0.000	0.000	0.000
C	<b>TOTAL NPC (28 TO 30)</b>	<b>0.693</b>	<b>0.660</b>	<b>0.693</b>	<b>0.660</b>
31	TEHRI	24.329	23.160	24.329	23.160
32	NATHPA JHAKHRI	17.073	16.251	17.083	16.260
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1151.312</b>	<b>1096.413</b>	<b>1129.794</b>	<b>1075.392</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	DVC(ER)	4.993	4.780	4.780	4.555
34	RELIANCE(WR)	1.667	1.589	1.512	1.438
35	TATA POWER CO. LTD.(TPCL)-TATA	3.576	3.410	3.245	3.093
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 35)</b>	<b>10.236</b>	<b>9.779</b>	<b>9.537</b>	<b>9.086</b>
	<b>EXPORT OF POWER</b>				
36	UTTRANCHAL	59.032	62.050	59.032	62.050
37	BESCO (KALYANI)	6.762	7.083	7.083	7.440
38	HPSEB	33.531	35.237	33.531	35.237
39	PUNJAB	19.231	20.237	19.231	20.237
40	MAHARASHTRA	25.597	26.814	26.814	28.170
41	RAJASTHAN	102.516	107.724	102.516	107.724
42	MPTCL	19.666	20.601	20.601	21.649
<b>F</b>	<b>TOTAL EXPORT (TOTAL 36 TO 42)</b>	<b>266.335</b>	<b>279.746</b>	<b>268.808</b>	<b>282.507</b>
	<u>INFIRM POWER</u>				
43	DULASTI	0.000	0.000	0.000	0.000
44	KHELGAON	0.000	0.000	0.000	0.000
45	TEHRI				
<b>G</b>	<b>TOTAL INFORM POWER (TOTAL 43 TO 45)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
<b>H</b>	<b>TOTAL DRAWAL FROM THE NORTHERN GRID</b>	<b>895.213</b>	<b>826.446</b>	<b>870.523</b>	<b>801.972</b>
<b>I</b>	<b>OVER DRAWAL(+)/UNDERDRAWAL(-) FROM THE GRID</b>				<b>-114.662 (-76.587)</b>
	<u>AVAILABILITY FROM OWN SOURCES</u>				
46	IP				78.864
47	1/3rd HSEB SHARE + JHAZZAR SHARE IN IP				23.807
48	NET GENERATION AVAILABILITY FOR DELHI IN IP (46-47)				55.057
49	RPH				53.812
50	GT				88.160
51	PRAGATI				225.548
52	TOTAL AVAIL.FROM OWN SOURCES (48+49+50+51)				422.577
53	IMPORT FROM BTPS				411.997
<b>J</b>	<b>TOTAL AVAILABILITY WITHIN DELHI (52+53)</b>				<b>834.574</b>
<b>K</b>	<b>TOTAL CONSUMPTION</b>				<b>1521.884</b>
<b>L</b>	<b>LOAD SHEDDING</b>				<b>27.880</b>
<b>M</b>	<b>REQUIREMENT</b>				<b>1549.764</b>
<b>N</b>	<b>% DEPENDENCE ON N.GRID</b>				<b>52.696</b>
<b>O</b>	<b>AUX. CON. OF STATIONS WITHIN DELHI</b>				<b>22.718</b>
<b>P</b>	<b>NET CONSUMPTION OF DELHI</b>				<b>1499.166</b>

Figures in parenthesis correspond to the UI billing figures

## 8.12 Power supply position during the month of March 2008

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	97.818	93.371	97.322	92.900
2	RIHAND-I	72.605	69.295	72.365	69.067
3	RIHAND-II	93.819	89.543	93.506	89.245
4	UNCHAHAR-I	16.332	15.590	16.320	15.578
5	UNCHAHAR-II	34.317	32.754	34.294	32.732
6	UNCHAHAR-III	20.741	19.796	20.726	19.782
7	DADRI(TH)	539.384	514.821	538.563	514.036
8	FARAKA	44.798	43.190	43.190	41.221
9	KHELGAON	70.332	67.811	67.811	64.726
10	TALA	2.268	2.187	2.187	2.088
11	ANTA(GT)	18.227	17.405	18.227	17.405
12	ANTA(Liquid)	4.343	4.143	4.011	3.825
13	ANTA(RLNG)	3.042	2.908	2.580	2.467
14	AURAIYA(GT)	33.147	31.648	33.147	31.648
15	AURAIYA(Liquid)	4.207	4.018	3.530	3.370
16	AURAIYA(RLNG)	4.360	4.170	3.864	3.696
17	DADRI(GT)	24.195	23.110	24.195	23.110
18	DADRI(Liquid)	23.101	22.035	20.568	19.614
19	DADRI (RLNG)	1.594	1.522	1.397	1.334
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	<b>1108.630</b>	<b>1059.317</b>	<b>1097.803</b>	<b>1047.844</b>
20	TANAKPUR	0.501	0.479	0.501	0.479
21	CHAMERA-I	10.619	10.132	10.619	10.132
22	CHAMERA-II	9.115	8.700	9.115	8.700
23	BAIRA-SUIL	8.789	8.388	8.789	8.388
24	SALAL	20.839	19.889	20.839	19.889
25	DULASTI	13.629	13.008	13.629	13.008
26	DAULI GANGA	4.913	4.688	4.913	4.688
27	URI(HEP)	37.371	35.666	37.371	35.666
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	<b>105.776</b>	<b>100.950</b>	<b>105.776</b>	<b>100.950</b>
28	NAPP	6.825	6.516	6.816	6.508
29	RAPP(B-4)	0.000	0.000	0.000	0.000
30	RAPP(B-3)	0.000	0.000	0.000	0.000
C	<b>TOTAL NPC (28 TO 30)</b>	<b>6.825</b>	<b>6.516</b>	<b>6.816</b>	<b>6.508</b>
31	TEHRI	20.205	19.282	20.205	19.282
32	NATHPA JHAKHRI	24.429	23.317	24.429	23.317
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	<b>1265.865</b>	<b>1209.382</b>	<b>1255.029</b>	<b>1197.901</b>

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
	<b>IMPORT OF POWER</b>				
33	TATA POWER CO. LTD.(TPCL)-TATA	0.038	0.036	0.035	0.033
<b>E</b>	<b>TOTAL IMPORT (TOTAL 33 TO 33)</b>	<b>0.038</b>	<b>0.036</b>	<b>0.035</b>	<b>0.033</b>
	<b>EXPORT OF POWER</b>				
34	JHARKHAND	0.205	0.214	0.214	0.225
35	UTTRANCHAL	27.959	29.305	27.959	29.305
36	RELIANCE	3.081	3.217	3.217	3.378
37	BESCO (KALYANI)	14.490	15.156	15.156	15.890
38	ANDHRA PRADESH	111.981	117.059	117.059	122.774
39	HPSEB	0.619	0.650	0.619	0.650
40	HARYANA	0.000	0.000	0.000	0.000
41	UTTAR PRADESH	17.396	18.189	17.396	18.189
42	PUNJAB	13.447	14.138	13.447	14.138
43	MAHARASHTRA	31.613	33.089	33.089	34.675
44	RAJASTHAN	4.553	4.783	4.553	4.783
45	MPTCL	9.811	10.275	10.275	10.764
<b>F</b>	<b>TOTAL EXPORT (TOTAL 34 TO 45)</b>	<b>235.155</b>	<b>246.075</b>	<b>242.984</b>	<b>254.771</b>
	<u>INFIRM POWER</u>				
46	DULASTI	0.000	0.000	0.000	0.000
47	KHELGAON	0.000	0.000	0.000	0.000
48	TEHRI				
G	TOTAL INFIRM POWER (TOTAL 46 TO 48)	0.000	0.000	0.000	0.000
H	TOTAL DRAWAL FROM THE NORTHERN GRID	1030.748	963.343	1012.080	943.163
I	OVER DRAWAL(+)/UNDERDRAWAL(-) FROM THE GRID				-162.303 (-95.568)
	<b><u>AVAILABILITY FROM OWN SOURCES</u></b>				
49	IP				83.328
50	1/3rd HSEB SHARE+JHAZZAR SHARE IN IP				25.110
51	NET GENERATION AVAILABILITY FOR DELHI IN IP (49-50)				58.218
52	RPH				76.010
53	GT				135.918
54	PRAGATI				82.019
55	TOTAL AVAIL.FROM OWN SOURCES (51+52+53+54)				352.165
56	IMPORT FROM BTPS				391.517
J	TOTAL AVAILABILITY WITHIN DELHI (55+56)				743.682
K	TOTAL CONSUMPTION				1524.542
L	LOAD SHEDDING				33.452
M	REQUIREMENT				1557.994
N	% DEPENDENCE ON N.GRID				61.865
O	AUX. CON. OF STATIONS WITHIN DELHI				23.608
P	<b>NET CONSUMPTION OF DELHI</b>				<b>1500.934</b>

Figures in parenthesis correspond to the UI billing figures

### 8.13 Consolidated Power Supply Position for 2007-08

All figures in MUs

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
1	SINGRAULI	1261.721	1211.341	1260.080	1209.774
2	RIHAND-I	852.971	819.109	851.805	817.994
3	RIHAND-II	1055.650	1013.765	1054.030	1012.217
4	UNCHAHAR-I	191.484	183.814	190.040	182.422
5	UNCHAHAR-II	407.360	391.021	404.360	388.128
6	UNCHAHAR-III	254.158	244.055	252.135	242.098
7	DADRI(TH)	6071.457	5829.475	5956.077	5718.163
8	FARAKA	303.169	291.547	292.357	279.711
9	KHELGAON	646.610	622.492	627.813	602.031
10	TALA	100.453	96.686	99.293	95.493
11	ANTA(GT)	248.912	239.163	247.316	237.617
12	ANTA(Liquid)	52.869	50.546	15.421	14.700
13	ANTA(RLNG)	46.168	44.537	21.757	20.951
14	AURAIYA(GT)	370.421	355.694	368.344	353.684
15	AURAIYA(Liquid)	78.603	75.249	15.376	14.663
16	AURAIYA(RLNG)	80.375	77.579	36.795	35.461
17	DADRI(GT)	411.130	395.274	408.124	392.363
18	DADRI(Liquid)	188.336	179.995	61.019	58.150
19	DADRI (RLNG)	76.131	73.604	27.285	26.371
A.	<b>TOTAL NTPC(TOTAL 1 TO 19)</b>	12697.978	12194.946	12189.427	11701.991
20	TANAKPUR	45.824	44.082	45.824	44.082
21	CHAMERA-I	174.808	168.450	164.317	158.271
22	CHAMERA-II	210.710	203.019	206.952	199.379
23	BAIRA-SUIL	71.303	68.679	65.351	62.902
24	SALAL	372.578	358.810	372.578	358.810
25	DULASTI	303.758	292.324	302.408	291.018
26	DAULI GANGA	188.745	181.744	169.581	163.156
27	URI(HEP)	281.924	271.279	281.899	271.254
B	<b>TOTAL NHPC (TOTAL 20 TO 27)</b>	1649.650	1588.387	1608.910	1548.872
28	NAPP	66.596	63.996	66.583	63.984
29	RAPP(B-4)	8.596	8.268	8.574	8.246
30	RAPP(B-3)	9.084	8.748	9.077	8.740
C	<b>TOTAL NPC (28 TO 30)</b>	84.276	81.012	84.234	80.970
31	TEHRI	284.838	273.355	284.838	273.355
32	NATHPA JHAKHRI	653.856	629.584	653.866	629.593
D	<b>TOTAL CENTRAL SECTOR (A+B+C+31+32)</b>	15370.598	14767.284	14821.275	14234.781
	<b>IMPORT OF POWER</b>				
33	HPSEB	1190.715	1147.582	1189.194	1146.125
34	DVC(ER)	221.238	214.000	214.002	206.827



Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
35	GUJRAT	29.049	27.860	27.619	26.512
36	RELIANCE(WR)	4.962	4.739	4.510	4.295
37	TISCO (TATA)	2.030	1.956	1.901	1.813
38	GRIDCO	9.079	8.757	8.757	8.383
39	KSEB-IR (WR-SR)	13.003	12.512	11.921	11.591
40	KAWAS	0.409	0.391	0.391	0.373
41	CESC (RELIANCE)	0.290	0.280	0.268	0.256
42	KRL -IR (ER-SR)	48.237	46.302	44.465	42.931
43	ANDHRA PRADESH	17.556	16.905	16.192	15.596
44	TATA POWER CO. LTD.(TPCL)-TATA	18.935	18.092	17.217	16.436
45	LIQUID FIRED GEN. FROM AURAIYA	0.001	0.001	0.001	0.001
<b>E</b>	<b>TOTAL IMPORT</b>	1555.504	1499.377	1536.438	1481.139
	<b>EXPORT OF POWER</b>				
46	TATA POWER CO.LTD.(TPCL)	16.789	17.434	17.429	18.168
47	JHARKHAND	0.205	0.214	0.214	0.225
48	UTTRANCHAL	191.863	201.330	191.863	201.330
49	RELIANCE	24.498	24.708	25.476	26.588
50	BESCO (KALYANI)	21.252	22.239	22.239	23.330
51	ANDHRA PRADESH	111.981	117.059	117.059	122.774
52	HPSEB	161.618	169.252	161.618	169.252
53	HARYANA	4.790	4.963	-4.790	4.963
54	UTTAR PRADESH	103.563	107.543	103.563	107.543
55	PUNJAB	60.636	64.571	51.230	64.571
56	MAHARASHTRA	138.915	145.311	145.311	152.165
57	RAJASTHAN	335.531	351.746	335.721	351.946
58	MPTCL	30.374	31.815	31.815	33.400
<b>F</b>	<b>TOTAL EXPORT</b>	1202.015	1258.185	1198.748	1276.255
	<b>INFIRM POWER</b>				
59	DULASTI	2.334	2.258	2.334	2.258
60	KHELGAON	0.027	0.026	0.027	0.026
61	TEHRI	1.275	1.232	1.275	1.232
<b>G</b>	<b>TOTAL INFIRM POWER</b>	3.636	3.516	3.636	3.516
<b>H</b>	<b>TOTAL DRAWAL FROM THE NORTHERN GRID</b>	15727.723	15011.992	15162.600	14443.179
<b>I</b>	<b>OVER DRAWL(+)/UNDERDRAWAL(-) FROM THE GRID</b>				-1969.540 (-1685.580)
	<b>AVAILABILITY FROM OWN SOURCES</b>				
62	IP				1027.499
63	1/3rd HSEB SHARE+JHAZZAR SHARE IN IP				284.093
64	NET GENERATION AVAILABILITY FOR DELHI IN IP (62-63)				743.406
65	RPH				897.665
66	GT				1280.140
67	PRAGATI				2366.037
<b>68</b>	<b>TOTAL AVAIL.FROM OWN SOURCES (64+65+66+67)</b>				5287.248

Sr. NO.	DETAILS OF THE IMPORT FROM THE GRID INDICATING DIFFERENT SOURCES	Requirement at Power Plant	Requirement at Periphery	Allocation made by NRLDC at Power Plant	Allocation made by NRLDC at Periphery
69	IMPORT FROM BTPS				4929.792
J	TOTAL AVAILABILITY WITHIN DELHI				10217.040
K	TOTAL CONSUMPTION				22690.679
M	LOAD SHEDDING				136.118
M	REQUIREMENT				22826.797
N	% DEPENDENCE ON N.GRID				63.65
O	AUX. CON. OF STATIONS WITHIN DELHI				321.092
P	<b>NET CONSUMPTION OF DELHI</b>				<b>22369.587</b>

### 8.14 LOAD SHEDDING DETAILS FOR 2007-08

Month	No. of under Freq. trippings occurred	Shedding due to grid restriction in MUs			Shedding due to low freq./ over drawa in MUs		
		Due to Under Freq. tripping	Shedding due to low freq/ voltage / over drawal/ Northern Grid Constraints by DTL	Total In Mus.	BYPL	BRPL	TOTAL BSES
		(1)	(2)	(3)	(4=2+3)	(5)	(6)
APR'07	181	1.778	0.000	1.778			1.662
MAY'07	14	0.061	0.000	0.061	0.000	0.000	0.000
JUN'07	46	0.296	0.000	0.296	0.011	0.252	0.263
JUL'07	8	0.089	0.000	0.089	0.000	0.000	0.000
AUG.'07	20	0.361	0.000	0.361	2.331	3.945	6.276
SEP.'07	17	0.157	0.000	0.157	0.000	0.402	0.402
OCT.'07	57	0.371	0.213	0.584	0.000	0.000	0.000
NOV.'07	97	0.717	0.000	0.717	0.000	0.000	0.000
DEC.'07	150	1.265	0.000	1.265	0.000	0.000	0.000
JAN.'08	317	4.686	0.000	4.686	0.644	1.460	2.104
FEB.'08	347	4.645	0.000	4.645	0.270	0.847	1.117
MAR'08	582	5.857	0.000	5.857	0.132	0.429	0.561
<b>TOTAL</b>	<b>1836</b>	<b>20.283</b>	<b>0.213</b>	<b>20.496</b>	<b>3.388</b>	<b>7.335</b>	<b>12.385</b>

Month	Shedding due to low frequency / over drawal in MUs					Total shedding due to Grid Restrictions in MUs	
	NDPL	MES	NDMC	Shedding due to transmission constraints in Central Sector Stns			Total
				BYPL	BRPL		
	(8)	(9)	(10)	(11)	(12)		(13=(7) to (12))
APR'07	0.000	0.000	0.000	0.000	0.000	1.662	3.440
MAY'07	0.000	0.000	0.000	0.000	0.000	0.000	0.061
JUN'07	0.114	0.000	0.000	0.000	0.000	0.377	0.673
JUL'07	0.000	0.000	0.000	0.000	0.000	0.000	0.089
AUG.'07	1.777	0.000	0.000	0.000	0.000	8.053	8.414
SEP.'07	0.387	0.000	0.000	0.000	0.000	0.789	0.946
OCT.'07	0.173	0.000	0.000	0.000	0.000	0.173	0.757
NOV.'07	0.000	0.000	0.000	0.000	0.000	0.000	0.717
DEC.'07	0.828	0.000	0.000	0.000	0.000	0.828	2.093
JAN.'08	15.134	0.000	0.000	0.382	0.213	17.833	22.519
FEB.'08	12.327	0.000	0.000	3.849	2.501	19.794	24.439
MAR'08	7.653	0.000	0.000	7.184	8.366	23.764	29.621
<b>TOTAL</b>	<b>38.393</b>	<b>0.000</b>	<b>0.000</b>	<b>11.415</b>	<b>11.080</b>	<b>84.353</b>	<b>93.769</b>

**8.15 DEMAND - AVAILABILITY-DEMAND POSITION OF DELHI AT THE TIME OF PEAK DEMAND MET DURING 2007-08**

(Values in MW)

Month	Date	Time of occurrence of peak demand	Generation within Delhi					Less 1/3 Haryana share in IP
			IP	RPH	GT	Pragati	BTPS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Apr-07	30/04/07	16:30	137	99	136	289	619	35
May-07	16/05/07	16:13	129	116	148	279	612	36
Jun-07	11/06/07	16:20	108	85	163	263	623	36
Jul-07	12/07/07	16.10.12	90	98	122	259	539	36
Aug-07	16/08/07	22:26	111	117	182	297	434	24
Sep-07	21/09/07	18:45:38	128	100	152	269	613	36
Oct-07	29/10/07	<b>18:12:23</b>	115	103	158	281	625	24
Nov-07	7/11/07	19:03:50	130	100	148	307	622	35
Dec-07	19/12/07	<b>7:56:42</b>	83	99	192	313	622	24
Jan-08	24/01/08	19:46:06	64	102	120	329	707	25
Feb-08	15/02/08	8:17:00	80	56	118	336	547	35
Mar-08	28/03/08	19:37:53	112	103	208	138	423	36
<b>2007-08</b>	<b>11/06/07</b>	<b>16:20</b>	<b>108</b>	<b>85</b>	<b>163</b>	<b>263</b>	<b>623</b>	<b>36</b>

Month	Net Availability within Delhi	Drawal from the Grid	Scheduled Drawal	Over drawl (+) / under drawal (-) (Grid Assistance)	Peak Demand Met	Load Shedding	Un-restricted Demand
	(9)=(3) to (7) - (8)	(10)	(11)	(12)=(10)-(11)	(13)=(9)+(10)	(14)	(15)=(13)+(14)
Apr-07	1245	2192	1844	348	3437	0	3437
May-07	1248	2592	1994	598	3840	6	3846
Jun-07	1206	2788	2541	247	4030	15	4045
Jul-07	1072	2795	2477	318	3903	6	3909
Aug-07	1117	2622	2326	296	3763	0	3763
Sep-07	1226	2430	2301	129	3692	3	3695
Oct-07	1258	2047	2059	(-)12	3329	5	3334
Nov-07	1272	1698	1752	(-)54	3005	0	3005
Dec-07	1285	1920	1556	364	3229	0	3229
Jan-08	1297	1996	1752	244	3318	0	3318
Feb-08	1102	2160	1758	402	3297	16	3313
Mar-08	948	2174	1814	360	3158	0	3158
<b>2007-08</b>	<b>1206</b>	<b>2788</b>	<b>2541</b>	<b>247</b>	<b>4030</b>	<b>15</b>	<b>4045</b>

**8.16 POWER AVAILABILITY- DEMAND POSITION AT THE TIME OF OCCURRENCE OF MAXIMUM UNRESTRICTED DEMAND DURING 2007-08**

Month	Date	Time of occurrence of peak demand	Generation within Delhi					1/3 <sup>rd</sup> Haryana share in IP
			IP	RPH	GT	Pragati	BTPS	
			(1)	(2)	(3)	(4)	(5)	
Apr-07	30/04/07	16:30	137	99	136	289	619	35
May-07	16/05/07	16:13	129	116	148	279	612	36
Jun-07	11/06/07	16:00	108	85	163	263	623	36
Jul-07	12/07/07	16:10	90	98	122	259	539	36
Aug-07	24/08/07	20:00	126	115	183	299	407	36
Sep-07	21/09/07	18:45:38	128	100	152	269	613	36
Oct-07	29/10/07	18:12:23	115	103	158	281	625	24
Nov-07	7/11/07	19:03:50	130	100	148	307	622	35
Dec-07	19/12/07	7:56:42	83	99	192	313	622	35
Jan-08	24/01/08	19:46:06	64	102	120	329	707	25
Feb-08	15/02/08	8:17:00	80	56	118	336	547	35
Mar-08	28/03/08	19:37:53	112	103	208	138	423	36
<b>2007-08</b>	<b>11/06/07</b>	<b>16:00</b>	<b>108</b>	<b>85</b>	<b>163</b>	<b>263</b>	<b>623</b>	<b>36</b>

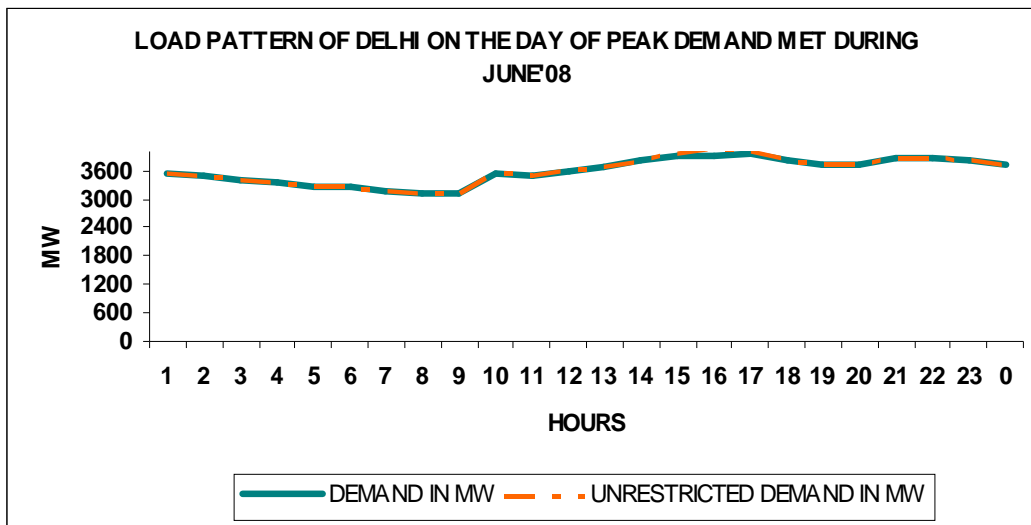
Month	Net Availability within Delhi	Drawal from the Grid	Scheduled Drawal	Overdrawl(+)/under drawal (-) (Grid Assistance)	Peak Demand Met	Load Shedding	Un-restricted Demand
	(9)=(3) to (7)-(8)	(10)	(11)	(12)=(10)-(11)	(13)=(9) + (10)	(14)	(15)=(13)+(14)
Apr-07	1245	2192	1844	348	3437	0	3437
May-07	1248	2592	1994	598	3840	6	3846
Jun-07	1242	2647	2545	(-)102	3889	186	4075
Jul-07	1072	2795	2477	318	3903	6	3909
Aug-07	1094	2337	2105	232	3467	470	3937
Sep-07	1226	2430	2301	129	3692	3	3695
Oct-07	1258	2047	2059	(-)12	3329	5	3334
Nov-07	1272	1698	1752	54	3005	0	3005
Dec-07	1274	1920	1556	364	3229	0	3229
Jan-08	1297	1996	1752	244	3318	0	3318
Feb-08	1102	2160	1758	402	3297	16	3313
Mar-08	948	2174	1814	360	3158	0	3158
<b>2007-08</b>	<b>1242</b>	<b>2647</b>	<b>2545</b>	<b>(-)102</b>	<b>3889</b>	<b>186</b>	<b>4075</b>

## 8.17 LOAD PATTERN

### 8.17.1 SUMMER SEASON

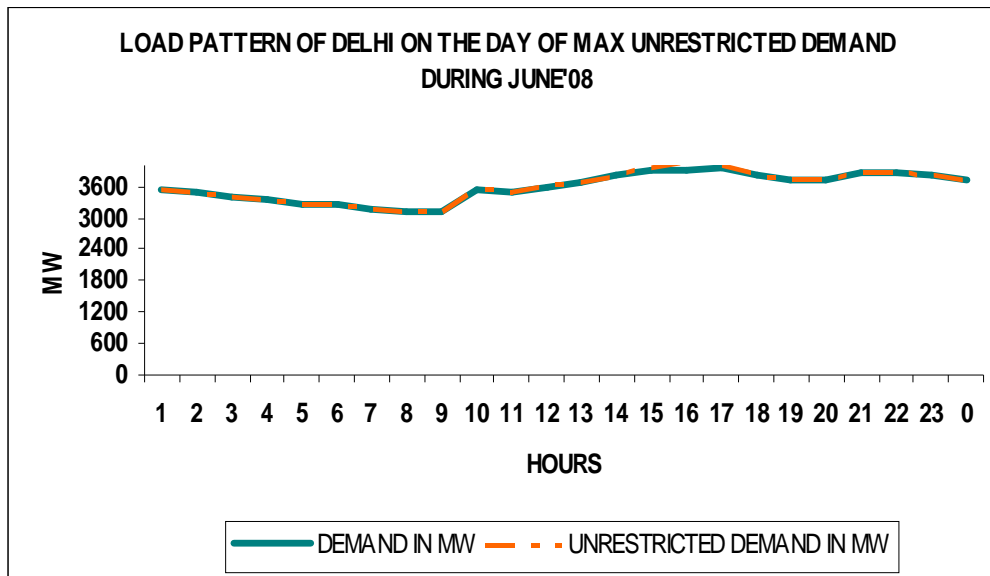
#### 8.17.1.1 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM PEAK DEMAND MET DURING JUNE '07 (11.06.07) (4030 MW at 16:20 hrs.)

Hours	Demand met in MW	Load Shedding in MW	Un-restricted Demand in MW
01:00	3529	0	3529
02:00	3467	0	3467
03:00	3396	0	3396
04:00	3352	0	3352
05:00	3248	0	3248
06:00	3238	0	3238
07:00	3165	0	3165
08:00	3129	0	3129
09:00	3105	0	3105
10:00	3513	0	3513
11:00	3493	3	3496
12:00	3596	3	3599
13:00	3655	0	3655
14:00	3821	2	3823
15:00	3911	21	3932
16:00	3889	186	4075
17:00	3975	13	3988
18:00	3830	4	3834
19:00	3702	11	3713
20:00	3717	0	3717
21:00	3844	0	3844
22:00	3844	0	3844
23:00	3792	5	3797
24:00	3701	0	3701
<b>Energy in Mus</b>	<b>85.075</b>	<b>0.225</b>	<b>85.3</b>



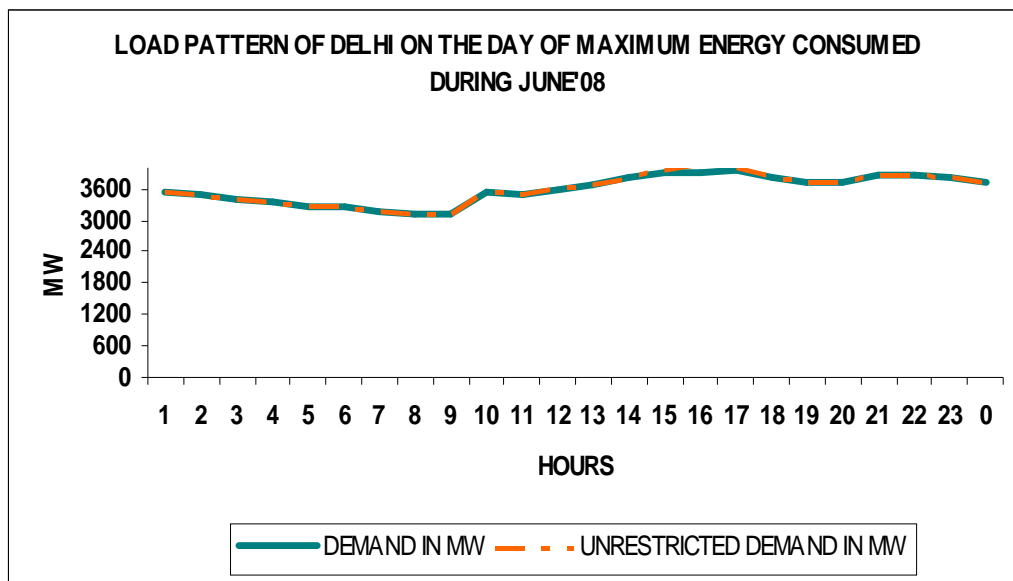
**8.17.1.2 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UNRESTRICTED DEMAND DURING JUNE '07 (11.06.07) (4075 MW at 16:00 hrs.)**

Hours	Demand met in MW	Load Shedding in MW	Un-restricted Demand in MW
01:00	3529	0	3529
02:00	3467	0	3467
03:00	3396	0	3396
04:00	3352	0	3352
05:00	3248	0	3248
06:00	3238	0	3238
07:00	3165	0	3165
08:00	3129	0	3129
09:00	3105	0	3105
10:00	3513	0	3513
11:00	3493	3	3496
12:00	3596	3	3599
13:00	3655	0	3655
14:00	3821	2	3823
15:00	3911	21	3932
16:00	3889	186	4075
17:00	3975	13	3988
18:00	3830	4	3834
19:00	3702	11	3713
20:00	3717	0	3717
21:00	3844	0	3844
22:00	3844	0	3844
23:00	3792	5	3797
24:00	3701	0	3701
<b>Energy in Mus</b>	<b>85.075</b>	<b>0.225</b>	<b>85.3</b>



**17.1.1.3 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM ENERGY CONSUMED DURING JUNE '07 (11.06.07)**

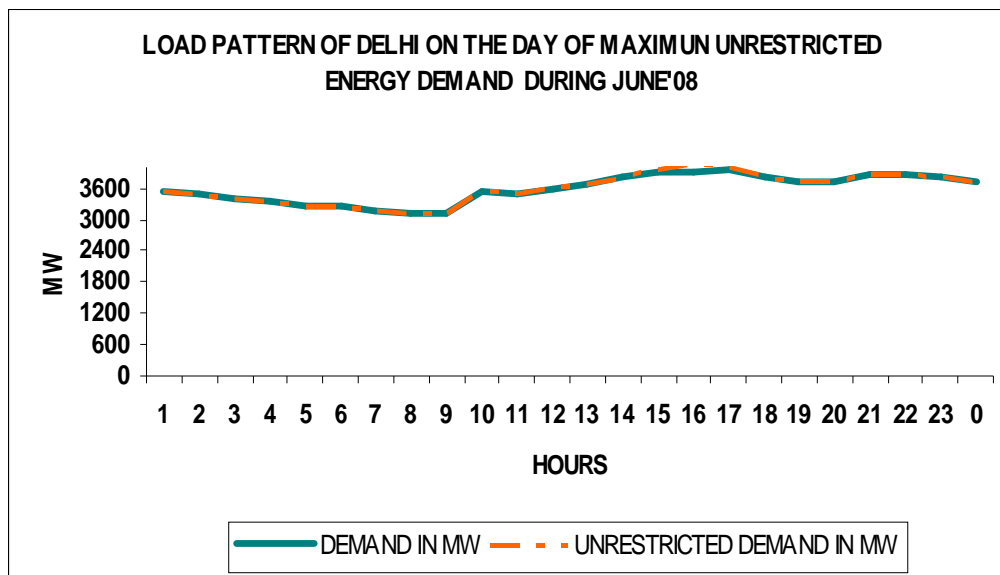
Hours	Demand met in MW	Load Shedding in MW	Un-restricted Demand in MW
01:00	3529	0	3529
02:00	3467	0	3467
03:00	3396	0	3396
04:00	3352	0	3352
05:00	3248	0	3248
06:00	3238	0	3238
07:00	3165	0	3165
08:00	3129	0	3129
09:00	3105	0	3105
10:00	3513	0	3513
11:00	3493	3	3496
12:00	3596	3	3599
13:00	3655	0	3655
14:00	3821	2	3823
15:00	3911	21	3932
16:00	3889	186	4075
17:00	3975	13	3988
18:00	3830	4	3834
19:00	3702	11	3713
20:00	3717	0	3717
21:00	3844	0	3844
22:00	3844	0	3844
23:00	3792	5	3797
24:00	3701	0	3701
<b>Energy in Mus</b>	<b>85.075</b>	<b>0.225</b>	<b>85.3</b>





**17.1.1.4 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UNRESTRICTED ENERGY DEMAND DURING JUNE '07 (11.06.07)**

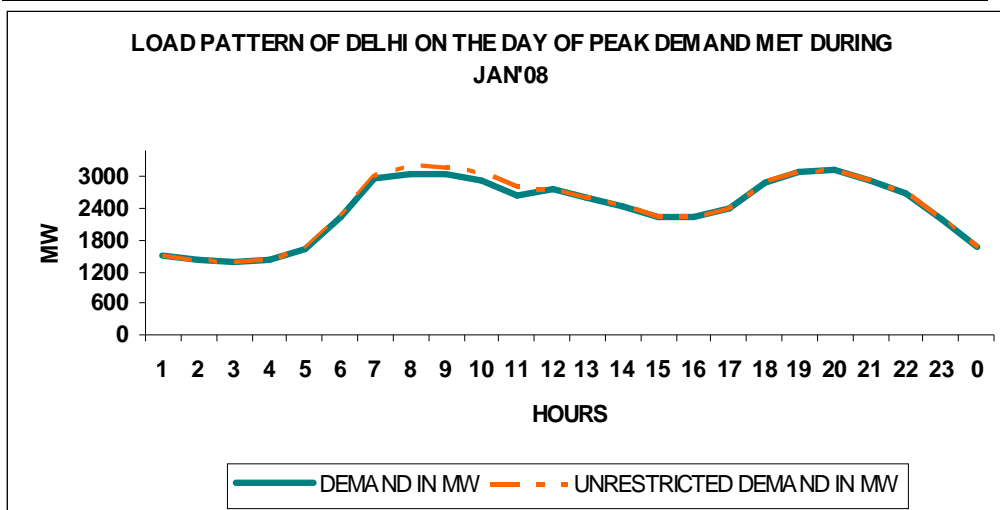
Hours	Demand met in MW	Load Shedding in MW	Un-restricted Demand in MW
01:00	3529	0	3529
02:00	3467	0	3467
03:00	3396	0	3396
04:00	3352	0	3352
05:00	3248	0	3248
06:00	3238	0	3238
07:00	3165	0	3165
08:00	3129	0	3129
09:00	3105	0	3105
10:00	3513	0	3513
11:00	3493	3	3496
12:00	3596	3	3599
13:00	3655	0	3655
14:00	3821	2	3823
15:00	3911	21	3932
16:00	3889	186	4075
17:00	3975	13	3988
18:00	3830	4	3834
19:00	3702	11	3713
20:00	3717	0	3717
21:00	3844	0	3844
22:00	3844	0	3844
23:00	3792	5	3797
24:00	3701	0	3701
<b>Energy in Mus</b>	<b>85.075</b>	<b>0.225</b>	<b>85.300</b>



## 8.17.2 WINTER LOAD PATTERN

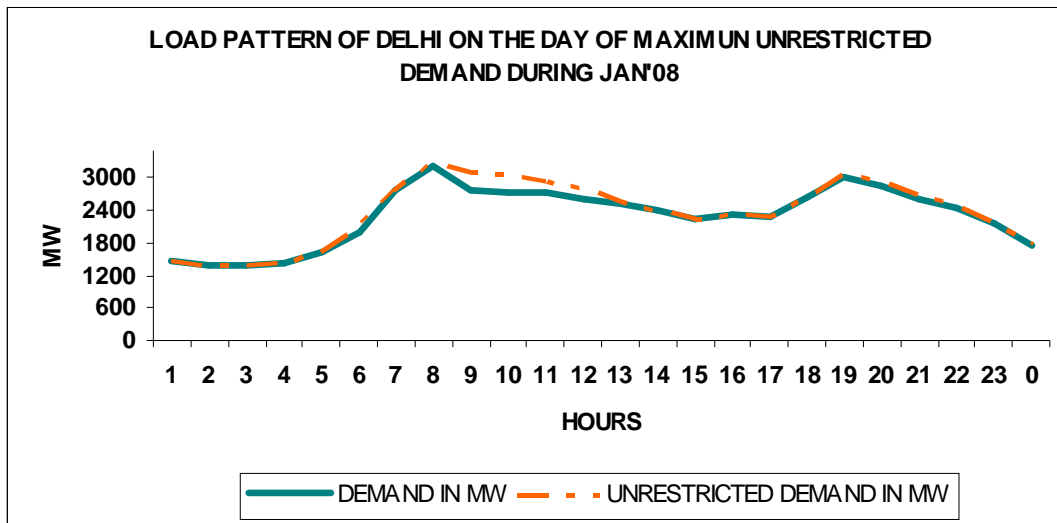
### 8.17.2.1 LOAD PATTERN OF DELHI ON THE DAY OF PEAK DEMAND MET DURING JAN '08 (24.01.08) (3318 MW at 19:46:06 hrs.)

Hours	Demand met in MW	Load Shedding in MW	Un-restricted Demand in MW
01:00	1505	0	1505
02:00	1407	0	1407
03:00	1390	0	1390
04:00	1431	0	1431
05:00	1634	0	1634
06:00	2237	0	2237
07:00	2981	35	3016
08:00	3072	137	3209
09:00	3055	100	3155
10:00	2938	173	3111
11:00	2640	171	2811
12:00	2757	0	2757
13:00	2588	0	2588
14:00	2430	0	2430
15:00	2249	0	2249
16:00	2243	0	2243
17:00	2394	0	2394
18:00	2887	0	2887
19:00	3100	0	3100
20:00	3143	0	3143
21:00	2919	0	2919
22:00	2681	0	2681
23:00	2218	0	2218
24:00	1664	0	1664
<b>Energy in Mus</b>	<b>55.25</b>	<b>0.761</b>	<b>56.011</b>



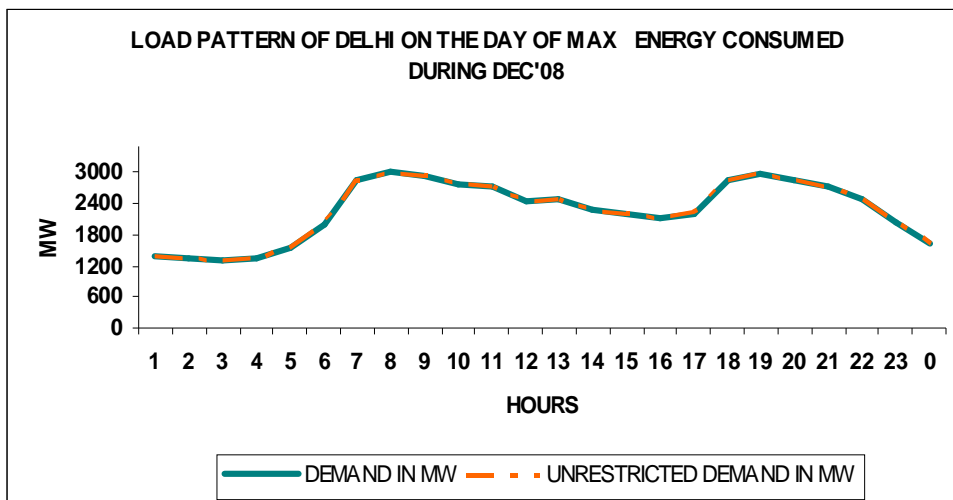
**8.17.2.2 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UN-RESTRICTED DEMAND DURING JAN '08 (05.01.08) (3353 MW at 08:04:00 hrs.)**

Hours	Demand met in MW	Load Shedding in MW	Un-restricted Demand in MW
01:00	1464	0	1464
02:00	1390	0	1390
03:00	1373	0	1373
04:00	1405	0	1405
05:00	1621	0	1621
06:00	2013	90	2103
07:00	2762	22	2784
08:00	3209	44	3253
09:00	2776	299	3075
10:00	2708	338	3046
11:00	2739	196	2935
12:00	2607	196	2803
13:00	2511	60	2571
14:00	2418	0	2418
15:00	2243	13	2256
16:00	2315	0	2315
17:00	2284	0	2284
18:00	2649	0	2649
19:00	2992	70	3062
20:00	2838	107	2945
21:00	2608	81	2689
22:00	2456	33	2489
23:00	2175	0	2175
24:00	1759	0	1759
<b>Energy in Mus</b>	<b>53.587</b>	<b>1.582</b>	<b>55.169</b>



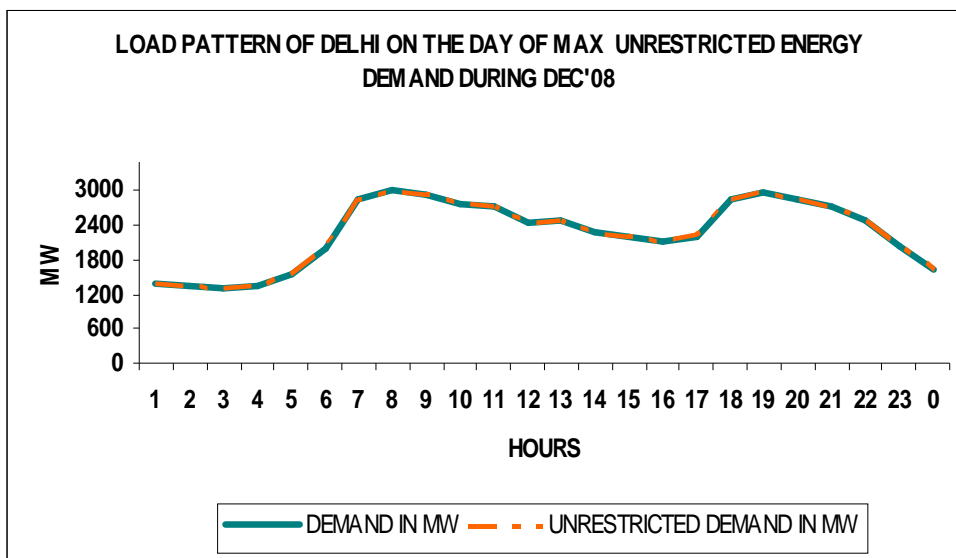
**8.17.2.3 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM ENERGY CONSUMED DURING DEC '07 (18.12.07) (57.421 Mus)**

Hours	Demand met in MW	Load Shedding in MW	Un-restricted Demand in MW
01:00	1388	0	1388
02:00	1331	0	1331
03:00	1294	0	1294
04:00	1359	0	1359
05:00	1543	0	1543
06:00	1987	0	1987
07:00	2866	0	2866
08:00	2997	0	2997
09:00	2950	0	2950
10:00	2748	0	2748
11:00	2747	0	2747
12:00	2453	0	2453
13:00	2469	0	2469
14:00	2271	0	2271
15:00	2201	0	2201
16:00	2130	0	2130
17:00	2190	40	2230
18:00	2841	0	2841
19:00	2963	0	2963
20:00	2863	0	2863
21:00	2717	0	2717
22:00	2472	0	2472
23:00	2030	0	2030
24:00	1645	0	1645
<b>Energy in Mus</b>	<b>57.421</b>	<b>0.119</b>	<b>57.54</b>



**8.17.2.4 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UNRESTRICTED ENERGY DEMAND DURING DEC '07(18.12.07) (57.54 Mus)**

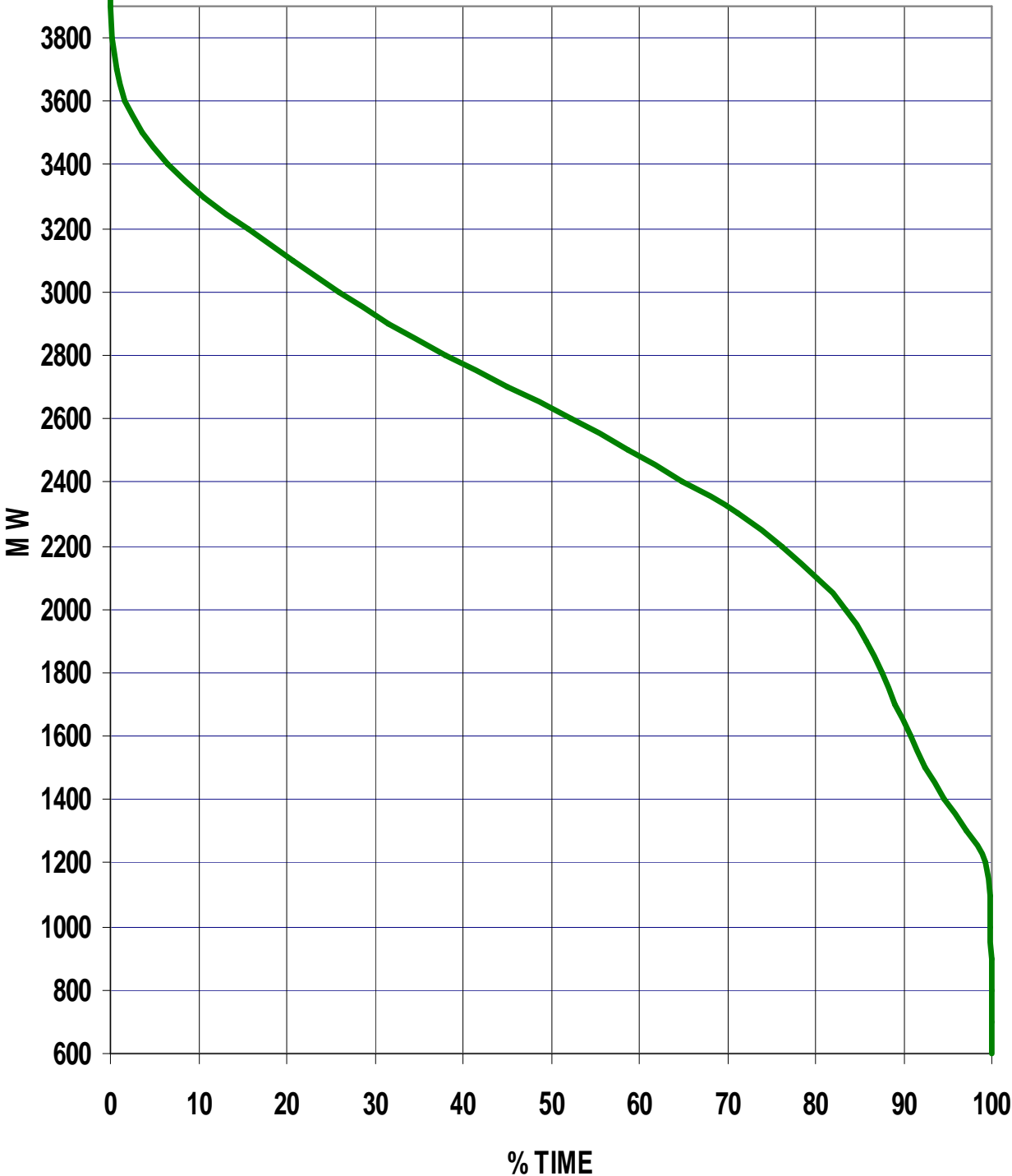
Hours	Demand met in MW	Load Shedding in MW	Un-restricted Demand in MW
01:00	1388	0	1388
02:00	1331	0	1331
03:00	1294	0	1294
04:00	1359	0	1359
05:00	1543	0	1543
06:00	1987	0	1987
07:00	2866	0	2866
08:00	2997	0	2997
09:00	2950	0	2950
10:00	2748	0	2748
11:00	2747	0	2747
12:00	2453	0	2453
13:00	2469	0	2469
14:00	2271	0	2271
15:00	2201	0	2201
16:00	2130	0	2130
17:00	2190	40	2230
18:00	2841	0	2841
19:00	2963	0	2963
20:00	2863	0	2863
21:00	2717	0	2717
22:00	2472	0	2472
23:00	2030	0	2030
24:00	1645	0	1645
<b>Energy in Mus</b>	<b>57.421</b>	<b>0.119</b>	<b>57.54</b>



### 8.17.3 LOAD DURATION CURVE FOR 2007-08 (Based on SCADA)

LOAD REMAINED ABOVE IN MW	DURATION IN HOURS	(%) OF TIME
3900	2.75	0.03
3800	18.25	0.21
3700	60.25	0.69
3600	150.00	1.71
3500	312.00	3.55
3400	573.25	6.53
3300	931.00	10.60
3200	1371.00	15.61
3100	1813.25	20.64
3000	2280.00	25.96
2900	2769.50	31.53
2800	3342.25	38.05
2700	3958.00	45.06
2600	4589.75	52.25
2500	5166.25	58.81
2400	5703.50	64.93
2300	6244.00	71.08
2200	6700.50	76.28
2100	7041.75	80.17
2000	7328.50	83.43
1900	7527.50	85.70
1800	7684.25	87.48
1700	7821.25	89.04
1600	7970.25	90.74
1500	8125.50	92.50
1400	8310.25	94.61
1300	8536.25	97.18
1200	8721.50	99.29
1100	8770.50	99.85
1000	8774.75	99.89
900	8778.75	99.94
800	8781.00	99.97
700	8783.00	99.99
600	8784.00	100.00

# LOAD DURATION CURVE OF DELHI FOR YEAR 2007-08



**9 FREQUENCY SPECTRUM OF NORTHERN REGION [(NORTH-EAST-WEST)(NEW)] FOR 2007-08.**

Month	Below 48.5Hz (% Time)	48.5 – 49.0Hz (% Time)	49.0- 49.5Hz (% Time)	49.5- 50Hz (% Time)	50.0- 50.5Hz (% Time)	50.1- 51.0Hz (% Time)	51.0 to Above (% Time)	Ave.freq. during the month	Max. freq. during the month	Min. freq. during the month
<b>APR'07</b>	0.00	12.41	49.87	34.36	3.25	0.11	0.00	49.33	50.13	48.79
<b>MAY'07</b>	0.04	1.39	33.35	53.76	11.43	0.06	0.00	49.63	50.86	48.78
<b>JUN'07</b>	0.00	3.59	31.79	41.15	23.29	0.18	0.00	49.69	50.76	48.71
<b>JUL'07</b>	0.00	1.31	28.53	51.41	18.71	0.04	0.00	49.34	50.76	48.41
<b>AUG.'07</b>	0.00	2.88	36.48	45.83	14.65	0.16	0.00	49.61	50.96	48.69
<b>SEP.'07</b>	0.00	1.31	29.91	53.36	15.35	0.07	0.00	49.66	50.62	48.70
<b>OCT.'07</b>	0.00	7.21	62.51	28.16	2.11	0.01	0.00	49.66	50.62	48.70
<b>NOV.'07</b>	0.00	14.96	62.47	20.81	1.76	0.00	0.00	49.29	50.34	49.01
<b>DEC.'07</b>	0.00	16.62	59.90	22.00	1.48	0.00	0.00	49.29	50.6	48.78
<b>JAN.'08</b>	0.00	21.11	62.65	15.11	1.13	0.00	0.00	49.22	50.32	48.60
<b>FEB.'08</b>	0.00	22.35	63.96	13.48	0.21	0.00	0.00	49.20	49.93	48.83
<b>MAR'08</b>	0.00	24.24	61.65	13.22	0.72	0.04	0.00	49.21	50.74	48.60
<b>TOTAL</b>	<b>0.00</b>	<b>10.78</b>	<b>48.59</b>	<b>32.72</b>	<b>7.84</b>	<b>0.06</b>	<b>0.00</b>	<b>49.43</b>	<b>51.56</b>	<b>47.72</b>

**10 DETAILS OF UNDER FREQUENCY RELAY TRIPPINGS OCCURRED IN 2007-08**

MONTH	STAGE-1 (48.8Hz)	STAGE-2 (48.6Hz)	df/dt (49.9Hz with slop 0.1, 0.2, 0.3Hz/Sec)	TOTAL
<b>APRIL 2007</b>	174	0	7	181
<b>MAY 2007</b>	10	0	2	12
<b>JUNE 2007</b>	39	0	7	46
<b>JULY 2007</b>	7	0	1	8
<b>AUGUST 2007</b>	20	0	0	20
<b>SEPTEMBER 2007</b>	15	0	2	17
<b>OCTOBER 2007</b>	53	0	3	56
<b>NOVEMBER 2007</b>	96	0	1	97
<b>DECEMBER 2007</b>	144	0	3	147
<b>JANUARY 2008</b>	306	0	11	317
<b>FEBRUARY 2008</b>	312	0	36	348
<b>MARCH 2008</b>	537	0	45	582
<b>TOTAL</b>	<b>1713</b>	<b>0</b>	<b>118</b>	<b>1831</b>



## 11 INTRASTATE TRANSMISSION LOSSES

### 11.1 WEEK WISE INTRASTATE TRANSMISSION LOSSES FOR 2007-08 (Based on SEM data)

Week No.	Avg Trans. Loss in %age	Actual drawal from the grid in Mus	Actual Ex-bus generation with in Delhi in Mus					Total
			IP	RPH	GT	PRAGATI	BTPS	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(4)+(5)+ (6)+(7)+ (8)
1	0.45	31.675	1.693	1.403	3.942	6.675	9.868	23.582
2	0.40	224.831	10.381	9.953	26.099	49.513	70.263	166.210
3	1.45	254.235	13.146	9.995	24.926	50.230	74.427	172.724
4	1.00	300.967	15.615	13.288	22.844	49.900	77.675	179.321
5	1.05	274.308	24.547	18.137	20.981	48.558	105.377	217.600
6	1.35	269.504	19.319	18.551	24.521	46.750	102.603	211.743
7	0.59	286.297	19.319	18.537	17.867	46.658	90.931	193.313
8	1.20	307.011	18.946	18.583	19.274	47.245	95.724	199.772
9	1.33	288.232	20.003	12.924	20.910	45.874	104.540	204.251
10	0.97	290.888	14.089	14.424	24.975	48.402	108.264	210.154
11	1.02	349.709	18.188	10.117	26.917	47.242	106.600	209.063
12	0.78	350.465	17.067	7.465	24.318	44.371	91.062	184.284
13	1.12	314.285	19.504	7.409	12.578	45.230	80.181	164.902
14	1.22	341.223	20.659	9.048	21.263	38.075	98.919	187.964
15	1.18	346.762	12.800	17.398	19.295	41.989	86.298	177.779
16	1.22	334.219	18.558	16.216	19.959	45.921	83.567	184.221
17	1.20	343.397	16.986	17.642	22.698	46.931	87.688	191.946
18	1.22	335.895	17.018	15.228	27.429	49.640	84.083	193.398
19	1.14	331.287	19.445	15.929	24.770	46.263	63.740	170.147
20	1.20	356.709	19.831	15.634	25.626	46.514	70.372	177.977
21	1.42	328.826	14.595	14.198	30.618	47.587	71.474	178.473
22	1.41	343.251	20.401	18.140	29.570	48.637	61.749	178.496
23	1.37	340.532	14.987	16.825	28.514	47.304	68.889	176.519
24	1.28	333.058	14.731	17.565	25.446	45.215	72.925	175.882
25	1.25	275.433	14.412	17.441	22.165	46.840	102.347	203.205
26	1.10	314.512	15.352	16.761	24.396	45.142	103.490	205.140
27	1.23	258.286	17.955	16.591	25.107	44.649	93.770	198.071
28	1.49	211.342	11.768	17.350	27.260	49.679	92.041	198.099

Week No.	Avg Trans. Loss in %age	Actual drawal from the grid in Mus	Actual Ex-bus generation with in Delhi in Mus					Total
			IP	RPH	GT	PRAGATI	BTPS	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(4)+(5)+(6)+(7)+(8)
29	1.49	181.282	15.963	17.608	26.565	47.513	96.291	203.940
30	1.50	161.888	15.525	17.233	24.448	46.337	99.283	202.826
31	1.51	162.152	14.661	17.049	22.723	46.041	107.384	207.857
32	2.13	148.376	17.856	17.269	22.723	46.335	108.257	212.441
33	1.66	142.022	19.288	14.409	22.926	40.989	107.064	204.677
34	1.78	131.308	18.743	16.696	24.994	41.488	108.778	210.698
35	1.82	128.339	17.441	18.060	26.134	39.804	108.120	209.560
36	1.68	130.631	19.202	15.582	26.870	39.065	108.336	209.056
37	1.72	131.635	17.662	16.472	27.522	41.949	109.394	212.998
38	1.85	151.939	17.662	11.229	26.679	43.484	109.858	208.912
39	1.60	150.757	16.498	14.256	26.836	52.531	110.212	220.333
40	1.64	136.756	17.845	16.492	27.381	50.379	110.814	222.911
41	1.58	175.479	19.859	16.081	23.282	32.363	110.757	202.343
42	1.64	179.058	18.481	16.493	13.778	32.082	110.453	191.288
43	1.58	171.720	17.392	16.903	14.348	46.441	108.279	203.363
44	1.61	172.657	12.845	16.263	20.107	54.335	110.237	213.787
45	1.81	198.405	10.197	11.947	19.084	53.931	100.444	195.603
46	1.79	196.296	13.916	6.831	17.151	53.364	95.455	186.718
47	1.67	184.452	17.531	10.118	19.541	54.049	95.828	197.067
48	2.12	136.980	18.926	14.473	25.020	51.893	102.328	212.639
49	1.71	129.434	19.149	15.314	23.914	45.264	109.989	213.631
50	1.92	152.641	16.048	12.630	25.003	16.595	107.068	177.345
51	1.86	171.987	17.762	14.703	27.901	17.553	99.123	177.041
52	1.65	195.415	14.557	15.852	32.156	16.520	71.006	150.091
53	1.52	218.341	16.201	16.243	34.077	18.765	73.717	159.004
54	1.50	33.505	2.648	1.968	4.977	3.457	10.326	23.376
<b>Total</b>	<b>1.38</b>	<b>12410.590</b>	<b>885.173</b>	<b>780.926</b>	<b>1250.410</b>	<b>2299.562</b>	<b>4947.669</b>	<b>10163.740</b>

Note : Week-1 & 2, Transmission losses correspond to conventional / half hourly logged readings.

Week	Total Consumption of Delhi at DTL periphery in Mus	Actual drawal of distribution licensees and deemed licensees							Trans. Loss in %
		NDPL	BRPL	BYPL	NDMC	MES	Total	Avg. Trans Loss in Mus	
(1)	(10)=(3)+(9)	(11)	(12)	(13)	(14)	(15)	(16)=(11)+(12)+(13)+(14)+(15)	(17)=(10)-(16)	(18)=(17)*100/10
1	55.3	15.6	23.0	13.6	2.5	0.4	55.0	0.2	0.45
2	391.0	108.6	164.5	92.8	20.5	3.1	389.5	1.6	0.40
3	427.0	118.8	177.6	97.4	23.7	3.3	420.8	6.2	1.45
4	480.3	128.9	202.2	113.5	27.1	3.8	475.5	4.8	1.00
5	491.9	131.4	206.3	117.6	27.5	3.9	486.8	5.2	1.05
6	481.2	128.9	202.1	113.5	26.8	3.4	474.7	6.5	1.35
7	479.6	130.1	202.6	113.2	27.3	3.6	476.8	2.8	0.59
8	506.8	134.5	212.3	120.7	29.0	4.2	500.7	6.1	1.20
9	492.5	133.4	204.6	116.6	27.5	3.9	485.9	6.5	1.33
10	501.0	135.4	209.3	119.8	27.9	3.8	496.2	4.9	0.97
11	558.8	149.8	237.4	131.7	30.2	4.0	553.1	5.7	1.02
12	534.7	145.0	227.7	123.9	30.0	4.0	530.6	4.1	0.78
13	479.2	131.4	203.7	111.3	23.8	3.7	473.8	5.4	1.12
14	529.2	143.6	221.5	123.5	30.1	4.0	522.8	6.4	1.22
15	524.5	143.7	218.4	122.4	29.8	4.1	518.4	6.2	1.18
16	518.4	142.6	214.5	121.7	29.2	4.0	512.1	6.3	1.22
17	535.3	147.7	221.1	125.9	30.1	4.1	528.9	6.4	1.20
18	529.3	145.5	221.1	123.1	29.0	4.1	522.8	6.5	1.22
19	501.4	138.9	204.2	119.8	28.8	4.1	495.7	5.7	1.14
20	534.7	146.6	220.8	127.0	29.7	4.2	528.3	6.4	1.20
21	507.3	138.2	210.5	119.3	28.1	4.0	500.1	7.2	1.42
22	521.7	143.9	210.4	126.0	30.0	4.1	514.4	7.4	1.41
23	517.1	142.3	209.9	124.5	29.1	4.1	510.0	7.1	1.37
24	508.9	143.0	208.8	121.9	24.8	4.0	502.4	6.5	1.28
25	478.6	134.9	192.3	114.2	27.5	3.8	472.7	6.0	1.25
26	519.7	144.8	212.7	123.1	29.2	4.1	513.9	5.7	1.10
27	456.4	128.3	185.6	107.4	25.8	3.7	450.8	5.6	1.23
28	409.4	115.4	164.2	98.7	21.7	3.3	403.3	6.1	1.49

Week	Total Consumption of Delhi at DTL periphery in Mus	Actual drawal of distribution licensees and deemed licensees							Trans. Loss in %
		NDPL	BRPL	BYPL	NDMC	MES	Total	Avg. Trans Loss in Mus	
(1)	(10)=(3)+(9)	(11)	(12)	(13)	(14)	(15)	(16)=(11)+(12)+(13)+(14)+(15)	(17)=(10)-(16)	(18)=(17)*100/10
29	385.2	110.9	153.3	91.8	20.5	3.0	379.5	5.7	1.49
30	364.7	105.6	146.2	85.1	19.4	2.9	359.3	5.5	1.50
31	370.0	107.4	146.8	87.7	19.6	2.9	364.4	5.6	1.51
32	360.8	104.7	143.1	83.8	18.7	2.9	353.1	7.7	2.13
33	346.7	96.9	143.2	80.9	17.1	2.9	341.0	5.7	1.66
34	342.0	97.8	139.6	77.6	17.9	2.9	335.9	6.1	1.78
35	337.9	98.7	136.4	76.3	17.3	3.1	331.8	6.1	1.82
36	339.7	99.5	136.5	77.2	17.6	3.1	334.0	5.7	1.68
37	344.6	101.4	138.1	78.0	17.8	3.4	338.7	5.9	1.72
38	360.9	103.7	146.2	81.6	18.7	3.9	354.2	6.7	1.85
39	371.1	106.5	152.1	83.1	19.3	4.2	365.1	6.0	1.60
40	359.7	104.5	146.3	80.9	18.2	3.9	353.8	5.9	1.64
41	377.8	103.6	156.8	85.9	20.7	4.7	371.9	6.0	1.58
42	370.3	104.7	151.1	84.7	19.6	4.2	364.3	6.1	1.64
43	375.1	105.7	154.4	85.5	19.4	4.2	369.1	5.9	1.58
44	386.4	106.7	160.6	87.3	20.9	4.8	380.2	6.2	1.61
45	394.0	106.9	162.3	90.7	22.2	4.8	386.9	7.1	1.81
46	383.0	104.4	156.6	89.1	21.6	4.4	376.2	6.9	1.79
47	381.5	106.7	155.9	87.9	20.5	4.1	375.1	6.4	1.67
48	349.6	99.0	141.2	80.9	17.8	3.3	342.2	7.4	2.12
49	343.1	100.2	138.3	78.7	16.8	3.2	337.2	5.9	1.71
50	330.0	93.0	133.3	77.2	17.4	2.8	323.7	6.3	1.92
51	349.0	101.2	139.8	80.6	18.0	3.0	342.5	6.5	1.86
52	345.5	94.8	141.6	81.5	18.3	3.6	339.8	5.7	1.65
53	377.3	105.5	153.8	88.3	20.9	3.1	371.6	5.7	1.52
54	56.9	15.9	23.1	13.1	3.4	0.5	56.0	0.9	1.50
<b>Total</b>	<b>22574.3</b>	<b>6277.1</b>	<b>9285.9</b>	<b>5279.6</b>	<b>1226.1</b>	<b>194.5</b>	<b>22263.2</b>	<b>311.1</b>	<b>1.38</b>

## 11.2 MONTH WISE TRANSMISSION LOSSES FOR 2007-08

Month	NDPL	BRPL	BYPL	NDMC	MES	Total supply to disoms
1	2	3	4	5	6	7=sum(2 to 6)
Apr'07	522.476	804.602	451.972	105.584	15.014	1899.648
May'07	582.965	905.891	513.720	123.014	16.714	2142.305
June'07	609.792	942.144	530.758	125.966	16.849	2225.509
July'07	642.921	968.759	547.620	131.554	18.178	2309.032
Aug'07	625.985	933.064	544.913	129.319	18.081	2251.362
Sept'07	589.122	856.183	501.528	117.818	16.647	2081.298
Oct'07	484.790	673.223	399.584	89.789	13.378	1660.763
Nov'07	424.434	598.405	337.609	75.534	12.756	1448.738
Dec'07	459.067	642.519	357.471	81.388	16.867	1557.312
Jan'08	467.309	694.066	383.250	91.023	20.121	1655.768
Feb'08	427.879	623.041	353.307	81.282	16.156	1501.664
Mar'08	437.991	629.596	363.022	82.125	13.761	1526.494
<b>Total</b>	<b>6274.731</b>	<b>9271.492</b>	<b>5284.753</b>	<b>1234.398</b>	<b>194.521</b>	<b>22259.894</b>

Month	IP	GT	RPH	PPCL	BTPS	Drawal from the Grid
1	8	9	10	11	12	13
Apr'07	<b>75.259</b>	105.959	55.106	211.939	352.912	1127.845
May'07	81.268	93.132	75.337	207.380	440.228	1269.069
June'07	76.300	93.189	37.307	189.028	409.290	1442.059
July'07	72.994	99.938	73.724	204.977	374.009	1511.458
Aug'07	79.954	122.951	71.647	208.779	296.722	1501.422
Sept'07	66.516	105.406	72.280	195.252	393.667	1273.941
Oct'07	65.910	111.696	76.864	209.184	441.225	783.090
Nov'07	79.073	105.307	71.402	176.688	462.921	578.863
Dec'07	77.851	119.716	63.762	206.365	487.445	629.059
Jan'08	70.928	79.675	71.698	189.770	483.298	788.013
Feb'08	69.153	84.988	46.260	220.144	413.493	695.349
Mar'08	72.713	132.020	65.539	80.055	392.707	810.421
<b>Total</b>	<b>887.921</b>	<b>1253.977</b>	<b>780.926</b>	<b>2299.562</b>	<b>4947.917</b>	<b>12410.590</b>

Month	Total Injection For supply to Discoms	Losses in MUs	Losses in %	Losses in % during previous year
1	14=Sum(8to13)	15=14-7	16=15*100/14	17
Apr'07	1929.020	29.372	1.52	1.21
May'07	2166.413	24.109	1.11	1.13
June'07	2247.174	21.665	0.96	0.60
July'07	2337.100	28.067	1.20	1.08
Aug'07	2281.476	30.114	1.32	1.13
Sept'07	2107.062	25.764	1.22	0.48
Oct'07	1687.969	27.206	1.61	0.94
Nov'07	1474.253	25.515	1.73	0.58
Dec'07	1584.199	26.887	1.70	0.84
Jan'08	1683.383	27.615	1.64	1.24
Feb'08	1529.388	27.724	1.81	1.26
Mar'08	1553.455	26.961	1.74	0.90
<b>Total</b>	<b>22580.893</b>	<b>320.998</b>	<b>1.4</b> <b>Avg.</b>	<b>0.95</b> <b>Avg.</b>

## 12 ALLOCATION OF POWER TO DISCOMS FOR 2007-08

### 12.1 ALLOCATION OF POWER TO VARIOUS LICENCEES AS PER ORDER OF DERC AND DECISION OF GNCTD FOR ALLOCATION OF ENTIRE UNALLOCATED QUOTA TO BYPL Dated 31.03.07 FOR APRIL' 07

(Allocation In %)

SOURCES	LICENSEES					
	NDMC	MES	NDPL	BRPL	BYPL	TOTAL
1. Central Sector	0	0	29.18	43.58	27.24	100.00
2. BTPS	49.65	7.09	12.62	18.85	11.78	100.00
3. IP	0	0	29.18	43.58	27.24	100.00
4. RPH	0	0	29.18	43.58	27.24	100.00
5. GT	0	0	29.18	43.58	27.24	100.00
6. Pragati	0	0	29.18	43.58	27.24	100.00
7. HPSEB	0	0	33.33	33.34	33.33	100.00
8. DVC	0	0	29.18	43.58	27.24	100.00

**12.2 ALLOCATION OF POWER TO VARIOUS LICENCEES AS PER ORDER OF DERC AND DECISION OF GNCTD FOR ALLOCATION OF ENTIRE UNALLOCATED QUOTA TO BYPL w.e.f. 01.05.07 TO 31.03.2008\_**

**(Allocation In % )**

SOURCES	LICENSEES					
	NDMC	MES	NDPL	BRPL	BYPL	TOTAL
1. Central Sector (Without Dadri)	0	0	29.18	43.58	27.24	100.00
2. Dadri(Th)	0	0	24.868	37.037	38.095	100.00
3. BTPS	49.65	7.09	10.78	16.03	16.45	100.00
4. IP	0	0	24.914	37.105	37.981	100.00
5. RPH	0	0	24.868	37.037	38.095	100.00
6. GT	0	0	24.868	37.037	38.095	100.00
7. Pragati	0	0	24.868	37.037	38.095	100.00

**13 Inter Discom transfer of power**

As per the order of Delhi Electricity Regulatory Commission (DERC) dated 14.08.2007, surplus power by virtue of allocation of the licensees should be distributed to the needy distribution licensees to the ratio of the allocation of the sources to the extent of requirement. SLDC started such scheduling from 19.08.2007. Upto 19.02.2008, the scheduling was done on the basis of requirement and availability assessed by the licensees involved. From 20.02.2008 for better management of inter discom surplus, the same has been done on actual basis. As per the order of commission dated 14.08.2007, *for the settlement rate, Commission orders that the fixed cost of Badarpur Power Station, the variable charge for BTPS and a mark up of 10 paise over and above the two charges towards income tax and any other item which is unforeseen at this stage shall be added. As per the current indications, the fixed charge for BTPS is Rs. 0.53 per kwhr and the variable charge is Rs. 2.11 per Kwhr as of 30-6-07. Adding 10 paise per kwhr for all other adjustments, the single settlement rate between the Discom for such transaction is fixed at Rs. 2.75 per kwhr. Any fuel price adjustment to Rs. 2.11 per kwhr beyond 30.06.07 shall be added at actuals to the prescribed rate of 2.75 kwhr.*

As per the above order, the inter discom transfer rates for 2007-08 has been as under :-

**All figures in Ps/Unit**

Month	Basic variable charges	Actual variable charges	Difference	Rate for inter discom transfer (275Ps + Difference of basic and actual variable charges)
Aug'07	211	213	2	277
Sept'07	211	234	23	298
Oct'07	211	218	7	282
Nov'07	211	199	-12	263
Dec'07	211	221	10	285
Jan'08	211	225	14	289
Feb'08	211	243	32	307
Mar'08	211	227	16	291

**The details of inter discom surplus power for the year**

### 13.1 Military Engineering Services (MES)

**All figures in MUs**

MONTH	BRPL	BYPL	NDPL	NDMC	Total
Aug-07	0.07050	0.00083	0.03100	0.00000	0.10232
Sep-07	2.99243	0.00000	1.36502	0.00921	4.36666
Oct-07	2.30725	0.01361	1.45685	0.00000	3.77771
Nov-07	3.45085	0.00274	2.68210	0.00000	6.13570
Dec-07	3.45485	0.02620	2.70126	0.00000	6.18231
Jan-08	3.29605	0.04090	2.64917	0.00000	5.98612
Feb-08	1.21909	0.04139	1.02353	0.00000	2.28402
Mar-08	1.00099	0.01919	1.04487	0.00000	2.06506
<b>Total</b>	<b>17.79201</b>	<b>0.14486</b>	<b>12.95381</b>	<b>0.00921</b>	<b>30.89989</b>

### 13.2 New Delhi Municipal Council (NDMC)

**All figures in MUs**

MONTH	BRPL	BYPL	NDPL	MES	Total
Aug-07	4.01485	0.02538	1.23115	0.06888	5.34027
Sep-07	25.02742	0.00000	10.46863	0.16074	35.65679
Oct-07	16.81057	0.21144	10.15979	0.00713	27.18892
Nov-07	25.11526	0.02238	19.17365	0.00000	44.31129
Dec-07	38.96097	0.65743	28.60991	0.00000	68.22831
Jan-08	42.92458	0.99496	32.15593	0.00355	76.07902
Feb-08	20.99544	1.62420	15.88606	0.00000	38.50570
Mar-08	6.88430	0.12296	7.03140	0.00183	14.04049
<b>Total</b>	<b>180.73338</b>	<b>3.65876</b>	<b>124.71653</b>	<b>0.24211</b>	<b>309.35079</b>



### 13.3 BSES Rajdhani Power Ltd. (BRPL)

All figures in MUs

MONTH	BYPL	NDPL	NDMC	MES	Total
Aug-07	0.00000	0.00417	0.00052	0.00007	0.00476
Sep-07	0.00000	0.00000	0.00000	0.00000	0.00000
Oct-07	0.00000	0.53802	0.00000	0.00000	0.53802
Nov-07	0.00000	0.35508	0.00000	0.00000	0.35508
Dec-07	0.00000	0.28975	0.00000	0.00000	0.28975
Jan-08	0.00000	1.33411	0.00000	0.00000	1.33411
Feb-08	0.00000	1.53895	0.00000	0.00000	1.53895
Mar-08	0.00000	2.25890	0.07441	0.01193	2.34524
<b>Total</b>	<b>0.00000</b>	<b>6.31898</b>	<b>0.07492</b>	<b>0.01200</b>	<b>6.40590</b>

### 13.4 BSES Yamuna Power Ltd. (BYPL)

All figures in MUs

MONTH	BRPL	BYPL	NDPL	NDMC	Total
Aug-07	0.01223	0.09027	0.01804	0.00258	0.12312
Sep-07	0.46799	0.35245	0.00407	0.00422	0.82873
Oct-07	23.95456	16.04546	0.00000	0.00512	40.00513
Nov-07	32.76014	27.73141	0.00000	0.00000	60.49155
Dec-07	30.75373	25.48130	0.00000	0.00000	56.23503
Jan-08	28.05731	26.30875	0.00000	0.01203	54.37809
Feb-08	16.78419	16.63441	0.00000	0.00000	33.41860
Mar-08	19.32273	20.82212	0.08871	0.03356	40.26714
<b>Total</b>	<b>152.11288</b>	<b>133.46618</b>	<b>0.11083</b>	<b>0.05750</b>	<b>285.74739</b>

### 13.5 North Delhi Power Ltd. (NDPL)

All figures in MUs

MONTH	BRPL	BYPL	NDPL	NDMC	Total
Aug-07	0.00000	0.00000	0.00000	0.00000	0.00000
Sep-07	0.00502	0.00000	0.00951	0.00475	0.01928
Oct-07	0.54632	0.00000	0.00000	0.00000	0.54632
Nov-07	0.05900	0.00000	0.00000	0.00000	0.05900
Dec-07	0.00510	0.00000	0.00000	0.00000	0.00510
Jan-08	0.00036	0.00000	0.00000	0.00000	0.00036
Feb-08	0.19046	0.00000	0.00000	0.00000	0.19046
Mar-08	0.65781	0.00000	0.00452	0.00640	0.66874
<b>Total</b>	<b>1.46406</b>	<b>0.00000</b>	<b>0.01403</b>	<b>0.01115</b>	<b>1.48925</b>

## 14 IMPLEMENTATION OF INTRASTATE ABT IN DELHI

In the second phase of power reforms undertaken in Delhi, the power purchase agreements entered into by DESU/DVB/DTL have been reassigned to distribution licensees as per DERC order dated 31.03.2007. Intrastate ABT has also been introduced in Delhi from 01.04.2007. SLDC has started issuing UI bills from covering the period from 01.04.2007 on weekly basis. The Intrastate UI Pool Account is also operated by SLDC as per the DERC order. The details of Main meters used for ABT billing are as under :

### A) For Intrastate (Meters provided by DTLL)

S.no.	Main Metering Points				No. of meters as per beneficiary / utility ( + )	Check metering points			No. of meters as per beneficiary / utility ( + )	Number of meters Total
	Discom	220/66/33KV	11/6.6KV	TOTAL		220/66/33KV	11/6.6KV	TOTAL		
1)	NDPL	41	45	86	79	38	0	38	32	111
2)	BRPL	57	44	101	64	67	0	67	44	108
3)	BYPL	58	29	87	55	56	1	57	45	100
4)	NDMC	25	4	29	29	25	4	29	29	58
5)	MES	6	8	14	13	6	7	13	13	26
	<b>TOTAL</b>	<b>187</b>	<b>130</b>	<b>317</b>	<b>240</b>	<b>192</b>	<b>12</b>	<b>204</b>	<b>163</b>	<b>403</b>
	<b>GRAND TOTAL</b>			<b>521</b>	<b>403</b>					

### B) For Generating Stations (Meters provided by DTL)

Sr. No.	Station	Metering points (feeders)	Main	check
			Nos. of meters as per beneficiary utility	Nos. of meters as per beneficiary utility
01	IP Station	27	2	2
02	RPH	14	2	2
03	G.T.	8	2	2
04	Pragati	3	3	--
05	BTPS	11	6	5
	<b>TOTAL</b>	<b>63</b>	<b>15</b>	<b>11</b>

- a) No. of Meters involved for Intrastate ABT billing with DISCOMs = 240  
b) No of Meters involved for UI billing of Genco = 15  
c) Overall meters dealt by DTL = 419

### C) For Interstate (Meters provided by NRLDC)

S. N.	Details	Main	Stand by / check
01	Nos. of meters to compute input from the Grid to DTL system	31	23
	Total		54

The details of the UI Transactions for 2007-08 at Intrastate Level are as under :

#### 14.1 UI Transactions of NDPL

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same with Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	536.520	522.476	-14.044	-410.596	-405.815	288.96
May-07	565.539	582.962	17.422	700.793	741.663	425.69
Jun-07	583.593	609.792	26.199	835.198	852.147	325.25
Jul-07	635.026	642.921	7.895	287.893	302.560	383.25
Aug-07	611.473	625.985	14.512	818.153	895.229	616.87
Sep-07	548.252	591.265	43.013	1370.959	1437.403	334.18
Oct-07	455.162	478.463	23.301	1421.708	1814.189	778.57
Nov-07	431.868	424.408	-7.461	-408.757	-295.187	395.66
Dec-07	451.178	459.062	7.884	247.872	405.921	514.87
Jan-08	457.547	467.309	9.762	748.467	854.607	875.49
Feb-08	405.720	427.865	22.145	1811.122	1933.801	873.24
Mar-08	424.103	437.991	13.887	1295.505	1326.289	955.05
<b>Total</b>	<b>6105.983</b>	<b>6270.499</b>	<b>164.516</b>	<b>8718.319</b>	<b>9862.808</b>	<b>599.50</b>

**Note :**

i) (-)ve indicates amount receivable by the Utility

ii) (+)ve indicates amount payable by the Utility.

iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason.

## 14.2 UI Transactions of BRPL

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same wih Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	788.081	804.602	16.521	940.351	986.333	597.02
May-07	818.927	906.751	87.824	3017.522	3205.216	364.96
Jun-07	833.740	953.203	119.463	3986.063	4102.479	343.41
Jul-07	890.425	971.572	81.147	2668.629	2804.922	345.66
Aug-07	882.470	936.191	53.721	2132.772	2261.168	420.91
Sep-07	801.097	857.947	56.850	1836.291	1891.741	332.76
Oct-07	724.166	674.214	-49.951	-2031.513	-1907.007	381.77
Nov-07	688.029	598.427	-89.602	-4366.915	-4232.191	472.33
Dec-07	663.423	642.523	-20.900	-537.428	-407.427	194.94
Jan-08	660.063	694.066	34.002	3006.311	3320.598	976.58
Feb-08	577.156	623.041	45.884	4035.464	4306.521	938.56
Mar-08	605.399	629.596	24.196	2169.985	2289.607	946.26
<b>Total</b>	<b>8932.976</b>	<b>9292.131</b>	<b>359.155</b>	<b>16857.532</b>	<b>18621.961</b>	<b>518.49</b>

**Note :**

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason

### 14.3 UI Transactions of BYPL

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same wih Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	488.037	451.972	-36.065	-1550.792	-1529.319	424.05
May-07	669.859	513.468	-156.392	-4931.253	-4804.133	307.19
Jun-07	652.989	526.393	-126.597	-4053.846	-3986.527	314.90
Jul-07	685.882	546.753	-139.128	-4051.625	-3951.715	284.03
Aug-07	654.876	544.913	-109.963	-3355.178	-3203.543	291.33
Sep-07	608.138	501.838	-106.299	-3149.830	-3070.560	288.86
Oct-07	519.604	402.923	-116.681	-5648.515	-5453.721	467.40
Nov-07	456.065	337.614	-118.450	-5807.992	-5618.440	474.33
Dec-07	488.497	357.472	-131.024	-6342.226	-6166.004	470.60
Jan-08	459.107	383.250	-75.857	-5567.276	-5334.922	703.29
Feb-08	446.567	353.320	-93.247	-7556.707	-7287.398	781.52
Mar-08	437.212	363.022	-74.190	-5530.580	-5472.120	737.58
<b>Total</b>	<b>6566.831</b>	<b>5282.938</b>	<b>-1283.894</b>	<b>-57545.821</b>	<b>-55878.402</b>	<b>435.23</b>

**Note :**

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason

#### 14.4 UI Transactions of NDMC

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same wih Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	161.175	105.584	-55.591	-2294.206	-2277.181	409.63
May-07	213.119	122.915	-90.204	-2968.735	-2886.633	320.01
Jun-07	199.681	122.037	-77.645	-2652.216	-2604.388	335.42
Jul-07	181.037	129.831	-51.205	-1518.131	-1487.017	290.40
Aug-07	139.672	129.319	-10.352	-312.512	-275.502	266.12
Sep-07	155.206	114.325	-40.881	-1247.941	-1213.375	296.81
Oct-07	187.022	89.789	-97.233	-4566.550	-4397.526	452.27
Nov-07	180.498	77.082	-103.416	-5303.106	-5139.967	497.02
Dec-07	168.792	81.388	-87.404	-4048.318	-3919.077	448.39
Jan-08	152.561	91.023	-61.538	-3916.914	-3751.263	609.59
Feb-08	125.303	81.282	-44.022	-3532.428	-3455.464	784.95
Mar-08	136.918	82.125	-54.792	-4361.366	-4248.158	775.32
<b>Total</b>	<b>2000.985</b>	<b>1226.702</b>	<b>-774.283</b>	<b>-36722.424</b>	<b>-35655.552</b>	<b>460.50</b>

**Note :**

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason

## 14.5 UI Transactions of MES

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same with Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	22.142	15.014	-7.128	-287.224	-284.328	398.87
May-07	30.376	16.714	-13.663	-452.860	-440.459	322.39
Jun-07	28.514	16.849	-11.665	-405.951	-398.949	342.00
Jul-07	25.852	18.178	-7.674	-220.345	-216.007	281.47
Aug-07	20.674	18.081	-2.593	-79.428	-73.445	283.22
Sep-07	23.055	16.647	-6.408	-201.024	-195.505	305.08
Oct-07	26.824	13.378	-13.446	-628.440	-605.195	450.08
Nov-07	26.129	12.756	-13.374	-667.047	-646.507	483.42
Dec-07	27.664	16.867	-10.797	-503.849	-489.001	452.89
Jan-08	27.568	20.121	-7.447	-469.237	-450.283	604.62
Feb-08	26.428	16.156	-10.272	-808.654	-786.597	765.79
Mar-08	24.650	13.761	-10.889	-918.959	-899.309	825.85
<b>Total</b>	<b>309.878</b>	<b>194.521</b>	<b>-115.358</b>	<b>-5643.017</b>	<b>-5485.584</b>	<b>475.53</b>

### Note :

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason

## 14.6 UI Transactions of IP

Month	Scheduled Ex-bus generation in Mus	Actual Ex-bus generation in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same with Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	50.848	53.050	2.202	10.502	10.036	-45.57
May-07	57.379	62.941	5.562	-1.546	9.483	-17.05
Jun-07	58.439	60.438	1.999	15.977	16.873	-84.40
Jul-07	50.893	54.633	3.740	-20.336	-19.174	51.26
Aug-07	55.984	59.372	3.387	5.613	6.857	-20.24
Sep-07	43.942	47.469	3.527	-2.928	7.601	-21.55
Oct-07	43.170	47.475	4.304	26.285	42.610	-98.99
Nov-07	51.756	52.206	0.450	11.878	56.368	- 1253.90
Dec-07	52.008	52.549	0.541	-9.360	-16.014	295.90
Jan-08	46.311	47.737	1.426	-20.607	6.255	-43.88
Feb-08	44.633	45.381	0.748	-23.040	-2.470	33.01
Mar-08	47.190	47.593	0.402	-11.486	14.769	-367.01
<b>Total</b>	<b>602.554</b>	<b>630.844</b>	<b>28.290</b>	<b>-19.048</b>	<b>133.195</b>	<b>-47.08</b>

### Note :

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason



**14.7 UI Transactions of RPH**

<b>Month</b>	<b>Scheduled Ex-bus generation in Mus</b>	<b>Actual Ex-bus generation in Mus</b>	<b>UI Energy in Mus</b>	<b>Amount as per Intrastate UI account in Rs. Lacs</b>	<b>Adjusted UI amount to equate the same with Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs</b>	<b>Avg Rate in Ps/unit</b>
Apr-07	54.187	55.106	0.919	0.453	2.767	-30.11
May-07	74.482	75.337	0.855	-7.421	-6.837	80.00
Jun-07	37.300	37.307	0.007	7.549	8.196	-11949.58
Jul-07	73.374	73.724	0.350	-4.107	-3.774	107.75
Aug-07	71.178	71.647	0.469	-15.435	-15.712	334.81
Sep-07	72.084	72.280	0.196	0.956	2.309	-117.99
Oct-07	75.745	76.443	0.699	-23.146	-15.893	227.52
Nov-07	70.441	70.827	0.387	7.808	-15.776	408.05
Dec-07	62.873	63.762	0.890	3.105	57.327	-644.40
Jan-08	70.029	71.698	1.669	-29.288	-11.563	69.29
Feb-08	45.056	46.260	1.203	5.621	28.572	-237.41
Mar-08	64.760	65.539	0.779	-3.481	23.300	-298.95
<b>Total</b>	<b>771.508</b>	<b>779.931</b>	<b>8.422</b>	<b>-57.386</b>	<b>52.915</b>	<b>-62.83</b>

**Note :**

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason

## 14.8 UI Transactions of GT

Month	Scheduled Ex-bus generation in Mus	Actual Ex-bus generation in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same with Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	102.201	105.959	3.758	-110.733	-99.553	264.94
May-07	89.363	93.132	3.768	-76.097	-72.395	192.13
Jun-07	85.440	93.189	7.750	-209.907	-203.262	262.29
Jul-07	95.440	99.938	4.498	-120.817	-118.613	263.71
Aug-07	115.691	122.951	7.260	-171.738	-163.215	224.81
Sep-07	102.082	105.406	3.324	-95.469	-92.305	277.66
Oct-07	106.177	111.696	5.519	-218.266	-202.602	367.13
Nov-07	99.838	105.307	5.468	-320.244	-305.967	559.53
Dec-07	114.051	119.716	5.666	-327.987	-314.803	555.61
Jan-08	77.181	79.675	2.495	-146.114	-124.214	497.94
Feb-08	82.028	84.988	2.961	-182.209	-174.625	589.81
Mar-08	128.803	132.020	3.217	-169.685	-168.038	522.40
<b>Total</b>	<b>1198.295</b>	<b>1253.977</b>	<b>55.682</b>	<b>-2149.265</b>	<b>-2039.593</b>	<b>366.29</b>

**Note :**

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason

## 14.9 UI Transactions of PPCL

Month	Scheduled Ex-bus generation in Mus	Actual Ex-bus generation in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same with Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	207.498	211.939	4.441	-207.904	-200.504	451.45
May-07	202.838	207.380	4.542	-190.212	-185.220	407.77
Jun-07	185.999	189.028	3.029	-119.054	-116.505	384.63
Jul-07	198.175	204.977	6.802	-279.115	-269.533	396.25
Aug-07	203.403	208.779	5.376	-325.184	-307.421	571.84
Sep-07	190.708	195.252	4.543	-191.181	-184.536	406.17
Oct-07	201.614	209.184	7.570	-396.211	-379.088	500.78
Nov-07	172.777	176.688	3.911	-244.454	-237.188	606.43
Dec-07	201.197	206.365	5.168	-316.127	-307.381	594.83
Jan-08	185.404	189.770	4.365	-362.516	-339.394	777.47
Feb-08	214.691	220.144	5.453	-478.956	-458.728	841.24
Mar-08	78.342	80.055	1.713	-143.423	-142.871	834.07
<b>Total</b>	<b>2242.648</b>	<b>2299.562</b>	<b>56.914</b>	<b>-3254.337</b>	<b>-3128.369</b>	<b>549.67</b>

### Note :

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason

#### 14.10 UI Transactions of BTPS

Month	Scheduled Ex-bus generation in Mus	Actual Ex-bus generation in Mus	UI Energy in Mus	Amount as per Intrastate UI account in Rs. Lacs	Adjusted UI amount to equate the same with Inter state UI accounts issued by NRPC for the state of Delhi as a whole in Rs Lacs	Avg Rate in Ps/unit
Apr-07	349.820	352.912	3.092	-59.654	-63.531	205.48
May-07	434.988	440.228	5.239	-204.184	-199.680	381.12
Jun-07	406.241	409.290	3.050	-142.480	-140.083	459.30
Jul-07	368.149	374.009	5.860	-212.123	-209.122	356.88
Aug-07	294.981	296.722	1.741	-91.121	-85.788	492.71
Sep-07	388.254	393.667	5.414	-190.227	-184.685	341.15
Oct-07	435.705	441.225	5.520	-220.277	-211.733	383.58
Nov-07	457.932	462.921	4.989	-253.124	-245.795	492.67
Dec-07	482.375	487.445	5.070	-268.536	-259.561	511.96
Jan-08	477.819	483.298	5.479	-375.922	-200.095	365.19
Feb-08	409.055	413.008	3.953	-284.186	-100.196	253.50
Mar-08	388.957	392.707	4.009	-309.990	-116.890	291.56
<b>Total</b>	<b>4894.275</b>	<b>4947.431</b>	<b>53.415</b>	<b>-2611.824</b>	<b>-2017.157</b>	<b>377.64</b>

**Note :**

- i) (-)ve indicates amount receivable by the Utility
- ii) (+)ve indicates amount payable by the Utility.
- iii) The above UI account are subject to change if UI accounts are revised by NRPC due to any reason

**15 CAPACITOR REQUIREMENT AND INSTALLED CAPACITY OF CAPACITORS IN DELHI AS PER NRPC STUDY FOR 2006-2007 AND 2007-08**

(All figures in MVAR)

Requirement		Installed Capacity		Working Capacity in MVAR	
2006-07	2007-08	2006-07	2007-08	2006-07	2007-08
3375	3750	3547	3456	3470	3410

[The above does not include LT Capacitors]

**16. AVAILABILITY OF DELHI TRANSCO LTD. SYSTEM FOR THE YEAR 2007- 08**

Sl. No.	Name of Elements	Availability in %age
1	AVAILABILITY OF 8NOS. 400kV, 315MVA ICTs	95.91%
2	AVAILABILITY OF 6NOS. 400kV LINES	98.34%
3	AVAILABILITY OF 62NOS. 220kV LINES	99.20%
4	AVAILABILITY OF 41NOS. 220/66kV ICTs	99.17%
5	AVAILABILITY OF 25NOS. 220/33kV ICTs	94.39%
6	AVAILABILITY OF 3NOS. 66/33kV ICTs	99.37%
7	AVAILABILITY OF 26NOS. 66/11kV PR. TXS	99.51%
8	AVAILABILITY OF 16NOS. 33/11kV PR. TXS	99.72%
9	AVAILABILITY OF 88NOS. 66kV FEEDER BAYs	99.86%
10	AVAILABILITY OF 92NOS. 33kV FEEDER BAYs	99.88%
11	AVAILABILITY OF 203NOS. 11kV SYSTEM	99.99%
12	AVAILABILITY OF 56NOS. CAP. BANKS	99.77%
<b>TOTAL AVAILABILITY OF DTL SYSTEM =</b>		<b>99.48%*</b>

The following elements added during the year

- 220kV MAHARANI BAGH - LODHI ROAD CKT-I (COMMISSIONED ON 15.12.2007 AT 19.25HRS.)
- 220kV MAHARANI BAGH - LODHI ROAD CKT-II (COMMISSIONED ON 15.01.2008 AT 21.50HRS.)

\*Subject to the approval of DERC

**17 TRIPPINGS / BREAK-DOWNS IN 400/220KV SYSTEM FOR THE YEAR 2007-08**

**17.1 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH APRIL 2007**

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	01.04.07	16.40	220KV GEETA COLONY – PATPARGANJ CKT- II	01.04.07	21.22	CKT. TRIPPED ON ACTIVE GROUP-I, TRIP PHASE ABC, DIST PROT ZONE-I, 86 AT GEETA COLONY AND ON ACTIVE GROUP-I, TRIP PHAE ABC, DIST PROT ZONE-II, 186, 186X, BUS BAR PROTECTION, 87CX, 87BX, 96B, 96X, 96M, 96M, 96J, 96D AT PATPARGANJ. `Y` PHASE CT CLAMP BURNT AT PATPARGANJ.
02	01.04.07	16.40	220KV PATPARGANJ – IP CKT-II	01.04.07	23.23	CKT. TRIPPED ON 186, 86, DIST PROT THREE PHASE AT IP AND ON 186, 186 AT PATPARGANJ. 220/33KV 100MVA PR. TR.-I & II AT IP ALSO TRIPPED ON 86, 86.
03	04.04.07	13.36	220KV BTPS – MEHRAULI CKT-I	04.04.07	19.20	CKT. TRIPPED ON DIST PROT ZONE-I `C` PHASE AT MEHRAULI AND ON DIST PROT `C` PHASE ZONE-I, 30G, 186 AT BTPS.
04	05.04.07	14.25	220/66KV 100MVA PR. TR.-III AT PAPPANKALAN-I	05.04.07	16.05	TR. TRIPPED ON MASTER RELAY.
05	06.04.07	14.55	220/ 33KV 100MVA PR. TR.-I AT PARK STREET	06.04.07	15.00	TR. TRIPPED ON 86.
6	09.04.07	20.35	220KV BTPS – NOIDA – GAZIPUR CKT.	09.04.07	20.49	CKT. TRIPPED ON 186A, 186B, 86A, 186AX AT BTPS. NO TRIPPING AT GAZIPUR
07	11.04.07	10.45	220KV BTPS – SARITA VIHAR CKT-I & II	11.04.07	11.02	THE FOLLOWING TRIPPINGS OCCURRED AT BTPS : SARITA VIHAR CKT-I & II : 67NX AT SARITA VIHAR IP EXT CKT-I : DIST PROT ZONE-II ABC, AUTO RECLOSE LOCK OUT. AT IP EXT 220KV SARITA VIHAR CKT-I : DIST PROT. `ABC` PHASE ZONE-II, 186, 186X 220/66KV 100MVA PR.TR-I & II : 86, 86, U/F AT PARK STREET 220KV IP EXT CKT-I : E/F DUE TO ABOVE TRIPPING, PRAGATI UNI-I TRIPPED ON FSNL AND 100MVA PR. TR.-I & II AT GT TRIPPED ON 51, 64 ALONG WITH ALL RUNNING UNITS AT GT, FOWLING ITS ISLANDING. 220KV BTPS-SARITA VIHAR CKT-II CHARGED AT 10.58HRS. AND CKT-I CHARGED AT 11.02HRS. FROM BTPS END. 220KV SARITA VIHAR-I.P. EXTN. CKT-I CHARGED AT 11.07HRS. 220/66KV 100MVA PR. TXS CHARGED AT 11.10HRS. PRAGATI UNIT-I SYNCHRONIZED AT 11.10HRS. AND GT UNIT-I, 2, 4, 6 & STG-III SYNCHRONIZED AT 11.04HRS, 11.20HRS, 11.50HRS, 11.08HRS AND 11.30HRS.

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
08	13.04.07	11.48	220KV BAMNAULI – MEHRAULI CKT-I	13.04.07	12.05	CKT. TRIPPED ON DIST PROT `A` PHASE, 186A&B AT BAMNAULI. NO TRIPPING AT MEHRAULI END.
09	14.04.07	07.45	220/33KV 100MVA PR. TR.-IV AT PATPARGANJ	14.04.07	08.15	TR. TRIPPED ON POLE DISCREPANCY.
10	14.04.07	08.35	220/33KV 100MVA PR. TR.-IV AT PATPARGANJ	14.04.07	12.34	TR. TRIPPED ON POLE DISCREPANCY.
11	14.04.07	17.32	220KV IP EXT – SARITA VIHAR CKT- I	14.04.07	17.33	CKT. TRIPPED ON 186, 186 AT IP EXT.
12	15.04.07	18.10	66/33KV 30MVA PR. TR.- AT PARK STREET	16.04.07	18.20	TR. TRIPPED ON 86, 87, 51CX. `B` PHASE CT DAMAGED
13	16.04.07	15.57	220KV WAZIRABAD – KASHMIRI GATE CKT-II	16.04.07	18.11	CKT. TRIPPED ON RXME-18, RYB PHASE, REL 511, DISTANCE PROT. ZONE-I AT WAZIRABAD. NO TRIPPING AT KASHMIRI GATE.
14	18.04.07	13.35	220/66KV 100MVA PR. TR.-IV AT PAPPANKALAN	18.04.07	13.50	TR. TRIPPED ON O/C, E/F.
15	18.04.07	13.45	220KV BAMNAULI – PAPPANKALAN CKT-I	18.04.07	13.57	CKT. TRIPPED ON AUTO TRIPPING, DIST PROT AT PAPPANKALAN. NO TRIPPING AT BAMNAULI.
16	19.04.07	12.32	220KV WAZIRABAD – GEETA COLONY CKT-I	19.04.07	12.35	CKT. TRIPPED ON RXME-18, RY PHASE. NO TRIPPING AT GEETA COLONY.
17	20.04.07	17.25	220KV IP EXT – SARITA VIHAR CKT- I	20.04.07	17.35	CKT.TRIPPED ON 186, O/C, E/F, POLE DISCREPANCY, 86X, 67NX, ACTIVE GROUP-I, TRIP PHASE ABC, DIST PROT. ZONE-II AT IP EXT AND ON AUTO RECLOSE, 186A, 186B, ZONE-I, `A` PHASE AT SARITA VIHAR.
18	20.04.07	17.26	220KV BTPS – SARITA VIHAR CKT- II	20.04.07	17.50	CKT. TRIPPED ON 67NX, 186A, 186B AT BTPS. 220KV I.C-I AT LODHI ROAD ALSO TRIPPED ON 186A, 186B, E/F.
19	22.04.07	00.51	400KV BALLABHGARH – BAMNAULI CKT-II	22.04.07	01.04	CKT. BREAKER NO.352 OF THE CKT TRIPPED ON MAIN-I ANZ-I, 30CH1, 30CH2, 186A&B, AUTO RECLOSE LOCK OUT. CKT. BREAKER NO. 452 TRIPPED ON MAIN-II, AUTO RECLOSE ANZ-I AT BAMNAULI.
20	22.04.07	14.15	220KV BAMNAULI – MEHRAULI CKT-I & II	22.04.07	14.36	THE FOLLOWING TRIPPINGS OCCURRED :- AT BAMNAULI : CKT-I : DIST PROT `A` PHASE 186A&B CKT-II : DIST PROT `C` PHASE, 186A&B AT MEHRAULI CKT-I : `R` PHASE ANZ-I CKT-II : NO TRIPPING.

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
21	23.04.07	14.25	220KV BAMNAULI – NARAINA CKT-II	23.04.07	14.38	CKT. TRIPPED ON DIST PROT 'RY' PHASE AT BAMNAULI. NO TRIPPING AT NARAINA.
22	23.04.07	17.01	220/33KV 100MVA PR. TR-III & IV AT OKHLA	23.04.07	17.16	100MVA PR. TR.-III & IV TRIPPED ON FOLLOWING INDICATION : 100MVA PR. TR.-III : WITHOUT INDICATION 100MVA PR. TR.-IV : E/F, 86, LV 33KV I/C-III OF THE TR.-III TRIPPED ON O/C AND 33KV I/C-IV OF THE TR.-IV TRIPPED ON E/F, 86.
23	24.04.07	12.11	220KV MANDOLA – GOPALPUR CKT-I	24.04.07	12.38	CKT. TRIPPED ON CB AUTO TRIP, DIST PROT ZONE-2, AUTO RECLOSE LOCK OUT, 186A, 186B, 86R, 86Y, 86B AT MANDOLA. NO TRIPPING AT GOPALPUR.
24	24.04.07	16.45	220KV WAZIRABAD – KASHMIRI GATE CKT-II	24.04.07	17.34	CKT. TRIPPED ON THREE PHASE TRIP, RXME 18, DIST PROT ZONE-I, ZM-I TRIP, ZM-2 START, ZM-3 START AT WAZIRBAD AND ON DIST PROT 'A' PHASE , 86, PROTECTION TRIP, GROUP B, 86D.
25	24.04.07	16.45	220/33KV 100MVA PR. TR.-II AT KASHMIRI GATE	24.04.07	17.05	TR. TRIPPED ON DIFFERENTIAL 'B' PHASE, 87.
26	25.04.07	12.33	220KV BAMNAULI – MEHRAULI CKT-I	25.04.07	12.36	CKT. TRIPPED ON DIST PROT ZONE-I, 'A' PH, AT MEHRAULI AND ON DIST PROT 'A' PH. 186A&B AT BAMNAULI.
27	26.04.07	18.25	400KV MANDOLA – BAWANA CKT.-I	26.04.07	19.14	NO TRIPPING AT BAWANA. RELAY INDICATIONS AT MANDOLA NOT AVAILABLE.
28	28.04.07	13.25	220KV BTPS – OKHLA CKT-II	28.04.07	13.35	CKT. TRIPPED ON DIST PROT ZONE-I 'B&C' PHASE AT BTPS. NO TRIPPING AT OKHLA.
29	30.04.07	10.10	220/66KV 100MVA PR. TR.-I AT PAPPANKALAN-II	30.04.07	14.15	TR. TRIPPED ON 186.



**17.2 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH MAY - 2007**

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	01.05.07	08.05	33/11KV 16MVA PR. TR. AT LODHI ROAD	01.05.07	08.51	TR. TRIPPED ALONG WITH 11KV I/C –III ON O/C
02	03.05.07	09.35	220KV GEETA COLONY – PATPARGANJ CKT-I	03.05.07	15.03	TRIPPED AT BOTH ENDS <b>AT GEETA COLONY</b> CKT TRIPPED ON DIST. PROT., ZONE-I, 3-PHASE TRIP, 27 R,Y&B, 30E  <b>AT PATPARGANJ</b> CKT TRIPPED ON DIST. PROT., ZONE-II, 186
03	03.05.07	13.25	220KV GEETA COLONY – PATPARGANJ CKT-II	03.05.07	13.55	<b>AT GEETA COLONY</b> NO TRIPPING  <b>AT PATPARGANJ</b> CKT TRIPPED ON DIST. PROT., ZONE-II, 186, 86, TRIP PHASE - ABC
04	03.05.07	13.25	220KV GEETA COLONY – WAZIRABAD CKT-I	03.05.07	13.48	TRIPPED ON ACTIVE GROUP –I, PHASE A,B,C, 1'O/C, DISTANCE TRIP ZONE-I
05	03.05.07	13.25	220KV GEETA COLONY – WAZIRABAD CKT-II	03.05.07	13.45	TRIPPED ON DISTANCE, O/C, 67R, 3 PHASE TRIP RELAY OPERATION
06	05.05.07	11.04	400/22KV 515MVA ICT-II AT BAWANA	05.05.07	11.08	I/C-II OF ICT TRIPPED WWITHOUT INDICATION
07	06.05.07	11.20				
08	06.05.07	14.52	220KV BAWANA – ROHINI CKT. –II	06.05.07	18.38	CKT.-II TRIPPED WITH INDICATION DISTANCE PROTECTION, 186A, 186B, CB AUTO TRIP, AUTO RECLOSED LOCKOUT
09	06.05.07	14.52	220KV BAWANA – ROHINI CKT. –II	06.05.07	18.38	CKT.-I, TRIPPED ON POLE DISCREPANCY
10	06.05.07	16.27	220/66KV 100MVA PR. TR.	06.05.07	--	TR. TRIPPED ON 64 REF, 86, 186
11	07.05.07	13.10	220KV IP.STN. – PATPARGANJ CKT. I&II	07.05.07	--	CKT. TRIPPED ON E/F, LOCK OUT RELAY COPULED
12	07.05.07	13.12	220KV I.P.EXTN. (PRAGATI) – SARITA VIAHR CKT. –I	07.05.07	14.45	CKT. TRIPPED ON 67NX, 186O/C, E/F, POLE DISCRIPENCY.
13	07.05.07	13.15	220KV MANDOLA – SOUTH OF WAZIRABAD CKT. I & II	07.05.07	20.51	AT WAZURABAD : CKT-I TRIPPED ON DIST. PROT., ZONE-II, REL-511, 3-PHASE TRIP, AUTO RECLOSED, LOCK OUT, GAS PRESSURE LOW. CKT-II : NO TRIPPING AT WAZIRABAD END. LOAD DISAPPEARED FROM MANDOLA.
14	07.05.07	17.47	220KV BTPS – GAZIPUR CKT.	07.05.07	18.27	AT BTPS : CKT. TRIPPED ON E/F, R PHASE, 86, 186A, 186B

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
15	07.05.07	22.23	100MVA PR. TR. -II AT G.T.	07.05.07	22.33	TX. TRIPPED ON 86 ALONG WITH 66KV VIDYUT BHAWAN AND 66KV SCHOOL LANE CKT-I&II ON BUS BAR PROT.
16	08.05.07	15.37	220KV BTPS – GAZIPUR CKT.	08.05.07	19.22	AT BTPS : CKT. TRIPPED ON R PHASE, E/F, 186A, 186B, 86A AT GAZIPUR : NO TRIPPING
17	08.05.07	18.59	220KV BAWANA 400KV-NARELA CKT.-II	08.05.07	19.22	TRIPPED ON 21X, R2, Y2, B2, 21, R1, Y1, B1
18	09.05.07	09.45	220KV PATPARGANJ – GEETA COLONY CKT. -I	09.05.07	09.55	AT GEETA COLONY : CKT. TRIPPED ON DIST. PROT., ZONE-I, 3-PHASE TRIP, 86A, 30E AT PATPARGANJ : CKT. TRIPPED ON TRIP PHASE A, DIST PROT ZONE-I
19	09.05.07	09.45	220KV IP – PATPARGANJ CKT-I	09.05.07	14.20	CKT. TRIPPED ON 186, E/F, `R` PHASE AT PATPARGANJ. `R` PHASE JUMPER OF WAVE TRAP SNAPPED AT IP.
20	09.05.07	17.55	220KV IP – IP EXT CKT-I	09.05.07	23.15	CKT. TRIPPED ON `R` PHASE, O/C AT IP.
21	10.05.07	20.20	220/66KV 100MVA PR. TR.-II AT VASANT KUNJ	10.05.07	21.15	TRANSFORMER TRIPPED ON 30B, 30C, 30L, 30D, 30H ALONG WITH 66KV I/C-II WHICH TRIPPED ON INTER TRIPPING.
22	11.05.07	18.50	220KV IP EXT – SARITA VIHAR CKT- II	11.05.07	19.02	CKT. TRIPPED ON DIST PROT ZONE-II, 3- PHASE TRIP, ZONE-I AT IP EXT. AND ON DIST PROT AUTO RECLOSED LOCK OUT, 186A, 186B AT SARITA VIHAR.
23	11.05.07	19.44	220/66KV 100MV APR. TR.-I AT SARITA VIHAR	11.05.07	21.00	TR. TRIPPED ON DIFFERENTIAL, BC PHASE, 64RLV, 86 TRIP. `Y` PHASE LA OF HT SIDE BLAST.
24	12.05.07	11.55	220KV IP EXT – SARITA VIHAR CKT- II	12.05.07	12.20	CKT. TRIPPED ON 186, 3-PHASE TRIP, DIST PROT. ZONE-2 AT IP EXT AND ON DIST PROT ZONE-I `BC` PHASE AT SARITA VIHAR.
25	14.05.07	15.09	220KV PATPARGANJ – GEETA COLONY CKT-II	14.05.07	15.11	CKT. TRIPPED ON 86, 85X2, CARRIER RELAY AT PATPARGANJ.
26	14.05.07	20.07	220KV PATPARGANJ – GEETA COLONY CKT-I	14.05.07		CKT. TRIPPED ON DIST PROT ZONE-I, `A` PHASE, AT PATPARGANJ AND ON 3- PHASE TRIP, DISTANCE PROT ZONE-I, 30E, 86, 87RYB AT GEETA COLOY.
27	16.05.07	18.30	220KV BTPS – MEHRAULI CKT-II	16.05.07	22.32	CKT. TRIPPED ON 186, 186, TRIPPED PHASE `A`, DIST PROT ZONE-I AT MEHRAULI AND ON 30A, 30G, 186 AT BTPS.
28	16.05.07	20.00	220KV WAZIRABAD- GOPALPUR CKT-II	16.05.07	22.32	CKT. TRIPPED ON `RYB` PHASE, E/F AT GOPALPUR.

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
29	16.05.07	20.05	220KV MANDOLA – GOPALPUR CKT-II	16.05.07	22.06	CKT. TRIPPED ON DIST PROT ZONE-I 'RYB' AT GOPALPUR AND ON 'C' PHASE DIST PROT ZONE-II AT MANDOLA.
27	16.05.07	19.56	220KV BAWANA – ROHINI CKT-II	16.05.07	21.19	CKT. TRIPPED ON DIST PROT 'B' PHASE AT ROHINI AND BAWANA END.
28	16.05.07	19.55	220KV NARELA – ROHTAK ROAD CKT- I	16.05.07	21.22	CKT. TRIPPED ON O/C, E/F, DIST PROT ZONE-I AT NARELA AND ON 'A&C' PHASE, O/C, DIST PROT ZONE-I AT ROHTAK ROAD END.
29	17.05.07	01.05	33/11KV 20MVA PR. TR. AT PATPARGANJ	17.05.07	01.40	TR. TRIPPED ON BUCHZ, 86 WITH 11KV I/C WHICH TRIPPED WITHOUT INDICATION.
30	17.05.07	16.55	220/33KV 100MVA PR. TR.-I AT SHALIMAR BAGH	17.05.07	20.40	TR. MADE OFF MANUALLY DUE TO FIRE IN 'B' PHASE JUMPER OF BREAKER OF 33KV I/C-I.
31	18.05.07	12.39	220/66KV 100MVA PR. TR.-I & II	18.05.07	12.54	TR.-I & II TRIPPED ON 51, 64.
32	19.05.07	19.00	220/66KV 100MVA PR. TR.-I AT PAPPANKALAN-II	20.05.07	10.50	TR. TRIPPED WITHOUT INDICATION.
33	20.05.07	01.45	220KV IP EXT – PARK STREET CKT-I	20.05.07	05.50	CKT. TRIPPED ON POLE DISCREPANCY AT PARK STREET.
34	22.05.07	18.50	220/66KV 100MVA PR. TR.-I AT PAPPANKALAN-I	20.05.07	19.20	
35	23.05.07		VARIOUS TRIPING IN DTL SYSTEM			REFER 'A' TO THE DETAILED REPORT AT PAGE NO.
36	23.05.07	20.25	66/33KV 30MVA PR. TR. AT NARELA	23.05.07	22.10	TR. TRIPPED ON 64RLV WITH 33KV I/C WHICH TRIPPED WITHOUT INDICATION.
37	24.05.07	08.05	66/33KV 30MVA PR. TR. AT NARELA	24.05.07		TR. TRIPPED ON 64RLV WITH 33KV I/C WHICH TRIPPED WITHOUT INDICATION.
38	26.05.07	14.10	220/33KV 100MVA PR. TR.-III AT OKHLA	26.05.07	16.20	TR. TRIPPED ON 276001/BA ALONG WITH 33KV I/C-III WHICH TRIPPED WITHOUT INDICATION.
39	26.05.07	19.10	220KV BAWANA – ROHINI CKT-I	26.05.07	19.41	CKT. TRIPPED ON DIST PROT. ZONE-II, 186A, 186B AT BAWANA. NO TRIPPING AT ROHINI END.
40	27.05.07	03.40	66/11KV 20MVA PR. TR.-I AT SARITA VIHAR	27.05.07	08.20	TR. TRIPPED ON 30F, 86
41	27.05.07	07.45	220/33KV 100MVA PR. TR.-I AT GOPALPUR	27.05.07	14.30	TR. TRIPPED ON 86, BUCHZ
42	27.05.07	08.40	66/11KV 20MVA PR. TR.-I AT SARITA VIHAR	27.05.07	12.55	TR. TRIPPED ON 30E.

**17.3 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH JUNE 2007**

SL NO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	02.06.07	14.23	220KV NARELA-ROHTAK ROAD CKT-II	02.06.07	15.03	AT NARELA : CKT TRIPPED ON DIST. PROT., ZONE-I
02	09.06.07	09.40	220KV PATPARGANJ-GEETA COLONY CKT-I&II	09.06.07	9.50	AT PPG: 220KV PPG-GEETA COLONY CKT-I & II TRIPPED ON 186, 186 RESULTING IN ISLANDING OF IP, RPH, PRAGATI ALONGWITH STG AND ITS COLLAPSE. 220KV IP - PPG CKT-I ALONG WITH 220KV BUS-I WAS ALREADY UNDER S/D AT PATPARGANJ. TRIPPING OCCURRED WHILE NORMALISING THE 220KV BUS-I AT PATPARGANJ WHICH WAS UNDER S/D SINCE 06.35HRS SPARKING OBSERVED IN PT SELECTION RELAY. 220KV PPG-GEETA COLONY CKT-I NORMALISED AT 09.47HRS. 220KV PATPARGANJ - GEETA COLONY CKT-II NORMALISED AT 09.50HRS. 220KV IP-PPG CKT-I ENERGISED AT 10.30HRS. 220KV BUS-I AT PATPARGANJ CHARGED AT 12.30HRS. GENERATING UNITS SYNCHRONISED AS PER DETAILS HEREUNDER : PRAGATI #2 SYNCHRONIZED AT 10.22HRS IP #4 SYNCHRONIZED AT 10.47HRS. IP #2 SYNCHRONIZED AT 11.08HRS. PRAGATI STG SYNCHRONIZED AT 11.46HRS. RPH #2 SYNCHRONIZED AT 12.38HRS.
03	10.06.07	2.55	220KV NARELA-ROHTAK ROAD CKT-II	10.06.07	9.13	AT NARELA : CKT TRIPPED ON 195CC, 295CC, 95CC AT ROHTAK ROAD : NO TRIPPING
04	13.06.07	6.15	33KV BAYNO. 31 (IP-IG STADIUM) AT IP STATION	21.06.07	16.40	AT IP STATION : 33KV IP - IG STADIUM CKT TRIPPED ON O/C, E/F WITH HEAVY JERK. AS REPORTED BY GENCO STAFF CKT BREAKER OF THIS CKT COMPLETELY DAMAGED AT IP STATION END. 33KV BUS DIFF. OPERATED AT IP STATION DUE TO WHICH ALL RUNNING UNITS OF IP I.E. IP UNIT NOS. 2, 3 & 4 TRIPPED. UNIT-5 WAS ALREADY UNDER SHUTDOWN. PRAGATI UNIT 2 CAME ON FSNL. AFTER ISOLATING THE BREAKER FEEDER NORMALISED FROM BAY-33 AT IP STN. UNIT SYNCHRONIZED AS DETAILED BELOW. IP UNIT 2 SYNCHRONIZED AT 7.50HRS. IP UNIT 3 SYNCHRONIZED AT 7.47HRS IP UNIT 4 SYNCHRONIZED AT 8.45HRS IP UNIT 5 SYNCHRONIZED AT 8.14HRS
05	13.06.07	9.33	22 KV BTPS-MEHRAULI CKT-II	13.06.07	9.55	AT MEHRAULI : CKT TRIPPED ON 3-PHASE TRIP, DIST. PROT., ZONE-I ALONG WITH 66KV I/C NO. 3, MALVIYA NAGAR CKT-I&II WHICH TRIPPED WITHOUT INDICATION
06	13.06.07	18.33	220KV PRAGATI-SARITA VIHAR CKT-II	13.06.07	18.45	AT PRAGATI : CKT TRIPPED ON 186,3-PHASE TRIP, DIST. PROT. ZONE-I AT SARITA VIHAR : CKT TRIPPED ON 186,

SL NO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
07	14.06.07	19.42	220KV PRAGATI - SARITA VIHAR CKT-I&II	14.06.07	19.56	AT PRAGATI : CKT-I TRIPPED ON 186, DIST. PROT ZONE-1. CKT-II TRIPPED ON 186, 86X, 3-PH; TRIP, DIST. PROT. ZONE-I. 100MVA TXS. TRIPPE ON 86 ALONGWITH PRAGATI UNIT-1 AND ST GT STG-3, GT UNIT 1,2,3 &4 CAME ON FSNL. AT SARJTA VIHAR : BOTH THE CKTS. TRIPPED C 3-PH.TRIP, DIST. PROT. ZONE-I, AUT RELCLOSE, LOCK OUT. CKTS NORMALIZED AT 1956HRS. 100MVA TX CHARGED AT 20.09 HRS. & UNIT SYNCHRONIZED AS PER DETAILED BELOW:GTUNIT1&2 SYNCHRONIZED AT 20.13HRS. GT UNIT 3 SYNCHRONIZED AT 20.16HRS GT UNIT 4 SYNCHRONIZED AT 20.11HRS GT STG-3 SYNCHRONIZED AT 20.25HRS PRAGATI STG SYNCHRONIZED AT 21.26HRS
08	16.06.07	9.04	220KVBAMNAUL I-PAPPANKALAN-I CKT-II	16.06.07	9.10	AT PPK-f ; CKT TRIPPED ON CB DISCREPANCY AT BAMNAUL1 : NO TRIPPING
09	19.06.07	11.15	220KV NARELA-ROHTAK ROAD CKT-1	19.06.07	11.41	AT NARELA : CKT TRIPPED ON DIST. PRO^ ZONE-I AT ROHTAK ROAD : CKT TRIPPED ON E/F
10	19.06.07	11.24	220KV MANDOLA - GOPALPUR CKT-I	19.06.07	12.22	AT MANDOLA : CKT TRIPPED ON DIST. PRO1 ZONE-3 AT GOPALPUR : NO TRIPPING AT GOPALPU1 END. BUT 33KV TIMARPUR CKT-I TRIPPEI WITHOUT INDICATION.
11	19.06.07	11:30	220KV1.P.-RPHCKT.-I	19.06.07	14:15	AT RAJGHAT : CKT .TRIPPED Of 86A,86B,86C,86E,86X, 186A, 186B, AUTORECLOS] LOCKOUT. AT I.P.STATION : CKT. TRIPPED ON O/C,E/F.
12	19.06.07	16.58	220KV NARELA - ROHTAK ROAD CKT-1	19.06.07	17.55	AT NARELA : CKT TRIPPED ON DIST. PROT ZONE-I, 3-PHASE TRIP AT ROHTAK ROAD : CKT TRIPPED ON DIST. PROT ZONE-I, 3-PHASE TRIP
13	21.06.07	10.40	220KV PRAGATI-SARITA VIHAR CKT-I & 11	21.06.07	10.52	AT SARITA VIHAR : BOTH CKTS TRIPPED O> DIST. PROT. ZONE-I, 186A & 186B. AT PRAGATI : CKT-I NO TRIPPING CKT-II TRIPPED ON DIST. PROT. ZONE-2. 100MV/ TXS ALSO TRIPPED ON U/F AND PT FUSE FAIL. THE PRAGATI UNIT NO. 1 ALONG WITH STG ANE GT UNIT NO. 5 & 6 ALONGWITH STG NO.3 ISLANDED FROM THE GRID AND COLLAPSED. UNITS SYNCHRONIZED AS PER DETAILED BELOW : GTUNIT5 SYNCHRONIZED AT 11.08HRS. GT UNIT 6 SYNCHRONIZED AT 11.10HRS GT STG-3 SYNCHRONIZED AT 12.25HRS PRAGATI #1 SYNCHRONIZED AT 11.56HRS PRAGATI STG SYNCHRONIZED AT 11.24HRS
14	21.06.07	15.32	220KV WAZIRABAD - GEETA COLONY CKT-I	21.06.07	17.35	AT SOW : CKT TRIPPED ON REL511, 3-PHASE TRIP, DIST. PROT. ZONE-I AT GEETA COLONY : CKT TRIPPED ON 3-PHASE TRIP, DIST. PROT. ZONE-I

SL NO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
15	21.06.07	15.34	220KV MANDOLA - SOW CKT-III	21.06.07	16.21	AT SOW : CKT TRIPPED ON DIST. PROT. ZONE-I, AT MANDOLA : NO TRIPPING
16	23.06.07	15.13	220KV MANDOLA - GOPALPUR	23.06.07	15.20	AT MANDOLA : CKT TRIPPED ON DIST. PROT. ZONE-3, 86R, 86Y, 86B AT GOPALPUR : NO TRIPPING
17	26.06.07	7.28	220KV NARELA-PANIPAT CKT-I, II & 111	26.06.07	7.35	AT NARELA : NO TRIPPING AT PANIPAT ; NOT AVAILABLE
<b>18</b>	29.06.07	12.39	220KV PRAGATI - SARITA VIHAR CKT -1	29.06.07	12.51	AT PRAGATI : CKT TRIPPED ON 186, DIST. PROT. ZONE-I AT SARITA VIHAR : CKT TRIPPED ON 186A, 186B, DIST. PROT.
19	30.06.07	22.29	220KVBAWA NA-NAJAFGARH CKT-II	01.07.07	19.43	AT BAWANA : CKT TRIPPED ON DIST. PROT. ZONE-I AT NAJAFGARH : CKT TRIPPED ON 186. CONDUCTOR REPORTEDLY THEFT NEAR RANIKHERA

**17.4 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH JULY - 2007**

S. N	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	02.07.07	00.35	220KV I/C-IV AT BAMNAULI			220KV I/C-IV TRIPPED ON `B` PHASE, 95AB, CB-1, TRIPPED CKT-II `B` PHASE, 95ABC, C-II, DIRECTIONAL O/C, E/F, PROTECTION RELAY, MASTER RELAY 86, CB TROUBLE ALARM
02	04.07.07	09.35	33KV I/C-I & II AT LODHI ROAD	04.07.07	09.45	33KV I/C-I & II OF 100MVA PR. TR.-I & II TRIPPED ON O/C `R` PHASE.
03	06.07.07	14.52	220KV BAMNAULI – MEHRAULI CKT-II	04.07.07	15.00	CKT. TRIPPED ON DIST PROT `C` PHASE, ACTIVE GROUP-I STARTED AT MEHRAULI END AND ON DIST PROT `C` PHASE, AUTO RECLOSE, 186A&B, 30F, 30EF, LOW OIL LEVEL, 87 AT BAMNAULI END.
04	08.07.07	08.08	220KV WAZIRABAD – GEETA COLONY CKT-I	08.07.07	08.25	CKT. TRIPPED ON REL-511, GENERAL TRP, GFC-STF WL2, GFC-STFWL3, FUSE VTSZ, ZM-II TRIP, ZM-II START, ZM-III START, RXME18 AT WAZIRABAD AND ON ACTIVE GROUP-I, START PHAE BC, START ELEMENT DISTANCE, O/C, START I>1, DIST PROT ZONE-I AT GEETA COLONY.
05	08.07.07	10.48	220KV WAZIRABAD – GEETA COLONY CKT-I	08.07.07	10.48	CKT. TRIPPED ON GENERAL TRIP, GFC-STFW L1-L2, ZM-I TRIP, ZM-2 START, ZM-3 START AT WAZIRABAD AND ON ACTIVE GROUP-I, START PHASE A,B, TRIP PHASE A,B,C, START ELEMENT DISTANCE O/C, START I>1, DIST PROT. ZONE-I, MAIN-II, PHASE AB TRIP, ABC ZONE-I, FT1 AT GEETA COLONY
06	08.07.07	21.15	220/66KV 100MVA PR. TR.-II AT WAZIRABAD	08.07.07	22.06	TR. TRIPPED ON E/F ALONG WITH 66KV I/C-II WHICH TRIPPED ON E/F, O/C `R` PHASE. 66KV I/C-III ALSO TRIPPED ON 86, E/F. 66KV I/C-II & III ENERGIZED AT 22.23HRS. AND 21.31HRS RESPECTIVELY.
07	10.07.07	19.57	33KV I/C OF 66/33KV 30MVA PR. TR. AT NARELA	10.07.07	22.35	33KV I/C OF THE TRANSFORMER TRIPPED ON O/C, `R` PHASE.
08	11.07.07	15.03	220/33KV 100MVA PR. TR.-II AT SUBZI MANDI	11.07.07	15.07	TR. TRIPPED ON DIFFERENTIAL, 86 MASTER RELAY.
09	11.07.07	18.20	220/33KV 100MVA PR. TR.-II AT SUBZI MANDI	11.07.07	18.25	TR. TRIPPED ON 86.
10	12.07.07	19.01	220/33KV 100MVA PR. TR.-I, IV AND 220/33KV 50MVA PR. TR.-III AT PATPARGANJ	12.07.07	21.30	THE FOLLOWING RELAY INDICATION OBSERVED : 220/33KV 100MVA PR. TR.-I : 64LVREF, 86, 86 33KV I/C-I : O/C, `R` PHASE 220/33KV 100MVA PR. TR.-IV : 86 33KV I/C-IV : 86 220/33KV 50MVA PR. TR.-II : 64REF, LV SIDE 33KV I/C-II : WITHOUT INDICATION THE ABOVE TRIPPING OCCURRED DUE TO DAMAGE OF `B` PHASE ISOLATOR AND SNAPPING OF JUMPER OF 220/33KV 50MVA PR. TR.-II ON 33KV BUS-II 100MVA PR. TR.-I & IV. CHARGED AT 19.40HRS, RESPECTIVELY ALONG WITH RESPECTIVE 33KV INCOMERS. 50MVA TR.-II COULD BE CHARGED ON 13.07.2007 AT 18.05HRS.

S. N	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
11	14.07.07	06.25	66/11KV 20MVA PR. TR.-II AT WAZIRABAD	14.07.07		66/11KV 20MVA PR. TR.-II TRIPPED ON O/C, 'R & B' PHASE,ALONG WITH 11KV I/C-II DUE TO BURNT OF OCB OF 11KV I/C-II. 11KV I/C-II OF THE TR. TRIPPED ON O/C, 51C, 67C.
12	14.07.07	14.14	220KV MANDOLA – GOPALPUR CKT-II	14.07.07	18.44	CKT TRIPPED ON DIST. PROT ZONE-I,'R,Y&B' PHASE, M, R&Y PHASE
13	17.07.07	19.08	11KV I/C-II OF 20MVA PR. TR.-II	17.07.07	19.40	11KV I/C-II OF THE TR. TRIPPED ON O/C, 'R' PHASE.
14	18.07.07	10.20	220/66KV 100MVA PR. TR.-I AT GAZIPUR	18.07.07	10.48	100MVA PR. TR.-I TRIPPED ON E/F ALONG WITH 66KV I/C-I WHICH TRIPPED WITHOUT INDICATION.
15	18.07.07	13.40	220KV GEETA COLONY – PATPARGANJ CKT-II	18.07.07	13.45	CKT. TRIPPED ON 30E, AUTO TRIP, 30C, POLE DISCREPANY, MASTER RELAY AT GEETA COLONY END ONLY.
16	18.07.07	15.04	220KV WAZIRABAD – GEETA COLONY CKT-II	18.07.07	15.07	CKT. TRIPPED ON MASTER RELAY 86 AT GEETA COLONY END ONLY
17	18.07.07	17.27	220KV MANDOLA – WAZIRABAD CKT-IV	18.07.07		CKT. TRIPPED ON 'Y & B' PHASE, AT MANDOLA AND ON RXME18, RY PHASE, RE511, 'B' PHASE POLE AT WAZIRABAD.
18	19.07.07	09.18	220KV IP EXT – SARITA VIHAR CKT-II	18.07.07	09.34	CKT. TRIPPED ON 186, 186, ACTIVE GROUP-I, START PHASE AN, TRIP PHASE A, DIST PROT ZONE-I AT IP EXT AND ON 186, AUTO RECLOSE AT SARITA VIHAR.
19	19.07.07	12.20	220KV MEHRAULI – VASANT KUNJ CKT-I	19.07.07	12.43	CKT. TRIPPED ON DIST PROT 'C' PHASE, 186 AT VASANT KUNJ AND ON DIST PROT 'C' PHASE, 186A, 186B AT MEHRAULI.
20	19.07.07	17.53	220KV MANDOLA – GOPALPUR CKT-II	19.07.07	18.01	CKT. TRIPPED ON DIST SCHEME Y-B PHASE, 86RYB AT MANDOLA. NO TRIPPING AT GOPALPUR.
21	20.07.07	15.06	220/33KV 100MVA PR. TR.-I AT PATPARGANJ	20.07.07	15.30	220/33KV 100MVA PR. TR.-I TRIPPED ON O/C, 'R' PHASE, 86, 86 ALONG WITH 33KV I/C-I, II, III & IV. 33KV I/C-I & IV TRIPPED ON O/C 'R' PHASE AND 33KV I/C-II & III TRIPPED ON E/F.
22	20.07.07	16.05	33KV I/C AT NARELA	20.07.07	16.08	33KV I/C TRIPPED ON 'R' PHASE.
23	21.07.07	03.22	220KV BAWANA – NAJAFGARH CKT-II	21.07.07	14.50	CKT. TRIPPED ON DIST. PROT ZONE-I, MASTER RELAY 86, TRIP AUX, 21XR1, XY1, XB1, 21XR2, XY2, XB2 AT BAWANA. NO TRIPPING AT NAJAFGARH.
24	21.07.07	13.00	400KV BAMNAULI – BAWANA CKT-I	21.07.07	13.08	CKT. TRIPPED ON 85LOIR, 2Y80AC, 85LOX, 186A AND B AT BAWANA.
25	23.07.07	15.56	220KV PATPARGANJ – IP CKT-II	23.07.07	16.20	CKT. TRIPPED ON DIRECTIONAL E/F AT IP STATION. NO TRIPPING AT PATPARGANJ
26	23.07.07	15.56	220KV MANDOLA – WAZIRABAD CKT-I	23.07.07		CKT. TRIPPED ON GENERAL TRIP, RXME18, THREE PHASE TRIP, BUS VT SELECTION RELAY-2, RL511 DIST PROT ZONE-II, LOW GAS PRESSURE AT WAZIRABAD AND ON CB AUTO TRIP, 186A&B, 'B' PHASE, DIST PROT ZONE-I AT MANDOLA.
27	23.07.07	18.15	220/33KV 100MVA PR. TR.-II AT GEETA COLONY	23.07.07	19.32	TR. TRIPPED ON PRV TRIP, 30L, 86, 30E.



S. N	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
28	23.07.07	19.03	220/33KV 100MVA PR. TR.-I AT GEETA COLONY	23.07.07	20.18	TR. TRIPPED ON BUCHZ, WII TRIP, 30I, 30G, 86, 30E.
29	24.07.07	17.50	220KV PANIPAT – NARELA CKT-II	24.07.07	18.10	CKT. TRIPPED ON DIST PROT `B` PHASE ZONE-I, 85X2, 30G, 186A, 186B AT NARELA.
30	25.07.07	11.30	220KV MANDOLA – GOPALPUR CKT-II	25.07.07	14.42	CKT. TRIPPED ON DIST PROT `YB` PH. ZONE-II AT MANDOLA. NO TRIPPING AT GOPALPUR.
31	26.07.07	10.40	220/66KV 100MVA PR. TR.-IV AT PAPPANKALAN-I	26.07.07	10.58	TR. TRIPPED ON FALSE WINDING TEMP. TR. TROUBLE ALARM,
32	26.07.07	13.51	220KV BAMNAULI – PAPPANKALAN CKT-II	26.07.07	14.50	CKT. TRIPPED ON AUTO RECLOSE, 186A, 186B, DIST PROT `A` PHASE AT BAMNAULI. NO TRIPPING AT PAPPANKALAN.
33	27.07.07	18.22	220KV MANDOLA – WAZIRABAD CKT-IV	27.07.07	18.47	CKT. TRIPPED ON GENERAL TRIP, RYB PH., 3 PH. TRIP AT WAZIRABAD AND ON `RY` ZONE-2, 86R, 86Y, 86B, 186A AT MANDOLA.
34	28.07.07	11.47	220KV SARITA VIHAR–IP EXT CKT-I	28.07.07	11.50	CKT. TRIPPED ON AUTO RECLOSE AT SARITA VIHAR.
35	28.07.07	18.05	220KV BTPS – SARITA VIHAR CKT-I	28.07.07	18.32	CKT. TRIPPED ON 186A&B, AUTO RECLOSE, DIST PROT `A&B` PH. AT SARITA VIHAR AND ON 186 AT BTPS. SARITA VIHAR–IP EXT CKT -I ALSO TRIPPED ON 186, 186, 86X, ACTIVE GROUP-I, START PHASE AB, TRIPPED PH. ABC, START ELEMENT DIST PROT ZONE.
36	29.07.07	18.42	220KV GEETA COLONY – PATPARGANJ CKT-I	29.07.07	19.05	CKT. TRIPPED ON DIST PROT ZONE-II, START PHASE AB AT PATPARGANJ AND ON ACTIVE GROUP-I, DIST PROT ZONE-I, START PHASE AB, TRIP PHASE ABC AT GEETA COLONY.
37	30.07.07	14.53	220KV WAZIRABAD – KASHMIRI GATE CKT-II	30.07.07	15.02	CKT. TRIPPED ON RXME18, R PHASE, REL511, GEN TRIP, GSC-STFW L1-L2, ZM-1 TRIP, ZM-2 START, ZM-3 START AT WAZIRABAD
38	31.07.07	08.14	220/66KV 100MVA PR. TR.-II AT WAZIRABAD	31.07.07	08.42	TRANSFORMER TRIPPED ON 64REX (LV SIE), STATIC E/F (LV SIDE), THREE PHASE TRIPPING, GAS PRESSURE LOW.
39	31.07.07	10.57	220/66KV 100MVA PR. TR.-I AT PATPARGANJ	31.07.07	12.12	TR. TRIPPED ON 30F, MAIN TANK, POWER PRESSURE RELAY, 86, 86.
40	31.07.07	16.38	220KV MANDOLA – WAZIRABAD CKT-IV	31.07.07	16.58	CKT. TRIPPED ON RXME18, RYB PH, GEN. TRIP RYB PH, START R PH, START Y PH, START B PH, START NUE, E-I TRIP, ZCOM5, ZM-1 START, ZM-2 START, ZM3 START AT WAZIRABAD AND ON DIST PROT ZONE-I AT MANDOLA
41	31.07.07	18.38	220KV IP EXT – SARITA VIHAR CKT-I	31.07.07		CKT. TRIPPED ON THREE PHASE DIST PROT ZONE-II, AUTO RECLOSE, 186A, 186B AT SARITA VIHAR AND ON DIST PROT ZONE-II, ACTIVE GROUP-I, START PHASE AB, TRIP PHASE ABC AT IP EXT
42	31.07.07	18.50	220/66KV 100MVA PR. TR.-II AT WAZIRABAD	31.07.07	18.50	TR. TRIPPED ON 64LVREF, THREE PHASE TRIPPING, AIR PRESSURE LOW ALONG WITH 66KV I/C-II WHICH TRIPPED WITHOUT INDICATION.

**17.5 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH AUGUST - 2007**

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	01.08.07	15.45	220KV MANDOLA – WAZIRABAD CKT-I	01.08.07	16.50	CKT. TRIPPED ON GENERAL TRIP RYB PHASE, DIST PROT ZONE-II AT WAZIRABAD AND ON DIST PROT 'Y' PHASE ZONE-I AT MANDOLA.
02	01.08.07	16.02	400KV MANDOLA – BAWANA CKT-II	01.08.07	16.19	CKT. TRIPPED ON MAIN-II A-N ADDED TRIP, 186A, 186B, AT BAWANA.
03	02.08.07	02.50	400/220KV 315MVA ICT-IV AT BAMNAULI	02.08.07	11.05	ICT TRIPPED ON OLTC BUCHZ, 30F, 'C' PHASE TRIPPED, MASTER RELAY, 186A&B, GROUP-A 86A, AUTO RECLOSE LOCK OUT.
04	02.08.07	04.06	220/33KV 50MVA PR. TR.-III AT PATPARGANJ	02.08.07	14.05	TR. TRIPPED ON BUCHZ, 30A, 30G.
05	02.08.07	05.25	220/66KV 100MVA PR. TR.-III AT WAZIRABAD	02.08.07	07.08	TR. TRIPPED ON BUCHZ RELAY, THREE PHASE RELAY, DC FAIL 66KV I/C OF THE TRANSFORMER ALSO TRIPPED ON MASTER RELAY.
06	02.08.07	05.45	220/33KV 100MVA PR. TR.-III AT GOPALPUR	02.08.07	10.15	TR. TRIPPED ON 30A, BUCHZ, 95 SUPERVISOR RELAY, 86 MASTER RELAY.
07	02.08.07	06.15	66/11KV 20MVA PR. TR.-I AT KANJHAWALA	02.08.07	06.25	TR. TRIPPED ON 30G, OLTC, 86, TR. TROUBLE TRIP ALONG WITH 11KV I/C-I WHICH TRIPPED ON HIGH SPEED RELAY.
08	02.08.07	07.35	220/66KV 100MVA PR. TR.-III AT PAPPANKALAN	02.08.07	11.30	TR. TRIPPED ON 30D, OLTC BUCHZ, 30G, 86 ALONG WITH 66KV I/C-III WHICH TRIPPED ON INTER TRIPPING.
09	02.08.07	07.40	220/66KV 100MVA PR. TR.-II AT WAZIRABAD	02.08.07	08.10	TR. TRIPPED ON OIL PRESSURE LOW ALARM, PUMP FAN FAILURE, TRANSFORMER TROUBLE ALARM, SUDDEN PRESSURE RELAY, THREE PHASE TRIPPING ALONG WITH 66KV I/C-II WHICH TRIPPED ON INTER TRIPPING.
10	02.08.07	14.10	220/66KV 100MVA PR. TR.-II AT GAZIRPUR	02.08.07	14.50	TR. TRIPPED ON PRV RELAY ALONG WITH 66KV I/C-II WHICH TRIPPED WITHOUT INDICATION.
11	03.08.07	03.50	220/33KV 100MVA PR. TR.-III AT OKHLA	03.08.07	04.15	TR. TRIPPED ON WITHOUT INDICATION.
12	04.08.07	02.13	220KV BAWANA – NAJAFGARH CKT-I	04.08.07	16.04	CKT. TRIPPED ON DIST PROT CG-I, MASTER TRIP, 86, DIST PROTECTION 71X, R1Y1B1, DIST PROT 71R2Y2B2 AT BAWANA. NO TRIPPING AT NAJAFGARH.
13	04.08.07	03.52	66/11KV 20MVA PR. TR.-III AT ROHINI	04.08.07	08.40	TR. TRIPPED ON BUCHZ, 30A, 86
14	04.08.07	15.48	220KV GEETA COLONY – PATPARGANJ CKT-II	04.08.07	18.07	CKT. TRIPPED ON ACTIVE GROUP-I, START PHASE BC, TRIP PHASE ABC, DIST PROT ZONE-I, 85X2, 86X, 186, 186 AT PATPARGANJ END AND ON ACTIVE GROUP-I, START PHASE BC, TRIP PHASE BC, 86, 30E, 27RYB AT GEETA COLONY

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
15	04.08.07	15.48	220KV MANDOLA – WAZIRABAD CKT-IV	04.08.07	16.22	CKT. TRIPPED ON 86RYB, 186AB, DIST PROT `Y` PHASE ZONE-I AT MANDOLA. NO TRIPPING AT WAZIRABAD.
16	04.08.07	18.26	220KV IP EXT – SARITA VIHAR CKT-I	04.08.07	18.40	CKT. TRIPPED ON 186, 186, 86X AT IP EXT AND ON DIST PROT ZONE-II, AUTO RECLOSE, 186A&B AT SARITA VIHAR.
17	05.08.07	17.28	220KV MANDOLA – GOPALPUR CKT-I	05.08.07		CKT. TRIPPED ON DIST PROT `Y&B` PHASE ZONE-II AT GOPALPUR. NO TRIPPING AT MANDOLA.
18	05.08.07	17.32	220KV PANIPAT – NARELA CKT-II	05.08.07	17.35	CKT. TRIPPED ON MICRO MOW DIST PROT `B` PHASE ZONE-I, 30G, 186, MASTER RELAY AT NARELA
19	05.08.07	18.37	220KV SARITA VIHAR – IP EXT CKT-I	05.08.07	18.54	CKT. TRIPPED ON 186, 186, ACTIVE GROUP-, START PHASE BN, TRIPPED PHASE B, DIST PROT ZONE-I AT IP EXT AND ON DIST PROT `B` PHASE ZONE-I, 186A, 186B AT SARITA VIHAR.
20	06.08.07	01.55	220/33KV 100MVA PR. TR.-III AT OKHLA	06.08.07	05.25	TR. TRIPPED ON OIL TEMPERATURE, ALONG WITH 33KV I/C-III WHICH TRIPPED ON 86.
21	06.08.07	08.52	66/11KV 20MVA PR. TR.-II AT SARITA VIHAR	06.08.07	12.25	TR. TRIPPED ON WINDING TEMP, MASTER RELAY ALONG WITH ITS 11KV I/C WHICH TRIPPED ON LOCK OUT, E/F.
22	06.08.07	11.20	220KV WAZIRABAD – GEETA COLONY CKT-I	06.08.07	11.34	CKT. TRIPPED ON RXME RY, GENERAL TRIP, GEC-STFW, L1 GEC-STFW, L2 GEC-STFW, PE ZONE MAIN-I, ZM-II START, ZM3 START AT WAZIRABAD AND ON ACTIVE GROUP-I, TRIP PH ABC, START ELEMENT, DIST PROT ZONE-I, O/C AT GEETA COLONY.
23	06.08.07	11.27	220KV MANDOLA – WAZIRABAD CKT-III	06.08.07	12.43	CKT. TRIPPED ON `R` PHASE, 186A&B, 86, RYB AT MANDOLA.
24	07.08.07	14.45	33/11KV 16MVA PR. TR.-I AT SUBZI MANDI	07.08.07	15.00	TR. TRIPPED ON O/C ALONG WITH 11KV ITS I/C
25	07.08.07	16.10	220KV I/C OF 400/220KV 315MVA ICT-II AT BAWANA.	07.08.07	16.18	I/C TRIPPED WITHOUT INDICATION.
26	07.08.07	17.43	220KV SAHIBABAD – (GAZIPUR-T-OFF) – PATPARGANJ CKT-I	07.08.07	17.58	CKT TRIPPED ON DISTANCE PROT `Y&B` PHASE ZONE-I AT GAZIPUR SUB-STATION (T-OFF). NO TRIPPING AT PATPARGANJ.
27	08.08.07	16.42	220KV WAZIRABAD – GEETA COLONY CKT-I	08.08.07	16.50	CKT. TRIPPED ON RXME18, R-Y PHASE, RL511 GENERAL TRIP, GEC-STFW L2, GEC-STFW, L3 ZONE MAIN-I TRIP AT WAZIRABAD AND ON ACTIVE GROUP-I, START PHASE BC, TRIP PHASE ABC, DIST PROT ZONE-I O/C, 86 AT GEETA COLONY.
28	09.08.07	10.06	220KV WAZIRABAD – GEETA COLONY CKT-I	09.08.07	10.18	CKT. TRIPPED ON RXME18, R-Y PHASE, REL511, GENERAL TRIP, GSE-STSWL123, ZM-1 TRIP FUSE VTSZ, ZM-II START, ZM-3 START AT WAZIRABAD AND ON ACTIVE GROUP-I, START PHASE BC, TRIP PHASE ABC, START ELEMENT, DIST PROT `RYB`

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
29	09.08.07	14.23	220KV MANDOLA – BAWANA CKT-II	09.08.07	14.38	CKT. TRIPPED ON CB TROUBLE ALOARM, CB AUTO TRIP MAIN-I AB ZONE-I, MAIN-I AB ZONE-1 AT BAWANA AND ON MAIN-I RY ZONE-I AND MAIN-2 RY ZONE-I AT MANDOLA.
30	10.08.07	12.35	220KV SAHIBABAD – (GAZIPUR-T-OFF) – PATPARGANJ CKT-I	10.08.07	12.55	CKT TRIPPED ON DISTANCE PROT 'R' PHASE ZONE-II AT GAZIPUR SUB-STATION (T-OFF) AND ON 74A DIST PROT ZONE-I, ACTIVE GROUP-I, TRIP CONCEPT MULTIPLICATION, 21XYZ AT SAHIBABAD END.
31	10.08.07	21.21	400KV BALLABHGARH – BAMNAULI CKT-I	10.08.07	23.10	CKT. TRIPPED ON CB-I, CB-II AUTO TRIP, DIST PROT MAIN-I : ABC ZONE ZM-1, 2, 3 SOTF AIDED TRIP, AUX. ALARM MAIN-1 97YX, AUX ZONE A&B, 23Y, CARRIER RECEIVING MAIN-1, 85Y-1, 30CH2, AUX FAIL, CARRIER CHANNEL2 FAIL, 186A&B, CB-1&2 AUTO TRIP AT BAMNAULI.
32	11.08.07	05.14	400KV BAWANA – BAMNAULI CKT-II	11.08.07	11.45	CKT. TRIPPED ON CB AUTO TRIP, DIRECT TRIP,, 85LO, AUTO RECLOSE, 186A, 186B ON BOTH BREAKERS AT BAWANA.
32	11.08.07	10.55	220KV BTPS – OKHLA CKT-II	11.08.07	11.06	CKT. TRIPPED ON 30G, 30G, 186 AT BTPS END ONLY. CKT. DID NOT TRIP AT OKHLA END.
33	11.08.07	13.05	220KV MANDOLA – GOPALPUR CKT-I	11.08.07	15.50	CKT. TRIPPED ON DIST PROT 'Y&B' PHASE, ZONE-III, 86R, 86Y, 86B, 186A&B AT MANDOLA.
34	11.08.07	15.55	220KV WAZIRABAD – GEETA COLONY CKT-II	11.08.07	16.08	CKT. TRIPPED ON RXME18, RYB GENERAL TRIP, GEC-STF WLT, GFC-STFW ZM-I TRIP, FUSE BTSZ, ZM-II, ZM-III START, AT WAZIRABAD AND ON ACTIVE GROUP-I, START PHASE A, TRIP PHASE ABC, START ELEMENT, DIST PROT ZONE-I AT GEETA COLONY.
35	11.08.07	15.55	220/66KV 100MVA PR. TR.-III AT WAZIRABAD	11.08.07	16.08	TR. TRIPPED ON REF LV
36	12.08.07	08.25	220KV BAMNAULI – NARAINA CKT-I	12.08.07	20.00	CKT. TRIPPED ON DIST PROT B&C PHASE, ZONE-II, AUTO RECLOSE, 186A&B AT BAMNAULI AND ON DIST PROT 'C' PHASE AT NARAINA.
37	12.08.07	18.50	220KV NARELA – ROHTAK ROAD CKT-II	12.08.07	19.40	CKT. TRIPPED ON DIST PROT ABC PHASE ZONE-I AT NARELA.
38	13.08.07	17.25	220KV SARITA VIHAR – IP EXT CKT-I & II	13.08.07	17.57	THE FOLLOWING TRIPPINGS OBSERVED :- AT IP EXT SARITA VIHAR CKT-I : ACTIVE GROUP-I, DIST PROT ABC PHASE ZONE-I SARITA VIHAR CKT-II : ACTIVE GROUP-I, 186, 186, 86X, START PHASE BC, TRIP PHASE ABC, DIST PROT ZONE-I AT SARITA VIHAR IP EXT CKT-I : START PHASE AB, TRIP PHASE ABC, DIST PROT ZONE-I IP EXT CKT-II : DIST PROT ABC PHASE, ZONE-I CKTS CLOSED AT 17.56HRS AND 17.57HRS RESPECTIVELY AT SARITA VIHAR

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
39	14.08.07	05.38	66/11KV 20MVA PR. TR. AT GAZIPUR	14.08.07		
40	14.08.07	08.29	220KV SAHIBABAD – (GAZIPUR-T-OFF) – PATPARGANJ CKT-I	14.08.07	12.15	CKT. TRIPPED ON 74A, DIST PROT ABC ZNE-IV, TCM21XYZ, MASTER RELAY 86 AT GAZIPUR.
41	14.08.07	15.20	220KV BAMNAULI – PAPPANKALAN-II CKT-I	14.08.07	15.40	CKT. TRIPPED ON 186 AUTO RECLOSE AT BAMNAULI. NO TRIPPING AT PAPPANKALAN-II
42	14.08.07	16.02	220KV SARITA VIHAR – IP EXT CKT-I	14.08.07	16.17	CKT. TRIPPED ON 186A, 186B, AUTO RECLOSE LOCK OUT, DIST PROT `C` PHASE ZONE-I AT SARITA VIHAR AND ON 186, 186, START PHASE CN, TRIP PHASE C, START ELEMENT TRIP Z1 AT IP EXT.
43	14.08.07	16.12	220KV BAMNAULI – PAPPANKALAN-II CKT-II	14.08.07	16.20	CKT. TRIPPED ON DIST PROT A&B PH, AUTO RECLOSE LOCKOUT, 186A&B AT BAMNAULI. NO TRIPPING AT PAPPANKALAN-II.
44	15.08.07		VARIOUS TRIPPING OF 400KV & 220KV CKTS			REFER `B` TO THE DETAILED REPORT AT PAGE NO.
45	16.08.07	12.23	220KV BTPS – MEHRAULI CKT-I	16.08.07	12.51	CKT. TRIPPED ON CN 186, 186 Z-1 AT MEHRAULI AND ON `B` PHASE E/F AT BTPS.
46	17.08.07	18.11	220KV GOPALPUR – SUBZI MANDI CKT-I	17.08.07	18.19	CKT. TRIPPED ON DIST PROT ZONE-I R&B PHASE AT GOPALPUR. NO TRIPPING AT SUBZI MANDI.
47	17.08.07	21.25	66/11KV 20MVA PR. TR.-II AT MEHRAULI	18.08.07	01.45	TR. TRIPPED ON 86, AUXILIARY RELAY ALONG WITH 11KV I/C-II WHICH TRIPPED WITHOUT INDICATION.
48	19.08.07	17.54	220KV IP EXT – SARITA VIHAR CKT-I	17.08.07	18.27	CKT. TRIPPED ON ACTIVE GROUP-I, 186, 186 START PHASE CN, TRIP PHASE C, DIST PROT ZONE-I AT IP EXT AND ON START PHASE 6A, TRIP PHASE ABC, 186A, 186B, DIST PROT ZONE-I AT SARITA VIHAR.
49	19.08.07	17.54	220KV BTPS – SARITA VIHAR CKT-I	17.08.07	18.23	CKT. TRIPPED ON 67NX, 186A, 186B, MASTER RELAY AT BTPS. NO TRIPPING AT SARITA VIHAR.
50	20.08.07	13.40	220KV BAMNAULI – PAPPANKALAN-I CKT-II	20.08.07	13.43	CKT. TRIPPED ON DIST PROT `A` PHASE, AUTO RECLOSE, 186A&B AT BAMNAULI. NO TRIPPING AT PAPPANKALAN-I
51	20.08.07	15.48	220/66KV 100MVA PR. TR.-II AT GOPALPUR	20.08.07	19.42	TR. TRIPPED ON O/C.
52	20.08.07	19.50	220KV BAMNAULI – PAPPANKALAN-I CKT-I	20.08.07	20.10	CKT. TRIPPED ON 186A, 186B, 86X, 186X (ALL PHASE) AT PAPPANKALAN-I.
53	20.08.07	19.50	220/66LV 100MVA PR. TR.-III AT PAPPANKALAN-I	21.08.07	00.40	TR. TRIPPED ON 30D, BUCHZ, 30G, OLTC, 86.
54	21.08.07	16.28	220KV MANDOLA-BAWANA CKT-II	21.08.07	16.37	CKT. TRIPPED ON DIST PROT MAIN-I A&B PHASE ZONE-1, MAIN-II A&B PHASE ZONE-I, CB-1 N 195C-1C AND CB-2 TRIPPED ON 130F, 186A, 186B, AUTO RECLOSE AT BAWANA. CKT. TRIPPED ON DIST PROT `RY` PHASE ZONE-I AT MANDOLA.

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
55	21.08.07	18.05	220KV MANDOLA – GOPALPUR CKT-I	21.08.07	18.25	CKT. TRIPPED ON DIST PROT `YB` PHASE, ZONE-II, 86R, 86Y, 86B, 186A& 186B AT MANDOLA. NO TRIPPING AT GOPALPUR.
56	23.08.07	18.35	220KV BAMNAULI – MEHRAULI CKT-II	23.08.07	13.12	CKT. TRIPPED ON DIST PROTECTION `C` PHASE AT BAMNAULI AND ON 186, 186, DIST PROT ZONE-I AT MEHRAULI.
57	23.08.07	20.50	220KV PANIPAT – NARELA CKT-I	24.08.07	00.26	CKT. TRIPPED ON DIST PROT `C` PHASE ZONE-I AT NARELA.
58	26.08.07	11.35	220KV BTPS – GAZIPUR CKT.	26.08.07	12.04	CKT. TRIPPED ON `R` PHASE E/F AT BTPS. NO TRIPPING AT GAZIPUR.
59	26.08.07	19.02	220KV MANDOLA – WAZIRABAD CKT-III	27.08.07	15.26	CKT. TRIPPED ON REL511, GENERAL TRIP, RYB PHASE START, RXME18, DIST PROT `B` PHASE ZONE-1, ZM2 START, ZM3 START, SOTF TRIP AT WAZIRABAD. CKT. TRIPPED AT MANDOLA ON DIST PROT `RY` PHASE ZONE-3.
60	26.08.07	19.02	220KV MANDOLA – WAZIRABAD CKT-II	26.08.07	19.48	CKT. TRIPPED ON DIST PROT ZONE-II, RYB PHASE AT MANDOLA. NO TRIPPING AT WAZIRABAD.
61	26.08.07	19.02	220KV GEETA COLONY – PATPARGANJ CKT-I	26.08.07	19.38	CKT. TRIPPED ON DIST PROT ABC PHASE ZONE-II AT PATPARGANJ. NO TRIPPING AT GEETA COLONY
62	27.08.07	03.40	220/66KV 100MVA PR. TR.-I & II AT ROHINI	26.08.07	16.25	TR.-I TRIPPED ON O/C `R` PHASE ALONG WITH 66KV I/C-I WHICH TRIPPED WITHOUT INDICATION. TR.-II TRIPPED ON E/F, 86, DIFFERENTIAL ALONG WITH 66KV I/C-II. 66KV `Y` PHASE CT OF I/C-II DAMAGED. 66KV I/C-I & II CHARGED AT 03.50HRS. AND 16.32HRS RESPECTIVELY.
63	27.08.07	11.22	220KV BTPS – NOIDA – GAZIPUR CKT.	27.08.07	17.40	CKT. TRIPPED ON `R` PHASE E/F AT BTPS. NO TRIPPING AT GAZIPUR END.
64	27.08.07	13.42	220/66KV 100MVA PR. TR.-I & II AT ROHINI	27.08.07	14.15	100MVA PR. TR.-III & IV TRIPPED ON 67ABC-N, 86B, 80A AND O/C, E/F, 50/51, 80A, 86B RESPECTIVELY.
65	27.08.07	21.58	220/66KV 100MVA PR. TR.-I AT NAJAFGARH	27.08.07	22.15	100MVA PR. TR.-I TRIPPED ON 51AX, 51CX, 86, 86 ALONG WITH 66KV I/C-I & III. 66KV I/C-I TRIPPED ON 51CX, 51BX AND 66KV I/C-III TRIPPED WITHOUT INDICATION.
66	28.08.07	10.32	220KV IP –PATPARGANJ CKT.-I	28.08.07	10.47	CKT. TRIPPED ON 186, DIST PROT `ABC` PHASE ZONE-I AT IP STATION. NO TRIPPING AT PATPARGANJ.
67	28.08.07	10.32	220/33KV 100MVA PR. TR.-IV AT PATPARGANJ	28.08.07	17.30	TR. TRIPPED ON 86A, DIFFERENTIAL.
68	28.08.07	11.12	220KV WAZIRABAD – GEETA COLONY CKT-I	28.08.07	11.25	CKT. TRIPPED ON GENERAL TRIP, GFC-STFW L1 L2, L3, GFC STFW, ZM, TRIP ZM2, START ZM3, DIST PROT `RY` PHASE AT WAZIRABAD AND ON MAIN-I ACTIVE GROUP-I, START PHASE ABC, TRIPPED PHASE ABC, O/C, DIST PROT ZONE-II, AND ON MAIN-II DIST PROT ABC ZONE-II AT GEETA COLONY.

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
69	28.08.07	11.12	220KV GEETA COLONY – PATPARGANJ CKT-I	28.08.07	11.34	CKT. TRIPPED ON DIST PROT ABC ZONE-II AT PATPARGANJ.
70	28.08.07	15.40	220KV SARITA VIHAR – IP EXT CKT- II	28.08.7	15.53	CKT. TRIPPED ON DIST PROT ABC PHASE, 186A, 186B AT SARITA VIHAR AND ON 186, 186, 86X, ACTIVE GROUP-I, START PHASE BC, TRIPPED PHASE ABC, START ELEMENT, DIST PROT ZONE-I AT IP EXT.
71	28.08.07	17.00	220KV GEETA COLONY – PATPARGANJ CKT-I	28.08.07	19.10	CKT. TRIPPED ON STAT PHASE AB, TRIPPED PHASE ABC, DIST PROT ZONE-I AT PATPARGANJ
72	29.08.07	16.55	220KV BAMNAULI – NARAINA CKT-I	29.08.07	20.02	CKT. TRIPPED ON 186A, 186B, DIST PROT `C` PHASE AT BAMNAULI AND ON DIST PROT `C` PHASE, 86AA, 86BB, 86CC, THREE PHASE AUTO RECLOSE 186X AT NARAINA.
73	31.08.07	10.55	220KV BTPS – NOIDA – GAZIPUR CKT	31.08.07	11.25	CKT. TRIPPED ON 64 DIRECTIONAL E/F AT BTPS. NO TRIPPING AT GAZIPUR.

**17.6 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH SEPTEMBER – 2007**

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	03.09.07	10.40	220KV BTPS – OKHLA CKT-I	03.09.07	11.40	CKT. TRIPPED ON 86T, DIST. PROT `C` PHASE, AUTO RECLOSE AT OKHLA AND ON `B` PHASE E/F AT BTPS.
02	03.09.07	11.45	220KV BTPS – MEHRAULI CKT-I & II	03.09.07	12:09	THE FOLLOWING RELAY INDICATIONS OBSERVED : AT BTPS : CKT-I :30G, 30C, 186 CKT-II : 30G, 30A, 186 AT MEHRAULI : CKT-I : DIST PROT ZONE-I CKT-II : DIST PROT ZONE-I `A` PHASE
03	05.09.07	10.53	220KV BTPS – MEHRAULI CKT-II	05.09.07	11.16	CKT. TRIPPED ON DIST PROT `A` PHASE ZONE-I, 186 AT MEHRAULI AND ON 30A, 30G, 186 AT BTPS.
04	09.09.07	13.53	220KV PRAGATI – SARITA VIHAR CKT-II	09.09.07	13.56	CKT. TRIPPED ON DIST PROT `A` PHASE ZONE-I, 186, AUTO RECLOSE AT SARITA VIHAR AND ON DIST PROT ZONE-I `A` PHASE, 186, 186 AT PRAGATI.
05	09.09.07	14.58	220KV PRAGATI – SARITA VIHAR CKT-I	09.09.07	15.04	CKT TRIPPED ON 186A, 186B, DIST PROT ZONE-I, `C` PHASE AT SARITA VIHAR AND ON ACTIVE GROUP-A, DIST PROT ZONE-I `C` PHASE AT IP EXT
06	09.09.07	15.01	220KV MANDOLA – GOPALPUR CKT-I	09.09.07	16.05	CKT. TRIPPED ON DIST PROT ZONE-I `R&Y` PHASE AT GOPALPUR AND ON DIST PROT ZONE-II `B` PHASE, 86RYB AT MANDOLA.
07	09.09.07	15.14	220KV BAWANA – SHALIMARBAGH CKT-I	09.09.07	15.20	CKT. TRIPPED ON DIST PROT ZONE-I `A&B` PHASE AT BAWANA. NO TRIPPING AT SHALIMARBAGH.
08	09.09.07	15.15	66/11KV 20MVA PR. TR.-I AT WAZIRABAD-I	09.09.07	15.17	TR. TRIPPED ON E/F.
09	09.09.07	20.42	220KV MANDOLA – GOPALPUR CKT-I	09.09.07	22.25	`Y` PHASE POLE OF BREAKER TRIPPED OUT `R` AND PHASE DID NOT OPEN. THEN CKT. TRIPPED MANUALLY. CKT. SYNCHRONIZED FROM MANDOLA END AT 22.25HRS.
10	09.09.07	20.42	220/33KV 100MVA PR. TR.-II AT SUBZI MANDI	09.09.07	23.03	TR. TRIPPED ON 86, O/C, E/F ALONG WITH 33KV I/C-II WHICH TRIPPED ON 95BC 86.
11	10.09.07	14.11	220KV BTPS – NOIDA – GAZIPUR CKT.	10.09.07	14.51	CKT. TRIPPED ON 186A&B AT BTPS. NO TRIPPING AT GAZIPUR.
12	10.09.07	14.16	220KV BTPS – SARITA VIHAR CKT-II	10.09.09	19.13	CKT. TRIPPED ON 186 AT SARITA VIHAR AND ON 67N, 186A, 186B, BACK UP PROTECTION AT BTPS. IT IS INFORMED THAT `R` PHASE WAVE TRAP JUMPER SNAPPED AT BTPS END.
13	13.09.07	14.32	220KV WAZIRABAD – GEETA COLONY CKT-I & II	13.09.07	14.45	THE FOLLOWING TRIPPINGS OCCURRED : AT WAZIRABAD : RXME18 AT GEETA COLONY : TRIP PH. ABC, DIST PROT ZONE-I
14	13.09.07	14.32	220KV GEETA COLONY – PATPARGANJ CKT-I	13.09.07	14.47	CKT. TRIPPED ON TRIP PHASE ABC, DIST PROT ZONE-IV AT GEETA COLONY. NO TRIPPING AT PATPARGANJ.
15	13.09.07	18.01	220KV MANDOLA – GOPALPUR CKT-I	13.09.07	18.30	CKT. TRIPPED ON DIST PROT ZONE-III, `RYB` PHASE, 86R, 86Y, 86B, 186A, 186B AT MANDOLA. NO TRIPPING AT GOPALPUR.
16	14.09.07	16.02	33/11KV 16MVA PR. TR. AT KASHMIRI GATE	14.09.07	16.35	TR. TRIPPED ON DIFFERENTIAL RELAY, 87R, 87B, MASTER RELAY.
17	14.09.07	18.17	220KV WAZIRABAD – GEETA COLONY CKT-I	14.09.07	18.31	CKT. TRIPPED ON RXME18, RYB PHASE, REL-511 AT WAZIRABAD AND ON TRIP PHASE ABC, DIST PROT ZONE-I AT GEETA COLONY.
18	14.09.07	18.17	220KV GEETA COLONY – PATPARGANJ CKT-I	14.09.07	18.25	CKT. TRIPPED ON DIST PROT `ABC` PHASE, 86 AT GEETA COLONY. NO TRIPPING AT PATPARGANJ.



SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
19	16.09.07	12.13	220KV BTPS – MEHRAULI CKT-I	16.09.07	12.29	CKT. TRIPPED ON 30C, 30G, 186 AT BTPS AND ON 186, DIST PROT ZONE-I, `C` PHASE AT MEHRAULI.
20	16.09.07	13.02	220KV PRAGATI – SARITA VIHAR CKT-II	16.09.07	13.08	CKT. TRIPPED ON DIST PROT ZONE-I `A` PHASE, AUTO RECLOSE, 186A, 186B AT SARITA VIHAR AND ON DIST PROT ZONE-I `A` PHASE AT PRAGATI
21	17.09.07	15.07	220KV PRAGATI – SARITA VIHAR CKT-II	16.09.07	15.13	CKT. TRIPPED ON DIST PROT ZONE-I `A` PHASE AT PRAGATI AND ON DIST PROT `A` PHASE, AUTO RECLOSE LOCK OUT AT SARITA VIHAR.
22	18.09.07	17.09	220KV BTPS – MEHRAULI CKT-II	18.09.07	17.24	CKT. TRIPPED ON DIST PROT ZONE-I `A` PHASE, 186 AT MEHRAULI AND ON `A` PHASE E/F AT BTPS.
23	19.09.07	02.50	400KV MANDOLA – BAWANA CKT-I	19.09.07	03.08	CKT. TRIPPED ON AUTO RECLOSE (1552 CLOSE BUT 1652 TRIPPED) ON MAIN-I DIST PROT ZONE-I AND MAIN-II DIST PROT ZONE-I AT BAWANA
24	19.09.07	05.13	220KV MANDOLA – GOPALPUR CKT-II	19.09.07	05:32	CKT. TRIPPED ON DIST PROT ZONE-I `RYB` PHASE AT GOPALPUR AND ON DIST PROT ZONE-I `Y` PHASE, 186RYB, 186A, 186B AT MANDOLA.
25	19.09.07	09.28	220KV BTPS – MEHRAULI CKT-II	19.09.07	09.51	CKT. TRIPPED ON 30A, 30G, 186, RYB AT BTPS AND ON DIST PROT ZONE-I `A` PHASE, 186 AT MEHRAULI.
26	19.09.07	18.55	220KV BTPS – SARITA VIHAR CKT-I & II	19.09.07	19.10	<p>THE FOLLOWING TRIPPINGS OCCURRED :</p> <p>AT SARITA VIHAR  220KV BTPS CKT-I : DIST PROT. ZONE-3, C PH, 186A, 186B  220KV BTPS CKT-II : DIST PROT ZONE-3 C PH. 186A, 186B  220KV PRAGATI CKT-I: DIST PROT `C` PH ZONE-I, 186A, 186B</p> <p>AT BTPS :  220KV SARITA VIHAR CKT-I : E/F  220KV SARITA VIHAR CKT-II : E/F</p> <p>AT PRAGATI  220KV SARITA VIHAR CKT-I : 186, 195AC, 195BC, 195CC, DIST PROT ZONE-I, `C` PHASE  220KV SARITA VIHAR CKT-I : NO TRIPPING.  220KV BTPS CKT-I &amp; II CLOSED AT 19.14HRS. AND 19.15HRS RESPECTIVELY AT SARITA VIHAR.  PRAGATI UNIT-II ALSO TRIPPED DURING THE INCIDENT  AFTER THE TRIPPING, GT ISLANDED FROM THE GRID AND SURVIVED DURING 18.55HRS. TO 19.06HRS. AT 19.06HRS. ALL RUNNING GT TRIPPED ALONGWITH STG#3. GT-1, 2, 3, 4, 5, 6 SYNCHRONIZED AT 19.18HRS, 19.55HRS, 19.58HRS, 22.20HRS AND 19.26HRS. STG-3 SYNCHRONIZED AT 19.13HRS.  DUE TO JERK. 220/66KV 100MVA PR. TR.-I &amp; II ALSO TRIPPED AT PRAGATI ON 86, 86 WHICH NORMALIZED AT 19.10HRS. AND 19.12HRS. RESPECTIVELY.</p>
27	21.09.07	13.15	220KV BTPS – NOIDA – GAZIPUR CKT.	21.09.07	13.53	CKT. TRIPPED ON 64NX, E/F `Y` PHASE AT BTPS. NO TRIPPING AT GAZIPUR.
28	21.09.07	15.22	220KV BTPS – NOIDA – GAZIPUR CKT.	21.09.07	19.50	CKT. TRIPPED ON `R` PHASE E/F AT BTPS. NO TRIPPING AT GAZIPUR.
29	21.09.07	20.02	220KV MANDOLA – WAZIRABAD CKT-I	21.09.07	20.51	CKT. TRIPPED ON DIST PROT ZONE-I `RY` PHASE, 186A&B AT MANDOLA AND ON DIST PROT ZONE-I `RYB` PHASE AT WAZIRABAD.

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
30	21.09.07	20.02	220KV MANDOLA – WAZIRABAD CKT-IV	21.09.07	21.54	CKT. TRIPPED ON 86, DIST PROT ZONE-II 'RY' PHASE AT MANDOLA. NO TRIPPING AT WAZIRABAD.
31	21.09.07	20.51	220/66KV 100MVA PR. TR.-I AT WAZIRABAD-I	21.09.07	21.55	TR. TRIPPED ON 86, 51NX, E/F. TR. TRIED TO CHARGED AT 21.41HRS. ON NO LOAD BUT AGAIN TRIPPED. TR. FINALLY NORMALIZED AT 21.55HRS.
32	21.09.07	21.05	220/66KV 100MVA PR. TR.-I AT PATPARGANJ	22.09.07	01.24	TR. TRIPPED ON 30F, 86.
33	21.09.07	21.30	220KV BTPS – NOIDA – GAZIPUR CKT.	21.09.07	22.02	CKT. TRIPPED ON O/C, 67 'B' PHASE AT GAZIPUR.
33	21.09.07	22.30	220KV BTPS – NOIDA – GAZIPUR CKT.	21.09.07	22.32	CKT. TRIPPED ON O/C, 67 'B' PHASE AT GAZIPUR.
34	22.09.07	13.21	220KV BTPS – SARITA VIHAR CKT-I & II	22.09.07	13.31	THE FOLLOWING TRIPPINGS OCCURRED : AT SARITA VIHAR : BTPS CKT-I & II : 186A, 186B, DIST PROT ZONE-III 'A' PHASE AT PRAGATI 100MVA PR. TR.-I & II : 86, 86, U/F AT BTPS : NO TRIPPING
35	22.09.07	13.21	220KV BTPS – NOIDA – GAZIPUR CKT	22.09.07	14.30	CKT. TRIPPED ON E/F 'R&Y' PHASE AT BTPS. NO TRIPPING AT GAZIPUR
36	23.09.07	18.02	220KV PANIPAT – NARELA CKT-I	23.09.07	18.07	CKT. TRIPPED ON 186, 30C, 85X2, DIST PROT ZONE-I 'C' PHASE AT NARELA.
37	24.09.07	00.58	220/33KV 100MVA PR. TR.-II AT LODHI ROAD	24.09.07	12.35	TR. TRIPPED WITHOUT INDICATION. TR. TRIED ON NO LOAD AT 06.48HRS BUT AGAIN TRIPPED ON POLE DISCREPANCY. TR. FINALLY CHARGED AT 12.35HRS.
38	24.09.07	13.10	220KV BAMNAULI – MEHRAULI CKT.-I	24.09.07	13.15	CKT. TRIPPED ON DIST PROT ZONE-I, 'A' PHASE AT MEHRAULI AND ON DIST PROT 'A' PHASE, 186A&B, AUTO RECLOSE LOCK OUT AT BAMNAULI.
39	26.09.07	02.55	66/11KV 20MVA PR. TR.-I AT WAZIRABAD-I	26.09.07	13.58	TR. TRIPPED ON BUCHZ, 86.
40	26.09.07	03.14	220KV BAWANA – NAJAFGARH CKT-II	26.09.07	18.25	CKT. TRIPPED ON DIST PROT, 86 AT BAWANA AND ON DIST PROT 'C' PHASE, 186 AT NAJAFGARH.
41	26.09.07	20.32	220KV PANIPAT – NARELA CKT-II	26.09.07	20.38	CKT. TRIPPED ON 30A, 30G, DIST PROT 'R' PHASE ZONE-1, 186, MASTER RELAY AT NARELA.
42	27.09.07	05.53	220KV MANDOLA – WAZIRABAD CKT-II	27.09.07	06.29	CKT. TRIPPED ON DIST PROT ZONE-I 'Y' PHASE, 86, RYB, 186AB AT MANDOLA AND ON DIST PROT 'RYB, PHASE AT WAZIRABAD
43	27.09.07	18.20	66/11KV 20MVA PR. TR.-I AT WAZIRABAD-I	27.09.07	18.25	TR. TRIPPED ON 64, E/F ALONG WITH 11KV I/C-I WHICH TRIPPED ON E/F.
44	27.09.07	19.16	220KV MANDOLA – GOPALPUR CKT-II	27.09.07	20.18	CKT. TRIPPED ON DIST PROT ZONE-I 'Y' PHASE, 86R, 86Y, 86B, 186A, 186B AT MANDOLA AND ON DIST PROT ZONE-I 'R' PHASE AT GOPALPUR.
45	30.09.07	13.15	220KV BTPS – MEHRAULI CKT-II	30.09.07	13.55	CKT. TRIPPED ON DIST PROT ZONE-I 'A' PHASE AT MEHRAULI AND ON 30A, 30G, 186, DIST PROT ZONE-I AT BTPS.
46	30.09.07	13.15	220/33KV 100MVA PR. TR.-III & IV AT OKHLA.	30.09.07	13.25	100MVA PR. TR.-III TRIPPED WITHOUT INDICATION WHILE 100MVA PR. TR.-IV TRIPPED ON 86, O/C, ALONG WITH 33KV I/C-III & IV WHICH TRIPPED ON 86.
47	30.09.07	15.15	220KV WAZIRABAD – KASHMIRI GATE CKT-II	30.09.07	15.30	CKT. TRIPPED ON RXME18, RYB GENERAL TRIP AT WAZIRABAD. NO TRIPPING AT KASHMIRI GATE.
48	30.09.07	16.22	220/66KV 100MVA PR. TR.-I & II AT IP EXT.	30.09.07	16.36	TR.-I & II TRIPPED ON BACK UP PROTECTION RELAY 51, 64 O/C, E/F AND WHICH CHARGED AT 16.35HRS. AND 16.36HRS RESPECTIVELY.

**17.7 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH OCTOBER – 2007**

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	02.10.07	09.20	220KV PANIPAT – NARELA CKT-I	02.10.07	10.36	CKT. TRIPPED ON 186A&B, AUTO RECLOSE AT NARELA. CKT. TRIED AT 09.25HRS. BUT AGAIN TRIPPED ON SAME INDICATION AT 09.32HRS. CKT. FINALLY CHARGED AT 10.36HRS.
02	02.10.07	18.15	220KV GEETA COLONY – PATPARGANJ CKT-I	02.10.07	18.23	CKT. TRIPPED ON DIST. PROT. ZONE-I TRIP PHASE ABC. MAIN-II, DIST PROT ZONE-I TRIP PHASE ABC, 86, 30C AT GEETA COLONY AND ON DIST PROT ZONE-II, TRIP PHASE ABC AT PATPARGANJ.
03	03.10.07	13.11	220KV BAWANA – NAJAFGARH CKT-I	03.10.07	13.15	CKT. TRIPPED ON DIST. PROT. ZONE-I AT BAWANA. NO TRIPPING AT NAJAFGARH.
04	03.10.07	22.38	66/11KV 20MVA PR. TR-I AT KANJHAWALA	03.10.07	23.05	TR. TRIPPED ON 30G, OLTC ALONG WITH 11KV I/C-I WHICH TRIPPED DUE TO FAULT IN 11KV O/G RANIKHERA FEEDER WHICH TRIPPED ON E/F, O/C.
05	05.10.07	03.42	400KV BAMNAULI – BAWANA CKT-I	05.10.07	03.56	CKT. TRIPPED ON CB AUTO TRIP, AUTO RECLOSE LOCK OUT, 85, 30CH1, 30CH2, 186A&B AT BAWANA.
06	07.10.07	18.08	220KV MANDOLA – GOPALPUR CKT-I	07.10.07	19.33	CKT. TRIPPED ON CB AUTO TRIP, AUTO RECLOSE LOCK OUT, DIST PROT ZONE-III, 86RYB, 186A&B AT MANDOLA. NO TRIPPING AT GOPALPUR. CKT. TRIPPED DUE TO FIRE IN WAVE TRAP JUMPER OF 220KV SUBZI MANDI CKT.-I AT GOPALPUR
07	08.10.07	04.14	220KV BTPS – MEHRAULI CKT-I & II	08.10.07	04.52	CKT. TRIPPED ON FOLLOWING INDICATIONS AT BTPS MEHRAULI CKT-I : 30G, 30H, 186 MEHRAULI CKT-II : 30AB, 30G, 186 AT MEHRAULI : BTPS CKT-I : NO TRIPPING BTPS CKT-II : DIST PROT ZONE-I, TRIP PHASE ABC, 186
08	09.10.07	00.40	220KV MANDOLA – NARELA CKT-II	09.10.07	01.16	CKT. TRIPPED ON DIST PROT ZONE-I, TRIP PHASE ABC, 86 AT NARELA AND ON DIST PROT ZONE-I, RYB PHASE, 86 AT MANDOLA.
09	11.10.07	14.45	220KV BAMNAULI – NAJAFGARH CKT-I & II	11.10.07	15.20	220KV BAMNAULI CKT-I & II TRIPPED ON 186 AT NAJAFGARH ALONG WITH 66KV I/C-II & IV WHICH TRIPPED ON 64X, E/F DUE TO FAULT IN O/G 66KV O/G JAFARPUR CKT-II WHICH TRIPPED ON DIRECTIONAL E/F, O/C.
10	12.10.07	12.52	400KV MANDOLA – BAWANA CKT-I AND 400KV BALLABH GARH – BAMNAULI CKT-I & II	12.10.07		DETAILED REPORT ENCLOSED
11	14.10.07	16.55	220KV GEETA COLONY – PATPARGANJ CKT-II	14.10.07	18.54	CKT TRIPPED ON TRIP PHASE ABC, DIST PROT ZONE-I, 86, 30E AT GEETA COLONY AND ON DIST PROT ZONE-I TRIP PHASE ABC, 86X, 186 AT PATPARGANJ. CKT. TRIED AT 17.07HRS. BUT AGAIN TRIPPED AT GEETA COLONY END ON POLE DISCREPANCY, 30E, 86. CKT. FINALLY CHARGED AT 18.54HRS. FROM GEETA COLONY END.

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
12	15.10.07	21.55	220/66KV 100MVA PR. TR.-I AT GAZIPUR	16.10.07	13.20	TR. TRIPPED ON OLTC BUCHZ ALONG WITH 66KV I/C-I WHICH TRIPPED WITHOUT INDICATION.
13	16.10.07	09.26	220KV GEETA COLONY – PATPARGANJ CKT-I	16.10.07	09.41	CKT.TRIPPED ON DIST PROT ZONE-II, TRIP PHASE ABC AT PATPARGANJ AND ON DIST PROT ZONE-II, TRIP PHASE ABC AT GEETA COLONY.
14	16.10.07	09.26	220/33KVA 50MVA PR. TR.-III AT PATPARGANJ	16.10.07	18.50	TR. TRIPPED ON 64RLV, 86.
15	17.10.07	11.25	66/11KV 20MVA PR. TR.-III AT NAJAFGARH	17.10.07	14.30	TR. TRIPPED ON 86, 51B ALONG WITH 11KV I/C-III WHICH TRIPPED ON E/F, O/C R&B PHASE DUE TO FAULT IN O/G KAKROLA FEEDER
16	17.10.07	14.50	220KV BAMNAULI – PAPPANKALAN-I CKT-I & II	17.10.07	16.40	THE BAMNAULI CKT-I & II TRIPPED ON AUTO RECLOSE 186A & 186B, 86X, 186X, 96, BUS BAR PROTECTION AT PAPPANKALAN-. NO TRIPPING AT BAMNAULI.
17	21.10.07	20.02	220KV BAWANA – ROHINI CKT-II	21.10.07	20.07	CKT. TRIPPED ON AUTO RECLOSE, DIST PROT. `A` PHASE CB AUTO TRIP, 186A, 186B AT BAWANA. NO TRIPPING AT ROHINI.
18	26.10.07	00.08	220KV PANIPAT – NARELA CKT-II	26.10.07	00.30	CKT. TRIPPED ON DIST PROT. `C` PHASE ZONE-I, 85YY, 85X2 AT NARELA.
19	26.10.07	09.00	220KV BAMNAULI – BAWANA CKT-I	26.10.07	09.23	CKT TRIPPED ON CB-2 AUTO TRIP, 186A, 186B, BOTH BREAKER, 130C, 130E AT BAWANA AND ON INTER TRIP, AUTO RECLOSE, 186A&B BOTH BREAKER, 86 AT BAMNAULI.
20	26.10.07	14.15	66/11KV 20MVA PR. TR.-I AT NAJAFGARH	26.10.07	14.37	TR. TRIPPED ON 86, NEUTRAL UNBALANCE ALONG WITH 11KV I/C WHICH TRIPPED ON INTER TRIPPING.
21	30.10.07	20.09	220KV PANIPAT – NARELA CKT-II	30.10.07	22.30	CKT. TRIPPED ON 30G, 186 AT NARELA.

**17.8 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH NOVEMBER – 2007**

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	02.11.07	08.28	220KV PANIPAT – NARELA CKT-II	02.11.07	11.17	CKT. TRIPPED WITHOUT INDICATION AT NARELA.
02	04.11.07	09.03	220KV BTPS – MEHRAULI CKT-I	04.11.07	10.17	CKT. TRIPPED ON 186, 86A, 86B, DIRECTIONAL O/C `B` PHASE AT BTPS. 66KV CAPACITOR BANK `B` PHASE POLE DAMAGED AT MEHRAULI.
03	05.11.07	07.16	220/66KV 100MVA PR. TR.-II AT NARELA	05.11.07	16.30	TR. TRIPPED ON 87, 87HS A&C PHASE AND 86.
04	05.11.07	13.50	220/66KV 100MVA PR. TR.-II AT IP EXT.	05.11.07	15.17	TR. TRIPPED ON 86, 86, 87, DIFFERENTIAL RELAY, 64, RESTRICTED E/F
05	05.11.07	14.30	220KV WAZIRABAD – KASHMIRI GATE CKT-II	05.11.07	14.41	CKT. TRIPPED DIST PROT ZONE-3 `RYB` PHASE, RXME18 AT WAZIRABAD, NO TRIPPING AT KASHMIRI GATE.
06	05.11.07	20.35	66/11KV 20MVA PR. TR.-I AT NAJAFGARH	05.11.07	20.40	TR. TRIPPED ON UNBALANCED, 86 ALONG WITH 11KV O/G ANAJ MANDI FEEDER WHICH TRIPPED ON E/F, O/C `B` PHASE.
07	06.11.07	09.10	220/66KV 100MVA PR. TR.-II AT PARK STREET	07.11.07	01.50	TR. TRIPPED ON 87A, 87C, 86A, 81A, 86B, 86B ALONG WITH 66KV I/C-II WHICH TRIPPED ON INTER TRIPPING. 66KV `B` PHASE CT DAMAGED.
08	07.11.07	02.23	220KV BAWANA – NAJAFGARH CKT-II	07.11.07	15.23	CKT. TRIPPED ON 86, DIST PROT ZONE-I, `C` PHASE, 21XR1, 21XY1, 21XB3, 21XR2, 21XY2, 21XB2, AUTO RECLOSE LOCK OUT AT BAWANA AND ON 186, 186, DIST PROT ZONE-3 AT NAJAFGARH.
09	09.11.07	07.15	220/33KV 100MVA PR. TR.-I AT PATPARGANJ	09.11.07	17.00	TR. TRIPPED ON DIFFERENTIAL, 64RLV, 86, 86, 87 ALONG WITH 33KV I/C-I WHICH TRIPPED ON INTER TRIPPING.
10	09.11.07	07.00	220/33KV 100MVA PR. TR.-I AT GEETA COLONY	09.11.07	09.45	TR. TRIPPED ON BREAKER TROUBLE GENERAL LOCK, OIL PRESSURE TROUBLE, 30B, SF6 LOCK OUT, 30D, TRIP COIL SUPERVISION, 195RYB, TRIP COIL-2, SUPERVISION 195 RYB.
11	10.11.07	10.46	220/33KV 100MVA PR. TR.-I AT SHALIMAR BAGH	10.11.07	12.45	TR. TRIPPED ON E/F, O/C, 51C, 86, 86 ALONG WITH 33KV I/C-I WHICH TRIPPED ON 86 AND 51C.
12	10.11.07	21.18	220KV MANDOLA – NARELA CKT-II	10.11.07	21.35	CKT. TRIPPED ON 186, E/F AT NARELA.

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
13	11.11.07	09.25	220/66KV 100MVA PR. TR.-I & II AT PRAGATI	11.11.07	14.20	220/66KV 100MVA TX-I & II TRIPPED ON E/F O/C ALONG WITH 66KV SCHOOL LANE CKT-I & II AND 66KV VIDYUT BHAWANA CKT-II. THE FOLLOWING RELAY OBSERVED : 66KV SCHOOL LANE CKT-I : 51, 64 66KV SCHOOL LANE CKT-II : 64 66KV VIDYUT BHAWAN CKT-II : 51 DUE TO TRIPPING ALL RUNNING UNITS AT GT ALSO TRIPPED. GT-I, 3, 4, 5, 6, STG-3 SYNCHRONIZED AT 10.15HRS, 11.32HRS, 09.32HRS, 14.16HRS, 09.32HRS AND 12.40HRS RESPECTIVELY.
14	11.11.07	22.25	220/66KV 100MVA PR. TR.-I & II AT PRAGATI	11.11.07	22.48	66KV I/C-1 & 2 OF 100MVA PR. TR.-I & II TRIPPED ALONG WITH ALL RUNNING GT AND ALL 66KV O/G FEEDERS. UNIT-1, 3, 4, 6 AND STG-III SYNCHRONIZED AT 23.12HRS, 23.23HRS, 22.48HRS, 23.50HRS AND 00.35HRS (12.11.07) RESPECTIVELY. GT-2 DID NOT TRIP. 220/66KV 100MVA PR. TR.-I ENERGIZED AT 22.48HRS. AND TR.-II ENERGIZED AT 22.45HRS. 66K VIDYUT BHAWAN CKT. ENERGIZED AT 22.49HRS, 66KV SCHOOL LANE CKT-I ENERGIZED AT 22.50HRS, 66KV SCHOOL LANE CKT-II ENERGIZED AT 22.48HRS, 66KV DMRC CKT-I ENERGIZED AT 22.43HRS. 66KV DMRC CKT-II ENERGIZED AT 22.43HRS. STG-3 ENERGIZED AT 00.35HRS. ON 12.11.2007.
15	14.11.07	14.43	220/66KV 100MVA PR. TR. AT BAWANA	14.11.07	16.18	'Y' PHASE POLE OF 220KV BREAKER OF 100MVA PR. TR. TRIPPED WITHOUT INDICATION.
16	15.11.07	12.39	220KV BAWANA – NAJAFGARH CKT-II	15.11.07	12.43	CKT. TRIPPED ON 186 & DISTANCE RELAY AT NAJAFGARH. NO TRIPPING AT BAWANA.
17	15.11.07	12.39	66KV I/C-I, II, III & IV AT ROHINI	15.11.07	13.10	66KV I/C-I & II TRIPPED ON 51C, 86 AND 66KV I/C-III & IV TRIPPED ON E/F.
18	16.11.07	00.59	220KV BAWANA – SHALIMARBAGH CKT-II	16.11.07	19.22	CKT. TRIPPED ON DIST PROT 'C' PHASE, 186A, 186B AT BAWANA AND ON DIST PROT 'C' PHASE, 186A, 186B AT SHALIMAR BAGH.
19	16.11.07	09.07	220/66KV 100MVA PR. TR-II AT SARITA VIHAR	16.11.07	16.02	TR. TRIPPED ON 51C, O/C, 51N, E/F.
20	16.11.07	09.07	220KV BTPS – SARITA VIHAR CKT-I	16.11.07	10.26	CKT. TRIPPED AT BTPS. NO TRIPPING AT SARITA VIHAR.
21	16.11.07	17.24	220KV WAZIRABAD-II – KASHMIRI GATE CKT-II	16.11.07	17.40	CKT. TRIPPED ON REL511, RXME18, DIST PROT ZONE-I AT WAZIRABAD-II. NO TRIPPING AT KASHMIRI GATE.
22	16.11.07	20.20	33/11KV 16MVA PR. TR. AT PATPARGANJ	17.11.07	15.15	TR. TRIPPED ON DIFFERENTIAL.
23	17.11.07	15.40	220KV WAZIRABAD-II – KASHMIRI GATE CKT-II	17.11.07	15.58	CKT. TRIPPED ON RXME18, R&B PHASE, GENERAL TRIP, GSC-STFW, L1, L2, L3, ZM-1 TRIP, ZM-2 START, ZM-3 START. NO TRIPPING AT KASHMIRI GATE

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
24	19.11.07	06.31	66/11KV 20MVA PR. TR.-I AT VASANT KUNJ	19.11.07	12.20	TR. TRIPPED ON OLTC BUCHZ.
25	19.11.07	07.10	66/11KV 20MVA PR. TR.-III AT NAJAFGARH	19.11.07	11.27	TR. TRIPPED ON 86, 64RLV, 64RHV, ALONG WITH 11KV I/C-III WHICH TRIPPED ON O/C 'R&B' PHASE DUE TO FAULT IN 11KV O/G KAKRAULA FEEDER WHICH TRIPPED ON O/C, 'R' PHASE E/F.
26	20.11.07	09.34	220/33KV 50MA PR. TR. AT PATPARGANJ	20.11.07	16.20	TR. TRIPPED ON REFLV SID AND 86 ALONG WITH ITS 33KV I/C WHICH TRIPPED ON INTER TRIPPING.
27	21.11.07	09.57	220KV GEETA COLONY – PATPARGANJ CKT-II	21.11.07	12.30	CKT. TRIPPED ON DIST PROT ZONE-I, PHASE ABC, 27RYB, 30E AT GEETA COLONY AND ON DIST PROT ZONE-II PHASE ABC, 186, 186 AT PATPARGANJ.
28	21.11.07	13.46	220KV WAZIRABAD- II – KASHMIRI GATE CKT-II	21.11.07	13.56	CKT. TRIPPED ON RXME18, RYB PHASE, GENERAL TRIP, GSC-STFW, L1, L2, L3, ZM-1 TRIP, ZM-2 START, ZM-3 START. NO TRIPPING AT KASHMIRI GATE
29	21.11.07	07.40	66/11KV 20MVA PR. TR. AT VASANT KUNJ	21.11.07	18.10	TR. TRIPPED ON 30D, OLTC BUCHZ, 86.
30	22.11.07	15.05	400KV BAMNAULI – BAWANA CKT-II	22.11.07	15.14	CKT. TRIPPED ON DIRECT TRIP RECEIVED, CB-I & II AUTO TRIP AT BAWANA
31	22.11.07	18.24	220KV BTPS – SARITA VIHAR CKT- II	22.11.07	18.26	CKT. TRIPPED ON POLE DISCREPANCY AT SARITA VIHAR.
32	22.11.07	22.24	220KV BTPS – SARITA VIHAR CKT- II	22.11.07	22.39	CKT. TRIPPED ON POLE DISCREPANCY AT SARITA VIHAR. THE CKT TRIED BUT AGAIN TRIPPED ON SAME INDICATION.
33	23.11.07	13.45	220KV MANDOLA – NARELA CKT-II	23.11.07	14.44	CKT. TRIPPED ON DIST PROT PHASE ABC, E/F, 186 AT NARELA AND ON DIST PROT ZONE-II 'B' PHASE, 86, RYB, 186A&B AT MANDOLA.
34	24.11.07	13.26	220KV MANDOLA – WAZIRABAD CKT-II	24.11.07	15.30	CKT. TRIPPED ON GENERAL TRIP RYB PH, RXME18, AT WAZIRABAD AND ON 'R' PHASE, 186A&B, 86RYB AT MANDOLA. CKT. TRIED AT 14.56HRS. BUD DID NOT HOLD. CKT. FINALLY CHARGED AT 15.30HRS.
35	25.11.07	21.48	66/11KV 20MVA PR. TR.-I AT OKHLA	27.11.07	18.48	TR. TRIPPED ON DIFFERENTIAL, 87, MASTER RELAY 86 ALONG WITH 11KV I/C-I WHICH TRIPPED ON 86.
36	26.11.07	04.42	220/33KV 100MVA PR. TR.-I AT GOPALPUR	26.11.07	07.40	TR. TRIPPED ON BUCHZ, 30A, 86, 86 ALONG WITH 33KV I/C-I WHICH TRIPPED ON INTER TRIPPING.
37	27.11.07	06.07	33KV I/C OF 30MVA PR. TR. AT NARELA	27.11.07	06.12	33KV I/C OF 66/33KV 30MVA PR. TR. TRIPPED ON E/F.

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
38	27.11.07	14.57	220/33KV 100MVA PR. TR.-I AT GOPALPUR	28.11.07	11.55	TR. TRIPPED ON BUCHZ, 30A, 86, 86 ALONG WITH 33KV I/C-I WHICH TRIPPED WITHOUT INDICATION.
39	27.11.07	23.10	220/33KV 100MVA PR. TR.-II AT GEETA COLONY	28.11.07	00.25	TR. TRIPPED ON CB TRIP COIL, ½ PANEL DC SUPPLY FAIL, BREAKER TROUBLE GENERAL LOCK OUT, TRIP COIL SUPERVISION-1, RYB 195 RELAY, TRIP COIL SUPERVISION-2, RYB 295, GENERAL LOCK OUT, OIL PRESSURE TROUBLE 30B, 30D, SF6 LOCK OUT.



**17.9 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH DECEMBER – 2007**

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	01.12.07	03.28	400KV BAWANA – HISSAR CKT	01.12.07	03.46	CKT. TRIPPED ON DIST PROT MAIN-I CNZ1 MAIN-II AT BAWANA. NO TRIPPING AT HISSAR
02	01.12.07	03.33	400KV BAWANA – BAHADURGARH CKT	01.12.07		CKT AUTO RECLOSED AT 03.33HRS, 03.50HRS, 05.00HRS, 05.07HRS AND 05.36HRS, 05.51HRS, 06.06HRS, 06.08HRS, 06.13HRS, 06.19HRS, 06.21HRS, 06.44HRS.
03	01.12.07	04.05	66/11KV 20MVA PR. TR.-I AT VASANT KUNJ	01.12.07	18.10	TR. TRIPPED ON 86, BUCHZ ALONG WITH 11K I/C-I
04	01.12.07	04.07	400KV BAWANA – HISSAR CKT.	01.12.07		CKT. TRIPPED ON DIST PROT MAIN-I, CNZ, MAIN-II AT BAWANA. NO TRIPPING AT HISSAR
05	01.12.07	04.27	400KV BAWANA – HISSAR CKT.	01.12.07	04.47	CKT. TRIPPED ON MAIN-I BCZ-I, MAIN-II 186A & 186B AT BAWANA.
06	01.12.07	06.00	400KV BAWANA – HISSAR CKT.	01.12.07	06.06	CKT. TRIPPED ON MAIN-I CNZ1, MAIN-II DIST PROT 186A, 186B ON BOTH CB.
07	01.12.07	06.12	400KV BAWANA – HISSAR CKT.	01.12.07	06.12	CKT AUTO RECLOSED AT BAWANA
08	01.12.07	06.13	400KV BAWANA – HISSAR CKT.	01.12.07	20.27	CKT TRIPPED ON MAIN-I, ABNZ-1, MAIN-II, 186A&B AT BAWANA AND CKT ALSO TRIPPED AT HISSAR END BUT DETAILS ARE NOT AVAILABLE.
09	01.12.07	06.55	400KV BAWANA – BAMNAULI CKT-II	01.12.07	07.06	CKT. TRIPPED ON MAIN-I BNZ-2, MAIN-II BNZ, 186A, 186B ON BOTH CB AT BAWANA
09	01.12.07	07.13	400KV BAWANA – BAMNAULI CKT-II	01.12.07	09.59	CKT. TRIPPED ON CNZ-I, MAIN-II CNZ1, 186A, 186B ON BOTH CB AT BAWANA AND ON DIST PROT MAIN BNZ-I, 186A, 186B ON BOTH CB AT BAMNAULI
10	01.12.07	06.58	400KV BAWANA – BAMNAULI CKT-I	01.12.07	09.48	CKT. TRIPPED ON DIST PROT MAIN ANZ1, MAIN-II ANZ1, 186A, 186B ON BOTH CB AT BAMNAULI CKT. TRIED AT 07.08HRS FROM BAMNAULI END BUT DID NOT HOLD AGAIN TRIPPED ON DIST. PROT. MAIN-I, C-N-Z-1 186A&B ON BOTH CB. AT 7.23HRS. CKT WAS AGAIN TRIED FROM BAWANA END BUT DID NOT HOLD AND TRIPPED ON B-N-Z-1 MAIN-I, MAIN-II, 186A&B ON BOTH CB.
11	01.12.07	07.26	400KV BAWANA – BAHADURGARH CKT.	01.12.07	09.20	CKT. TRIPPED ON DIST PROT MAIN-I, ABNZ1, MAIN-II ABCZ1, 186A, 186B ON BOTH CB, 86 AT BAWANA
12	04.12.07	09.02	66/11K 20MVA PR. TR.-III AT NAJAFGARH	04.12.07	13.35	TR. TRIPPED ALONG WITH 11KV I/C-III WHICH TRIPPED ON O/C 'R&B' PHASE
13	04.12.07	12.55	220KV BAWANA – ROHINI CKT-I	04.12.07	20.02	CKT. TRIPPED ON 67NX, DIRECTIONAL E/F, 186A, 186B, AUTO RECLOSE AT ROHINI. NO TRIPPING AT BAWANA. AT 13.00HRS. CKT TRIED FROM ROHINI END BUT TRIPPED ON 67NX, 186A&B.

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
14	05.12.07	00.41	33KV /C OF 66/33KV 30MVA PR. TR. AT NARELA	05.12.07	09.43	33KV I/C TRIPPED ON E/F
15	05.12.07	07.50	220/33KV 100MVA PR. TR.-III AT NARAINA	05.12.07	17.15	TR. TRIPPED ON 30G, BUCHZ. TR. TRIED AT 08.20HRS BUT AGAIN TRIPPED ON TR. TROUBLE RELAY, GROUP-A, 86A, AUX TR. TROUBLE 30A, 30B, 30C, 30A, BUCHZ.
16	05.12.07	12.05	66/11KV 20MVA PR. TR.-I AT NAJAFGARH	05.12.07	12.15	TR. TRIPPED ON 86B, BACK UP PROTECTION ALONG WITH 11KV I/C-I WHICH TRIPPED ON INTER TRIPPING.
17	05.12.07	12.52	220KV BAMNAULI – MEHRAULI CKT-II	05.12.07	15.27	CKT. TRIPPED ON DIST PROT `C` PHASE ZONE-I, 186 AT MEHRAULI. NO TRIPPING AT BAMNAULI.
18	08.12.07	20.05	66/11KV 20MVA PR. TR.-I AT NAJAFGARH	08.12.07	20.08	TR. TRIPPED ON 86 ALONG WITH 11KV I/C-I WHICH TRIPPED ON E/F `R` PHASE DUE TO FAULT IN 11KV O/G ANAJ MANDI FEEDER.
19	11.12.07	18.08	220/33KV 100MVA PR. TR.-I AT GOPALPUR	11.12.07	20.26	TR. TRIPPED ON 30A, BUCHZ RELAY, 86, 86 ALONG WITH 33KV I-I WGHICH TRIPPED ON INTER TRIPPING.
20	13.12.07	02.59	400KV BAWANA – HISSAR CKT.	13.12.07	03.17	CKT. TRIPPED ON MAIN-I & II BNZ-I AT BAWANA
21	13.12.07	04.41	400KV BAWANA – HISSAR CKT.	13.12.07	04.47	CKT. TRIPPED ON MAIN-I & II BNZ-I AT BAWANA
22	13.12.07	05.10	400KV BAWANA – HISSAR CKT.	13.12.07	05.13	CKT. TRIPPED ON MAIN-I & II BNZ-I AT BAWANA
23	13.12.07	05.22	400KV BAWANA – HISSAR CKT.	13.12.07	10.42	CKT. TRIPPED ON MAIN-I & II BNZ-I AT BAWANA
23	13.12.07	02.53	400KV BAWANA – BAHADURGARH CKT	13.12.07	5.41	AUTO RECLOSED OPERATED ON THE CKT. AT 02.53HRS, 03.12HRS, 04.30HRS, 04.33HRS, 04.45HRS, 04.350HRS, 05.10HRS, 05.17HRS, 05.23HRS, 05.24HRS, 05.27HRS, 05.28HRS, 05.34HRS, 05.35HRS, 05.40HRS, 05.41HRS
	13.12.07	5.42	400KV BAWANA – BAHADURGARH CKT	13.12.07	10.51	CKT TRIPPED ON MAIN-I ANZ-I AND MAIN-II ANZ-I, 86A-II GROUP. CKT. TRIED AT 08.06HRS. BUT AGAIN TRIPPED ON SAME INDICATION.
24	13.12.07	05.39	400KV BAMNAULI – BAWANA CKT-II	13.12.07	05.41	CKT. TRIPPED ON DIST PROT `R` PHASE. CKT AUTO RECLOSED AT BAWANA END AT 05.39HRS., 5.52HRS., 7.24HRS., 7.39HRS., 7.43HRS., 7.59HRS., 08.06HRS., 8.24HRS., 8.27HRS., 8.37HRS RESPECTIVELY.
25	13.12.07	06.16	400KV BAMNAULI – BAWANA CKT-I	13.12.07	06.21	AT BAWANA CKT. TRIPPED ON MAN-I, A-N-Z-1, ONLY ONE CB TRIPPED. AT BAMNAULI CKT TRIPPED ON DIST. PROT. ZONE-I, A-N-Z-1, 186A&B
26	13.12.07	07.18	400KV BAMNAULI – BAWANA CKT-I	13.12.07	15.45	AT BAWANA CKT. TRIPPED ON MAN-I, A-N-Z-1, ONLY ONE CB TRIPPED. AT BAMNAULI CKT TRIPPED ON DIST. PROT. ZONE-I, A-N-Z-1, 186A&B

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
27	14.12.07	03.51	TRIPPINGS ON 400KV CKTS			AS PER ENCLOSED REPORT
28	15.12.07	00.59	400KV BAWANA – HISSAR CKT.	15.12.07		CKT. AUTO RECLOSED AT BAWANA END FACIA : CB AUTO TRIP, DIRECT TRIP, TIE CB AUTO TRIP, RELAY : MAIN-I CNZ-I, , L3, 85Y MAIN-II, 86C2, 52X.
29	15.12.07	01.28	220/66KV 100MVA PR. TR.-I & II AT PRAGATI S/STN	15.12.07	01.46	100MVA PR. TR.-I & II TRIPPED ON 51, 64 ALONG WITH 66KV SCHOOL LANE CKT-I & II WHICH TRIPPED ON O/C, E/F. 66KV VIDYUT BHAWAN CKT-II ALSO TRIPPED WITHOUT INDICATION. 66KV SCHOOL LANE CKT-I & II CHARGED AT 01.45HRS AND 66KV VIDYUT BHAWAN CKT-II CHARGED AT 01.50HRS.  UNIT-I 2, 5 AND STG-I AT GT CAME ON FSNL AND TRIPPED. THE UNITS SYNCHRONIZED AS PER DETAILS HEREUNDER : UNIT # 1 UNIT # 2 UNIT # 3 STG # 5
30	15.12.07	04.10	66/11KV 20MVA PR. TR.-I AT SARITA VIHAR	15.12.07	11.30	TR. TRIPPED ON BUCHZ.
31	15.12.07	05.17	400KV BAWANA – HISSAR CKT	15.12.07	05.17	CKT AUTO RECLOSED AT BAWANA
32	15.12.07	08.52	220KV PATPARGANJ – GEETA COLONY CKT-II	15.12.07	11.28	CKT. TRIPPED ON GENERAL LOCK OUT, OIL PRESSURE TROUBLE, 30B, SF6 LOW, 30D, 195 TRIP COIL SUPERVISION, RYB, 295RYB.
33	15.12.07	16.43	220KV GOPALPUR – SUBZI MANDI CKT-I	15.12.07	17.00	CKT. TRIPPED ON DIST PROT ZONE-I RYB PHASE AT GOPALPUR. NO TRIPPING AT SUBZI MANDI.
34	16.12.07	09.50	400KV BAMNAULI – BALLABHGARH CKT	16.12.07	10.03	CKT. TRIPPED ON CARRIER LOCK OUT, 85LO, AUTO RECLOSE, 86A & B AT BAMNAULI END
35	17.12.07	12.10	220KV BTPS – OKHLA CKT-I & II	18.12.07	20.48	220KV BTPS – OKHLA CKT-II WAS UNDER PLANNED SHUT-DOWN AT OKHLA SINCE 12.10HRS. ON 17.12.2007. CKT. WAS CLEARED AND BACK CHARGED AT 17.25HRS. FROM BTPS END. WHEN SYNCHRONIZED AT BTPS, BOTH CKTS TRIPPED ON 86T, E/F AT OKHLA ALONG WITH 220KV BUS COUPLER WHICH TRIPPED ON 86, 51NX AT OKHLA. THERE WAS NO TRIPPING OF CKT-I AT BTPS END. CKT-I CHARGED AT 17.34HRS. CKT-II CHARGED AT 20.48HRS. FROM BTPS END
36	18.12.07	10.25	220KV BTPS – NOIDA – GAZIPUR CKT.	18.12.07	14.48	CKT. TRIPPED ON 34DX, 186A, 186B, 186X AT BTPS. NO TRIPPING AT GAZIPUR. HOWEVER 66KV BUS COUPLER TRIPPED ON E/F, 51B WITH HEAVY JERK AT THE SAME TIME AT GAZIPUR.
37	21.12.07	07.30	400KV BREAKER OF 400/220KV ICT-I AT BAWANA	21.12.07	15.24	BREAKER TRIPPED ON MAIN CB AUTO TRIP, POLE DISCREPANCY, 30CB, AUXILIARY RELAY, BREAKER ALARM, 99, OVER FLUX RELAY, 392, 2/99 TIMER, OVER FREQUENCY, 30AH, AUX CONTACT SUPPLY FAIL.

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
38	21.12.07	16.37	220/66KV 100MVA PR. TR.-I & II AT PRAGATI S/STN	21.12.07	23.28	100MVA PR.TR.-I TRIPPED ON 86, 86, 87 AND DIFF. AND 100MVA PR. TR.-II TRIPPED ON 86, 86, 30F. TR.-II CHARGED AT 16.54HRS AND TR.-I CHARGED AT 23.28HRS. DURING THE TRIPPING GT UNIT #1 ALONG WITH STG 1 & 3 TRIPPED ON JERK. UNITS SYNCHRONIZED AS DETAILED BELOW : GT UNIT #1 GT UNIT #1 GT UNIT #1 GT UNIT #1
39	21.12.07	16.45	220KV GOPALPUR – SUBZI MANDI CKT-II	21.12.07	17.02	CKT. TRIPPED ON DIST PROT ZONE-I RYB PHASE AT GOPALPUR. NO TRIPPING AT SUBZI MANDI.
40	21.12.07	16.58	220KV BTPS – NOIDA – GAZIPUR CKT.	21.12.07	18.01	CKT. TRIPPED ON 64DX, DIRECTIONAL E/F, 186A, 186B, 186X AT BTPS AND ON DIRECTIONAL E/F, THREE PHASE RELAY, 67R AT GAZIPUR. 220/66KV 100MVA PR. TR.-I ALSO TRIPPED ON THREE PH TRIPPING RELAY.
41	22.12.07	09.18	66/11KV 20MVA PR. TR.-III AT NAJAFGARH	22.12.07	11.25	TR. TRIPPED ON DIFFERENTIAL, 87A, 87B, 87C, 86, 64RLV ALONG WITH 11KV I/C-II WHICH TRIPPED WITHOUT INDICATION.
42	24.12.07	22.07	220KV MANDOLA – NARELA CKT-II	24.12.07	23.07	CKT. TRIPPED ON DIST. PROT RYB PHASE ZONE-I, 186, MASTER RELAY AT NARELA AND ON DIST PROT 'R' PHASE ZONE-I, 86RYB PHASE AT MANDOLA.
43	25.12.07	06.32	VARIOUS 400/220KV TRIPPINGS IN DELHI SYSTEM			DETAILED REPORT ENCLOSED IN MAJOR TRIPPINGS
44	26.12.07	01.47	220/66KV 100MVA PR. TR.-I & II AT PRAGATI	26.12.07		BOTH 100MVA PR. TR. TRIPPED ON 51, 64 ALONG WITH 66KV VIDHUT BHAWAN CKT-II AND 66KV SCHOOL LANE CKT-I WHICH TRIPPED WITHOUT INDICATION. 66KV SCHOOL LANE CKT-II TRIPPED IN 51, 64. ALL RUNNING UNITS AT GT ALSO TRIPPED. 100MVA PR. TR-I & II CHARGED AT 02.00HRS. AND 01.58HRS. WHILE THE TIME OF SYNCHRONIZATION OF GTS ARE AS UNDER GT-1 : 02.10HRS, GT-2 : 02.28HRS, GT-5 : 04.28HRS, GT-6 :02.07HRS. STG-I : STG-II :
45	30.12.07	14.40	220KV WAZIRABAD – KASHMIRI GATE CKT-II	30.12.07	16.27	CKT. TRIPPED ON DIST PROT RYB PHASE, RXME18, AT WAZIRABAD. CKT. TRIED AT 14.51HRS. BUT AGAIN TRIPPED ON AT WAZIRABAD. CKT. FINALLY CHARGED AT 19.30HRS..
46	30.12.07	15.52	220KV WAZIRABAD – GEETA COLONY CKT-II	30.12.07	16.27	CKT. TRIPPED ON DIST PROT RYB PHASE, RXME18 AT WAZIRABAD AND ON DIST PROT ZONE-I ABC PHASE AT GEETA COLONY.
47	30.12.07	15.53	220KV MANDOLA – WAZIRABAD CKT-IV	30.12.07	16.54	CKT TRIPPED ON PHASE TO PHASE ZONE-II 'R&Y' PHASE.
48	31.12.07	14.33	220/66KV 100MVA PR. TR.-II AT NARELA	31.12.07	18.23	TR. TRIPPED ON 86, 87 DIFERENTIAL ALONG WITH 66KV I/C-II WHICH TRIPPED ON INTER TRIPPING.

**17.10 DETAILS OF TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH  
JANUARY 2008**

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	02.01.08	10.10	220KV BAWANA – NARELA CKT-II	02.01.08	15.15	CKT. TRIPPED ON DIST PRTO ZONE-I AT BAWANA. NO INDICATION AT NARELA.
02	07.01.08	01.16	VARIOUS 400/220KV TRIPPINGS IN DELHI	07.01.08		REFER 'D' TO THE DETAILED REPORT AT PAGE NO.
03	07.01.08	06.27	220KV PANIPAT – NARELA CKT-II	07.01.08	07.30	CKT. TRIPPED ON 186A, 186B, 30G, 30H AT NARELA.
04	10.01.08	09.18	220KV BTPS – NOIDA - GAZIPUR CKT	10.01.08	10.45	CKT. TRIPPED DIRECTIONAL E/F, 86, 64, 186A, 186B AT BTPS. NO TRIPPING AT GAZIPUR
05	11.01.08		VARIOUS 400/220KV TRIPPINGS IN DELHI			REFER 'E' TO THE DETAILED REPORT AT PAGE NO.
06	11.01.08	14.37	220KV WAZIRABAD – KASHMIRI GATE CKT-II	11.01.08	14.45	CKT. TRIPPED ON RXME-18, DIST PROT ZONE-I, 'RYB' PHASE AT WAZIRABAD. NO TRIPPING AT KASHMIRI GATE.
07	14.01.08	14.29	220KV BAMNAULI – MEHRAULI CKT-II	14.01.08	14.35	CKT. TRIPPED ON 186, 186, DIST PROT 'C' PHASE ZONE-I AT MEHRAULI.
08	15.01.08	15.55	220KV BTPS – GAZIPUR CKT.	15.01.08	16.57	CKT. TRIPPED ON DIRECTIONAL E/F AT BTPS. NO TRIPPING AT GAZIPUR
09	17.01.08	15.40	220KV MANDOLA – GOPALPUR CKT-II	17.01.08	16.38	CKT. TRIPPED ON DIST PROT ZONE-I RYB PHASE AT GOPALPUR.
10	19.01.08	03.42	400KV BAWANA – BAHADUR GARH CKT.	19.01.08	05.24	AUTO RECLOSE OPERATED ON THE CKT AT 03.42HRS, 04.01HRS, 04.12HRS, 04.24HRS, 04.27HRS, 04.32HRS, 04.59HRS, 05.01HRS, 05.04HRS.
11	19.01.08	05.52	400KV BALLABHGARH – BAMNAULI CKT-II	19.01.08	06.13	CKT BREAKER NO.452 OF 400KV BALLABHGARH – BAMNAULI CKT-II TRIPPED ON MAIN-I : CNZ-I, MAIN-II : CNZ-I
12	19.01.08	06.16	400KV BALLABHGARH – BAMNAULI CKT-II	19.01.08	10.33	CKT. TRIPPED ON DIST PROT MAIN-I CNZ-I, AUTO RECLOSE LOCK OUT, 186A&B ON CB-I & II AT BAMNAULI. CKT. TRIED AT 08.18HRS. BUT AGAIN TRIPPED ON SAME INDICATION. CKT. FINALLY CHARGED AT 10.33HRS.
13	19.01.08	06.18	400KV BALLABHGARH – BAMNAULI CKT-I	19.01.08	10.25	CKT. TRIPPED ON DIST PROT ABNZ-I, MAIN-II ABNZ-I, 85Y1, AUTO RELCOSE LOCK OUT, CB-I & II AT BAMNAULI. CKT. TRIED AT 06.38 HRS BUT DID NOT HOLD. CKT FINALLY CHARGED AT 10.25HRS.
14	19.01.08	06.39	400KV BAWANA – BAHADURGARHC KT	19.01.08	06.49	CKT. TRIPPED ON MAIN-I : DIST PROT ANZ-I, 85Y, MAIN-II ANZ-I, 86A-II, 186A&B ON BOTH BREAKER AT BAWANA.
15	19.01.08	08.48	400KV BTPS – NOIDA – GAZIPUR CKT	19.01.08	09.15	CKT. TRIPPED ON E/F AT BTPS. NO TRIPPING AT GAZIPUR
16	20.01.08	02.07	16MVA PR. TR. AT PATPARGANJ	20.01.08	13.55	TR.. TRIPPED ON 87BX, 87CX, 186

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
17	23.01.08	14.56	220/66KV 100MVA PR. TR.-IV AT ROHINI	23.01.08	15.05	100MVA PR. TR.-IV TRIPPED ALONG WITH 66KV I/C-III & IV WHICH TRIPPED ON E/F AND 86B RESPECTIVELY.
18	24.01.08	03.30	220/66KV 100MVA PR. TR.-III AT NAJAFGARH	24.01.08	10.20	TR. TRIPPED ON BUCHZ.
19	25.01.08	19:10	66/11KV,20 MVA PR.TR.-I AT KANJHAWALA	25.01.08	19:28	TR.TRIPPED ON 64RLV,86 ALONGWITH I/C-I, WHICH TRIPPED ON O/C R-PHASE,E/F.
20	27.01.08	15:04	220 KV GEETACOLONY-WAZIRABAD CKT-II	27.01.08	15:46	AT GEETA COLONY:CKT. TRIPPED ON THREE PHASE TRIP, DIST.PROT.ZONE-I,86 AT WAZIRABAD :CKT. TRIPPED ON RXME-18,REL-511,DIST.PROT.ZONE-I RPH UNIT II AND PRAGATI STG ALSO TRIPPED ON JERK . RPH UNIT II SYNCHRONIZED ON 28.01.08 AT 06:45 HRS. AND PRAGATI STG SYNCHRONIZED ON 27.01.08 AT 16:10 HRS.
21	27.01.08	15:04	220 KV WAZIRABAD II-MANDOLA CKT-I	27.01.08	16:16	CKT. TRIPPED AT MANDOLA ON DIST. PROT. ZONE-I
22	27.01.08	15:04	220 KV WAZIRABAD II-MANDOLA CKT-IV	27.01.08	16:18	CKT. TRIPPED AT MANDOLA ON DIST. PROT. ZONE-I
23	27.01.08	17:20	220 KV GOPALPUR-SUBZIMANDI CKT-II	27.01.08	18:26	AT GOPALPUR: CKT. TRIPPED ON DIST.PROT. ZONE-I
24	27.01.08	17:20	220 KV GOPALPUR-MANDOLA CKT-I	27.01.08	18:23	AT MANDOLA: CKT. TRIPPED ON DIST. PROT. ZONE-I

**17.11 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH FERUARY 2008**

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	03.02.08	09.53	220/66KV 100MVA PR. TR	03.02.08	10.23	WITHOUT INDICATION
02	11.02.08	21.10	220/66KV 100MVA PR. TR.-I & II AT PAPPANKALAN-II	11.02.08	23.10	TR. TRIPPED ON LOCK OUT.
03	24.02.08	16.16	220/66KV 100MVA TR. II AT PATPARGANJ	24.02.08	17.50	I/C TRIPPED ON E/F
04	06.02.08	21.38	220/66KV 100MVA TR-II AT PPK-II	07.02.08	05.30	LOW GAS & AIR PRESSURE LOCK OUT
05	10.02.08	14.00	220KV WAZIRABAD-KASHMIRI GATE CKT-II	10.02.08	14.07	CKT. TRIPPED ON GENERAL TRIP GFC, STF L1, L2, L3, ZM-1 TRIP, ZM-2 START, ZM-3 START, RXME18, AUXILIARY RELAY, RYB PHASE AT WAZIRABAD. NO TRIPPING AT KASHMIRI GATE.
06	06.02.08	06.10	220KV BAMNAULI-MEHRAULI CKT -I AT BAMNAULI	06.02.08	06.30	CB A/R LOCKOUT DIST. PROT. C-PH.
07	06.02.08	06.31	220KV BAMNAULI-MEHRAULI CKT -I AT BAMNAULI	06.02.08	06.50	CB A/R LOCKOUT DIST. PROT. A PHASE
08	06.02.08	07:27	220KV BAMNAULI-MEHRAULI CKT. II AT BAMNAULI	06.02.08	07.33	CB A/R LOCKOUT, DIST. PROTN. B PHASE
09	05.02.08	07.50	220KV BAMNAULI-NAJAFGARH CKT-II AT NAJAFGARH	05.02.08	07.52	186, 186, MASTER TRIP RELAY
10	06.02.08	06.31	220KV BAMNAULI-NARAIAN CKT. II AT BAMNAULI	06.02.08	07.07	CB A/R LOCKOUT DIST. PROTN. C PHASE
11	06.02.08	07.27	220KV BAMNAULI-NARAINA CKT I AT BAMNAULI	06.02.08	08.16	DIST. PROTN. C PHASE
12	06.02.08	07:48	220KV BAMNAULI-NARAINA CKT I AT BAMNAULI	06.02.08	08.16	CB A/R LOCKOUT, DIST. PROTN. A PHASE
13	06.02.08	08.17	220KV BAMNAULI-NARAINA CKT I AT BAMNAULI	06.02.08	09.26	CB A/R LOCKOUT, DIST. PROTN. A PHASE
14	06.02.08	07.20	220KV BAMNAULI-NARAINA CKT I AT NARAINA	06.02.08	11.14	DIST. PROT., 86 A, 86 A, 86 B, 86 B, 86 C, 86 C 186 X AUTO R/C`
15	06.02.08	06.31	220KV BAMNAULI-NARAINA CKT. I AT BAMNAULI	06.02.08	07.07	CB A/R LOCKOUTDIST. PROT. A PHASE
16	05.02.08	23.45	220KV BAWANA – NAJAFGARH CKT-II AT NAJAFGARH	05.02.08	23.50	186
17	05.02.08	04.50	220KV BAWANA-NAJAFGARH CKT-I & II AT NAJAFGARH	05.02.08	04.55	186, 186 , MASTER TRIP RELAY
18	05.02.08	07.50	220KV BAWANA-NAJAFGARH CKT-I & II AT NAJAFGARH	05.02.08	07.52	186, 186, MASTER TRIP RELAY
19	05.02.08	03.00	220KV BAWANA-NAJAFGARH CKT-II AT NAJAFGARH	05.02.08	03.05	DIST PROT `A` 186, 186
20	05.02.08	02.44	220KV BAWANA-ROHINI CKT-I	05.02.08	02.47	DIST.PROT.21Q - AΦ,186A & B.
21	24.02.08	20.00	220KV GEETA COLONY – PATPARGANJ CKT-I AT GEETA COLONY	24.02.08	22.05	CB LOCK OUT, 195RYB, 295RYB, 30B, OIL PRESSURE TROUBLE, 30A, N-2

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
22	11.02.08	17.10	220KV GOPALPUR – SUBZI MANDI CKT-II	11.02.08	17.13	CKT. TRIPPED ON DIST PROT ZONE-I, GENERAL TRIP AT GOPALPUR.
23	21.02.08	11.15	220KV GOPALPUR – SUBZI MANDI CKT-II AT GOPALPUR	21.02.08	11.30	WITHOUT INDICATION
24	11.02.08	17.10	220KV GOPALPUR-MANDOLA CKT-I	12.02.08	00.49	AT GOPALPUR SUPPLY FAILED. AT MANDOLA CKT TRIPPED ON DIST. PROT. ZONE-I, 3-PHASE TRIP, 186A&B
25	11.02.08	17.10	220KV GOPALPUR-SUBZI MANDI CKT-II	11.02.08	19.42	AT GOPALPUR CKT TRIPPED ON DIST. PROT. ZONE-I. NO TRIPPING AT SUBZIMANDI
26	22.02.08	16.57	220KV IP-PATPAR GANJ CKT-II AT PPG	22.02.08	19.05	AT PATPARGANJ CKT TRIPPED ON DIST. PROT. ZONE-I, 186, 86X. AT IP CKT TRIPPED ON 86, 186, DIST. PROT. ZONE-I
27	11.02.08	17.10	220KV MANDOLA – GOPALPUR CKT-I	12.02.08	00.49	CKT. TRIPPED ON DIST PROT ZONE-I `YB` PHASE, 86RYB, 186A&B AT MANDOLA. NO TRIPPING AT GOPALPUR.
28	06.02.08	06.10	220KV MEHRAULI-BAMNAULI CKT-I AT MEHRAULI	06.02.08	06.28	DIST. PROT. C-PHASE, ZONE-I
29	06.02.08	06.37	220KV MEHRAULI-BAMNAULI CKT-I AT MEHRAULI	06.02.08	07.20	DIST. PROT. ZONE-I, 3-PHASE TRIP, 186
30	06.02.08	07.25	220KV MEHRAULI-BAMNAULI CKT-I AT MEHRAULI	06.02.08	20.47	DIST. PROT. ZONE-I
31	06.02.08	06.37	220KV MEHRAULI-BAMNAULI CKT-II AT MEHRAULI	06.02.08	06.52	186
32	06.02.08	07.27	220KV MEHRAULI-BAMNAULI CKT-II AT MEHRAULI	06.02.08	07.37	DIST. PROT. ZONE-I, B-PHASE
33	19.02.08	14.22	220KV NARELA-MANDOLA CKT-II AT NARELA	19.02.08	14.35	B-PHASE, O/C, 186A&B
34	28.02.08	18.02	220KV PATARGANJ-GEETA COLONY CKT AT PATPARGANJ	28.02.08	20.52	AT PATPARGANJ CKT TRIPPED ON DIST. PROT. ZONE-I, 3-PHASE TRIP, 186, 186X, 85X2. AT GEETA COLONY CKT TRIPPED ON DIST. PROT. ZONE-I, 3-PHASE TRIP
35	10.02.08	14.00	220KV WAZIRABAD – KASHMERE GATE CKT-II AT SOW	10.02.08	14.07	DIST. PROT. ZONE-I, RXME-18, 3-PHASE TRIP
36	09.02.08	10.35	400/220KV 315MVA ICT-I AT BAMNAULI	11.02.08	17.40	TR. TRIPPED ON BUCHZ.
37	03.02.08	09.53	400/220KV 315MVA ICT-II AT BAWANA	03.02.08	10.23	86A, 86B, 95A, 95B, TIE 652 186A&B ALONG WITH
38	03.02.08	09.53	400/220KV 315MVA ICT-III AT BAWANA	03.02.08	10.23	30F, 86A, 86B, TIE 952 ON 186A&B, 30F.,
39	11.02.08	20.41	400KV 315MVA ICT-I AT BAMNAULI	Still out		TIE CB AUTO TRIP, MAIN CB AUTO TRIP, BUCHHOLTZ ALARM, TX. WINDING TEMPERATURE, DIFFERENTIAL, 87-A, 87B, 87C, TIMER 2/502,LBB,BUCHHOLTZ TRIP, TRIP PHASE ABC
40	11.02.08	20.41	400KV BAMNAULI – BAWANA CKT-II AT BAWANA	12.02.08	01.11	CKT. TRIPPED ON OVER VOLTAGE, AUTO RECLOSE, 186A&B AT BAMNAULI
41	11.02.08	20.41	400KV BAMNAULI – BAWANA CKT-II AT BAMNAULI	12.02.08	01.11	CKT. TRIPPED ON DIST PROT ZONE-I, TRIP OVER VOLTAGE, AUTO RECLOSE, 186A&B.
42	11.02.08	20.41	400KV BAMNAULI-BALLABHGARH CKT-II AT BAMNAULI	12.02.08	08.26	OVER VOLTAGE, LOCK OUT, 85LO 186A&B
43	03.02.08	03.55	400KV BAMNAULI-BAWANA CKT-I AT BAMNAULI	03.02.08	10.09	MAIN-I, MAIN-II, A-N-Z-1, 186A&B, DIST. 25.7KM
44	04.02.08	20.42	400KV BAMNAULI-BAWANA CKT-I AT BAMNAULI	04.02.08	21.10	DIST PROT ANZ-I, MAIN-I & II, AUTO RECLOSE LOCK OUT., 186A&B.



SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
45	11.02.08	20:41	400KV BAMNAULI-BAWANA CKT-I AT BAMNAULI	12.02.08	00:35	DIST. PROT. ZONE-I, OVER VOLTAGE, AUTO RECLOSE LOCK OUT, 186A&B. AT BAWANA CKT TRIPPED ON MAIN-I, 59B, MAIN-II, B-N AIDED TRIP, 30C, 30F, 80AN, 186A&B
46	04.02.08	21:32	400KV BAMNAULI-BAWANA CKT-I AT BAWANA	04.02.08	23:31	MAIN-1 A N Z1, MAIN-2 A,N.Z1. DIST PROT.A N Z1, 5.6KM, 186A&B BOTH C.B.
47	04.02.08	23:31	400KV BAMNAULI-BAWANA CKT-I AT BAWANA	05.02.08	13:19	MAIN-1 ANZ1,SOTF MAIN-2 A,N.Z1.SOTF. DIST PROT. A N Z1, 5.8KM, 186A&B BOTH CB 30F,130F
48	05.02.08	23:08	400KV BAMNAULI-BAWANA CKT-I AT BAWANA	05.02.08	23:47	MAIN-1 A N Z1, MAIN-2 A,N.Z1. DIST PROT. A N Z1, 09.9KM, 186A&B BOTH C.B.
49	05.02.08	01:43	400KV BAMNAULI-BAWANA CKT-I AT BAWANA	05.02.08	02:02	MAIN 1 CNZ1, MAIN -II CNZ1, 186 A & 186 B (BOTH CB), DISTANCE RELAY 7.2 KM
50	05.02.08	06:32	400KV BAMNAULI-BAWANA CKT-I AT BAWANA	05.02.08	06:34	MAIN 1 ABNZ1, 2/80AC, 80D, MAIN-2 ABNZ1, 186 A & 186 B (BOTH CB)
51	05.02.08	06:34	400KV BAMNAULI-BAWANA CKT-I AT BAWANA	05.02.08	10:21	MAIN 1 ANZ1, 195AC MAIN-II ANZ1, 23 KM, 186 A 186 B (BOTH CB)
52	03.02.08	03:59	400KV BAMNAULI-BAWANA CKT-II AT BAMNAULI	03.02.08	08:24	MAIN-I, MAIN-2, C-N-Z-1, 18 6A&B. DIST. 30.4KM
53	04.02.08	21:35	400KV BAMNAULI-BAWANA CKT-II AT BAMNAULI	05.02.08	09:29	DIST PROT BCNZ-I, MAIN-I & II, A/R LOCK OUT, 186A&B
54	11.02.08	20:41	400KV BAMNAULI-BAWANA CKT-II AT BAMNAULI	12.02.08	07:55	OVER VOLTAGE, AUTO RECLOSE LOCK OUT, 186A&B. AT BAWANA CKT TRIPPED ON MAIN-I&II, B-N-Z-1, 186A&B
55	04.02.08	21:21	400KV BAMNAULI-BAWANA CKT-II AT BAWANA	04.02.08	21:55	MAIN-1 C N Z1, MAIN-2 C,N.Z1. DIST PROT.C N Z1, 9.9KM,186A&B BOTH C.B.
56	04.02.08	21:55	400KV BAMNAULI-BAWANA CKT-II AT BAWANA	05.02.08	09:30	MAIN-1 C N Z1, MAIN-2 C,N.Z1. DIST PROT.C N Z1, 7.1KM, 186A&B BOTH C.B.
57	05.02.08	23:42	400KV BAMNAULI-BAWANA CKT-II AT BAWANA	05.02.08	00:53	MAIN-1 C N Z1, MAIN-2 C,N.Z1. DIST PROT.C N Z1, 9.9KM, 186A&B BOTH C.B
58	05.02.08	01:16	400KV BAMNAULI-BAWANA CKT-II AT BAWANA	05.02.08	01:34	MAIN-1 A N Z1, MAIN-II, ANZ1, 186 & 186 B, BOTH CB., DISTANCE RELAY AN 8.4 KM,
59	05.02.08	01:42	400KV BAMNAULI-BAWANA CKT-II AT BAWANA	05.02.08	06:39	MAIN 1 BNZ1, MAIN -II BNZ1 186 A & 186 B (BOTH CB), DISTANCE RELAY 8.8 KM
60	05.02.08	06:39	400KV BAMNAULI-BAWANA CKT-II AT BAWANA	05.02.08	10:29	MAIN-I CNZ1, 186 A & 186 B (BOTH CB), MAIN-II CNZ1, 30CN1, 21.1 KM
61	06.02.08	02:20	400KV BAMNAULI-BALLABGARH CKT.-I AT BAMNAULI	06.02.08	10:26	C.B 252 TRIPPED, CB 2 A/R LOCKOUT, DIST. PROTN. MAIN-2, B N, Z-1
62	06.02.08	02:25	400KV BAMNAULI-BALLABGARH CKT.-I AT BAMNAULI	06.02.08	10:23	C.B 152 TRIPPED, CB 1 A/R LOCKOUT, DIST. PROTN. MAIN-1, C, N, Z-1
63	06.02.08	02:12	400KV BAMNAULI-BALLABGARH CKT.-II AT BAMNAULI	06.02.08	02:12	CB 452 AUTO RECLOSE OPERATED, DIST. PROTN. MAIN-1 & II B,N, Z-1
64	06.02.08	02:19	400KV BAMNAULI-BALLABGARH CKT.-II AT BAMNAULI	07.02.08	04:35	TRIPPED CB NO. 352 & 452, DIST. PROTN. MAIN-1 & II B,N,Z-1, CB-1&II A/R LOCKOUT 186A & B DISTANCE 9.5 KM.
65	06.02.08	01:25	400KV BAMNAULI-BALLABGARH CKT.-II AT BAMNAULI	06.02.08	01:35	CB NO. 352 TRIPPED, DIST. PROTN. MAIN1&II A,N, Z-1, A/R LOCKOUT 186 A&B

SLN O	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
66	05.02.08	05.37	400KV BAMNAULI-BALLABHGARH CKT-I AT BAMNAULI	05.02.08	07.30	DIST PROT ANZ-I, MAIN-I & II, A/R LOCK OUT, 186A&B
67	05.02.08	07.45	400KV BAMNAULI-BALLABHGARH CKT-I AT BAMNAULI	05.02.08	08.04	DIST PROT ANZ-I, MAIN-I & II, A/R LOCK OUT, 186A&B
68	11.02.08	20.41	400KV BAMNAULI-BALLABHGARH CKT-I AT BAMNAULI	12.02.08	00.40	AUTO RECLOSE LOCK OUT, 85LO 186A&B
69	04.02.08	21.11	400KV BAMNAULI-BALLABHGARH CKT-II AT BAMNAULI	04.02.08	21.54	DIST PROT CNZ-I, MAIN-I & II
70	04.02.08	21.57	400KV BAMNAULI-BALLABHGARH CKT-II AT BAMNAULI	04.02.08	22.00	DIST PROT CNZ-I, MAIN-I & II
71	04.02.08	22.38	400KV BAMNAULI-BALLABHGARH CKT-II AT BAMNAULI	05.02.08	09.25	DIST PROT CNZ-I, MAIN-I & II, AUTO RECLOSE LOCK OUT, 186A&B
72	06.02.08	01:14	400KV BAMNAULI-BAWANA CKT.- II AT BAMNAULI	06.02.08		CB 1552,1652 AUTO RECLOSE OPERATED, DIST. PROTN. MAIN-1 & II A,N, Z-1
73	06.02.08	01:45	400KV BAMNAULI-BAWANA CKT.-I AT BAMNAULI	06.02.08		CB 1852 AUTO RECLOSE OPERATED, DIST. PROTN. MAIN- II C,N, Z-1
74	06.02.08	01:47	400KV BAMNAULI-BAWANA CKT.-I AT BAMNAULI	06.02.08	01.47	CB 1852 AUTO RECLOSE OPERATED, DIST. PROTN. MAIN- II A,N, Z-1
75	06.02.08	02:02	400KV BAMNAULI-BAWANA CKT.-I AT BAMNAULI	06.02.08	02:02	CB 1852 AUTO RECLOSE OPERATED, DIST. PROTN. MAIN- II A,B,C,N, Z-1
76	06.02.08	02:05	400KV BAMNAULI-BAWANA CKT.-I AT BAMNAULI	06.02.08	02.16	TRIPPED CB NO. 1752, 1852, DIST. PROTN. MAIN-II A,B,C,N, Z-1
77	06.02.08	02.17	400KV BAMNAULI-BAWANA CKT.-I AT BAMNAULI	06.02.08	10.23	C.B 1752 &1852 TRIPPED ON DIST. PROT. MAIN-I&II, B-N-Z-1, A/R LOCK OUT, 186A&B
78	06.02.08	01:44	400KV BAMNAULI-BAWANA CKT.-II AT BAMNAULI	06.02.08		CB 1552,1652 AUTO RECLOSE OPERATED, DIST. PROTN. MAIN-1 & II B,N, Z-1
79	06.02.08	01:46	400KV BAMNAULI-BAWANA CKT.-II AT BAMNAULI	06.02.08		TRIPPED CB NO. 1552 & 1652, DIST. PROTN. MAIN-1 & II B,N,Z-1, CB-1&II A/R LOCKOUT 186A & B
80	03.02.08	03.59	400KV BAWANA-BAMNAULI CKT-II AT BAWANA	03.02.08	08.24	MAIN-I, MAIN-2, C-N-Z-1, 186A&B. DIST. 7.3KM
81	05.02.08	01:50	400KV BAWANA-MANDOLA CKT-I AT BAWANA	05.02.08	10:46	MAIN -I, CNZ1, 186 A & 186 B (BOTH CB), MAIN -II CNZ1, 30 C, 30 F, DISTANCE 14.1 KM TRY TO CLOSE BUT TRIPPED , RELAY : MAIN -II ANZ1, 186 A7 186 B (ONLY CB 1652)
82	05.02.08	01:52	400KV BAWANA-MANDOLA CKT-II AT BAWANA	05.02.08	04:03	MAIN I BCNZ1, MIN-II BCNZ1, DISTANCE RELAY BNZ1, 1.9 KM, 186 A7 186 B (BOTH CB)
83	05.02.08	00.43	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, PROT.-1:- ANZ1,PROT.-2 ANZ1,DIST PROT. A N, 2.8KM.
84	05.02.08	00.44	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED PROT.-1:- ANZ1,PROT.-2 ANZ1,DIST PROT. A N, 2.8KM.
85	05.02.08	00.45	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED PROT.-1:- ANZ1,PROT.-2 ANZ1,DIST PROT. A N, 2.8KM.
86	05.02.08	01:34	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED PROT.-1:- BNZ1,PROT.-2 BNZ1,

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
87	05.02.08	01:43	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, :- PROT.-1:- ANZ1,PROT.-2 ANZ1,
88	05.02.08	01:46	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, PROT.-1:- BNZ1,PROT.-2 BNZ1,
89	05.02.08	02:16	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, PROT.-1:- ANZ1,PROT.-2 ANZ1,
90	05.02.08	02:47	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, :- PROT.-1:- ANZ1,PROT.-2 ANZ1,
91	05.02.08	03:00	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, :- PROT.-1:- ANZ1,PROT.-2 ANZ1,
92	05.02.08	04:02	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, PROT.-1:- ANZ1,PROT.-2 ANZ1,
93	05.02.08	04:03	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, PROT.-1:- CNZ1,PROT.-2 CNZ1,
94	05.02.08	04:29	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, PROT.-1:- ANZ1,PROT.-2 ANZ1,
95	05.02.08	07:06	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, PROT.-1:- ANZ1,PROT.-2 ANZ1,
96	05.02.08	07:12	400KV MANDOLA-BAWANA CKT-I AT BAWANA	05.02.08		AUTO RECLOSED, PROT.-1:- ANZ1,PROT.-2 ANZ1,
97	05.02.08	00:40	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	00:45	PROT.-1 CNZ1,AIDED TRIP, PROT.-2 CNZ1, 17.06KM, 186A&B.BOTHCB
98	05.02.08	01:04	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	01:08	:PROT.-1 CNZ1,AIDED TRIP, PROT.-2 CNZ1, 17.06KM, 186A&B.BOTHCB.
99	05.02.08	01:29	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	01:33	RELAY:- PROT.-1 CNZ1,AIDED TRIP, PROT.-2 CNZ1, 17.06KM, 186A&B.BOTHCB.
100	05.02.08	01:39	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	01:40	PROT.-1 CNZ1,AIDED TRIP, PROT.-2 CNZ1, 186A&B.BOTHCB.
101	05.02.08	02:09	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	02:11	AUTO RECLOSED PROT.-1 BNZ1, PROT.-2 BNZ1, 186A&B.BOTHCB.
102	05.02.08	02:13	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	02:14	TRIPPED- CVT AVAILABLE.
103	05.02.08	03:31	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	03:35	AUTO RECLOSED PROT.-1 ANZ1,AIDED TRIP, PROT.-2 ANZ1, 186A&B.CB
104	05.02.08	03:34	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08		AUTO RECLOSED PROT.-1 ANZ1,AIDED TRIP, PROT.-2 ANZ1, 186A&B.CB
105	05.02.08	04:00	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	04:04	AUTO RECLOSED PROT.-1 CNZ1, PROT.-2 CNZ1, 186 A&B.CB. 30C
106	05.02.08	04:29	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	04:31	AUTO RECLOSED PROT.-1 CNZ1, PROT.-2 CNZ1, 186 A&B.CB.
107	05.02.08	07:07	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	07:11	AUTO RECLOSED PROT.-1 CN, AIDED TRIP, PROT.-2 CNZ1, 186A&B.CB

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
108	05.02.08	07:48	400KV MANDOLA-BAWANA CKT-II AT BAWANA	05.02.08	07:51	AUTO RECLOSED: PROT.-1 CN, PROT.-2 CNZ1,
109	14.02.08	10.40	66/11KV 20MVA PR. TR AT PPK-II	14.02.08	12.20	DIFFERENTIAL
110	06.02.08	19.47	66/11KV 20MVA PR. TR. AT PAPPANKALAN-II	07.02.08	17.45	TR. TRIPPED ON DIFFERENTIAL ALONG WITH 11KV I/C WHICH TRIPPED ON INTER TRIPPING.
111	14.02.08	1040	66/11KV 20MVA PR. TR. AT PAPPANKALAN-II	14.02.08	12.20	TR. TRIPPED ON DIFFERENTIAL.
112	06.02.08	19.47	66/11KV 20MVA TR. AT PPK-II	06.02.08	17.45	DIFFERENTIAL

**17.12 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH MARCH – 2008**

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
01	02.03.08	06.40	33KV I/C AT NARELA	02.03.08	06.53	33KV I/C TRIPPED ON E/F.
02	03.03.08	04.18	400KV BAWANA – BAHADURGARH CKT.	03.03.08	08.14	AUTO RECLOSE OBSERVED AT 04.18HRS, 04.47HRS, 05.59HRS, 06.11HRS, 06.12HRS AND 06.14HRS AND CKT. FINALLY TRIPPED AT 06.15HRS. ON MAIN-I BCNZ, 85Y, MAIN-II ABCZ, A2,B2,C2, 1860 186B ON BOTH TIE AND MAIN 2/11 CB AUTO TRIP AT BAWANA.
03	04.03.08	00.49	VARIOUS 400/220KV TRIPPINGS IN DELHI			REFER 'H' TO THE DETAILED REPORT AT PAGE NO.
04	04.03.08	10.15	220KV PANIPAT – NARELA CKT-III	04.03.08	10.20	CKT. TRIPPED ON 186A&B AT NARELA
05	05.03.08	10.31	220KV MANDOLA – NARELA CKT-I	06.03.08	16.12	CKT. TRIPPED ON DIST. PROT ZONE-I AB PHASE AT NARELA. 'Y' PHASE JUMPER REPORTED TO BE FELL ON 'R' PHASE AT MANDOLA.
06	05.03.08	16.10	400KV BAWANA – HISSAR CKT.	05.03.08	16.51	CKT TRIPPED ON FACIA TIE CB AUTO TRIP, MAIN CB AUTO TRIP, TR. OVER FLUX, BUS BAR PROTECTION. VT FUSE FAIL AT BAWANA.
07	06.03.08	17.50	400/220KV ICT-IV AT BAWANA	06.03.08		ICT-IV WAS UNDER PLANNED SHUT-DOWN SINCE 11.05HRS. ON 06.03.08 WHILE ENERGIZING AFTER CLEARANCE, IT COULD NOT HELD AND TRIPPED ON 186A, 186B LOCK OUT RELAY, 86A1 GROUP, 86B1 GROUP, DIFFERENTIAL, 87.
08	07.03.08	01.15	VARIOUS 400/220KV TRIPPINGS IN DELHI			REFER 'I' TO THE DETAILED REPORT AT PAGE NO.
09	08.03.08	01.45	VARIOUS 400/220KV TRIPPINGS IN DELHI			REFER 'J' TO THE DETAILED REPORT AT PAGE NO.
10	09.03.08		VARIOUS 400/220KV TRIPPINGS IN DELHI			REFER 'K' TO THE DETAILED REPORT AT PAGE NO.
11	10.03.08	10.20	220KV PATPARGANJ-GEETA COLONY CKT-II	10.03.08	19.18	CKT. TRIPPED ON DIST PROT ZONE-I, ABC PHASE, ACTIVE GROUP-I AT GEETA COLONY AND ON DIST PROT ZONE1 ABC PHASE AT PATPARGANJ.
12	10.03.08	11.13	220KV PANIPAT – NARELA CKT-I	10.03.08	11.15	CKT. TRIPPED ON 186A, 186B AT NARELA.
13	10.03.08	16.10	220KV MAHARANI BAGH – LODHI ROAD CKT-II	10.03.08	16.45	CKT. TRIPPED ON AUTO RECLOSE BLOCK AT MAHARANI BAGH. NO TRIPPING AT LODHI ROAD.
14	15.03.08	15.40	220/33KV 100MVA PR. TR.-I & II AT PARK STREET	15.03008	16.35	TR.-I TRIPPED ON BUCHZ, 86A, 86B AND TR.-II TRIPPED ON 51A, 51C, O/C, 86A, 86B

SLNO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
15	19.03.08	11.29	VARIOUS TRIPPINGS IN DELHI SYSTEM			REFER 'L' TO THE DETAILED REPORT AT PAGE NO.
16	21.03.08	20.43	220KV GEETA COLONY PATPARGANJ – IP CKT-I	21.03.08	21.51	CKT. TRIPPED ON DIRECTIONAL E/F, MASTER RELAY, 186 AT IP END AND ON DIST PROT ZONE-I ABC PHASE AT PATPARGANJ. 220KV PATPARGANJ – GEETA COLONY CKT-I TRIPPED ON DIST PROT ZONE-II, ABC PHASE, O/C AT GEETA COLONY.
17	23.03.08	10.52	220KV BAWANA – NAJAFGARH CKT-II	23.03.08	10.53	CKT. TRIPPED ON 186, 186 AT NAJAFGARH. NO TRIPPING AT BAWANA.
18	24.03.08	12.38	220KV MAHARANI BAGH – LODHI ROAD CKT-II	24.03.08	18.22	CKT. TRIPPED WITHOUT INDICATION AT LODHI ROAD. NO TRIPPING AT MAHARANI BAGH.
19	30.03.08	00.57	220KV IP EXT – PARK STREET CKT-I	30.03.08	07.50	CKT. TRIPPED ON POLE DISCREPANCY AT PARK STREET. NO TRIPPING AT IP EXT.

# 18 MAJOR TRIPPING DETAILS OF 400/200KV SYSTEM IN DELHI POWER SYSTEM IN 2007-08

## A. DETAILS OF TRIPPINGS OCCURRED ON 23.05.2007 IN DELHI SYSTEM

### (a) 220kV Geeta Colony Sub station

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Geeta Colony - Patparganj Ckt-I	Dist. Prot., A- N, Zone-I	15.10	15.20	No Distance
2	220kV Geeta Colony - Patparganj Ckt-II	Dist. Prot., C- N, Zone-I	15.10	15.20	Distance 1.926KM

### (b) 220kV Patparganj Sub station

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Patparganj - Geeta Colony Ckt-I	Dist. Prot., A- N, Zone-2	15.10	15.33	Distance 3.82KM
2	220kV Patparganj - Geeta Colony Ckt-II	Dist. Prot., C- N, Zone-I	15.10	15.49	Distance 3.69KM
Under frequency relays of Group XYZ operated. All the 33KV feeders made on at 15.50hrs. 66KV Vivek Vihar Ckt made on at 16.00hrs. To control the load all 33KV feeders made off at 16.18hrs. & normalized at 17.10hrs. Load relief through UFRs is 222MW.					

### (c) 220kV I. P. station

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV IP-Patparganj Ckt-I	E/F	15.10	16.14	33kV Bay-25,37,53,54 16,18,30 also tripped on U/F. Load relief through UFRs is 60MW.
2	100MVA 220/66kV Tx. No. I	Differential	15.32	16.03	

### (d) GT Station

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	100MVA 220/66KV Tx-I & II	O/C, E/F	15.10	15.40	At 15.18hrs Vigyan Bhawan I&II, DMRC-I & II tripped on O/C, E/F and normalized at 15.42hrs.

### (e) RPH Station

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	Bay No. 1, 2, 5, 6, 12, 13, 16,17 & 18	Tripped on U/F. Load relief through UFRs is 50MW.	15.10	17.15	

### (f) 220kV Pragati Sub station

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220/66 kV 100 MVA Pr. Tr.- I & II	86,86,U/F.	15:10	15.37	Pragati -1 & 2 tripped. At 15:15hrs 220kV bus coupler made off at 15.15hrs after that 220kV Sarita Vihar Ckt-I&II made off.

### (g) 220kV Parkstreet Sub station

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Pragati – Parkstreet Ckt-I & II	Load relief through UFRs is 170MW.	15.10	16.45	220KV supply failed.
All feeders except NDMC feeders tripped on U/F. These feeders normalized at 15.38hrs. At 15.55hrs. to control the load all 66kV feeders except NDMC feeders put off and again normalized at 16.45hrs. Total load affected during the period is 170MW					

**(h) 220kV Lodhi Road Sub station**

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Pragati - Sarita Vihar Ckt-I & II	No tripping. Only supply failed.	15.10	16.10	220KV supply failed.
2		Load affected 114MW			

**(i) 220kV Sarita Vihar Sub Station**

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Pragati - Sarita Vihar Ckt-I	No tripping	15.10	16.25	Supply failed from BTPS and Pragati station
2	220kV Pragati - Sarita Vihar Ckt-II	No tripping	15.10	16.25	Supply failed from BTPS and Pragati station
66KV Mathura Road Ckts alongwith 11kV load tripped on U/F. All the feeders normalized at 16.25hrs. The load relief was 110MW.					

**(j) AT BTPS (220KV Yard) :**

S. No	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV BTPS – Sarita Vihar Ckt-I	67NX	15.10	15.28	
2	220kV BTPS – Sarita Vihar Ckt-II	67NX	15.10	15.32	

Generating units Tripped and synchronized as detailed below:

S N	Name of Station & Unit No.	Time of tripping	Time of synchronization	Remarks
01	I.P.Stn.			
	#2	15.10	16.37	
	#3	15.10	18.10	
	#4	15.10	22.32	
	#5	15.10	18.40	
02	Pragati			
	# 1	15.10	16.44	
	#2	15.10	17.23	
	STG	15.10	19.30	
03	RPH			
	#1	15.10		
	#2	15.10	16.58	
04	GT Station			
	#2	15.29	15.56	FSNL
	#3	15.29	16.58	
	#4	15.29	16.55	
	#5	15.10	16.28	
	#6	15.29	15.50	Came on FSNL
	STG 3	15.10	16.58	



**B. DETAILS OF TRIPPINGS OCCURRED ON 15.08.07 IN DELHI SYSTEM (COVERING 400kV,220 kV & GENERATING STATIONS)**

**(a) 220kV Subzi Mandi Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1.	33kV Shahzada Bagh Ckt-II	Directional O/C, 67B& 86	19:20	13:58 (16.08.07)	

**(b) 220kV Kanjhawala Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	11kV O/H Kanjhawala	E/F	10:20	11:40	
2	11kV ABC Punjab Khore	E/F	10:40	11:25	

**(c) 220kV Rohini Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Rohini-6 Ckt-I	O/C R-Phase	10:30	11:15	
2	66 kV DMRC Ckt-II	E/F & O/C R Ph	16:17	16:35	

**(d) 220kV Shalimar Bagh Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	33kV Wazirpur Ckt-I	67NX & 186	13:42	13:52	
2	33kV Wazirpur Ckt-I	67 CX & 186	14:40	19:15	
3	33kV Wazirpur Ckt-II	67 CX & 186	16:02	17:20	
4	33kV Rani Bagh Ckt.II	67 AX & 186	17:02	17:20(16.08.07)	Breaker Pole & CT at SMB also flashed
5	33kV Wazirpur Ckt-II	67 NX & 186	18:40	18:50	
6	33kV Wazirpur Ckt-II	67CX & 186	18:55	21:10	
7	33kV Wazirpur Ckt-I	67NX & 186	13:42	13:52	
8	33kV Wazirpur Ckt-I	67 CX & 186	14:40	19:15	
9	33kV Wazirpur Ckt-II	67 CX & 186	16:02	17:20	
10	33kV Rani Bagh Ckt.II	67 AX & 186	17:02	17:20(16.08.07)	Breaker Pole & CT at SMB also flashed
11	33kV Wazirpur Ckt-II	67 NX & 186	18:40	18:50	
12	33kV Wazirpur Ckt-II	67CX & 186	18:55	21:10	

**(e) 220kV Najafgarh Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Nangloi Ckt.	Dist. Prot. B&C Ph.	12:18	12:40	
2	66kV Nangloi Ckt	Dist. Prot. B&C Ph.	14:10	16:55	
3	66kV Water Works	Dist. Prot. A&B Ph.	12:55	13:20	
4	66kV Water Works	Dist. Prot. A&B Ph.	14:20	14:31	
5	66kV Water Works	Dist. Prot. B&C Ph.	18:18	18:45	
6	66kV Budella-II Ckt-I	Dist. Prot. A&B Ph.	15:45	15:55	
7	66kV Budella-II Ckt-II	57 AX	15:45	15:55	

(f) **220kV Pappankalan-I Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Budela-I Ckt.	Dist. Prot.	14:35	15.00	
2	66kV Rewari Line Ckt.	Dist. Prot. B&C-Ph.	19:15	20.54	
3	66kV DMRC Ckt-I	Back Up Prot.	10:15	13.00	

(g) **220kV Gopalpur Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mandola Ckt-I	Supply failed	10:7	11:04	Backfed
2	220kV Mandola Ckt-II	Supply failed	11:51	11:59	Backfed
3	220kV Mandola Ckt-I	Supply failed	12:15	12:39	Backfed
4	220kV Mandola Ckt-I	Supply failed	16:23	17:13	Backfed
5	220kV Mandola Ckt-II	Switched off due to heavy sparking	17:59	18:27	
6	220kV Mandola Ckt-I	Supply failed	18:40	19:09	Backfed
7	220kV Gopalpur Ckt-I	Supply failed	22:00	23:32	Backfed
8	220 kV Mandola Ckt-II	S/OFF, Heavy Sparking	19:31	22:38	Got attended after availing shut down.
9	220kV Mandola Ckt-I	Supply failed	22:53	23:21	
10	220kV Subzi Mandi Ckt-II	M1-R-Y-B PH, M2 RYB PH, S/OFF	18.30	23:02	Kite thread hanged from wave trap at Subzi Mandi which got attended after availing shut down.
11	33 kV Wazira Bad Ckt-II	Z-1, E/F, 86 Master Relay	9:07	11:1	
13	33kV Timarppur Ckt-I	Dist Prot, R-Y Ph. O/C R Ph.	16:25	16:49	
14	33kV Timarpur Ckt-II	E/F	16:40	19:52	
15	33kV Timarpur Ckt-I	E/F	18:35	19:43	

(h) **220kV Okhla Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Malviya Nagar Ckt-II	Distance Scheme 86X1	10:50	11:10	
2	66kV Malviya Nagar Ckt-II	67 NX (E/F)	10:50	11:16	
3	66kV Malviya Nagar Ckt-II	67CX (O/C)	14:42	15:40	
4	66kV Malviya Nagar Ckt-I	67 NX (E/F)	13:52	16:55	
5	33kV Nehru Place Ckt-I	67 NX (E/F)	15:25	18:10	
6	33kV Nehru Place Ckt-I	67 NX , 67CX (O/C & E/F)	19:15	22:15	
7	33kV Tughlakabad Ckt.	67 NX (E/F)	16:50	18:55	
8	33kV Nehru Place Ckt-II	67 CX (O/C)	17:40	21:32	
9	33kV Masjid Moth Ckt.	67 NX (E/F)	17:58	18:20	
10	33kV Masjid Moth Ckt.	67 NX (E/F)	18:30	19:00	

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
11	33kV Masjid Moth Ckt.	67 NX (E/F)	19:30	19:42	
12	33kV Masjid Moth Ckt.	67 CX (O/C)	22:37	22:40	
13	33kV Okhla Ph-II Ckt-I	67 NX (E/F)	22:37	23:10	

(i) **220kV Mehrauli Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV BTPS Ckt-I	186, Dist Zone-1, Fault location 3.570 km.	17:25	20:12	At BTPS:- The conductors also sliiped from isolators at BTPS.
2	220kVBTPS Ckt-II	186, Dist Trip Zone-1,1.322 KM.	14:20	17:55	AT BTPS:-Kites were lying on the circuit at BTPS which got removed.
3	220kV Vasant Kunj Ckt-II	186A,186B, Dist. Prot. Zone-1,ph-A,B.	19:27	19:35	

(j) **220kV Vasant Kunj Sub station**

S.N	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Vasant Kunj D-II Ckt.	Distance Scheme A&B Phase.	18.52	20.10	

(k) **220kV Lodhi Road Sub station**

S.N	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Pragati-Sarita Vihar Ckt-I (T-Off Lodhi Road)	Supply failed	13.45	13.50	
2	--do--	Supply failed	16.52	16.53	
3	220kV Pragati-Sarita Vihar Ckt-II (T-Off Lodhi Road)	Supply failed	16.37	16.40	

(l) **220kV Geeta Colony Sub station**

S.N o.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Patpar Ganj Ckt-II	Dist Prot 'ABC' Phase Zone-1, 30E, 86 & 27RYB, Fault Location 752.5 M	10:05	10:20	Ckt. Tried to put on at 10.09hrs. but again tripped on 30E, 30B, 30C & 86 relay indications
2	33kV Geeta Colony Ckt-II	Trip Phase ABC, E/F, Dist. Prot. Zone-1, 27, 86 & 30 Fault Location 605.4M.	15.05	15.55	
3	33kV Kanti Nagar Ckt-II	Trip Phase ABC, Dist. Prot. Zone-2, 27, 86&30. Fault Location 4.793 KM,	13.51	15.25	

(m) **220kV Gazipur Sub station**

S.N o.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Vivek Vihar Ckt-II	O/c & Aux relay	09:05	11:43	
2	66kV Vivek Vihar Ckt-II	E/F & Aux relay	18:02	18:37	
3	66kV Bus Coupler	E/F	18:02	18:15	

(n) 220kV Patparganj Sub station

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220 kV Geeta Colony Ckt-II	186, 86. Dist. Prot. 'ABC' Ph Zone-2, Fault location 3.872KM,	10:06	10:20	
2	66kV Vivek Vihar Ckt-I	186,86, B-Ph.	11:20	11:30	
3	66kV Vivek Vihar Ckt-I	186,86, BC-Ph.	12:25	12:40	
4	66kV Vivek Vihar Ckt-I	O/C R-PH.,186	13:55	14:05	
5	66kV Vivek Vihar Ckt-II	186,86, B-Ph.	11:20	11:30	
6	66kV Vivek Vihar Ckt-II	186,86 B C-Ph.	12:25	12:40	
7	66kV I/C-II	E/F	11:18	11:24	
8	33kV Guru Angad Nagar Ckt-I	E/F	08:53	11:35	
9	33kV Karkar dooma Ckt-I	E/F	17:35	17:55	
10	33kV Karkar dooma Ckt-II	E/F	17:35	19:20	

(o) 220kV Pragati Sub station

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Sarita Vihar Ckt-I	Dist. Prot. Zone-I, 186	13:46	14:04	Fault Location 6.201km
2	220kV Sarita Vihar Ckt-I	Dist. Prot. Zone-I, 186,	16:51	16:54	Fault Location 6.860km
3	220kV Sarita Vihar Ckt-II	Dist. Prot. Zone-I, 186	16:36	16:42	Fault Location 7.687km

(p) 220kV Sarita Vihar Sub station

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	100MVA 220/66kV Pr. Tx II at Sarita Vihar	51M,86	05:10	06:44	
2	220kV Pragati Ckt-I	67N, Auto reclose lock out,186 A&B	05:12	06:10	
3	220kV Pragati Ckt-I	Dist. Prot. Zone-I, Phase BN,186 A&B	06:48	12:56	Fault Location 2.65km, No tripping at Pragati S/Stn
4	220kV Pragati Ckt-I	Dist. Prot. Zone-I, 186	13:46	14:04	Fault Location 2.978km
5	220kV Pragati Ckt-I	Dist. Prot. Zone-I, 186,	16:51	16:54	
6	220kV Pragati Ckt-II	Dist. Prot. Zone-I, 186,	16:36	16:45	Fault Location 9.068km
7	220kV BTPS Ckt-I		05:04	05:24	

(q) 220kV South of Wazirabad Sub station

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Yamuna Vihar Ckt-II	67NX E/F	10:24	10:54	
2	66kV Yamuna Vihar Ckt-II	67NX E/F	10:24	11:03	

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
3	220kV Mandola Ckt-IV	RXME-18 RYB Ph. REL-511, Zm1-Trip, Zm2-Start, Zm3 - Start, Fault-Loop L1-N=0.9Km	14:22	14:32	
4	220kV Mandola Ckt-IV	RXME-18 RYB Ph. REL-511, Trip-RYB Ph. Start-RYB Ph, Zm1-Trip, Zoom-CS, Dist Ckt Data.	16:09	16:24	
5	220kV Kashmiri Gate Ckt-II	RXME-18 RY Ph. REL511, General trip GFC-STFWL-123, GFC-STF WPE, Zm1 Trip, Zm2-Start Zm3 - Start, Fault-Loop L1-L2, Dist=0.2Km	16:40	16:55	
6	220kV Kashmiri Gate Ckt-II	RXME-18 RY Ph .REL511, General-trip, GFCSTFWL-123 Zm1-Trip FUSE-VTSZ, Zm2- Start Zm3- Start.	17:17	17:25	
7	11kV Gamri Road feeder	O/C R&B PH	8:35	9:55	
8	11kV Sonia Vihar W.T.P.-2 feeder	O/C R&B Ph	16:45	17:15	
9	11kV Wazira Bad Ckt-II	E/F	18:15	19:14	

(r) **220kV I. P. station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV RPH Ckt-I	Dist. Prot., Zone I, 3 Phase Trip, 186 A&B	14:19	14:50	
2	33kV Bay-17	E/F, O/C B Phase	17:55	21:10	

(s) **RPH Station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV IP Ckt-I	E/F, O/C B Phase, Bus Differential	06:48	07:03	33kV Bay-13 (tripped on E/F), 33kV Bay-12, 16 & 17 tripped on bus differential operation Unit no.1 also tripped. Unit synchronized at 16:13 hrs.
2	33kV Bay-13	W/O Indication	11:35	16:12	
3.	220kV IP Ckt-I	E/F, O/C Y Phase	14:19	14:50	33 kV Bus Section also tripped on O/C, E/F along with unit-2. Unit-2 synchronized at 17:12hrs.
4	33kV Bay-13	Dist. Prot, Zone-1, Ph.YB	17:35	23:30	

(t) **220kV Parkstreet Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	33kVBaired Road Ckt-I	E/F	10:48	14:05	
2	66kV Shastri Park Ckt-I	Dist. Prot., Zone-I, AB	15:58	18:35	

(u) **400kV Bamnauli Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1.	220kV Naraina Ckt-I	Dist. Prot, Zone-1 Ph. BC, CB Auto trip, Auto reclose, 186 A&B	19:08	19:17	

(v) **400 kV Mandola Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1.	220kV Gopalpur Ckt-I	Dist. Prot., Zone-3, Ph. YB	10:47	11:05	
2.	220kV Gopal Pur Ckt-II	Dist. Prot., Zone-1, Ph. YB	11:51	12:11	
3.	220kV Gopal Pur Ckt-I	Dist. Prot., Zone-3, Ph. YB	12:15	12:53	
4.	220kV Wazira Bad Ckt-IV	Dist. Prot., Zone-I, Ph RY	14:22	14:47	
5.	220kV Wazira Bad Ckt-IV	Dist. Prot, Zone 1, Ph. YB	16:09	16:26	
6.	220kV Wazira Bad Ckt-I	Dist. Prot., Zone-I, Ph. YB	16:11	22:02	
7.	220 kV Gopal Pur Ckt-I	Dist. Prot, Zone-2, Ph. RY	16:23	17:19	
8.	220kV Gopal Pur Ckt-I	Dist. Prot, Zone 3, Ph. YB	17:59	18:36	
9.	220kV Gopal Pur Ckt-I	Dist. Prot., Zone 3, Ph. RN	18:40	19:11	
10.	220kV Gopal Pur Ckt-I	Dist. Prot., Zone 3, Ph. BN	22:00	23:32	

C. **DETAILS OF TRIPPINGS OCCURRED ON 26.08.2007 IN DELHI SYSTEM**

(a) **220kV Geeta Colony Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV SOW – Geeta Colony Ckt-I	No tripping at Geeta Colony	19:02	19:30	Supply failed at Geeta Colony
2	220kV Patpar Ganj – Geeta Colony Ckt-I	No tripping at Geeta Colony	19:02	19:30	Supply failed at Geeta Colony

(b) **220kV Patparganj Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Patpar Ganj – Geeta Colony Ckt-I	Dist. Prot. Zone-3, 86X, 186	19.02	19.38	Fault location 14.13KM

(c) **220kV South of Wazirabad Sub station**

S.N.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mandola – Wazirabad Ckt-II	No Tripping at SOW	19.02	19.50	
2	220kV Mandola – Wazirabad Ckt-III	Dist. Prot. Zone-1, 3- $\phi$ Trip, 186	19.02	15.07 (On 27.08.2007)	At 19.48hrs. Ckt tried to back charged from Mandola end but could not hold and tripped on Dist. Prt. Zone-1, REL-511, RXME-18

(d) **RPH Station**

S.N o.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	33kV Bay No. 12, 13, 16, 17 & 18	Tripped on Bus differential	19.02	19.30	Kite thread fall on 33kV Bus. RPH Unit-1 also tripped along with these Bays. Bay-13 energized at 20.00hrs. and RPH Unit # 1 synchronized at 20.50hrs.

(e) **400kV Mandola Sub station**

S.N o.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mandola – Wazirabad Ckt-II	Dist. Prot. Zone-2, 3- $\phi$ Trip, 186	19.02	19.50	
2	220kV Mandola – Wazirabad Ckt-III	Dist. Prot. Zone-3, 3- $\phi$ Trip, 186	19.02	19.50	

f) **Generation Unit Tripping Details:**

S. N.	Name of Station & Unit No.	Time of tripping Hrs	Time of synchronization Hrs	Remarks
01	RPH			
	#1	19.02	20.50	

D) **DETAILS OF TRIPPINGS OCCURRED ON 12.10.2008 IN DELHI SYSTEM**

Time	Operation carried out
<b>At 400kV Bamnauli</b>	
12.52	Supply failed
13.12	CVT available in 400kV Ballabgarh ckt. –I
13.15	400kV Ballabgarh Ckt. –I closed. All four ICTs and outgoing 220kV lines supply restore.
13.17	CVT available on 400kV Ballabgarh ckt. –II
13.18	400kV Ballabgarh Ckt. –II closed.
13.20	CVT available on 400kV Bawana- Bamnauli ckt. I & II
13.20	1852 CB of 400kV Bawana- Bamnauli ckt. –I closed
13.28	1752 CB of 400kV Bawana – Bamnauli ckt. –I closed
13.30	400kV Bawana – Bamnauli ckt. –II closed
<b>At 400kV Bawana</b>	
12.52	No tripping, supply of 400kV Bawana-Mandola ckt. –I failed load on all 400kV lines disappeared.
12.55	400kV Abdullapur Ckt. I & II intertripping for normalizing the system
13.00	400kV Hissar intertrip for normalizing the system
13.11	Supply restored on 400kV Mandola – Bawana ckt. – I
13.13	400kV Abdullapur ckt.-I closed
13.18	All four ICT normalized
13.20	400kV Bawana- Bamnauli ckt. I & II energized
13.20	220kV Najafgarh Ckt. I & II energized
13.21	220kV Rohini Ckt. I & II energized
13.23	220kV Shalimarbagh Ckt. I & II energized
13.24	220kV Bawana – Narela ckt. I & II energized
13.26	400kV Bahadurgarh ckt. energized

Time	Operation carried out
13.42	400kV Hissar ckt. Energized
14.52	400kV Abdullapur ckt. –II energized
<b>At 220kV Narela</b>	
12.52	Supply of 220kV Narela – Panipat ckt. failed
13.28	Load changeover to 220kV Narela – Bawana ckt. after receiving supply from Bawana
13.41	CVT available in 220kV Panipat Ckts.

**E. DETAILS OF TRIPPINGS OCCURRED ON 14.12.2007 AT 400KV S/STN. BAWANA & BAMNAULI**

**At 400kV Bamnauli S/Stn.**

Sr no	Time of occurrence	Relay indications / operations carried out.
01	20.45	400kV Bawana Ckt-II tripped on Dist Prot Main-1, CNZ-1, LOC 24%.
02	21.09	Bawana Ckt-II (breaker no. 1552 & 1652) tried and held ok.
03	21.28	400kV Bawana Ckt-I (breaker 1752) tripped on Main-1 Dist Prot ANZ-1 Main-2 Dist Prot ANZ-1
04	21.28	400kV Bawana Ckt-II (breaker no. 1552 & 1652) tripped on Main-I Dist Prot CNZ-1 Main-II Dist Prot CNZ-1 LOC 21%
05	21.35	400kV Ballabgarh Ckt-II (breaker no. 452) tripped on Carrier Channel-I, Main-I Carrier Signal received, Main-1 Dist Prot CNZ-1, Main-2 CNZ-1
06	21.38	400kV Ballabgarh Ckt-I tripped on (breaker no. 152 & 252) Dist Prot Main-1 BNZ-1 Dist Prot Main-2 BNZ-1 LOC – 16%
07	21.44	Ballabgarh Ckt-I (breaker no. 152 & 252) tried, held OK.
08	21.49	400kV Ballabgarh Ckt-I (breaker no. 152 & 252) tripped on Main-1 : Dist Prot ANZ-1 Main-2 : Dist Prot ANZ-1 LOC 16%
09	22.01	Ballabgarh Ckt-I (breaker no. 152 & 252) tried and held OK.
10	22.04	Ballabgarh Ckt-II (breaker no. 452) tried, held OK.
11	22.07	400kV Ballabgarh Ckt-I (breaker no. 152 & 252), Ballabgarh Ckt-II (breaker no. 352 & 452), 400kV Bawana Ckt-I (breaker no. 1852), 400/220kV 315MVA ICT-I (breaker no. 2052), 315MVA ICT-II (breaker no. 952), 315MVA ICT-III (breaker no. 652) tripped. On breaker 1852 : the indications are as under Main-1 Dist Prot, ABNZ-1 Main-2 Dist Prot ABNZ-1 Switch on to fault, LBB, 50/Z1  Breaker no. 352 & 452 Main-1 : Dist Prot CNZ-1 Main-2 : Dist Prot CNZ-1  Breaker no. 152 & 252 Main-1 : Dist Prot BNZ-1 Main-2 : Dist Prot BNZ-1 LOC 6%
12	22.15	400kV Ballabgarh Ckt-I (breaker no.152 & 252) tried and held OK.
13	22.20	400kV Ballabgarh Ckt-II (breaker no.352 & 452) tried and held OK.
14	22.26	315MVA ICT-1 (breaker no. 2052), 315MVA ICT-2 (breaker no.952) and 315MVA ICT-3 (breaker no.652) tried and held OK.
15	22.45	400kV Ballabgarh Ckt—I (breaker no.152 & 252) tripped on Main-1 : Dist Prot ANZ-1 Main-2 : Dist Prot, ANZ-1 LOC 7.1%
16	22.50	400kV Ballabgarh Ckt-II and 400/220kV 315MVA ICT-I, 315MVA ICT-II 315MVA ICT-III tripped. 220kV I/C of ICT-III also tripped. Ballabgarh Ckt-II (breaker 352 & 452) Main-1 : CNZ-1 Main-2 : CNZ-1 Tr-I & II on Bus bar protection and Tr.-III on auto reclose lock out.



Sr no	Time of occurrence	Relay indications / operations carried out.
17	22.52	400kV Ballabgarh Ckt—I (breaker no.152 & 252) tried and held OK.
18	22.55	400kV Ballabgarh Ckt-II (breaker no.352 & 452) tried and held OK.
19	22.59	400kV Ballabgarh Ckt-II (breaker no.352 & 452) tripped.
20	23.02	400kV Ballabgarh Ckt-II (breaker no.352 & 452) tried and held OK.
21	23.10	ICT-I, II & III tried on no load. ICT-I & II held OK. Tr.-III could not hold.
22	23.15	400kV Ballabgarh Ckt-I (breaker no. 152 & 252) and Ckt-II (breaker no.352 & 452) tripped on indications : carrier signal received. Main-1 & 2 : ANZ-1 (for breaker 152 & 252) LOC 7% On Breaker -352 & 452 (Main-1 & 2-CNZ-1)
23	24.00	400kV Ballabgarh Ckt-I & II tried and held OK.
24	00.25 27.12.06	400kV Ballabgarh Ckt-II (breaker no. 352 & 452) tripped. Carrier signal received – Main-1 & 2 : CNZ-1
25	00.58 27.12.06	400kV Ballabgarh Ckt-II (breaker no.152 & 25) tripped. Carrier signal received on Main-2 Main-1: BNZ-1 LOC 24%. CB-1 & 2 auto reclose.
26	01.04	400kV Ballabgarh Ckt-II tripped from Ballabgarh end.
27	01.10	400kV Ballabgarh Ckt-I tripped from Ballabgarh end.
28	06.57	400kV Ballabgarh Ckt-II energized from Ballabgarh end.
29	07.01	400kV Ballabgarh Ckt-II (breaker no. 352 & 452) energized.
30	07.04	220kV I/C of ICT-I energized.
31	07.11	220kV I/C of ICT-II energized
32	07.35	400kV Ballabgarh Ckt-I (breaker no. 152 & 252) energized.
33	08.36	ICT-III energized.
34	09.33	400kV Bawana Ckt-I energized from Bawana end.
35	09.34	400kV Bawana Ckt-I (1752 & 1852) energized.
36	09.35	400kV Bawana Ckt-I tripped from Bawana
37	09.47	400kV Bawana Ckt-II energized from Bawana end.
38	09.53	400kV Bawana Ckt-II (CB-1552 & 1652) held OK.
39	10.01	400kV Bawana Ckt-I (breaker no. 1752 & 1852) held OK.

**At 400kV Bawana S/Stn.**

Sr no	Time of Tripping	Time of restoring	Relay indication
01	20.45	21.07	400kV Bamnauli Ckt-II tripped on Facia Both CB Auto trip, Main-1CNZ-1, Main-2 CNZ-1, 186A&186B on both CB and 30CH. Line is back charged.
02	21.24	21.28	400kV Bamnauli Ckt-I tripped on CB-2, trouble alarm, auto trip, Main-1 ANZ-1, Main-2 ANZ-1, 186A, 186B on both CBs.
03	21.34	21.50	400kV Bamnauli Ckt-I tripped on CB2 auto trip, both CB pole discrepancy, Main-2 CNZ-1, Adid trip, 186A&B on both CB, 80D on CB2
04	21.35	00.33 27.12.06	400kV Bamnauli Ckt-II tripped on Both CB auto trip, Main-1 CNZ-1, Main-2 CNZ-1, 186A&186B on both CB.
05	21.53	00.32 27.12.06	400kV Bamnauli Ckt-I tripped on CB auto trip, Main-1 BNZ-1, Main-2 BNZ-1, 186A&186B on both CB. Try to close but did not hold.
06	00.32 27.12.06	09.31 27.12.06	400kV Bamnauli Ckt-I tripped on CB-1 trouble alarm CB-2 auto trip, direct trip received, Main-1 Carrier Signal received, Main-1&2 ANZ1
07	00.33 27.12.06	09.45 27.12.06	400kV Bamnauli Ckt-II tripped CB-1 trouble alarm CB2 auto trip, direct received, Main-1 Carrier signal received, Main-1 & 2 CNZ-1, 186A&B on both CB
08	09.35 27.12.06	10.02 27.12.06	400kV Bamnauli Ckt-I tripped on CB2 Auto trip, Direct trip received, 85LO (Carrier lock out), 186A & 186B on both CB.

Sr no	Name of the Ckt.	Time of Tripping	Time of restoring	Relay indication
01	400kV Bawana – Bamnauli Ckt-I	21.24	21.28	<b>At Bawana</b> : CB-2, trouble alarm, auto trip, Main-1 ANZ-1, Main-2 ANZ-1, 186A, 186B on both CBs. <b>At Bamnauli</b> Dist Prot Main-1 ANZ-1 and Dist Prot ANZ1
02	400kV Bawana – Bamnauli Ckt-II	20.45	21.07	<b>At Bawana</b> : Facia Both CB Auto trip, Main-1CNZ-1, Main-2 CNZ-1, 186A&186B on both CB and 30CH. <b>At Bamnauli</b> Both CB tripped. Dist Prot CNZ-1 on Main-1
03	400kV Bawana – Bamnauli Ckt-I	21.34	21.50	<b>At Bawana</b> CB2 auto trip, both CB pole discrepancy, Main-2 CNZ-1, Adid trip, 186A&B on both CB, 80D on CB2
04	400kV Bawana – Bamnauli Ckt-II	21.35	00.33 27.12.06	<b>At Bawana</b> Both CB auto trip, Main-1 CNZ-1, Main-2 CNZ-1, 186A&186B on both CB.
05	400kV Bawana – Bamnauli Ckt-I	21.53	00.32 27.12.06	<b>At Bawana</b> CB auto trip, Main-1 BNZ-1, Main-2 BNZ-1, 186A&186B on both CB.
06	400kV Bawana – Bamnauli Ckt-I	00.32 27.12.06	09.31 27.12.06	<b>At Bawana</b> CB-1 trouble alarm CB-2 auto trip, direct trip received, Main-1 Carrier Signal received, Main-1&2 ANZ1
07	400kV Bawana – Bamnauli Ckt-II	00.33 27.12.06	09.45 27.12.06	<b>At Bawana</b> CB-1 trouble alarm CB2 auto trip, direct received, Main-1 Carrier signal received, Main-1 & 2 CNZ-1, 186A&B on both CB
08	400kV Bawana – Bahadur Garh Ckt	02.00 27.12.06		<b>At Bawana</b> CB-2 auto trip, direct trip received, auto reclose, ANZ-1, Main-1 & 2 85Y
09	400kV Bawana – Bamnauli Ckt-I	09.35 27.12.06	10.02 27.12.06	<b>At Bawana</b> CB2 Auto trip, Direct trip received, 85LO (Carrier lock out), 186A & 186B on both CB.
10	400kV Bamnauli – Ballabgarh Ckt-I	21.38	21.44	<b>At Bamnauli</b> Dist Prot BNZ-I on Main-1 and Dist Prot BNZ-1 on Main-2
11	400kV Bamnauli – Ballabgarh Ckt-II	21.35	22.04	<b>At Bamnaul</b> Carrier Channel-1, Main-I Carrier Signal Received, Dist Prot Main-1 & 2 CNZ1
12	400kV Bamnauli – Ballabgarh Ckt-I	21.49	22.01	<b>At Bamnauli</b> Dist Prot ANZ-I on Main-1 & 2
13	400kV Bamnauli – Ballabgarh Ckt-I & II	22.07		<b>At Bamnauli</b> Dist Prot ABNZ1 on Main-I & II (1852) Dist Prot CNZ-1 on Main-I & II (352 & 452) Dist Prot BNZ on Main-I & II (152 & 252) CB-152 & 252 restored at 22.15hrs, CB-352 & 452 restored at 22.20hrs
14	400/220kV 315MVA ICT-I, II & III at Bamnauli	22.07	22.26	
15	400kV Bamnauli – Ballabgarh Ckt-I	22.45		Ckt. (CB 152 & 252) tripped on Dist Prot ANZ-I on Main-1 & 2.
16	400/220kV 315MVA ICT-I, II & III at Bamnauli	22.48		Bus bar protection operated.
17	400kV Bamnauli – Ballabgarh Ckt-II	22.50		

**F. DETAILS OF TRIPPINGS OCCURRED ON 07/01/2008 AT 400KV S/STN. BAWANA & BAMNAULI**

Tripping Time	Closing Time	Event	Remarks
400kV Bawana - Bamnauli Ckt-I			
04:56	05:09	Tripped	CVT available. Facia:- CB1 TC-1 faulty / CB. DC-1 fail. Relay:- Main-1 A N Z1, Main-2 A,N,Z1. Dist Prot. A N Z1, 6.9KM,186a&b both c.b.
05:21	05:25	Tripped	CVT available Facia:- CB1 TC-1 faulty / CB. DC-1 fail. Relay:- Main-1 A N Z1, Main-2 A,N,Z1. Dist Prot. A N Z1, 7.4KM,186a&b both c.b.
05:38	07:32	Tripped	CVT available. Facia:- CB1 TC-1 faulty / CB. DC-1 fail. Relay:- Main-1 A N Z1, Main-2 A,N,Z1. Dist Prot. A N Z1, 7.4KM,186a&b both c.b.
07:32	11:16	Tripped	Relay:- Main-1 A N Z1, Main-2 A,N,Z1. Dist Prot. A N Z1, 9.2KM,186a&b.
400kV Bawana - Bamnauli Ckt-II			
05:18	05:25	Tripped	CVT available. Facia:- CB2 Auto trip. Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot. C N Z1, 6.8KM,186a&b both c.b., 30ch-1.
05:37	5:47	Tripped	CVT available. Facia:- CB2 Auto trip. Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 6.8KM,186a&b both c.b., 30ch-1.
05:47	06:08	Tripped	Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot. C N 8.1KM,186a&b both c.b.
07:00	7:31	Tripped	CVT available. Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot. C N Z1, 7.4KM,186a&b both c.b.
07:31	11:21	Tripped	Relay:- Main-1 C N Z1,Main-2 C,N,Z1. Dist Prot. ABC 5.2KM,186a&b.
400kV Bawana – Bahadurgarh Ckt.			
01:16		Auto reclosed	Relay:- Main-1 C,N,Z1, Fault locator 21KM, L3, 85Y, Main-2 C, Z1, Fault locator 20.20KM, 86C2 Group. Facia:- CB. A/R Optd, c.b.auto trip, Tie cb. A/R lockout.
01:33		Auto reclosed	Relay:- Main-1 A,N,Z1, Fault locator 15KM, L1, 85Y, Main-2 A, Z1, Fault locator 14.62KM, 86A2 Group. Facia:- CB. A/R Optd, c.b.auto trip, Tie cb. A/R lockout.
01:46	10:06	Tripped	Facia:- c.b.auto trip.Tie cb.auto trip. A/R lockout. Relay:- Main-1 A, N,Z1, AIDED TRIP, 40KM, L1,85Y Aux crr. Main-2 A Z1, 26.71km, 86A2 3Ph.Trip, 186A&B.
400kV Bawana – Hissar Ckt.			
01:45		Auto reclosed	Facia:- CB.auto trip, Tie CB. A/R oped. Relay:- Main-1 CNZ-1, 15Km, L3, Main-2 CPhase , 86C2Group.
02:36	10:56	Tripped	Facia:- CB.auto trip, Diret.trip recevd.,Tie CB. A/R oped. Relay:- Main-1C N Z1, 94KM, L3, 85Y, Main-2 ABC 186A&B, 86A2,86B2,86C2Group
400kV Bawana – Abdullapur Ckt-I			
08:02	8:35	Tripped	Facia- 1152/1252 Both cb auto trip.main- 1&2 carr. sign. recvd. Relay- Main-1 ABC, N Z1,14.36Km, Main-2 B,N Z-1, 5.376km, 85Y, 186A & 186B.
08:35	09:39	Tripped	Facia- cb-2 auto trip. Relay- Main-1 C, Z1,02.90Km, Main-2 ABC, Z-1, 02.91km, 85Y, 186A & 186B.
400kV Bawana – Abdullapur Ckt-I			
7:53	08:25	Auto reclosed	C.b.no. 1352 A/R. Only c.b.no. 1452 Tripped Facia- 1352/1452 Both cb auto trip. 1352 CB Trouble alarm. Relay:- Prot.-1 85x, Prot.-2 ANZ1, 7.15Km, 186A&B.CB2,2/AA. NOTE:- Line remain charged CB.1352.

Tripping Time	Closing Time	Event	Remarks
400kV Bawana -Mandola Ckt-I			
08:16		Auto reclosed	Facia- CB-1trouble alarm, CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- ANZ1,aided trip, Prot.-2 ANZ1,Dist Prot. A N, 11.9KM.
08:19		Auto reclosed	Facia- CB-1trouble alarm, CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- BNZ1,aided trip, Prot.-2 BNZ1,Dist Prot. B N, 12.8KM.
08:21		Auto reclosed	Facia- CB-1trouble alarm, CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- ANZ1,aided trip, Prot.-2 ANZ1,Dist Prot. A N, 12.7KM.
400kV Bawana – Mandola Ckt-II			
07:58	08:21	Auto reclosed	Tripped- Only c.b.no. 1752 , & C.b.no. 1852 A/R Facia- CB-1 PD Trip, CB.1 auto trip, main-1 carr. signal recvd, panal dc-1 fail, cb-2 A/R optd. carr.CH-2 fail. Relay:- Prot.-1 CNZ1,aided trip, Prot.-2 CNZ1, 11.9km, 186A&B.CB.1
07:59		Auto reclosed	Auto Reclose.cb.1852 Facia- CB-1 PD Trip, CB1 auto trip, main-1 carr. signal recvd, panal dc-1 fail, cb-2 A/R optd. carr.CH-2 fail. Relay:- Prot.-1 CNZ1,aided trip, Prot.-2 CNZ1, 11.9km, 186A&B.CB.1
08:20		Auto reclosed	Auto Reclose.cb.1852 Facia- cb.2 trouble alarm, cb-2 A/R optd. carr.CH-2 fail. Relay:- Prot.-1 BNZ1, Prot.-2 BNZ1, 12.4km, 186A&B.CB.1
08:31	08:34	Auto reclosed	Tripped- Only c.b.no. 1752 , & C.b.no. 1852 A/R Facia- CB-1 PD Trip, CB.1 auto trip, main -1 carr. signal received, panal dc-1 fail, cb-2 A/R optd. carr.CH-2 fail. Relay:- Prot.-1 CNZ1,aided trip, Prot.-2 CNZ1, 186A&B.CB.1
220kV Bawana - Rohini Ckt-I			
08:11	08:15	Tripped	Facia:-A/R Lockout. RELAY:- Dist.Prot.Zone-1 - AΦ,186A & B.
220kV Bawana – Najafgarh Ckt-I			
03.05	03.13	Tripped	At Najafgarh Ckt tripped on 186. no tripping at Bawana
220kV Bamnauli – Najafgarh Ckt-I			
03.05	03.13	Tripped	At Najafgarh Ckt tripped on 186. no tripping at Bamnauli

**E. DETAILS OF TRIPPING OCCURRED IN 400/220KV SYSTEM OF DTL ON 11.01.2008**

Time of tripping	Time of restoration	Event	Remarks
<b>400kV Bawana – Bamnauli Ckt-I</b>			
02:38	02:45		CVT available. Facia:- CB1 TC-1 faulty / CB. DC-1 fail. Relay:- Main-1 A N Z1, Main-2 A,N,Z1. Dist Prot. A N Z1, 6.9KM, Trip ABC, 1
02:56	03:04		CVT available. Facia:- CB1 TC-1 faulty / CB. DC-1 fail. Relay:- Main-1 A N Z1, Main-2 A,N,Z1. Dist Prot. B N, 7.0KM, Trip ABC, 186A. & B
06:25	06:30		Relay:- Main-1 BNZ1, Main-2 B,N,Z1. Dist Prot. B N, 7KM, 186a&b both c.b.80AN.
06:49	06:57		Relay: Main-1 CNZ1, Main-2 CNZ1 Dist Prot. C N, 186a&b both c.b.80AN.
07:03	7:05 try to close but did not hold		Relay:- Main-1 NIL Main-2 A,N,Z1. Dist Prot. A N, 35.1KM, 186a&b both C. B. .
7:05 try to close but did not hold	7:30 try to close but did not hold		Relay:- Main-1 A N Z1, Main-2 A,N,Z1. Dist Prot. A N, 7.1KM, 186a&b both C. B.
7:30 try to close but did not hold	08:50		Relay:- Main-1 B N Z1, Main-2 B,N,Z1. Dist Prot. B N, 7.3KM, 186a&b both C. B.
<b>400kV Bawana – Bamnauli Ckt-II</b>			
02:35	02:45	Tripped	CVT available. Facia:- CB2 Auto trip. Relay - Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 6.8KM, Trip ABC,186a&b both C. B.
05:36	05:38	Tripped	CVT available. Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 6.9KM, 186a&b both C. B.
06:08	06:12	Tripped	CVT available. Facia:- CB1 TC-1 faulty / CB. DC-1 fail. Relay:- Main-1 A N Z1, Main-2 A,N,Z1. Dist Prot. A N, 6.9KM, 186a&b both C. B.
06:35	06:37	Tripped	CVT available. Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 23KM, 186a&b both c.b.
06:39	06:43	Tripped	CVT available. Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 6.9KM, 186a&b both c.b.
06:51	06:55	Tripped	CVT available. Facia:- CB1 Trouble alarm. Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 21.8KM, 186a&
07:01	7:03 try to close but did not hold	Tripped	Tripped off:- Both c.b. CVT available. Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 15.5KM, 186a&b both c.b.
7:03 try to close but did not hold	7:31 try to close but did not hold	Tripped	Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 14.6KM, 186a&b both c.b. 30c- CB.1.
7:31 try to close but did not hold	10:16	Tripped	Relay:- Main-1 C N Z1, Main-2 C,N,Z1. Dist Prot.C N Z1, 10.01KM, 186a&b both c.b.
<b>400kV Bawana – Bahadurgarh Ckt</b>			
05:10		Auto reclosed	Auto reclose:- Relay:- Main-1 A,N,Z1, Fault locator 20KM, 85Y, Main-2 A, Z1, Fault locator 19.33KM, 86A2 Group. Facia:- CB. A/R O
05:15		Auto reclosed	Auto reclose:- Relay:- Main-1 A,N,Z1, Fault locator 19KM, 85Y, Main-2 A, Z1, Fault locator 18.27KM.
05:19		Auto reclosed	Auto reclose:- Relay:- Main-1 A,N,Z1, Fault locator 21KM, 85Y, Main-2 A, Z1, Fault locator 19.99KM, 86A2.
05:22		Auto reclosed	Auto reclose:- Relay:- Main-1 C,N,Z1, Fault locator 22KM, 85Y, Main-2 C, Z1, Fault locator 21.20KM.
05:24		Auto reclosed	Auto reclose:- Relay:- Main-1 A,N,Z1, Fault locator 20KM, 85Y, Main-2 A, Z1, Fault locator 19KM, 86A2.
05:25		Auto reclosed	Auto reclose:- Relay:- Main-1 A,N, Aided trip, Fault locator 38KM, 85Y, Main-2 A, Z1, Fault locator 36.67KM, 86A2.
05:29		Auto reclosed	Auto reclose:- Relay:- Main-1 B,N,Z1, Fault locator 55KM, 85Y, Main-2 B, Z1, Fault locator 20.51KM, 86C2.
05:33	05:45	Tripped	Facia:- C. B. auto trip.Tie cb.auto trip. A/R lockout. Relay:- Main-1 NIL, 47KM, Main-2 NIL, 2/AA, 186A&B.BOTH CB.
06:02	06:11	Tripped	Facia:- C. B. auto trip.Diret.trip recevd. Tie cb.auto trip. A/R lockout. Relay:- Main-1 AB,N, Aided trip, Fault locator 44KM, 85Y, Main-2 A, Z1, Fault locator 43.02KM, 86A2. 2/AA, 186A&B.BOTH CB.
06:20		Auto reclosed	Relay:- Main-1 A,N, Aided trip, Fault locator 50KM, 85Y, Main-2 A, Z1, Fault locator 48.82KM, 86A2.
06:26		Auto reclosed	Relay:- Main-1 A,N, Aided trip, Fault locator 49KM, 85Y, Main-2 NIL.

Tripping Time	Closing Time	Event	Remarks
06:33	06:41	Tripped	Relay:- Main-1 AB,N. Aided trip, Fault locator 45KM, 85Y, Main-2 A, Z1, Fault locator 42.58KM, 86A2. 186A&B.BOTH CB.
06:41	6:44 try to close but did not hold	Tripped	Relay:- Main-1 A,N,Z1 Fault locator 18KM, 85Y, Main-2 A, Z1, Fault locator 17.15KM, 86A2. 186A&B.BOTH CB.
6:44 try to close but did not hold	09:58	Try to close but did not hold	Facia:- C. B. auto trip. Relay Main-1 A,N, Fault locator 19KM, 85Y, Main-2 A, Z1, Fault locator 17.99KM, 86A2.186A&B.
400KV BAWANA – HISSAR LINE			
05:06	09:46	Tripped	Facia:- Main & Tie CB. auto trip, Direct. trip received, Tie CB.pole discrepancy trip, CB. pole discrepancy trip. Relay:- Main-1C N Z1, 85Y, Main-2 Nil 186A&B, 2/AA.
220kV Bawana – Najafgarh Ckt-II			
07:58	08:12	Switched off	As per instruction of S/C Due to s/down at other end.

**F. DETAILS OF TRIPPINGS OCCURRED ON 04 / 05.02.2008 IN DELHI SYSTEM**

**a) 400kV Bamnauli S/Stn**

S.No.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV Bawana Ckt-I	Dist Prot ANZ-I, Main-I & II, Auto Reclose Lock out,, 186A&B.	20.42 04.02.08	21.10 04.02.08	Dist 26.2.Km from Bamnauli
2	400kV Ballabgarh Ckt-II	Dist Prot CNZ-I, Main-I & II	21.11 04.02.08	21.54 04.02.08	Dist 10.1Km from Bamnauli
3	400kV Bawana Ckt-I	Dist Prot ANZ-I Main-II, A/R lock out, 186A&B	21.33 04.02.08		Dist 30Km from Bamnauli. At 02.40hrs (05.02.08), ckt. was tried to close from Bamnauli end but did not hold and following relay appeared : Dist Prot BNZ-I Main-I & II, A/R lock out, 186A&B.
4	400kV Bawana Ckt-II	Dist Prot BCNZ-I, Main-I & II, A/R lock out, 186A&B	21.35 04.02.08	09.29 05.02.08	On 05.02.08 at 02.41hrs, ckt. was tried to close through CB-1552 from Bamnauli but did not hold and following relay appeared : Dist Prot CNZ-I Main-I & II, A/R lock out, 186A&B. Ckt was again tried to close at 07.42hrs but did not hold showing relays Dist Prot CNZ-I, Main-I & II, A/R Lock out, 186A&B.
5	400kV Ballabgarh Ckt-II	Dist Prot CNZ-I, Main-I & II	21.57 04.02.08	22.00 04.02.08	Dist 11.1Kms
6	400kV Ballabgarh Ckt-II	Dist Prot CNZ-I, Main-I& II, A/R lock out, 186A&B	22.38 04.02.08	09.25 05.02.08	
7	220kV Najafgarh Ckt-I & II	Made off	22.40 04.02.08	22.53 04.02.08	Ckt-I & II restored at 22.52hrs and 22.53hrs. respectively.
8	220kV Pappankalan-I Ckt-I & II	Made off	22.40 04.02.08	22.45 04.02.08	
9	220kV Naraina Ckt-I & II	Made off	22.40 04.02.08	22.53 04.02.08	
10	400/220kV ICT-I,II, III & IV	Made off	22.40 04.02.08	10.02	
11	400kV Ballabh Garh Ckt-I	Made off	22.42 04.02.08	02.38 05.02.08	
12	400kV Ballabh Garh Ckt-I	Dist Prot ANZ-I, Main-I & II, A/R lock out, 186A&B	05.37	07.30	Dist 15.2Kms
13	400kV Ballabh Garh Ckt-I	Dist Prot ANZ-I, Main-I & II, A/R lock out, 186A&B	07.45	08.04	Dist 8Kms
14	220kV Najafgarh Ckt-I &II	Made off	07.46	07.48	
15	220kV Naraina Ckt-I & II	Made off	07.55	08.10	

b) 400kV Bawana S/Stn

S.No.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV Bamnauli ckt-I	Facia: CB1 TC-1 faulty CB DC-1 fail. Relay: Main-1 ANZ 1, Main-2 ANZ1 Dist Prot. ANZ1, 09.9KM, 186 a &b both c.b.	20:45	21:07	
		CVT available. Facia:- CB1 TC-1 faulty / CB. DC-1fail. Relay : Main-1 A N Z1, Main-2 A.N.Z1. Dist Prot.A N Z1, 5.6KM, 186A&B both c.b.	21:32	23:31 try to close but did not hold	
		Facia:-CB1 TC-1 faulty / CB. DC-1fail. Relay:- Main-1 AN Z1, SOTF Main-2ANZ1 SOTF. Dist Prot. ANZ1 5.8 KM, 186A&B both CB 30F, 130F.	23:31 try to close but did not hold	13:19	
2	400kV Bamnauli ckt-II	CVT available. Facia - CB2 Auto trip. Relay:Main-1 CNZ1, Main-2 CNZ1 Dist Prot.CNZ1,9.9KM,186a&b both cb	21:21	21:55 try to close but did not hold	
		Facia:- CB2 Auto trip Relay:- Main-1 CNZ1, Main -2 C,N.Z1. Dist Prot.C NZ 1 7.1KM, 186a&b both c.b.	21:55 try to close but did not hold	09:30	
3	400kV Bahadur garh Ckt.	Relay:- Main-1 C,N,Z1, Fault locator 22KM, 85Y, Main-2 C, Z1, Fault locator 21.21KM, 86C2 Group. Facia:-CB. A/R Optd, Tie cb.& main c.b.auto trip, Tie cb. A/R lockout.	19:14		Auto reclosed
		Relay:- Main-1 C,N,Z1, Fault locator 24KM, 85Y, Main-2 C, Z1, Fault locator 20.99KM, 86C2 Group. Facia:- CB. A/R Optd, Tie cb.& main c.b.auto trip, Tie cb. A/R lockout.	20:32		Auto reclosed
		Relay:- Main-1 A,N,Z1, Fault locator 29KM, 85Y, Main-2 ABC, Z1, Fault locator 43.9KM, 86A2, B2, C2 Group. 186A&B Both CB 2/AA Timer. Facia:- CB. A/R Optd, Tie cb.& main c.b.auto trip, Tie cb. A/R lockout.	20:50	21:18	
3	400kV Bahadur garh ckt.	Relay:- Main-1 ANZ1, Fault locator 45KM, 85Y, Main-2 ABCZ1, Fault locator 39.11 KM, 86A2,B2,C2 Group 186 A&B Both CB 2/AA Timer. Facia : CB. A/R Optd, Tie cb.& main c.b.auto trip, Tie cb. A/R lockout.	21:19	05:54	
		Relay- Main-1 ACNZ1, Aided trip, Fault locator 2KM, Main-2 C, Z1,Z2, Fault locator 49.98KM, 186A&B Both CB . Facia: CB. A/R Optd, Tie cb.& main c.b.auto trip, Diret. trip received Tie cb. A/R lockout.	05:56	09:21	
4	400kV Hissar Ckt.	Facia:- Main & Tie CB.auto trip, Diret trip recevd, Tie CB pole discrepancy trip, CB.pole discrepancy trip.LBB Oprated Relay:- Main-1CNZ1, 45Km, 85Y, Main-2 C N, 186A&B, Main & Tie CB.2/AA. 30F	20:34	20:43	
		Facia:Auto reclose optd.Main & Tie CB auto trip, Diret trip recevd. Relay:- Main-1B N Z1, 45Km, 85Y, Main-2 Nil.	20:49		Auto reclosed
		CVT available. Facia:- Tie CB.pole discrepance/LBB Oprated., CB.pole discrepance trip. Relay:- Main-1C N Z1, 45Km, 85Y, Main-2 Nil 186A&B, Main & Tie CB.2/AA	20:56	21:03	
		CVT available Facia:Main & Tie CB auto trip, Diret.trip recevd, Tie CB.pole discrepancy trip, CB. pole discrepancy trip.LBB Oprated Relay:- Main-1C N Z1, 45Km, 85Y, Main-2 C N, 186A&B, Main & Tie CB.2/AA. 30F.	21:11	23:21	

S.No.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
4	400kV Hissar Ckt.	Facia:-Auto Reclose opted, Main & Tie auto trip, Diret trip recvd, main & tie cb trouble alarm Relay : Main-1 ABC N Z1, 12Km, 85Y, Main-2 ABCN 186A&B, Main & Tie CB.2/AA. 30F	Close at 23:21 But same time A/R & Tripped	4:47 try to close but did not hold	
		Facia:- Main & Tie CB auto trip, Diret trip recieved Relay–Main-1ANZ1 103 Km Main-2, Nil, 186A&B, Main & Tie CB.2/AA	4:47 try to close but did not hold	8:37 Only Tie CB.952	
5	400kV Abdullapur Ckt-I	Facia:- Over Voltage Pot. trip, Both auto trip, Main 2 carrier signal recvd Relay:- Main-1C Z1, 2.9Km, 59L1B 2/59L1,86A group,85y, Main-2 CA N,Z1 3.2Km, 186A&B, Both CB.2/AA	22:53	23:28	
		Facia:-CB TC-1 Faulty, CB auto trip, CB Auto Reclose. Relay: Main-1CZ1, 3.4 Km Main-2 CA N,Z1 3.8Km.	23:35		Auto reclosed
		Facia:-1152 CB TC-1&2 Faulty, CB auto trip, CB Auto Reclose.Main-2carr. Signal recvd Relay:-Main-1C Z,42.75 Km 85x, Main-2 C NZ1 3326.0Km. 85Y, 186 A&B & 2/AA On Both CB	00:13	00:24	
		Facia:-1152 CB TC-1&2 Faulty, 1152 & 1252 CB auto trip, CB.Auto Reclose 1252CB Trouble alarm Relay :- Main-1ACZ1, 4.8 Km, Main-2 CNZ1 5.5Km 85Y, 59L1A,L1B,L1C, Cb1-195AC1, 295BC1,52x6, 186A&B& 2/AA On Both CB	01:04	5:20	Ckt Tried to close at 05.20hrs,06.54hrs.an d08:16hrs but did not hold
		Relay:-Main-1CZ1 42.50Km Main-2 C N,Z1 49.53Km.2/AA, 186A&B , 295AC1,BC-1.	6:54	8:16	
		Relay:- Main-1BC Z1, 4.9Km, Main-2 ABC Z1 5.3Km.2/AA, 186A&B	8:16	09:32	
6	400kV Abdullapur Ckt-II	Facia:Both CB.auto trip, Main 1 carrier signal recvd. Relay:- 85X1, Main-1A Z1, 7.2Km, 59L1B, Main-2 AB N,Z1 7.6Km, 186A&B, Both CB.2/AA	23:06	23:54	
		Facia: Both CB.auto trip. Relay:- Main-1 0.6Km, Main-2 AB N,Z1 3.15Km, 186A&B, Both CB.2/AA	23:58	00:09	
		C.b.no 1352 A/R Only c.b.no. 1452 Tripped NOTE:- Line remain charged CB.1352.	00:10		Auto reclosed
		C.b.no.1352 Tripped Facia-1352/ 1452 Both cb auto trip. 1352 CB Trouble alarm.1352cb. A/Reclose Relay:- Prot.-1 Nil Prot.-2 ANZ1, 21Km, 85y, 186A&B.BothCB, 2/AA.	00:11	1:18 try to close but did not hold	
		Relay:- Main-1 0.6Km, Main-2 AB NZ 1 3.15Km, 186A&B, Both CB.2/AA	1:18 try to close but did not hold	02:38	
		Facia:- 1352 CB.auto trip.Main -1 VT Fuse fail/ Relay inoptd.Relay:- Main-1 Z1, 10.7Km, Main-2 ABC, Z1 5.3Km, 186A&B, Both CB.2/AA	02:40	6:49 try to close but did not hold	
		Relay:- Main-1 Z1, 104.2 Km Main-2 CN, Z1 104.2 Km 186A&B, Both CB.2/AA.	6:49 try to close but did not hold	8:19 try to close but did not hold	
		Relay:- Main-1 Z1, 1.6Km, Main-2 AN, Z1 45.11Km, 186A&B, Both CB.2/AA.	8:19 try to close but did not hold	09:55	
7	400kV Mandola Ckt-I	Facia- CB-1&2 trouble alarm CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail Relay:-Prot.-1- ANZ1 Prot.-2 ANZ1,Dist Prot. A N, 2.8KM.	00:43		Auto reclose
		Facia CB-1&2 trouble alarm, CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- ANZ1, Prot.-2 ANZ1,Dist Prot. A N, 2.8KM.	00:44		Auto reclose



S.No.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
7	400kV Mandila Ckt-I	Facia- CB-1&2 trouble alarm, CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1 & 2 fail. Relay:- Prot.-1:- ANZ1,Prot.-2 ANZ1,Dist Prot. A N, 2.8KM.	00:45		Auto reclose
		Facia- CB-1&2 trouble alarm, CB1& 2 auto trip, cb-1&2 A/R optd. carr.CH-1 &2 fail. Relay:- Prot.-1:- BNZ1,Prot.-2 BNZ1,	01:34		Auto reclosed
		Facia-CB-1&2 trouble alarm, CB.1&2 autotrip, cb-1&2 A/R optd. carr.CH-1 & 2 fail. Relay: Prot.-1 ANZ1,Prot.-2 ANZ1,	01:43		Auto reclosed
		Facia- CB-1&2 trouble alarm, CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- BNZ1,Prot.-2 BNZ1,	01:46		Auto reclosed
		Facia- CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- ANZ1,Prot.-2 ANZ1,	02:16		Auto reclosed
		Facia- CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- ANZ1,Prot.-2 ANZ1,	02:47		Auto reclosed
		Facia- CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- ANZ1,Prot.-2 ANZ1,	03:00		Auto reclosed
		Facia- CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- CNZ1,Prot.-2 CNZ1,	04:02		Auto reclosed
		CB.1652 Only Facia- CB.1&2 auto trip cb-1&2 A/R optd. carr.CH-1&2 fail. Relay: Prot.-1:- ANZ1,Prot.-2 ANZ1,	04:03		Auto reclosed
		Facia- CB.1&2 auto trip, cb-1&2 A/R optd. carr.CH-1&2 fail. Relay:- Prot.-1:- ANZ1,Prot.-2 ANZ1,	04:29		Auto reclosed
		Relay:- Prot.-1:- ANZ1,Prot.-2 ANZ1,	07:06		Auto reclosed
		Relay:- Prot.-1:- ANZ1,Prot.-2 ANZ1,	07:12		Auto reclosed
8	400kV Mandola Ckt-II	Tripped-Facia- CB-1 Trouble alarm, CB1 auto trip, main-1 carr.signal recvd, cb-2 A/R optd. carr. CH-2 fail.CB2 pole discrepance trip. Relay:- Prot-1 CNZ1,aided trip, Prot.-2 CNZ1, 17.06Km, 186A &B.BothCB.	00:40	00:45	
		Tripped- CVT available Facia -CB-1 Trouble alarm, CB1 auto trip, main -1 carr. signal recvd, cb-2 A/R optd carr. CH-2 fail.CB.2 pole discrepance trip. Relay:- Prot.-1 CNZ1,aided trip, Prot.-2 CNZ1, 17.06Km, 186A&B.BothCB.	01:04	01:08	
		Tripped- CVT available Facia- CB-1 Trouble alarm, CB.1 auto trip, main -1 carr. signal recvd, cb-2 A/R optd. carr. CH-2 fail CB.2 pole discrepance trip. Relay:-Prot-1 CNZ1, aided trip, Prot.-2 CNZ1, 17.06Km, 186A&B.BothCB.	01:29	01:33	
		Tripped- CVT available. Relay:- Prot.-1 CNZ1,aided trip, Prot.-2 CNZ1 186A&B.BothCB.	01:39	01:40	
		Tripped- CVT available Relay:- Prot.-1 BNZ1, Prot.-2 BNZ1, 186A&B. BothCB.	02:09	02:11	
		Tripped- CVT available.	02:13	02:14	
		Cb-1852 A/R Only CB- 1752 Tripped Facia- CB1&2 auto trip, main-1carr. signal recvd, cb-2 A/R optd. Carr CH-2 fail. Relay:-Prot-1 ANZ1aided trip, Prot.-2 ANZ1, 186A&B.CB. NOTE:- Line remain charged CB.1852.	03:31	03:35	Auto reclosed

S.No.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
8	400kV Mandola Ckt-II	C.b.no. 1852 A/R Only Facia- CB.1&2 auto trip, main -1 carr.signal recvd, cb-2 A/R optd. carr.CH-2 fail. Relay:- Prot.-1 ANZ1, aided trip, Prot-2 ANZ1, 186A&B.CB. NOTE:- Line remain charged through CB.1852.	03:34		Auto reclosed
		C.b-1852 A/R Only c.b-1752 Tripped Facia- CB.1&2 auto trip, main -1 carr. signal recvd, cb-2 A/R optd. carr.CH-2 fail. Relay:- Prot.-1 CNZ1, Prot.-2 CNZ1, 186A&B.CB. 30C. NOTE:- Line remain charged through CB.1852	04:00	04:04	Auto reclosed
		C.b-1852 A/R Only c.b-1752 Tripped Facia- CB.1&2 auto trip, main -1 carr.signal recvd, cb-2 A/R optd. carr.CH-2 fail. Relay:- Prot.-1 CNZ1, Prot.-2 CNZ1, 186A&B.CB. NOTE:- Line remain charged CB.1852.	04:29	04:31	Auto reclosed
		C.b.no. 1852 A/R Only c.b.no. 1752 Tripped Relay:- Prot.-1 CN, Aided trip Prot.-2 CNZ1, 186A&B.CB NOTE:- Line remain charged CB.1852.	07:07	07:11	Auto reclosed
		C.b.no. 1852 A/R Only c.b.no. 1752 Tripped Relay:- Prot.-1 CN, Prot.-2 CNZ1, 186A&B.CB. NOTE:- Line remain charged CB.1852.	07:48	07:51	Auto reclosed
				03:00	03:01
		Facia:-A/R Lock out. RELAY:- Dist.Prot.21Q - AΦ,186A & B.	02:44	02:47	

c) 220kV Narela S/Stn

S.No.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Panipat Ckt-I	30G2, Master Relay	04.50	07.12	
2	220kV Bus Coupler	E/F	04.50	04.52	
3	220KV Panipat Ckt-III	30G, Master Relay	05.05	11.05	
4	220kV Bus Coupler	E/F	05.08	05.09	
5	220kV Bus Coupler	E/F	05.14	05.22	
6	220kV Bus Coupler	E/F	05.43	05.50	
7	66KV Jahangirpuri Ckt-I & II and 04Nos. 11kV Feeders	U/F	05.55	06.12	
8	220kV Panipat ckt-II	ANZ-I, Master Relay	06.12		Ckt. still under breakdown
9	66kV Badli Ckt-I & II and 02Nos. 11kV feeder	U/F	06.19	07.35	
10	220kV Bus Coupler	E/F	07.12	07.14	

d) 220KV Najafgarh S/Stn

S.No.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana Ckt-II	Dist Prot `A` 186, 186	03.00	03.05	
2	220kV Bawana Ckt-I & II	186, 186, master trip relay	04.50	04.55	
3	220kV Bawana Ckt-I & II	186, 186, Master trip relay	07.50	07.52	
4	220kV Bamnauli Ckt-II	186, 186, Master trip relay	07.50	07.52	

e) 220kV Naraina S/Stn

S.No.	Name of the feeder/Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bamnauli Ckt-I & II	Supply failed	22.37	22.52	
			04.2.8	04.02.08	
2	220kV Bamnauli Ckt-I & II	Supply failed	04.50	04.54	
3	66kV Bodella-II Ckt-I & II	U/F	06.00	06.12	
4	220kV Bamnauli Ckt-I & II	Supply failed	07.45	08.08	

f) 220kV Pappankalan-I S/Stns

S.No.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bamnauli Ckt-I & II	Supply failed	22.40 04.02.08	22.44 04.02.08	
2	66kV Bindapur Ckt-I & II	U/F	05.55	07.00	
3	66kV Rewarl Line Ckt,	U/F	06.58	08.09	
3	66kV G-II Pappankalan Ckt-I & II	U/F	06.58	09.13	
5	66kV Bodella-I Ckt	U/F	06.58	09.13	
6	220kV Bamnauli Ckt-I & II	Supply failed	09.12	09.13	

G. DETAILS OF TRIPPINGS OCCURRED ON 05 / 06.02.2008 IN DELHI SYSTEM

a) 400kV Bawana S/Stn.

S.No.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	23:08	23:47	400kV Bamnauli Ckt-I	Facia:CB1 TC-1 faulty/CB. DC 1 fail. Relay: Main-1 AN Z1, Main-2 ANZ1. Dist Prot. A N Z1, 09.9KM, 186A&B both C.B.	
2	01:43	02:02	--do--	CVT available, Facia: CB1-TC1 Faulty/CB DC1 fail Relay : Main-1 CNZ1, Main -II CNZ1, 186 A & 186 B (Both CB), Distance Relay 7.2 Km	
3	02:05	06:32	--do--	CVT not available	
4	06:32	06:34	--do--	Try to close but tripped, Relay : Main 1 ABNZ1, 2/80AC, 80D, Main-2 ABNZ1, 186 A & 186 B (both CB)	
5	06:34	10:21	--do--	Try to close but tripped, Relay : Main 1 ANZ1, 195AC Main-II ANZ1, 23 KM, 186A 186 B (both CB)	
6	23:42	00:53	400kV Bamnauli Ckt-II	CVT available Facia:- CB2 Auto trip. Relay:- Main-1 C N Z1, Main-2 C,N.Z1. Dist Prot.C N Z1, 9.9KM, 186A&B both C.B	
7	01:16	01:34	--do--	CVT available Facia:- CB2 Auto trip Relay- Main-I ANZ1, Main-II, ANZ1, 186 & 186 B, both CB., Distance relay AN 8.4 Km,	
8	01:42	06:39	--do--	Facia-CB2 Auto Tripped, Relay Main 1 BNZ1, Main -II BNZ1 186 A&B (Both CB), distance Relay 8.8 Km	
9	06:39	10:29	--do--	Try to close but tripped, Main-I CNZ1, 186 A & 186 B (both CB), main-II CNZ1, 30CN1, 21.1 Km	
10	23:14	23:14	400kV Bahadurgarh Ckt	Relay: Main-AN, Aided trip, 52km 85Y-86A2 group, Main -II A Ph, 46.12Km Facia:- CB Auto tripped, direct trip recived, tie CB auto tripped, A/R lock out.	Auto reclosed
11	23:24	23:33	--do--	Relay: Main-1 BCN, aided tripped-49 Km, 85Y, Main -II- 86 B2 group, B Ph 46.18 Km, 186 A & 186 B, tie CB 186 A & 186 B, timer 2AA Facia:- CB. A/R Optd, Tie CB.& main CB.auto trip, Tie CB. A/R lockout.	
12	23:42	11:13	--do--	Relay:- Main-I68Km , 85Y, 186 A & 186 B, Timer -II/ AA, both CB Facia:- CB Auto tripped, direct trip recived, tie CB auto tripped/Auto reclose lock out.	
13	01:52	07:38	400kV Hissar Ckt.	Relay: Main 1, ANZ1, 85Y, Tie CB-186A & 186 B, 30F 7:27-CVT received,	
14	08:04	10:15	--do--	only CB 952, Relay ; 186 A&B 30 F, Main -I ABNZ1, 27 KM, L2, 85Y, RX1, 59L1B, 59L1C, Main-II, ABC, 86A2, 86B2, 86C2, group	
15	01:52	11:11	400kV Abdullapur Ckt-I	Main1 - ABC, 86A group, 86 A/95C, 295 BC-1, 2/59L1, 59L1C/ over voltage, 186 A & 186 B (both CB), 2/AA, 2/AA2, 52X6, 52XF A.C fail alarm, Main -II location 200 Km	

S.No.	Name of the feeder / Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
16	01:52	03:08	400kV Abdullapur Ckt-II	CVT available(1.57-CVT disappeared) Relay : 85X, 59L1B, 186A7 186 B (both CB), 2/AA & 2/AA2 3:06- CVT Received	
17	03:15	03:36	--do--	Facia : Over voltage protection trip, direct trip received, CB Auto tripped (Both CB) Relay : 59 L1B, 2/59L1(Timer O/V), 86 A group, 186 A & 186 B (both CB), 2/AA1, 2/AA2	
18	03:36	04:06	--do--	Facia : Over voltage protection trip, direct trip received, CB Auto tripped (Both CB) Relay : 59L1B, 2/59L1, 86 A group, 186 A7186B (both CB), 295 BC1, 2/AA	
19	04:07	06:16	--do--		Made off
20	06:19	06:23	--do--	Relay : 186 A & 186 B (both CB), 295 BC1, 52X	
21	06:26	06:30	--do--	Relay : 186 A & 186 B (both CB), 2/AA1, 2/AA2, 295 BC1,	
22	06:39	06:42	--do--	CVT Available Relay : 186 A & B (both CB), 2/AA1 2/AA2, 295 BC1,	
23	07:46	07:52	--do--	CVT available, Facia : CB auto tripped (both CB), Relay Main -II location 13 Km , 186 A & 186 B (both CB) 2/AA1, 2/AA2	
24	07:55	08:04	--do--	CVT available Relay : 186 A & B (both CB), 2/AA1 2/AA2, 295 BC1, 295 BC1, 52X7, location 13.1 Km	
25	01:50	10:46	400kV Mandola Ckt-I	Distance Relay 2.4 Km. 05:00 CVT received & disappeared, 05:32 CVT received & disappeared, Try to close but tripped , Facia: CB auto tripped, auto reclose operated Relay : Main -I, CNZ1, 186 A & 186 B (both CB), Main -II CNZ1, 30 C, 30 F, Distance 14.1 Km Try to close but tripped , Relay : Main -II ANZ1, 186 A7 186 B (only CB 1652)	
26	01:52	04:03	400kV Mandola Ckt-II	Facia:CB I trouble alarm, CB -II trouble alarm, CB-I auto tripped, Relay: Main I BCNZ1, Min-II BCNZ1, Distance relay BNZ1, 1.9 Km, 186 A7 186 B (both CB) 04:06 -CVT disappeared,	
27	4:59	10:52	--do--	05:20 CVT received & disappeared Try to close but tripped, Relay : Main -II ANZ1, 30 C , 186 A & 186B (both CB), Distance 12.2 Km. Ckt. tried to close at 06.19hs. Again but tripped	Made off
28	05:00	11:02	400/220kV ICT-IV		Made off
29	05:00	11:03	400/220kV ICT-I		Made off
30	02:20	12:04	220kV Najaf Garh Ckt-I		Made off
31	02:20	12:04	220kV Najaf Garh Ckt-II		Made off
32	02:20	6:00	220kV Rohini Ckt-II		Made off
33	6:04		--do--	Facia : CB auto Tripped, Auto reclose lock out Relay : distance protection C phase, 186 A & 186 B	
34	3:04	5:57	220kV Rohini Ckt-I		Made off
35	2:20	5:55	220kV Shalimar Bagh Ckt-I		Made off
36	2.20	11:10	220kV Shalimar Bagh Ckt-II		Made off
37	3:04	9:01	100MVA Pr. Tr.		Made off
38	3:04	5:54	220kV Narela Ckt-II		Made off

c) 400kV Bamnauli S/Stn.

Sr. No	Time of Tripping	Time of Restoration	Name of the Ckt.	Relay indications	Remarks
1	01:14		400kV Bawana Ckt.- II	CB 1552,1652 auto reclose operated, Dist. Protn. Main-1 & II A,N, Z-1	
2	01:25	01.35	400kV Ballabgarh Ckt.- II,	CB No. 352 tripped, Dist. Protn. Main1&II A,N, Z-1, A/R lockout 186 A&B	
3	01:44		400kV Bawana Ckt.- II	CB 1552,1652 auto reclose operated, Dist. Protn. Main-1 & II B,N, Z-1	
4	01:45		400kV Bawana Ckt.- I	CB 1852 auto reclose operated, Dist. Protn. Main- II C,N, Z-1	
5	01:46		400kV Bawana Ckt.II	Tripped CB No. 1552 & 1652, Dist. Protn. Main-1 & II B,N,Z-1, CB-1&II A/R LOCKOUT 186A & B	Distance 37 Km.
6	01:47	01.47	400kV Bawana Ckt.- I	CB 1852 auto reclose operated, Dist. Protn. Main- II A,N, Z-1	
7	02:02	02:02	400kV Bawana Ckt.-I	CB 1852 auto reclose operated, Dist. Protn. Main- II A,B,C N, Z-1	
8	02:05	02.16	400kV Bawana Ckt.I	Tripped CB No. 1752, 1852, Dist. Protn. Main-II A,B,C N, Z-1	
9	02:12	02.12	400kV Ballabh Garh Ckt.- II	CB 452 auto reclose operated, Dist. Protn. Main-1 & II B,N, Z-1	
10	02.17	10.23	400kV Bawana Ckt-I	C.B 1752 &1852 tripped on Dist. Prot. Main-I&II, B-N-Z-1, A/R Lock out, 186A&B	
11	02:19	04.35 07.02.08	400kV Ballab Garh Ckt.II	Tripped CB No. 352 & 452, Dist. Protn. Main-1 & II B,N,Z-1, CB-1&II A/R LOCKOUT 186A & B Distance 9.5 Km.	Ckt tried at 0258 hrs.but did not hold. Ckt. again tried at 10.34hrs but again tripped on A/R Lockout Dist. Prot. Main-1&II CNZ-I. Ckt. again tried through CB-352 at 11.18 hrs.& 11.55hrs but again tripped on same indications. Top phase string broken at Tower-197. Due to hanging of this string, bottom phase string insulators also broken. These strings have been replaced with new insulators.
12	02:20	10.26	400 kV Ballab Garh Ckt-I	C.B 252 Tripped, CB 2 Auto Reclose Lockout, Dist. Protn. Main-2, B N, Z-1	Ckt. tried at 02.55hrs. but did not hold.
13	02:25	10.23	400 kV Ballab Garh Ckt-I	C.B 152 Tripped, CB 1 Auto Reclose Lockout Dist. Prot. Main-1, C, N, Z-1	
14	06.10	06.30	220kV Mehrauli Ckt. I	CB Auto Reclose Lockout Dist. Prot. C-Ph.	
15	06.31	06.50	220kV Mehrauli Ckt. I	CB Auto Reclose Lockout Dist. Prot. A Phase	
16	06.31	07.07	220kV Naraina Ckt. I	CB Auto Reclose Lockout Dist. Prot. A Phase	
17	06.31	07.07	220kV Naraiian Ckt. II	CB Auto Reclose Lockout Dist. Protn. C Phase	
18	07:27	07.33	220kV Mehrauli Ckt. II	CB Auto Reclose Lockout Dist. Protn. B Phase	
19	07:27	08.16	220kV Naraina Ckt. I	Dist. Protn. C Phase	
20	07:48	08.16	220kV Naraina Ckt. I	CB Auto Reclose Lockout Dist. Protn. A Phase	
21	08.17	09.26	220kV Naraina Ckt. I	CB Auto Reclose Lockout Dist. Protn. A Phase	

c) **220KV Naraina S/Stn.**

S. N	Time of Tripping	Time of Restoration	Name of the Ckt.	Relay indications	Remarks
1	02:20	02:40	220kV Bamnauli Ckt-I		Supply Fail
2	06:10	06:30	--Do--		Supply Fail
3	06:30	07:05	--Do--		Supply Fail
4	07:21	07:32	--Do--		Supply Fail
5	07:45	08:16	--Do--		Supply Fail
6	08:16	09:25	--Do--		Supply Fail
7	11:04	11:04	--Do--		Supply Fail
8	02:20	02:40	220kV Bamnauli Ckt-II		Supply Fail
9	06:10	06:30	--Do--		Supply Fail
10	06:30	07:05	--Do--		Supply Fail
11	07:20	11:14	--Do--	Dist. Prot., 86A, 86B, 86C, 186 X A/R	
Load affected during the trippings					
	Time of tripping	Time of restoration	Duration of load affected in Hrs.	Load affected in MW	
	02:20	02:40	0:20	28	
	06:10	07:00	0:50	18	
	07:00	08:00	1:00	93	
	08:00	09:00	1:00	90	
	09:00	10:00	1:00	44	
	10:00	11:00	1:00	31	
	11:00	11:14	0:14	31	

d) **220KV Pappankalan-I S/Stn.**

Sr. No	Time of Tripping	Time of Restoration	Name of the Ckt.	Relay indications	Remarks
1	4:02	4:15	66KV Budella-1, G-2 Ckt-1&2, G-6 Ckt-1&2		Made off
2	4:02	8:40	66KV Rewari line		Made off
3	5:27	11:07	66KV Budella-1		Made off
4	4:02	5:32	66KV Bindapur-1&2		Made off
5	6:10	6:30	220kV Bamnauli Ckt-1 &2		Supply failed from BML
6	6:28	11:07	66KV Bindapur-1&2,		Made off
7	6:28	12:53	66KV G-2 Ckt-1		Made off
8	6:28	13:20	66KV G-2 Ckt-2		Made off
9	6:28	7:07	66KV G-6 Ckt-1&2		Made off
10	6:38	6:52	220kV Bamnauli Ckt-1 & 2		Supply failed from BML
11	7:05	7:05	66KV G-2 Ckt-1&2		Tripped off, O/c 67C&186
12	7:28	7:35	220kV Bamnauli Ckt-1 &2		Supply failed from BML
13	8:40	11:07	66KV G-6 Ckt-1&2		Made off
Load affected during the trippings					
	Time of tripping	Time of restoration	Duration of load affected in Hrs.	Load affected in MW	
	06:10	07:00	0:50	320	
	07:00	08:00	1:00	208	
	08:00	09:00	1:00	206	
	09:00	10:00	1:00	198	
	10:00	11:00	1:00	166	
	11:00	11:17	0:17	166	

e) **220KV Mehrauli S/Stn.**

Sr. No	Time of Tripping	Time of Restoration	Name of the Ckt.	Relay indications	Remarks
1	06.10	06.28	220KV BAMNAULI CKT-I	Dist. Prot. C-phase, Zone-I	Dist. 8.34KM
2	06.12	06.28	220KV BAMNAULI CKT-II		Made off
3	06.37	07.20	220KV BAMNAULI CKT-I	Dist. Prot. Zone-I, 3-phase trip, 186	Dist. 6.88KM
4	06.37	06.52	220KV BAMNAULI CKT-II	186	
5	07.25	20.47	220KV BAMNAULI CKT-I	Dist. Prot. Zone-I	Dist. 06.40KM
6	07.27	07.37	220KV BAMNAULI CKT-II	Dist. Prot. Zone-I, B-phase	Dist. 9.324KM

f) **220KV Narela S/Stn.**

Sr. No	Time of Tripping	Time of Restoration	Name of the Ckt.	Relay indications	Remarks
1	1.52	05.50	220KV BAWANA CKT-I&II		
2	03.39	20.42	220KV PANIPAT CKT-II	30G, 85X2, 186A&B	
3	03.53	20.42	220KV PANIPAT CKT-III	30G, 86X2, 186	
4	03.54		220KV PANIPAT CKT-I	30G, 30A, 85X2, 186A&B	

Load affected during the trippings					
	Time of tripping	Time of restoration	Duration of load affected in Hrs.	Load affected in MW	
	05:50	07:00	1:10	16	
	06:50	08:00	1:10	74	
	08:00	09:00	1:00	48	
	09:00	10:00	1:00	44	
	10:00	11:00	1:00	23	
	11:00	11:02	0:02	23	

g) 220KV Rohini S/Stn.

Sr. No	Time of Tripping	Time of Restoration	Name of the Ckt.	Relay indications	Remarks
1	01:50	06:02	220KV Bawana Ckt-I		Supply Fail
2	01:50	06:02	220KV Bawana Ckt-II		Supply Fail
3	06:00	06:10	66KV RHN 5 Ckt I		Made off
4	06:00	06:10	66KV RHN 5 Ckt II		Made off
5	06:00	11:15	66KV RHN 4 Ckt I		Made off
6	06:00	11:15	66KV RHN 4 Ckt II		Made off
7	06:00	11:15	66KV RHN 4 Ckt III		Made off
8	09:15	11:15	66KV RHN 23		Made off
9	09:15	11:15	66KV RHN 4 Ckt I		Made off
Load affected during the trippings					
	Time of tripping	Time of restoration	Duration of load affected in Hrs.	Load affected in MW	
	01:50	02:00	0:10	64	
	02:00	03:00	1:00	62	
	03:00	04:00	1:00	66	
	04:00	05:00	1:00	124	
	05:00	06:00	1:00	154	
	06:00	06:02	0:02	61	
	06:02	08:00	1:58	77	
	08:00	09:00	1:00	51	
	09:00	10:00	1:00	63	
	10:00	11:00	1:00	64	
	11:00	11:15	0:15	8	

h) 220KV Najafgarh S/Stn.

Sr. No	Time of Tripping	Time of Restoration	Name of the Ckt.	Relay indications	Remarks
1	23.45 05.02.08	23.50 05.02.08	220KV BAWANA CKT-II	186	
2	01.52	13.40	220KV BAWANA CKT-I&II		SUPPLY FAILED FROM BAWANA
3	02.20	02.23	66KV BODELLA-II CKT-I	DIST. PROT. B-PHASE, 86X1	
4	02.25	10.25	220KV BAMNAULI CKT-I&II		SUPPLY FAILED
5	02.25	11.45	66KV BODELLA-II CKT-I	86X1	
Load affected during the trippings					
	Time of tripping	Time of restoration	Duration of load affected in Hrs.	Load affected in MW	
	01:52	02:00	0:08	50	
	02:00	03:00	1:00	120	
	03:00	04:00	1:00	134	
	04:00	05:00	1:00	180	
	05:00	06:00	1:00	250	
	06:00	07:00	1:00	190	
	07:00	08:00	1:00	194	
	08:00	09:00	1:00	224	
	09:00	10:00	1:00	290	
	10:00	10:25	0:25	290	

h) 220KV Kanjhawala S/Stn.

Sr. No	Time of Tripping	Time of Restoration	Name of the Ckt.	Relay indications	Remarks
1	01:52	12:05	220KV BAWANA CKT-I&II		SUPPLY FAILED
Load affected during the trippings					
	Time of tripping	Time of restoration	Duration of load affected in Hrs.	Load affected in MW	
	01:52	02:00	0:08	9	
	02:00	03:00	1:00	8	
	03:00	04:00	1:00	8	
	04:00	05:00	1:00	10	
	05:00	06:00	1:00	15	
	06:00	07:00	1:00	20	
	07:00	08:00	1:00	30	
	08:00	09:00	1:00	35	
	09:00	10:00	1:00	35	
	10:00	12:25	2:25	30	

H. DETAILS OF TRIPPINGS OCCURRED ON 04.03.2008 IN DELHI SYSTEM

a) 400kV Bamnauli S/Stn

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV Bawana Ckt-I	Main-I&II, ANZ-1, 186 A&B, DIST. 25.7KM	03.55	10.09	
2	400kV Bamnauli Ckt-II	Main-1&2I, CNZ1, 186A&B. DIST. 30.4KM	03.59	08.24	

b) 400kV Bawana S/Stn

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV Bahadur Garh Ckt	Main-I & II, A-N-Z-1	00.49		Auto reclosed
2	400kV Bahadur Garh Ckt	Main-I & II B-N-Z-1	01.28		Auto reclosed
3	400kV Bahadur Garh Ckt	Main-I & II, A-B-N-Z-1, 186A&B, 86A,B&C and 3-Phase trip	01.40	8.35	
4	400kV Hissar Ckt	C-N-Z-1, Tie CB Pole Discrepancy, 186A&B. Dist 44KM	03.09	08.09	
5	400kV Bamnauli Ckt-II	Main-I & II, CNZ-1, 186A&B. Dist. 7.3KM	03.59	08.24	
6	400kV Abdullapur Ckt-I	Main-I&II, CBNZ-1, 186A&B, 85Y. Dist. 3.68KM	06.23	06.29	
7	400kV Abdullapur Ckt-I	Main-I & II CBNZ1, 186A&B, 85Y. Dist 3.68KM	06.34	08.51	
8	400kV Abdullapur Ckt-II		07.16	07.23	CB-1352 Auto Reclosed and CB-1452 tripped

c) 220kV Narela S/Stn

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Panipat Ckt-I	CNZ-1, 30A, 30C, 186	05.10	05.30	
2	220kV Panipat Ckt-III	30G, 30C, 186	05.42	10.15	
3	220kV Panipat Ckt-I	ANZ-1, 30A, 30G, 186	05.49	05.55	
4	220kV Panipat Ckt-II	BNZ-1, 186A&B	06.04	06.13	
5	220kV Panipat Ckt-II	BNZ-1, 186A&B	06.22	10.30	
6	220kV Panipat Ckt-I	CNZ-1, 186A&B	06.27	10.30	



I. DETAILS OF TRIPPINGS OCCURRED ON 07.03.2008 IN DELHI SYSTEM

(a) 220kV Pappankalan-I Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	11kV I/C-II & III	Under frequency	04.45	05.40	
2	66kV G-2 Ckt-I &II	Under frequency	04.45	05.40	
3	66kV G-6 Ckt-I &II	Under frequency	05.31	09.25	
4	66kV Rewari Line	Under frequency	05.31	09.25	
5	66kV Bodella	Under frequency	05.31	09.25	
6	66kV Bindapur Ckt-I &II	Under frequency	05.53	10.10	
7	11kV I/C-II & III	Under frequency	05.53	10.10	
8	66kV G-2 Ckt-I &II	Under frequency	05.53	10.10	
9	66kV Bodella, Rewari Line and part 11kV feeders	Made Off.	09:26	10:10	
10	All 66 kV feeders and 11kV I/C-I,II,III.	Made Off.	10:25	10:40	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	4:45	5:00	30		
	5:00	6:00	100		
	6:00	7:00	122		
	7:00	8:00	142		
	8:00	9:00	190		
	9:00	10:00	230		
	10:00	10:40	240		

(b) 220kV Gazipur Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Kondli Ckt-I & II	U/F	05.35	05.40	
2	66kV Kondli Ckt-I & II	U/F	05.41	11.10	
3	220kV BTPS-Noida-Gazipur Ckt	Supply failed	05.50	11.05	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:35	5:40	16		
	5:41	11:10	16		

(c) 220kV Patparganj Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	X-GROUP	U/F	05.43		
2	Y-GROUP	U/F	07.30		
3	Z-GROUP	U/F	08.30		
4	33kV Cooling Tower	Made off	08.12	08.25	
5	All 11kV feeders	Made off	08.29	09.10	
6	66kV GH-I			08.35	
7	33kV G. Angad Nagar Ckt-I&II			08.37	
8	66kV GH-I	U/F	08.38	09.44	
9	66kV Vivek Vihar Ckt-I&II			08.45	
10	33kV Cooling Tower	Made off	08.48	09.44	
11	33kV Karkadooma Ckt-I&II			09.10	
12	33kV G. Angad Nagar Ckt-I&II	U/F	08.38	09.36	
13	33kV Preet Vihar, 33kV CBD Shadara Ckt			09.58	
14	33kV Geeta Colony			10.05	
15	33kV Preet Vihar, G. Angad Nagar I&II, CBD Shadara,	Made off	10.25	11.42	
16	33kV Twin Tower, 33kV Shakarpur	Made off	10.25	11.45	

Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:00	6:00	15		
	6:00	7:00	20		
	7:00	8:00	30		
	8:00	9:00	100		
	9:00	10:00	100		

(d) **220kV Naraina Sub-station**

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	33 KV Payal.	Under frequency	05:08	05:40	
2	33 KV Rewari Line.	Under frequency	05:08	05:40	
3	220kV Bamnauli – Naraina Ckt-I & II	Supply failed	05.25	05.27	
4	220kV Bamnauli – Naraina Ckt-I & II	Supply failed	07.00	09.55	

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:00	5:25	17		
	5:25	6:00	17		
	6:00	7:00	17		
	7:00	8:00	70		
	8:00	9:00	70		
	9:00	10:00	70		

(e) **220kV Najafgarh Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana Ckt- I & II	186	03.45	03.48	
2	220kV Bamnauli Ckt- I	186	03.45	03.52	
3	66kV Budella-II Ckt-II	Dist. Prot. Zone-3, 86X	03.45	04.25	
4	220kV Bawana Ckt- I & II	186	04.14	04.25	
5	220kV Bamnauli Ckt- I	186	04.14	04.25	
6	220kV Bamnauli Ckt-II	186	04.14	05.05	
7	66kV G5 PPK-I	86X	04.14	04.25	
8	220kV Bawana Ckt- I & II	Supply failed	05.10	08:02	
9	66kV G-5 PPK-I&II	U/F	05.10	10:05	
10	66kV Budella-II Ckt-II	U/F	05.10	10:05	
11	20MVA Pr. Tr. 3	U/F	05.10	10:05	
12	220kV Bamnauli Ckt- I & II	Supply failed	05.15	10.00	
13	220kV Bawana Ckt- I & II	Supply failed	09.00	10.00	

Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	3:45	4:00	180		
	4:00	5:00	50		
	5:00	6:00	180		
	6:00	7:00	200		
	7:00	8:00	220		
	8:00	9:00	220		
	9:00	10:00	220		
	10:00	10:05	220		

(f) **400 kV Bamnauli Sub station:**

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV Bamnauli – Ballabgarh Ckt-II	CB-452 tripped on Dist Prot Main-I, CNZ1, Main-II, CNZ-1	03.35		
2	400kV Bamnauli – Ballabgarh Ckt-II	CB-352 Auto Reclose operated	03.45		AUTO RECLOSED
3	400kV Bamnauli – Bawana Ckt-I	Dist. Prot Main-I,CNZ1, Main-II CNZ1, A/R Lock Out, 186A&B	04.05	04.10	
4	400kV Bamnauli – Ballabgarh Ckt-I	CB-152 Dist. Prot Main-II, C-N-Z, Aided Trip, Auto Reclose, Lock Out, 186A&B	04.12	04.16	
5	400kV Bamnauli – Ballabgarh Ckt-II	CB-352 Tripped on Dist Prot, Main-II, CNZ, Aided Trip, A/R Lock Out, 186A&B	04.12	04.16	
6	400kV Bamnauli – Bawana Ckt-I	Dist. Prot, Main-I BNZ-1, Main-II, BNZ-1, A/R, Lock Out, 186A&B	04.20	04.25	
7	400kV Bamnauli – Bawana Ckt-II	Dist. Prot, Main-I CNZ1, Main-II CNZ-1, aided trip, A/r Lock Out, 186A&B	04.52	08.15	
8	400/220KV 315MVA ICT-II	Made off	05.05	09.50	
9	400kV Bamnauli – Bawana Ckt-II	Supply failed	05.15		V-string insulators damaged at tower no. 320
10	220kV Najafgarh Ckt-I & II	Supply failed	05.15		
11	220kV Naraina Ckt-I & II	Supply failed	05.15		
12	220kV Naraina Ckt-I & II	Made off	05.25	05.27	
13	400kV Bawana Ckt-I	Made off	06.50	08.14	
14	220kV Naraina Ckt-I & II	Made off	07.00	09.50	
15	400kV Ballabgarh Ckt-I	Made off CB- 152, 252 Tried at 08.16hrs. but again tripped on Dist. Prot. Main-II, ANZ1, A/R Lock out, 186A&B	08.16	10.36	
16	400/220KV 315MVA ICT- IV	Made off	08.12	08.32	
17	400/220KV 315MVA ICT-III	Made off	08.12	08.42	
18	220kV Mehrauli Ckt-I	Made off	08.27	09.34	
19	220kV Najafgarh Ckt-I & II	Made off	08.30	10.10	
20	220kV Pappankalan Ckt-I & II	Made off	08.30	09.50	
21	400kV Ballabgarh Ckt-II				

(g) **400 kV Bawana Sub station:--**

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1.	400kV Bahadur Garh.	Auto Reclosed	01:15		
2.	--DO--	Auto Reclosed	01:24		
3.	--DO--	Relay,Main-I ABNZ1, 19Km., L2, 85Y, Main-II AB CZ1, 86A2, B2, C2 3Ph, Trip Dist 23.94 Km.186 A&B both CB, 2/AA Tie CB	01:41	01.47	
4	--DO--	Auto Reclose	01:51		
5	--DO--	Auto Reclose	02:27		
6	--DO--	Facia: CB auto tripped, direct tripped received, Tie CB auto tripped/ A/R Lock out, Relay Main-I ABZ1, 19 Km L2 85 Y/ Main -2, ABCZ1, 25.39 Km, 86 A2, B2, C2. 186 A & B both CB.	02:34	02.45	

S. No	NAME OF THE FEEDER/ TRANSFORMER TRIPPED	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
7	--DO--	Relay Main -1 BNZ1, 22 Km L2/ 85Y, Main -2 BZ1, 86 B2, Dist 21.07 Km 186 A&B both CB	02:46	02.51	
8	--DO--	Relay Main -1 BNZ1, 22 Km L2/ 85Y, Main -2 BZ1, 86 B2, Dist 20.72 Km 186 A&B both CB	02:51		
9	400KV HISSAR LINE		02:58		AUTO RECLOSED
10	--DO--	Relay Main -I CNZ1, 85 Y 186 A & B on Tie, Main-2 Nil.	03:27	08.06	
11	--DO--	Relay Main-1, CNZ1, 85 Y Main-2 Nil, 186 A&B (952 CB)	08:41	08.44	
12	--DO--		08:48		AUTO RECLOSED
13	--DO--	Relay Main -ICNZ1 85 Y, Main -2 Nil 186 A & B (952 CB)	09:00	09.08	
14	400KV BAMNAULI CKT-I	Relay Main-1, ANZ1, 30CH1, 30 CH 2, Main-2, ANZ1, 186 A&B both CB, Dist. 07 Km, Trip AB&C	04:03	04.10	
15	--DO--	Relay Main-1, BNZ1, Main -2, BNZ1 Dist. 10.4 Km, 186 A &B both CB	04:20	04.24	
16	--DO--	Relay Main -I BNZ1, Main -2 BNZ1, 186 A&B both CB Distance. 7.3 Km	04:29	04.32	

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
17	--DO--	Relay Main-1 CN AIDED Trip, 186 A & B Both CB , 30 C, 30 F, 130 F.	04:52	08.05	CKT TRIED TO CLOSE AT 05.00, 06.52 HRS. BUT DID NOT HOLD
18	400KV BAMNAULI CKT-II	Relay Main-1,C-N-Z-1, Main-2 CNZ1, Distance. 7.0 Km , 186 A & B both CB. 30F, 130 F.	04:52	08.08	CKT TRIED TO CLOSE AT 07.15 HRS. BUT DID NOT HOLD
19	400KV ABDULLA PUR LINE	1452 Tripped- Relay 85 X, Main-2 B-N-Z-1, Distance. 16.91 Km, 295 BC1, 2/AA both CB, CB-2, 186 A&B both CB	05:04		AUTO RECLOSED
20	--DO--	Made off	05:11	10.07	
21	400KV MANDOLA CKT-I	Inter tripped	05:09	08.25	
22	400KV MANDOLA CKT-II	Inter tripped	05:09	07.09	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	03.27	04.00	20		
	04.00	05.00	25		
	05.00	06.00	25		
	06.00	07.00	25		
	07.00	08.00	25		
	08.00	09.00	25		
	09.00	10.00	25		
	10.00	10.10	25		

(h) **220kv Geeta Colony Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kv Wazirabad Ckt-I	Supply failed	05.03	07.42	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:03	6:00	22		
	6:00	7:00	22		
	7:00	8:00	22		
	8:00	9:00	22		
	9:00	10:00	22		
	10:00	10:10	22		

(i) **220kv Gopalpur Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kv Mandola Ckt-I & II	Supply failed	05.01	08.22	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:00	6:00	30		
	6:00	7:00	124		
	7:00	8:00	160		
	8:00	8:22	165		

(j) **220kv SOW Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mandola Ckt-I	Supply failed	05.05	1016	
2	220kV Mandola Ckt-II & III	Supply failed	05.05	06.35	
3	220kV Mandola Ckt-IV	Supply failed	05.05	10.18	
4	220kV Mandola Ckt-II & III	Supply failed	06.40	06.50	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:03	6:00	110		
	6:00	7:00	125		
	7:00	8:00	140		
	8:00	9:00	140		
	9:00	10:00	135		
	10:00	10:25	120		

(k) **220kv Subzimandi Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Gopalpur Ckt-I	Supply failed	05.05	10.35	
2	220kV Gopalpur Ckt-II	Supply failed	05.05	08.22	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:05	6:00	34		
	6:00	7:00	44		
	7:00	8:00	66		
	8:00	9:00	70		
	9:00	10:00	67		
	10:00	10:35	71		

(l) **220kv Mehrauli Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV BTPS Ckt-I	Dist. Prot. Zone-I, A-Phase,	06.57	08.45	Dist. 1.716KM
2	220kV Bamnauli Ckt-I	Dist. Prot. Zone-I, A-Phase,	06.57	08.45	Dist. 5.540KM

(m) **220kv Lodhi Road Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Maharani Bagh Ckt-I&II	Supply failed	03.52	09.00	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	3:52	4:00	15		
	4:00	5:00	20		
	5:00	6:00	20		
	6:00	7:00	25		
	7:00	8:00	25		
	8:00	9:00	25		

**(n) 220kv Kanjhawala Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana – Najafgarh Ckt-I&II	Supply failed	05.04	10.25	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:04	6:00	14		
	6:00	7:00	19		
	7:00	8:00	21		
	8:00	9:00	20		
	9:00	10:00	18		
	10:00	10:25	15		

**(o) 220kv Vasantkunj Sub-station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
	220kV Mehrauli Ckt-I & II	Supply failed	06.58	07.12	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	6:58	7:12	75		

**(p) BTPS station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV BTPS-Alwar line		02.41		Conductor found broken at tower no. 184 from Alwar end
02	220kV BTPS-Ballabgarh Ckt-II		07.39	10.02	
03	220kV BTPS-Ballabgarh Ckt-I	A-phase fault	04.39	10.24	
04	220kV BTPS-Noida Ckt		05.44	11.01	
05	220kV BTPS-Mehrauli Ckt-I		06.55	08.54	

**(q) I.P. station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	Bay No. 25	Without indication	04.45	10.29	
2	Bay No. 27	Without indication	04.45	10.25	
3	Bay No. 18 & 30	Without indication	07.30	11.30	

**(r) RPH station**

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	33kV BAY -1,2,5,6	U/F	07.00	11.07	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	7:00	11:07	9		

**(s) 220kv Narela Sub-station**

S NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Panipat Ckt-III	30C, 30G, 186, 86	03.10	03.24	
2	220kV Panipat Ckt-III	30C, 30G, 186, 86	03.38	03.58	
3	220kV Panipat Ckt-III	30C, 30G, 186, 86	04.08	10.34	
4	220kV Mandola Ckt-I	Dist. Prot. C-Phase, 186	04.37	10.20	
5	220kV Panipat Ckt-II	B-N-Z-I, 30G, 86	04.50	10.36	
6	220kV Rohatk Road I & II	Supply failed	04.52	09.45	
7	220kV Panipat Ckt-I	Supply failed	04.52	11.17	
8	220kV Bawana Ckt-I&II	Supply failed	05.08		
9	220kV Mandola Ckt-II	Supply failed	05.08	09.15	
10	66kV Jahangirpuri Ckt – I & II, 66kV Badli Ckt-I&II, All 11kV Feeders	Made off	05.08	10.48	
11	66kV A-7 Narela Ckt-I&II, 66/33kV 30 MVA Pr. Tr.	Made off	05.08	09.15	

Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	4:52	5:00	60		
	5:00	6:00	150		
	6:00	7:00	170		
	7:00	8:00	200		
	8:00	9:00	200		
	9:00	9:45	200		
	9:45	10:00	150		
	10:00	10:48	100		

(t) 220kv Shalimarbagh Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana Ckt-I	Supply failed	05.03	06.44	
2	220kV Bawana Ckt-II	Supply failed	05.03	10.02	
3	All 11kV and 33kV feeders except 33kV Hyderpur Ckt-I&II and 16MVA & 20MVA Pr. Tr.	Made off	06.45	10.05	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:03	6:00	47		
	6:00	7:00	47		
	7:00	8:00	50		
	8:00	9:00	70		
	9:00	10:00	90		
	10:00	10:05	120		

(u) 220kv Rohini Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana Ckt-I	Supply failed	05.00	06.35	
2	220kV Bawana Ckt-II	Supply failed	05.00	10.03	
3	All 66kV feeders except 66kV DMRC Ckt	Made off	06.35		
4	66kV Rohini IV Ckt-I, II & III			10.00	
5	66kV Rohini V Ckt-I & II			10.05	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	5:00	6:00	110		
	6:00	7:00	154		
	7:00	8:00	160		
	8:00	9:00	190		
	9:00	10:00	132		
	10:00	11:00	95		

**J. DETAILS OF TRIPPINGS OCCURRED ON 08.03.2008 IN DELHI SYSTEM**

(a) 400 kV Bannauli Sub station:

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV Bawana Ckt-I	Main-I, BNZ-1, Main-2, BNZ-1, 186A&B, DIST. 28.7KM	03.33	08.20	Ckt tried to closed at 03.40hrs. and 05.53hrs. but did not hold
2	400kV Bawana Ckt-II	Main-I, CNZ-1, Main-2, CNZ-1, 186A&B, DIST. 25.7KM	03.35	08.22	Ckt tried to closed at 03.40hrs. and 05.24hrs. but did not hold



(b) 400 kV Bawana Sub station:--

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
5	400kV Bamnauli Ckt-I	Main -I, BNZ-I, Main -2, BNZ-I, 186A&B. DIST. 7.00KM	03.32	08.21	
6	400kV Bamnauli Ckt-II	Main-I, CNZ-I, Main-2, CNZ-I, 186A&B. DIST. 6.4KM	03.33	08.23	
7	220kV Rohini Ckt-I	Dist. Prot. Zone-I A-Φ, 186A&B	03.46	07.58	
8	220kV Rohini Ckt-I	Dist Prot Zone-I, B-Φ, 186A&B	07.59	08.41	
9	220kV Najafgarh Ckt-II	Dist Prot Zone-I A-Φ, 186A&B. Dist. 2.18KM	03.58	09.41	
10	220kV Narela Ckt-I	Dist Prot Zone-I, C-Φ, Dist. 3.1KM	04.32	08.08	
11	220kV Rohini Ckt-II	Dist Prot. Zone-I, C-Φ, 186 A & B	04.42	04.59	
12	400kV Mandola Ckt-II	Auto reclosed	04.42		
13	400kV Abdullapur Ckt-II	Main-I, CNZ-I, Main-2, CAZ-I, 186A&B, 85Y, Dist. 06.54KM	04.44	05.19	
14	220kV Najafgarh Ckt-I	Dist. Prot Zone-I, B-Φ, 75B Dist 4.91KM	04.51	08.13	
15	220kV Rohini Ckt-II	Dist. Prot Zone-I C-Φ, 186 A & B	05.19	18.37	
16	220kV Narela Ckt-II	Dist. Prot Zone-I C-Φ, Dist. 03.08KM	05.48	08.08	
17	400kV Mandola Ckt-I	Auto reclosed	07.09		
18	220kV Rohini Ckt-I	Dist. Prot Zone-I B-Φ, 186A&B	07.59	08.41	

(c) 220kv Narela Sub-station

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Mandola Ckt-I	186, C-Phase	04.01	09.38	
02	220kV Bawana Ckt-I	Supply failed	04.32	08.42	
03	220kV Mandola Ckt-II	Supply failed	05.10	09.43	
04	220kV Bawana Ckt-II	Made OFF	05.16	08.12	
05	220kV Rohtak Road Ckt-I	ABC Z-1	05.31	05.55	
06	66kV Badli Ckt-I	Dist. Prot Zone-I R-Φ, 86X1	06.06	07.43	
07	220kV Rohtak Road Ckt-II	A-B-C-Z-1, 30A, 186	06.14	06.51	
08	220kV Rohtak Road Ckt-II	A-B-C-Z-1, 30A, 186	06.51	14.12	
09	220kV Rohtak Road Ckt-I	A-B-C-Z-1, 186	06.15	08.04	
10	66kV Badli Ckt-II	Dist. Prot Zone-I B-Φ, 86X1	06.50	07.33	

(d) 220kV Pappankalan-II Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bamnauli Ckt-I & II	Supply failed	03.35	04.07	

(e) 220kV Rohini Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Rohini-V Ckt-II	U/F	00.30	00.35	
2	66kV Rohini-VI Ckt-I & II, Sec-22 & 23 Ckt	U/F	00.12	01.05	
3	220kV Bawana Ckt-I	Dist. Prot Zone-I R-Φ, 186A&B	03.45	08.45	
4	220kV Bawana Ckt-II	Dist. Prot Zone-I B-Phase	04.25	05.00	
5	220kV Bawana Ckt-II	Supply failed	05.19	18.45	V-string insulator replaced on tower no.30
6	220kV Shalimar Bagh Ckt-II	Supply failed	07.58	08.00	

(f) 220kV Shalimar Bagh Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana Ckt-II	Dist. Prot Zone-I B-Φ, 186A&B	07.57	07.59	
2	33kV Hyderpur Ckt-I	86, 186	07.59	08.01	
3	33kV Wazirpur-I Ckt, SMB Khosla-II	U/F	10.37	11.12	
4	33kV Wazirpur-I Ckt, SMB Khosla-II	U/F	11.13	11.25	
5	33kV Wazirpur-II & III, & III, SGT Nagar	U/F	11.31	11.12.38	

(g) 220kV GOPALPUR Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mandola Ckt-I	Dist. Prot Zone-I 3-Φ TRIP. Fault loop L3-N. Dist. 2.7KM	05.03	08.32	Try to close at 05.59hrs. from Subzi Mandi end but did not hold
2	220kV Mandola Ckt-II	Dist. Prot Zone-I 3-Φ TRIP. Fault loop L2-N. Dist. 4.1KM	05.17	20.50	Try to close at 06.08hrs, 08.28hrs, 08.16hrs but did not hold
3	220kV Subzi Mandi Ckt-II	Made off	05.32	05.36	
4	220kV Subzi Mandi Ckt-I	Made off	06.05	06.10	
5	66kV Subzi Mandi Ckt-I, 66kV Jahangirpur Ckt-I&II	Made off	06.05	06.10	
6	66kV Jahangirpuri Ckt-I	Made off	08.48	08.52	Sparking on Y-Phase 220kV Mandola-I Ckt
7	66kV Jahangirpuri Ckt-II	Made off	08.48	08.58	Sparking on Y-Phase 220kV Mandola-I Ckt

(h) 220kV Wazirabad-II Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mandola Ckt-IV	Made Off	05.32	20.58	
2	66kV Shastri Park Ckt-I&II, 11kV Feeders (4NOS.)	U/F	05.55	06.55	
3	220kV Mandola Ckt-I	RXME-18, M-1, M-2, 3-Φ TRIP, General Trip, Zone-2, Fault Loop L1-N. Dist. 14.1KM	06.57	09.05	

**K. DETAILS OF TRIPPINGS OCCURRED ON 08/09.03.2008 IN DELHI SYSTEM**

(a) 220kV Pappankalan-I Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bamnauli Ckt-I&II	67NX, E/F, 186A&B, 186X	07.20	07.48	
2	220kV Bamnauli Ckt-I&II	Supply failed	07.51	09.30	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	07:00	08:00	210		
	08:00	09:00	190		

(b) 220kV Vasant kunj Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mehrauli Ckt-I	Supply failed	07.20	08.05	

Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	07.20	08.05	40		

(c) 220kV Kashmerigate Station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.
1	220kV SOW Ckt-I&II	Supply failed	01.04
2	220kV SOW Ckt-I&II	Supply failed	04.50
3	220kV SOW Ckt-I&II	Supply failed	07.02
	Time of tripping	Time of restoration	Load affected in MW
	01.00	02.00	18
	02.00	03.00	20
	03.00	04.00	15
	04.00	05.00	13
	05.00	06.00	12
	06.00	07.00	10
	07.00	08.00	21
	08.00	09.00	21

## (d) 220kV Naraina Sub-station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana Ckt-I & II	Supply failed	01.05	01.30	
2	220kV Bamnauli Ckt-I	Supply failed	06.30	09.39	
3	220kV Bamnauli Ckt-II	DIST PROT. AUTO RECLOSE, 86	06.42	09.39	

Load affected during the trippings			
	Time of tripping	Time of restoration	Load affected in MW
	01.05	02.00	25
	06.00	07.00	69
	07.00	08.00	71
	08.00	09.00	69
	09.00	09.39	70

## (e) 220kV Najafgarh Sub-station

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana Ckt-II	186, 186	23.25	17.24	
2	220kV Bawana Ckt-I	3-PHASE TRIP, 186, 186	23.44	09.18	
3	66kV Bodella Ckt-II	DIST. PROT. ZONE-3, 86X1	23.44	00.10	
4	220kV Bamnauli Ckt-I & II	Supply failed	01.05	10.05	

Load affected during the trippings			
	Time of tripping	Time of restoration	Load affected in MW
	01.05	02.00	160
	02.00	03.00	160
	03.00	04.00	160
	04.00	05.00	160
	05.00	06.00	190
	06.00	07.00	200
	07.00	08.00	320
	08.00	09.00	300
	09.00	10.00	260
	10.00	10.05	240

## (f) 400 kV Bamnauli Sub station:

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV Bawana Ckt-II	Dist Prot. Main-I, B-N-Z-1, Main-II, B-N-Z-1. Dist. 27.06KM	21.04		Auto Reclosed
2	400kV Bawana Ckt-II	Dist Prot Main-I & II, B-N-Z-1, Dist. 28.7KM	21.12		Auto Reclosed
3	400kV Bawana Ckt-II	Dist Prot. Main-I & II, C-N-Z-1	21.18		Auto Reclosed
4	400kV Bawana Ckt-I	Dist Prot Main-I & II, A-N-Z-1	21.18		Auto Reclosed
5	400kV Bawana Ckt-I	Dist Prot. Main-I & II, B-N-Z-1	21.20		Auto Reclosed
6	400kV Bawana Ckt-I	Dist Prot Main , ANZ1, Main-II, BNZ2, Aauto reclose lock out, 186A&B Both CB	21.27	09.43	
7	400kV Bawana Ckt-II	Dist Prot. Main-I, ABCNZ1, Main-II, ABCNZ1, Auto Reclose lock out, 186A& B Both CB	21.42	09.36	TRY TO CLOSE AT 00.34HRS. AND 00.36HRS. BUT DID NOT HOLD
8	400kV Ballabgarh Ckt-II	Dist Prot. Main-I, CNZ1, Main-II, CNZ-1, Auto Reclose Lock Out, 186A&B	00.36	10.25	TRY TO CLOSE AT 00.45HRS. BUT DID NOT HOLD
9	400kV Ballabgarh Ckt-I		00.50		Auto reclosed
10	400kV Ballabgarh Ckt-I		01.00		Auto reclosed
11	400kV Ballabgarh Ckt-I	CB NO. 152, 252. Dist Prot. Main-I, A-N-Z-1, Main-2, A-N-Z-I, Auto reclose lock out, 186A&B Both CB. Dist. 10.3KM.	01.06	09.25	TRY TO CLOSE AT 02.46HRS. BUT DID NOT HOLD
12	400/220KV 315MVA ICT-II, III & IV	Made off	01.15	09.28	
13	220kV Najafgarh Ckt-I & II	Made off	01.15	10.00	
14	220kV Pappankalan-II Ckt-I & II	Made off	01.15	01.32	
15	220kV Naraina Ckt-I& II	Made off	01.15	01.32	

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
16	220kV Pappankalan-II Ckt-I & II	Dist Prot. A-Phase, Auto Reclose Lockout, 186A&B	06.00		AUTO RECLOSED
17	220kV Pappankalan-II Ckt-I & II	Dist Prot. A-Ph. Auto Reclose Lockout, 186A&B. CB Pole discrepancy	06.04		AUTO RECLOSED
18	220kV Mehrauli Ckt-I	DIST. PROT. A-PHASE, AUTO RELOSE LOCK OUT 186A&B	06.28	06.50	
19	220kV Naraina Ckt-I	DIST. PROT. A-PHASE, AUTO RELOSE LOCK OUT 186A&B	06.28	09.40	
20	220kV Naraina Ckt-II	DIST. PROT. B-PHASE,	06.42	09.40	
21	220kV Mehrauli Ckt-I	DIST. PROT. C-PHASE, AUTO RELOSE LOCK OUT 186A&B	06.53	07.00	
22	220kV Mehrauli Ckt-II	Supply failed	07.18	07.45	
23	220kV Mehrauli Ckt-I	Supply failed	07.18	07.58	
24	220kV Pappankalan-II Ckt-I & II	MADE OFF	07.37	07.45	
25	220kV Mehrauli Ckt-I	DIST. PROT. B-PHASE, AUTO RECLOSED, LOCK OUT, 186A&B	07.59	11.03	
26	220kV Pappankalan-II Ckt-I & II	MADE OFF	08.00	09.30	

(g)

## 400 kV Bawana Sub station

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1.	400 kV Bamnauli Ckt-II	B-N-Z-1, MAIN-I, B-N-Z-1, MAIN-II	21.02	21.06	DIST. 6.9KM
2.	400 kV Bamnauli Ckt-II	B-N-Z-1, MAIN-I, B-N-Z-1, MAIN-II, 85LOX, DIST. 6.9KM	21.10	09.34	TRY TO CLOSE AT 21.27HRS., 21.41HRS., & 00.37HRS. BUT DID NOT HOLD
3.	400 kV Bamnauli Ckt-I	MAIN-I, MAIN-II, A-N-Z-1	21.18	09.41	TRY TO CLOSE AT 21.21HRS., 02.28HRS., 03.45HRS., 05.53HRS., & 08.57 BUT DID NOT HOLD
4	400kV Bahadurgarh Ckt		21.21		AUTO RECLOSED
5	400kV Bahadurgarh Ckt	CB AUTO TRIP, DIRECT TRIP RECEIVED, AUTO RECLOSE LOCK OUT, A-B-N-Z-1, MAIN-I DIST. 17KM, MAIN-II, A-B-C-Z-1 DIST. 21.36KM	21.24	10.20	TRIED AT 07.48HRS. FROM BAHADUR GARH END BUT DID NOT HOLD
6	400kV Hissar Ckt.	TIE CB AUTO TRIP, DIRECT TRIP RECEIVED, B-N-Z-1, MAIN-I	21.24	21.42	
7	400kV Hissar Ckt.	MAIN-I, B-C-N-Z1	22.08	00.10	
8	400kV Abdullapur Ckt-I	BOTH CB TRIP, MAIN-2, CARRIER SIGNAL RECEIVED, MAIN-I, A-B-C-Z-1, DIST. 703.5MTR. MAIN-2, B-N-Z-1. DIST. 7.405KM	22.46	22.53	
9	220kV Najafgarh Ckt-II	DIST. PROT. ZONE-I, 186. DIST. 3.22KM.	23.26	17.24	TRY TO CLOSE AT 09.18HRS. AND 11.11HRS. BUT DID NOT HOLD
10	400kV Mandola Ckt-I		23.29		AUTO RECLOSED
11	400kV Mandola Ckt-II	C-N-Z-I, MAIN-I&II, DIST. 17.6KM	23.40	23.46	
12	400kV Mandola Ckt-I	MAIN-II, C-N-Z-1	23.41	23.45	
13	220kV Najafgarh Ckt-I	DIST. PROT. ZONE-I, 86 DIST. 11KM	23.41	09.18	TRIED TO CLOSE AT 0.08 HRS. BUT DID NOT HOLD

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
14	400kV Mandola Ckt-II	CB NO. 1752 TRIPPED. CB NO. 1852 AUTO RECLOSED	23.57		AUTO RECLOSED CB NO. 1752 MADE ON AT 00.04HRS.
15	400kV Mandola Ckt-II	CB NO. 1752 TRIPPED. CB NO. 1852 DIST. 16.7KM. B-N-Z-1	00.14		AUTO RECLOSED.
16	400kV Mandola Ckt-I		00.16		AUTO RECLOSED
17	400kV Mandola Ckt-II	CB NO. 1852	00.17		AUTO RECLOSED
18	400kV Mandola Ckt-I		00.19		AUTO RECLOSED
19	400kV Mandola Ckt-II		00.20		AUTO RECLOSED
20	400kV Mandola Ckt-II		00.21		AUTO RECLOSED
21	400kV Mandola Ckt-I		00.23		AUTO RECLOSED
22	400kV Mandola Ckt-II	CB NO. 1852 TRIPPED ON C-N-Z-1. DIST. 23.3KM	00.24	01.49	
23	400kV Mandola Ckt-I	A-N-Z-1.AIDED TRIP, MAIN-I, MAIN-II DIST. 20.6KM . 21.1KM	00.24	02.06	TRY TO CLOSE AT 01.04HRS. BUT DID NOT HOLD. AGAIN TRIPPED ON DIST. PROT. DIST
24	400kV Mandola Ckt-II	A-C-N-Z-1 DIST. 20.1KM	01.49	09.10	
26	400kV Mandola Ckt-I	C-N-Z-1, AIDED TRIP	03.22	03.27	
27	400/220kV 315MVA ICT-III	OVER FLUX	04.41	09.16	
28	400kV Mandola Ckt-I	A-N-Z-2, MAIN-I&II	04.51	05.05	
29	400kV Hissar Ckt.	A-N-Z-1	05.20	05.29	
30	400kV Abdullapur Ckt-II	86X1, 2/59LIA	05.20	05.28	CVT DISAPPEARED. NO TRIPPING AT BAWANA END
31	400kV Mandola Ckt-I	A-N-Z-2	05.20	05.35	
32	400kV Abdullapur Ckt-I	MADE OFF	05.27	07.19	
33	400kV Hissar Ckt.	B-N-Z-1	05.30	05.32	Supply failed
34	400kV Hissar Ckt.	A-N-Z-1	05.34	05.37	
35	400/220kV 315MVA ICT-I	OVER FLUX	05.41	09.05	
36	400kV Hissar Ckt.	C-N-Z-1	05.49	05.51	TRY TO CLOSE AT 07.19HRS. FROM HISSAR END BUT DID NOT HOLD
37	400kV Hissar Ckt.	A-N-Z-1	05.53	08.31	
38	220kV Rohini Ckt-II	DIST. PROT. ZONE-I, A-PHASE	06.36	06.43	
39	220kV Rohini Ckt-I	DIST. PROT. ZONE-I, A-PHASE	06.39	06.43	
40	220kV Rohini Ckt-II	DIST. PROT. ZONE-I, C-PHASE	06.53	09.03	
41	220kV Narela Ckt-I	BG-I DIST. 2.04KM	06.56	09.30	
42	220kV Rohini Ckt-I	DIST. PROT. ZONE-I, A-PHASE	06.58	09.03	
43	400kV Abdullapur Ckt-II	A-N-Z-1.	07.03	09.08	CVT OF ALL 400/220kV FEEDERS DISAPPEARED. ABDULLAPUR Ckt-II TRIED AT 07.10HRS. AND 08.05HRS FROM ABDULLAPUR END BUT DID NOT HOLD.
44	220/66kV 100MVA TX	Supply failed	07.03	08.54	
45	400kV Mandola Ckt-I	INTER TRIPPING	07.07	08.36	
46	400/220kV 315MVA ICT-II	MADE OFF	07.23	08.33	
47	400/220kV 315MVA ICT-III	MADE OFF	07.23	09.16	
48	400kV Abdullapur Ckt-I	Supply failed	07.23	09.17	TRIED AT 07.30HRS., 7.35HRS. & 8.08HRS. FROM ABDULLAPUR END BUT DID NOT HOLD
<b>Load affected during the trippings</b>					
	Time of tripping	Time of restoration	Load affected in MW		
	07.03	08.00	16		
	08.00	09.00	18		

(h)

## 220kV Gopalpur Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Mandola Ckt-I	Supply failed	01.07	02.50	
02	220kV Mandola Ckt-II	Supply failed	01.07	02.50	
03	33kV Civil Lines, DIFR, Wazirabad-I & II	MADE OFF	02.55	02.58	
04	66kV Jahangirpuri Ckt-I&II, 33kV Azadpur Ckt-I&II	MADE OFF	02.55	09.45	
05	220kV Subzi Mandi Ckt-I&II	MADE OFF	02.55	09.48	
06	220kV Mandola Ckt-I&II	Supply failed	04.59	06.14	
07	220kV Mandola Ckt-I & II	Supply failed	07.04	09.02	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	01.00	02.00	120		
	02.00	03.00	90		
	03.00	04.00	90		
	04.00	05.00	90		
	05.00	06.00	130		
	06.00	07.00	170		
	07.00	08.00	175		
	08.00	09.00	160		
	09.00	10.00	180		

(i)

## 220kV Mehrauli Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bamnauli Ckt-I	DIST. PROT. ZONE-I, C-PHASE DIST. 6.432KM	06.32	06.47	
2	220kV Bamnauli Ckt-I	DIST. PROT. ZONE-I, C-PHASE DIST. 8.321KM	06.52	07.00	
3	220kV Bamnauli Ckt-I	DIST. PROT. ZONE-I, 3-PHASE TRIP, DIST. 7.386KM	07.18	07.56	
4	220kV Bamnauli Ckt-II	186	07.18	07.34	
5	220kV BTPS Ckt-I	WITHOUT INDICATION	07.18	07.27	
6	220kV Bamnauli Ckt-II	DIST. PROT. ZONE-I, B-PHASE., 186. DIST. 9.505KM	07.53	11.10	
7	220kV Bamnauli Ckt-I	DIST. PROT. ZONE-I, 3-PHASE TRIP, DIST. 7.247KM	08.01	11.10	
8	220kV BTPS Ckt-I	Supply failed	08.01	08.07	

(j)

## 220kV SOW Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mandola Ckt-I	DIST. PROT. ZONE-2, GENERAL TRIP, 3-PHASE TRIP. DIST. 14.1KM	00.20	18.08	TRIED AT 10.33 HRS. BUT DID NO HOLD. Y-PHASE DISC INSULATOR STRING BROKEN AT TOWER NO. 14
2	220kV Mandola Ckt-II	Supply failed	01.05	18.35	TRIED AT 3.16HRS., 4.50HRS. & 08.58 HRS.. Y-PHASE DISC INSULATOR STRING FLASHED & BROKEN AT TOWER NO. 11
3	220kV Mandola Ckt-III	Supply failed	01.05	18.36	TRIED AT 03.16HRS. 4.50HRS. & 08.58HRS. STRING FLASHED & BROKEN AT TOWER NO. 24
4	220kV Mandola Ckt-IV	Supply failed	01.05	03.12	
5	220kV Geeta Colony Ckt-I&II	MADE OFF	03.10	06.18	
6	220kV Kashmere Gate Ckt-I&II	MADE OFF	03.10	08.54	
7	220/66kV 100MVA Tx.II&III	MADE OFF	03.10	03.25	
8	220kV Mandola Ckt-IV	Supply failed	04.55	06.15	
9	66kV Gonda Ckt-I&II	MADE OFF	06.18	08.37	
10	220kV Mandola Ckt-IV	Supply failed	07.05	08.53	
11	220/66kV 100MVA TX.II&III	MADE OFF	07.45	11.25	

Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	01.05	02.00	67		
	02.00	03.00	80		
	03.00	04.00	82		
	04.00	05.00	77		
	05.00	06.00	77		
	06.00	07.00	97		
	07.00	08.00	210		
	08.00	09.00	137		
	09.00	10.00	150		
	10.00	11.00	102		

(k) 220kV Kanjhawala Sub-station

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	66kV I/C	86, 295C, 51N AND BACK UP PROTECTION	22.25	09.35	
02	66kV Clear Water Bawana	86T, 186, E/F	22.25	01.02	
03	66kV Pooth Khurd	86T, 186, E/F	23.20	10.58	
04	220kV Bawana – Najafgarh Ckt-I	Supply failed	23.41	09.35	

Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	01:00	02:00	10		
	02:00	03:00	10		
	03:00	04:00	12		
	04:00	05:00	15		
	05:00	06:00	19		
	06:00	07:00	22		
	07:00	08:00	20		
	08:00	09:00	20		
	09:00	10:00	18		

(l) 220kV Narela Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Mandola Ckt-I&II	Supply failed	01.05	10.12	
2	66kV Badli Ckt-I&II	Supply failed	01.05	10.05	
3	66kV Jahangirpuri Ckt-I&II	Supply failed	01.05	07.25	
4	66kV Jahangirpuri Ckt-I&II	Supply failed	01.05	10.05	
5	All 11kV FEEDERS	Supply failed	01.05	05.35	
6	66/33kV PR. TR.	Supply failed	01.05	01.20	
7	220kV Rohtak Road Ckt-I&II	MADE OFF	01.50	02.25	
8	220kV Rohtak Road Ckt-I	A-B-C-Z-1, 30G, 30A, 86	06.55	07.42	
9	220kV Panipat Ckt-I	B-N-Z-1, 30G	08.04	10.13	
10	220kV Rohtak Road Ckt-I	A-B-C-Z-1	08.05	09.50	
11	220kV Rohtak Road Ckt-II	A-B-C-Z-1, 186	08.10	09.47	
12	220kV Bawana Ckt-I&II	MADE OFF	10.13		
13	Group 'Y'	U/F	10.22	10.47	

Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW (Narela)	Load affected in MW (Rohtak Rd.)	
	01.00	02.00	75	40	
	02.00	03.00	122	81	
	03.00	04.00	107	77	
	04.00	05.00	99	78	
	05.00	06.00	133	70	
	06.00	07.00	156	83	
	07.00	08.00	230	91	
	08.00	09.00	222	106	
	09.00	10.00	122	120	
	10.00	11.00	134	134	

(m) 220kV Shalimarbagh Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Bawana Ckt-I&II	Supply failed	05.17	05.25	
02	220kV Bawana Ckt-I&II	Supply failed	07.02	08.50	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	05.17	06.00	9		
	07.00	08.00	114		
	08.00	09.00	30		

(n) 220kV Rohini Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana Ckt-I&II	Supply failed	05.20	05.28	
2	220/66kV 100MVA Tx-4	OVER FLUX	05.50	09.15	
3	220kV Bawana Ckt-I&II	Supply failed	06.35	06.42	
4	220kV Bawana Ckt-II	Supply failed	06.53	09.05	
5	220kV Bawana Ckt-I	TRIPPED WITHOUT INDICATION	06.56	09.05	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	05:20	06:00	109		
	06.00	07.00	154		
	07.00	08.00	173		
	08.00	09.00	202		
	09.00	09.05	170		

(o) 220kV Geeta Colony Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV SOW Ckt-I&II	Supply failed	01.04	06.20	
2	220kV SOW Ckt-I&II	Supply failed	07.04	08.52	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	01:00	02:00	21		
	02:00	03:00	20		
	03:00	04:00	19		
	04:00	05:00	19		
	05:00	06:00	20		
	06:00	06:20	29		
	07:00	08:00	45		
	08:00	08:52	49		

(p) 220kV Subzimandi Sub-station

S. NO	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV SOW Ckt-I&II	Supply failed	01.04	06.20	
2	220kV SOW Ckt-I&II	Supply failed	07.04	08.52	
	220kV Gopalpur Ckt-I &II	Supply failed	01.07	09.00	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	01.00	02.00	40		
	02.00	03.00	30		
	03.00	04.00	30		
	04.00	05.00	33		
	05.00	06.00	35		
	06.00	06.20	45		
	07.04	08.00	70		
	08.00	08.52	70		



**L. DETAILS OF TRIPPINGS OCCURRED ON 19.03.2008 IN DELHI SYSTEM**

There was a grid incident occurred in Delhi following the trippings of generating units at BTPS. The details of trippings/operations carried out at various Sub-stations during the incident are given hereunder :

(a) 220kV BTPS-station

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Okhla Ckt-I	186, 86X1, 86X2	11.29	10.52 20.03.08	Bus bar protection, 96A, 96B, 96C, 96D
02	220kV Okhla Ckt-II	186, 86X1, 86X2	11.34	11.56	Bus bar protection, 96F, 96G, 96H, 96K
03	220kV Ballabgarh Ckt-I	186, 86X1, 86X2	11.29	11.53	Bus bar protection, 96A, 96B, 96C, 96D
04	220kV Ballabgarh Ckt-II	186, 86X1, 86X2	11.34	11.41 (220kV Bus-II charged)	Bus bar protection, 96F, 96G, 96H, 96K
05	220kV Mehrauli Ckt-I	186, 86X1, 86X2	11.29	00.51 20.03.08 (On no load)	Bus bar protection, 96A, 96B, 96C, 96D
06	220kV Mehrauli Ckt-II	186, 86X1, 86X2	11.34	00.52 20.03.08 (On no load)	Bus bar protection, 96F, 96G, 96H, 96K
07	220kV Sarita Vihar Ckt-I	186, 86X1, 86X2	11.29	17.06	Bus bar protection, 96A, 96B, 96C, 96D
08	220kV Sarita Vihar Ckt-II	186, 86X1, 86X2	11.34	17.10	Bus bar protection, 96F, 96G, 96H, 96K
09	220kV Alwar Ckt	186, 86X1, 86X2	11.29	11.50	Bus bar protection, 96A, 96B, 96C, 96D
10	220kV Noida Ckt	186, 86X1, 86X2	11.34	19.40	Bus bar protection, 96F, 96G, 96H, 96K

Note : 220kV lines Okhla Ckt-I, 220kV Ballabgarh Ckt-I, 220kV Sarita Vihar Ckt-I, 220kV Mehrauli Ckt-I and 220kV Alwar line are connected with 220kV Bus-I, which tripped at 11.29hrs. The relays actuated are 96A, 96B, 96C & 96D.

220kV lines Okhla Ckt-II, 220kV Ballabgarh Ckt-II, 220kV Sarita Vihar Ckt-II, 220kV Mehrauli Ckt-II and 220kV Noida line are connected with 220kV Bus-II, which tripped at 11.34hrs. The relays actuated are 96F, 96G, 96H & 96K.

220kV Bus-I was energized through bus coupler at 11.46hrs.

At 17.25hrs. 220kV Bus-II became dead while testing was in progress.

At 17.30hrs. 220kV Ballabgarh Ckt-II got charged and 220kV Bus-II got energized.

At 17.55hrs. 220kV BTPS-Sarita Vihar Ckt-II got charged.

At 18.04hrs. 220kV BTPS-Okhla Ckt-II got charged.

At 19.33hrs. 220kV BTPS-Okhla Ckt-II got charged.

(b) 220kV Mehrauli Sub-station

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Mehrauli – BTPS Ckt-I	186 (U/F)	11.29	10.37 20.03.08	At BTPS end bus bar Prot, 96A,96B,96C,96D
02	220kV Mehrauli – BTPS Ckt-II	(U/F)	11.34	10.39 20.03.08	The Ckt. was made off at 10.58Hrs. to change over the load to Bamnauli Ckts. to control loading of 220kV BTPS-Ballabgarh Ckts.
03	220kV Mehrauli – Bamnauli Ckt-I	186, 3-phase trip (U/F)	11.29	11.43	
04	220kV Mehrauli- Bamnauli Ckt-II	186, 3-phase trip (U/F)	11.29	11.37	
05	66kV Malviya Nagar Ckt-I&II	Made off (U/F)	12.00	12.10	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.25	11.43	234		

## (c) 220kV Vasantkunj Sub-station

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV Mehrauli Ckt-I	Supply failed	11.30	11.58	
02	220kV Mehrauli Ckt-II	Supply failed	11.25	11.40	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.30	11.40	115		
	11.40	11.58	65		

## (d) 220kV Gazipur Sub-station

S. No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
01	220kV BTPS-Noida Ckt	Supply failed	11.36		
02	All 66kV Feeders	Made off	11.37		
03	66kV Kondli Ckt-I & 11kV feeders		11.37	13.02	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.36	13.02	56		
	13.02		52		

## (e) 220kV Sarita Vihar Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	66kV Mathura Road Ckt-I & II & 11kV Feeders	U/F	11.36	12.32	
2	220kV Pragati Ckt-I & II	Supply failed	11.52	12.30	
3	220kV BTPS Ckt-I & II	Supply failed	11.52		
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.36	12.32	80		

## (f) 220kV Parkstreet Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	33kV Parshad Nagar, 33kV Motia Khan Ckt-I&II	U/F	11.35	11.38	
2	33kV Shankar Road, 33kV Parshad Nagar, 33kV Motia Khan Ckt-I&II	U/F	11.40	11.48	
3	66kV Shastri Park Ckt-I & II	U/F	11.48	11.58	
4	33kV Faiz Road Ckt-II	U/F	11.48	11.58	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.35	11.38	35		
	11.40	11.48	41		
	11.48	11.58	37		

## (g) 220kV Okhla Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV BTPS Ckt-I	86T, Dist. Prot. Zone-3	11.29	10.52 20.03.08	At BTPS end bus bar protection, 96A,96B,96C,96D
2	220kV BTPS Ckt-II	186, 86X1, 86X2	11.34	11.56	At BTPS end bus bar protection, 96F,96G,96H,96K
3	66kV Malviya Nagar Ckt-I&II&III	Made off	12.55	14.00	
4	66kV Okhla Phase-I Ckt-I & II	Made off	12.55	14.00	
5	33kV Nehru Place Ckt-I ,II, III & IV, 33kV Tuglakabad, 33kV Balaji Ckt-I&II, 33kV East of Kailash, 33kV Alaknanda Ckt-I&II	Made off	12.55	14.00	

Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.29	12.10	260		
	12.10	12.55	200		
	12.55	14.00	120		

(h) 220kV Patparganj Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	X-Group 33kV Geeta Colony, G. Angad Nagar I&II, Karkadooma I&II	U/F	11.37	12.30	
2	Y-Group 66kV GH-I, 33kV Preet Vihar, 33kV Shakarapur	U/F	11.37	12.12	
3	220kV Bus Coupler	Made off	11.58	12.03	
4	220kV IP Ckt-I	Made on		12.01	220kV Patparganj- Geeta Colony Ckt-I got extended upto IP to synchronize Mandola system
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.37	12.12	87		
	12.12	12.30	44		

(i) 220kV Pragati (IP Extn.) Sub station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Pragati S/stn-Pragati-II	Load Disappeared	11.40		
2	220kV Sarita Vihar Ckt-I&II	Made off	11.53	12.26	

(j) 220kV RPH station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	Bay No. 1,2,5 & 6	U/F	11.35	11.48	
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.35	11.48	3		

(j) 220kV IP station

S.No	Name of the feeder/ Transformer tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	Bay No. 24 & 30	U/F	11.45	12.05	
2	220kV Patparganj Ckt-I	Made off	11.55	12.03	The island formed with IP, RPH, GT, Pragati generation got synchronized with Mandola system through 220kV- Wazirabad-Geeta Colony-Patparganj-IP link
Load affected during the trippings					
	Time of tripping	Time of restoration	Load affected in MW		
	11.35	12.05	23		

System configuration during the incident.

220kV Patparganj-Geeta Colony Ckt-I & II were kept opened at Patparganj. IP, RPH, GT & Pragati units were running in synchronism with BTPS supply. The load generation position of the system from Patparganj to BTPS had been as under :

Sub-Station	Load in MW	Generation position at 11.25hrs. in MW
Patparganj	157	--
IP	149	121
RPH	33	100
GT	60	201
Pragati	--	94
Sarita Vihar	53	--
Parkstreet	167	--
Total	619	516

The details of generation loss occurred in the system during the incident are as under :

Station	Unit No.	Generation in MW	Time of synchronization
BTPS	1	95	00.28hrs. on 20.03.2008
	2	90	14.31hrs.
	3	95	14.58hrs.
	4	Under S/D	
	5	210	19.45hrs.
Pragati	2	94	Tripped at 05.45hrs. and synchronized at 12.05hrs.

During the incident the IP, RPH, GT and Pragati station islanded from the grid following the tripping of all lines from BTPS. However, IP, RPH and GT station survived with the formation of sub-island and continued to feed VVIP and emergency load.

At 17.26hrs. again at BTPS Bus-II protection operated affecting 220kV Sarita Vihar Ckt-II, 220kV Okhla Ckt-II and 220kV Ballabgarh Ckt-II (220kV Mehrauli Ckt-I&II and 220kV Noida Ckt were off) along with BTPS Unit –II (synchronized at 19.45hrs.). The load of the system was managed by doing rotational load shedding in Sarita vihar and Okhla area during the time.