



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

2016-17

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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.

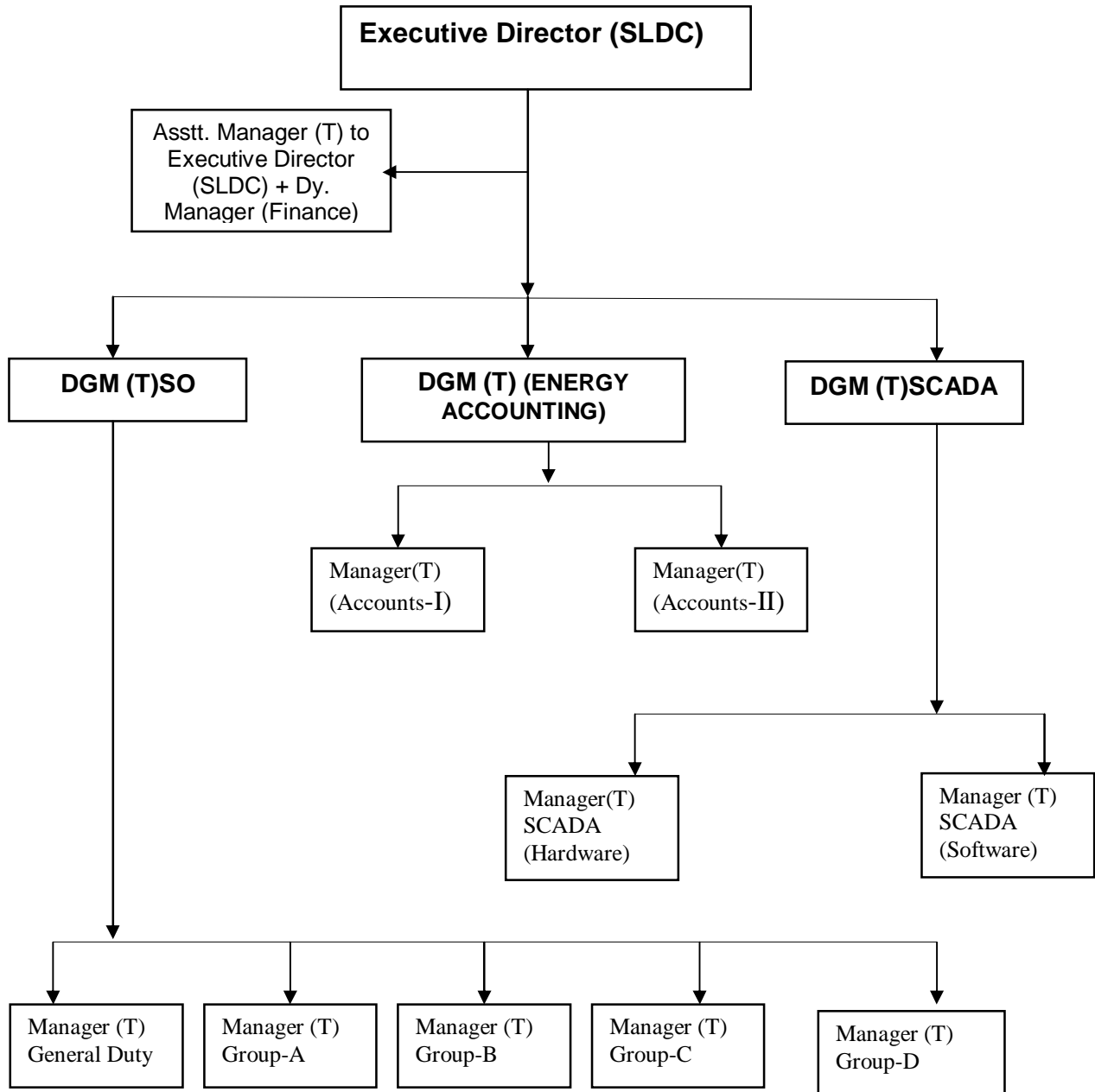
After the enactment of Electricity Act 2003, a new department under the name and style of **State Load Despatch Centre (SLDC)** under Delhi Transco Limited was created, as an Apex body to ensure integrated operation of the power system in Delhi. Earlier the department was part of O&M Department of Delhi 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 Reliability, Security and Economy on sound commercial principles.

2 LICENSEES OPERATING IN DELHI POWER SYSTEM

- | | | | |
|----|---|---|---------------------------------------|
| 1) | DELHI TRANSCO LTD.(DTL) | : | TRANSMISSION LICENSEE
(STU, DELHI) |
| 2) | INDRAPRASTHA POWER GENERATING
COMPANY LTD. (IPGCL) | : | GENERATING UTILITY |
| 3) | PRAGATI POWER CORPORATION LTD.
(PPCL) | : | GENERATING UTILITY |
| 4) | BSES RAJDHANI POWER LTD.
(BRPL) | : | DISTRIBUTION LICENSEE |
| 5) | BSES YAMUNA POWER LTD.
(BYPL) | : | DISTRIBUTION LICENSEE |
| 6) | TATA POWER DELHI DISTRIBUTION LTD.
(TPDDL) | : | DISTRIBUTION LICENSEE |
| 7) | NEW DELHI MUNICIPAL COUNCIL
(NDMC) | : | DEEMED DISTRIBUTION
LICENSEE |
| 8) | MILITARY ENGINEERING SERVICE
(MES) | : | DEEMED DISTRIBUTION
LICENSEE |

3 ORGANISATIONAL SETUP OF SLDC DEPARTMENT



4 Functions of various circles of SLDC

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

4.1 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, exercises 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.

4.2 Supervisory Control and Data Acquisition (SCADA)

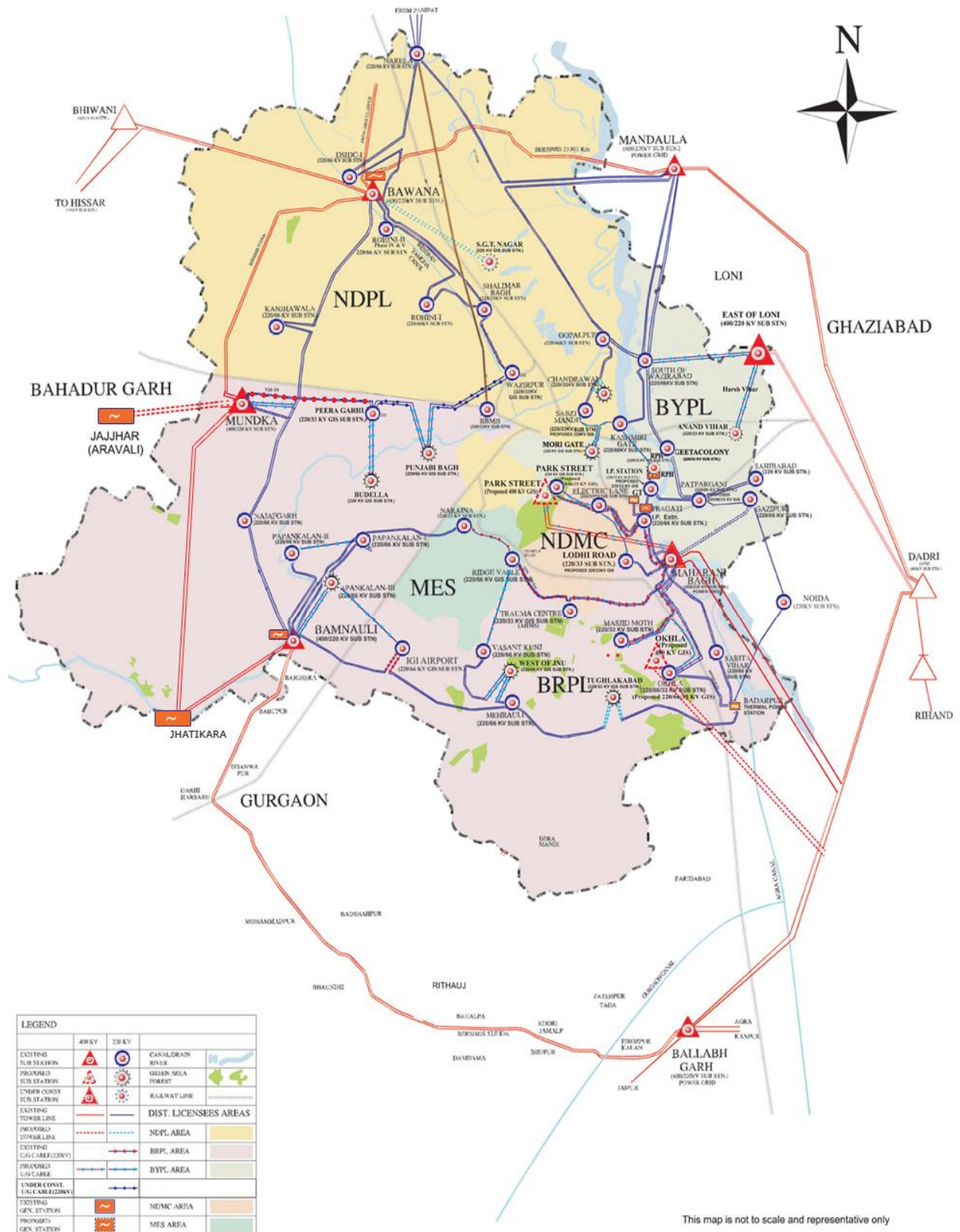
SLDC has the state of art Load despatch centre having SCADA (Supervisor Control And Data Acquisition System) for retrieving information from generating stations and grid sub stations consisting of analog data (like Mega Watt, Voltage, Current, MVar) and digital status of various elements (like Circuit 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 divisions. The software sub division of SCADA has developed in-house softwares for various activities.

4.3 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 also to prepare and issue weekly Deviation Settlement Mechanism (DSM) Accounts for Interstate utilities. At present, this circle's responsibilities are being discharged by System Operation circle.

4.4 Single Line Diagram of Delhi Power System



5 MAJOR ACTIVITIES OF SLDC DURING 2016-17

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. Delhi State Electricity Regulatory Commission has subsequently come out with Delhi Grid code (DGC) notified in official Gezette on 22.04.2008. Delhi Grid Code envisages Grid Coordination Committee whose responsibilities are :-

The Grid Coordination Committee shall be responsible for the following matters namely -

- (a) facilitating the implementation of these Regulations and the procedures developed under the provisions of these Regulations;
- (b) assessing and recommending remedial measures for issues that might arise during the course of implementation of provisions of these Regulations and the procedures developed under the provisions of these Regulations;
- (c) review of the DGC, in accordance with the provisions of the Act and these Regulations;
- (d) analyse any major grid disturbance after its occurrence,
- (e) examining problems raised by the Users, and
- (f) investigate in case any Beneficiary is indulging in unfair gaming or collusion after getting reported from SLDC.
- (g) review of the complete statement of the State UI (now DSM) and the State Reactive Energy account tabled by the SLDC through its Commercial Committee (a Sub-committee of GCC); and
- (h) such other matters as may be directed by the Commission from time to time.

Deputy General Manager (System Operation) is the Convener of the GCC. GCC further formed various Sub-Committees whose responsibilities are detailed hereunder:-

- a) **Operation Co-Ordination Sub-Committee (OCC)**
- b) **Commercial Sub-Committee (CC)**
- c) **Protection Sub-Committee (PC)**
- d) **System Study Sub-Committee**

5.1 OPERATION CO-ORDINATION SUB-COMMITTEE (OCC)

Functions and Responsibilities:

Operation Co-ordination Committee (OCC) is responsible for

- Settle all issues related to operation of the Delhi / Regional grid viz. reviewing the schedule v/s. actual generation of various power stations drawn up in the previous month;
- estimating availability of power and energy from each power station and demand of each licensee for the current and next month;
- drawing up coordinated maintenance schedule for Intrastate generating units and Intrastate transmission network;
- reviewing operational discipline and its norms to be observed by constituents;
- reviewing the operation of Automatic Under-Frequency Relays;
- discussing system occurrences, if any, during the previous month ;
- reviewing the status of implementation of the recommendations of the Inquiry Committees;
- monitoring / reviewing violation of provisions of IEGC/DGC related to grid operation;
- discussing / reviewing measures for ensuring economic grid operation including optimization of energy transfer with other constituents;
- examining possibility of optimizing intra state energy exchanges;
- discussing optimization of energy transfer with other states; and
- any other matter referred by the GCC.

5.2 COMMERCIAL SUB-COMMITTEE (CC):

Functions and Responsibilities :

Commercial Sub-Committee(CC) is responsible for

- all commercial related issues viz. energy accounting ;
- schemes required for inclusion in the Bulk Power Supply Agreements ;
- requirement of power from the new projects ;
- installation of special energy meters and its cost sharing, etc.;
- metering aspects;
- reviewing of the payments towards UI (now DSM) charges ;
- treatment of transmission losses;
- commercial declaration of lines / substation and Generating units;
- commercial issues in intra state exchange of power ;
- issues concerning settlement of payments among constituents, if any, etc. and ;
- any other matter referred by the GCC.

Auditing Commercial Committee shall audit the State Energy Accounts, Intra State UI Accounts and Inter discom Energy Transfer Account & Reactive Pool Accounts.

5.3 PROTECTION SUB-COMMITTEE (PC)

Functions and Responsibilities:

Protection Sub-Committee (PC) is responsible for

- all power system protection related issues viz. analysis of system disturbances in the state;
- review of protective relaying schemes ;
- relay co-ordination ;
- islanding schemes;
- automatic under frequency load shedding schemes;
- review of the implementation of recommendations made by the Inquiry Committee of the grid disturbance in the state / region concerning the above matters, etc.;
- and any other matter referred by the GCC.

5.4 SYSTEM STUDY SUB-COMMITTEE:

Functions and Responsibilities

System Study Sub-Committee entrusted with the work to carry out following system studies

- Studies for assessment of the quantum of capacitors required in the state taking into account the expected additions in the generation and transmission systems and the low voltage conditions in the system. The study shall be correlated with that of capacitor requirement study of being carried out at Regional level at NRPC.
- Studies for review of area wise reactive compensation requirement
- Operational load flow studies as & when required, for peak conditions off peak conditions etc.
- Short-circuit studies as and when required.
- Transient stability studies for major events like grid disturbances or other issues periodically or as and when requested by the constituent(s).
- System studies related to transmission constraints.
- Studies specific to high / low voltage conditions with specific reference to reactors or capacitors operation / requirement.
- Identification of requirement of reactors as and when required
- Co-relation of protection related issues from Studies as and when required
- To draw out the contingency plan of Delhi Power System.
- Any other technical study referred by the GCC.

The above said Sub-Committees meet periodically to transact business as envisaged in their formation.

The Apex Committee, Grid Coordination met twice during the year. The details of various decisions taken in the meeting are as under :-

S. No.	Date of meeting	Discussions and Decision on the issue(s)
1	26.04.2016	<p>14th meeting of the Grid Coordination Committee held on 26.04.2016 at 10.30hrs at Hotel Park Plaza, CBD, Shahdra, Near Metro Mall Karkardooma, Delhi-110095. The discussions and decisions taken in the meeting are as under:-</p> <ol style="list-style-type: none"> 1)GCC discussed the status of Hot Reserve of the Transformers. 2) GCC discussed the State-of Art- Load Management Scheme being implemented by Discoms and advised all discoms to expedite the work at the earliest. 3) GCC discussed the outstanding dues owed by some Distribution Licensees and advised to pay at least current dues of Generating and Transmission Coampanies. It also discussed the power regulations on BYPL and advised BYPL to take necessary steps. 4)GCC discussed the status of implementation of recommendations of Expert Committee on Grid Disturbances occurred on 30.07.2012 and 31.07.2012. 5)GCC reviewed the various system improvements works being undertaken by Transmissin and Distribution Companie for ensuring reliable power supply to Delhi. 6)GCC also discussed the revival programme of various elements under outage and Capacitor Installation Plan. GCC also discussed the high under drawal of reactive energy by Delhi system during the winter months. It was decided to constitute a group comprising representatives from SLDC, DTL, GENCOs and Discoms to look into the issue. 7)GCC discussed the replacement programme of 220kV Narela – Rohtak Road Ckt-I & II. 8) GCC reviwed the position of non usages of 33/66kV bays from DTL allocated to various Discoms. It also identified the grids having single source of supply. GCC advised discoms to make arrangements to give second feed to these grids. It also reviewed the position of various elements lying under outage and advised concerned utilities to make efforts for revival of the same.

S. No.	Date of meeting	Discussions and Decision on the issue(s)
2	21.09.2016	<p>15th meeting of the Grid Coordination Committee held on 21.09.2016 at 10.30hrs at NRPC, Katwaria Sarai, New Delhi-110016. The discussions and decisions taken in the meeting are as under:-</p> <ol style="list-style-type: none"> 1)GCC discussed the status of Hot Reserve of the Transformers in DTL. 2) GCC discussed the State-of Art- Load Management Scheme being implemented by Discoms and advised all discoms to adhere the timeline for implementation of ADMS. It further advised to provide the details of feeders to SLDC which have been incorporated in the scheme before implementation of ADMS as per the provisions of the Grid Code. 3) GCC discussed the outstanding dues owed by some Distribution Licensees. It advised all utilities to pay the dues to the Transmission and Generating Utilities to carry out their day to day operations and expansion projects to ensure the stable and reliable power supply to the consumers of the Delhi. 4) GCC discussed the status of implementation of recommendations of Expert Committee on Grid Disturbances occurred on 30.07.2012 and 31.07.2012. 5)GCC reviewed the various system improvements works being undertaken by Transmissin and Distribution Companie for ensuring reliable power supply to Delhi. 6)GCC reviewed the Capacitor Installation Plan. It also suggested the measures to curb injection of reactive power to the grid during high voltage conditions especially during winter nights. 7) 7)GCC discussed the replacement programme of 220kV Narela – Rohtak Road Ckt-I & II 8) GCC reviwed the position of non usages of 33/66kV bays from DTL allocated to various Discoms. It also identified the grids having single source of supply. GCC advised discoms to make arrangements to give second feed to these grids. It also reviewed the position of various elements lying under outage and advised concerned utilities to make efforts for revival of the same. 9) GCC also discussed various commercial issues pertaining to different Stakeholders and advised corrective measures.

S. No.	Date of meeting	Discussions and Decision on the issue(s)
3	18.01.2017	<p>16th meeting of the Grid Coordination Committee (GCC) held on 18.01.2017 at 10.30hrs at Eros Hotel, American Plaza, Nehru Place, New Delhi-110019. The discussions and decisions taken in the meeting are as under:-</p> <p>1)GCC discussed the status of Hot Reserve of the Transformers in DTL.</p> <p>2) GCC reviewed the position of implementation of Automatic Demand Management Scheme and advised the utilities to adhere the timelines and implement the schemes as per the provisions of Indian Electricity Grid Code.</p> <p>3)GCC reviewed the position of outstanding dues of Transmission and Generating Companies payable by various Distribution Licensees. It reiterated its stand and advised that all the utilities should pay the dues to the Transmission and Generating utilities to carry out their day to day operations and establishment of their new projects to ensure quality and reliable power supply to the consumers of Delhi.</p> <p>4) GCC discussed the status of implementation of recommendations of Expert Committee on Grid Disturbances occurred on 30.07.2012 and 31.07.2012.</p> <p>5)SLDC presented the operational performance of power system of Delhi since last meeting. It also presented the anticipated power supply position of Delhi for ensuing summer months. All Distribution Companies assured GCC that there would not be any shortage of power during summer months.</p> <p>6) GCC reviewed the various system improvements works being undertaken by Transmission and Distribution Companies for ensuring reliable power supply to Delhi.</p> <p>7)GCC discussed the capacitors installation plan by various Distribution Licensees. It also reviewed the position of utilized 66/33kV bays allocated to various Distribution Licensees. It also discussed the various issues raised by different Distribution Licensees and advised corrective measures.</p> <p>8) GCC discussed the operation of Grid during and high voltage conditions and reviewed the corrective measures initiated by various Stateholders to curb high voltage and injection of MVAR to the Grid during high voltage conditions.</p> <p>9) GCC also discussed the various commercial issues pertaining to different utilities in Delhi and suggested corrective measures.</p>

Apart from the above, various other meetings were held in Delhi to discuss and decide various issues as under :-

S. No.	Date of meeting	Discussions and Decision on the issue(s)
1	14.10.2016	The meeting was held regarding scheduling of power during November 2016 to March 2017.
2	18.10.2016	The meeting was held to resolve the issues relating to Short Term Intrastate Open Access.
3	10.01.2017	The meeting was held to resolve Scheduling issue of M/s Delhi MSW solutions Ltd.
4	12.01.2017 & 27.01.2017	The meeting was held to discuss preparation of Deviation Settlement Accounts at Intrastate level. Various issues related to DSM were deliberated in the meeting.
5	18.01.2017	The meeting was held to resolve accounting issue of 33kV Bhikaji Cama feeder emanating from 220kV Trauma Centre S.Stn of DTL. The long pending issue was settled.
6	09.02.2017	The meeting was held to discuss the steps being undertaken and to be initiated to curb high voltage conditions of the Grid during winter nights. Various steps being taken to curb high voltage were reviewed.
7	10.02.2017	The meeting was held to discuss System Studies carried out in coordination with Distribution Licensees and Generating Stations within Delhi.
8	23.02.2017	The meeting was held to discuss the proposal of TPDDL regarding optimization of Power Purchase Cost.
9	27.03.2017	The meeting was held to resolve various issues related to East Delhi Waste to Energy Plant.

6 SALIENT FEATURES OF DELHI POWER SYSTEM

Sr. No.	Features	2015-16	2016-17
1	Effective Generation Capacity within Delhi in MW		
	Rithala	94.2	94.2
	Rajghat Power House	135	135
	Gas Turbine	270	270
	Pragati Stage-I	330	330
	Badapur Thermal Power Station	705	705
	Bawana CCGT	1371	1371
	Timarpur Okhla Waste Management Ltd	16	16
	Delhi Municipal Solid Waste Management Ltd.	0	24
	East Delhi Waste Processing Company Ltd.	0	12
	Total	2922	2957
2	Maximum Unrestricted Demand (MW)	5846	6342
	Date	19.06.15	01.07.16
	Time	15:39:51	15:10:35
3	Peak Demand met (MW)	5846	6261
	Date	19.06.15	01.07.16
	Time	15:39:51	15:10:35
4	Availability (MW)	5648	6080
5	Shortage (-) / Surplus (+) in MW	(-)198	(-)181
6	Percentage Shortage (-) / Surplus (+)	(-)3.39	(-)2.89
7	Maximum Energy Consumption in a day (Mus)	119.098	130.580
8	Energy Consumed during the year	29565	30790
9	Load Shedding in Mus		
A)	Due to Grid Restrictions		
i)	Under Frequency Relay Operations	0.022	0.740
ii)	Load Shedding by		
	TPDDL	2.205	0.773
	BRPL	11.057	4.597
	BYPL	0.640	0.388
	NDMC	0.056	0.000
	MES	0.000	0.000
iii)	Due to Transmission Constraints in Central Sector System	0.597	0.164
	Total due to Grid Restriction	14.577	6.662
B)	Due to Constraints in System		
	DTL	10.596	9.801
	TPDDL	3.695	2.225
	BRPL	9.579	9.574
	BYPL	2.798	1.384
	NDMC	0.001	0.041
	MES	0.000	0.000
	Other Agencies	0.801	1.814
	Total	27.471	24.839
11	Total Load Shedding in MUs	42.048	31.501
12	Load shedding in percentage of Energy Consumption	0.142	0.102

7. PERFORMANCE OF GENERATING STATIONS WITHIN DELHI DURING YEAR 2016-17

Sr. No	Power Station	Effective Capacity (MW)	Gross Generation in MUs	Ex-bus Generation In MUs	Plant Availability Factor in %age
1	Rithala CCTG	94.2	0.000	0.000	89.12
2	Rajghat TPS	135	0.000	0.000	0.00
3	Gas Turbine	270	686.084	673.794	82.84
4	Pragati Stage-I	330	1804.446	1761.741	90.62
5	BTPS	705	1698.15002	1511.35352	38.61
6	Bawana CCGT	1371	2047.442	1973.777	80.70
7	Timarpur Okhla Waste Management Ltd.	16	143.573	121.211	--
9	Delhi Municipal Solid Waste Management Ltd	24	13.175	10.851	--
10	East Delhi Waste Processing Company Ltd.	12	3.616	1.309	--
	Total	2957.2	6396.48602	6054.03652	--

The gross generation and ex-bus generation is shown on the basis of operational figures calculated on day to day basis.

The PAFM of BTPS and RPH w.e.f. 01.01.2016 has been calculated as per directions of Delhi Pollution Control Committee (DPCC) issued vide letters dated 31.12.2015, 02.02.2016, 21.03.2016 and 15.03.2017 subject to finalization at the end of financial year.

8. DETAILS OF OUTAGES OF GENERATING STATIONS WITHIN DELHI FOR 2016-17

RPH

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	67.5	08.05.15	13.40	--	--	Tripped on boiler tube leakage. However, DPPC has also not allowed the operation due to non meeting pollution norms.
2	67.5	21.05.15	10.20	--	--	DPPC also not allowed the operation due to non meeting pollution norms.

(B) Gas Turbine

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	30	30.03.16	13.52	17.04.16	10:45	Machine tripped as heavy jerk observed in Control room and 160 MVA Tr-i& II tripped at 220 KV end due to tripping of Geeta Colony to Wazirabad ckt. Machine not taken on load due to less demand from SLDC.
		17.04.16	10:45	17.04.16	18:45	Station shut down to attend ACW line.
		17.04.16	18:45	29.04.16	19:15	Stopped due to low demand and high frequency
		13.5.16	16:10	13.5.16	17:47	Machine stopped to replace the broken drain valve in the inlet line of ACW.
		15.5.16	08:40	15.5.16	11:00	Machine stopped to attend the leakage of oil from LV bushing of Unit Transformer. Machine cleared by Electrical division at 11:00 hrs but machine not taken on load due to low schedule from SLDC.
		15.5.16	11:00	16.5.16	10:54	Machine stopped as per SLDC message
		23.5.16	15:46	25.5.16	15:30	Machine tripped due to tripping of 160 MVA Tr-I& II. After that machine not taken on load due to less demand
		28.5.16	12:01	6.6.16	09:58	Stopped due to low demand and high frequency
		10.6.16	16:54	10.6.16	17:08	Machine came on FSNL as both the ICT 160 MVA TX-I & II tripped due to jek in the system.
		13.6.16	07:11	13.6.16	09:00	Machine tripped as heavy jerk observed in the system as both 160 MVA Tx-I & II tripped.
		4.7.16	17:53	6.7.16	08:50	Stopped due to low demand and high frequency
		15.7.16	00:32	15.7.16	18:18	
		15.7.16	21:42	20.7.16	10:58	
		20.7.16	15:25	21.7.16	14:45	
		1.8.16	14:55	1.8.16	15:40	Machine stopped due to heavy smoke from Turbine auxiliary compartment.
		1.8.16	18:43	2.8.16	10:00	Tripped due to failure of communication link with I/O packs.
		2.8.16	10:00	3.8.16	10:15	Stopped due to low demand and high frequency
		4.8.16	12:30	4.8.16	14:08	Machine stopped to replace 11 KV CKT breaker due to low SF6 gas pressure.
		5.8.16	19:05	29.8.16	19:35	Stopped due to low demand and high frequency
		29.8.16	20:50	02.09.16	12.56	
04.10.16	00.25	04.10.16	16.05	Machine tripped as all communication failed . PCAA card failed.		
18.10.16	03.21	18.10.16	06.21	Machine came on FSNL and following alarm appeared. Generator Control panel under voltage. Generator breaker tripped.		
18.10.16	13.45	03.11.16	14.52	Stopped due to low demand and high frequency		

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	30	26.11.16	15:47	26.11.16	16:36	Machine came on part load due to tripping of both 160 MVA Tr- 1 & 2 after five minutes machine tripped.
		29.11.16	10:50	29.11.16	10:57	Machine came on FSNL as both 160 MVA Tr. Tripped
		29.11.16	13:09	29.11.16	13:17	
		30.11.16	04:30	30.11.16	04:56	
		30.11.16	04:59	30.11.16	05:39	Machine tripped due to grid disturbance.
		30.11.16	06:00	30.11.16	06:25	
		1.12.16	13:25	17.12.16	16:15	Stopped due to low demand and high frequency
		31.12.16	05:25	31.12.16	16:12	Machine tripped due to high TAD
		8.1.17	12:01	8.1.17	17:38	Machine stopped to Replace the Out let of ACW cooling line in GT#3.
		20.1.17	20:01	26.1.17	15:08	Machine stopped due to low schedule from SLDC on CC spot R-LNG.
		03.03.17	06.48	03.03.17	07.40	Due to flash in 11 KV breaker of 2 MVA Transformer , LT supply to machine failed and machine came on FSNL.
11.03.17	00.30	23.03.17	11.39	Stopped due to low demand and high frequency		
2	30	28.01.16	01:20	31.03.16	23:59	Stopped due to low demand and high frequency
		01.04.16	18:00	17.04.16	10:45	
		17.04.16	10:45	17.04.16	18:45	Station shut down to attend ACW line.
		17.04.16	18:45	5.5.16	15:11	Stopped due to low demand and high frequency
		5.5.16	15:57	5.5.16	16:40	Machine stopped due to problem in ACW line.
		7.5.16	17:02	7.5.16	17:52	Problem in battery charger
		19.5.16	00:02	19.5.16	01:03	T-Communication link inoperative
		23.5.16	15:46	23.5.16	15:50	Machine came on FSNL due to tripping of 160 MVA Tr-I & II.
		25.5.16	06:09	25.5.16	06:52	T-Communication link inoperative
		26.5.16	18:15	26.5.16	23:20	Machine tripped on high exhaust trip alarm.
		29.5.16	00:50	06.06.16	08.56	Stopped due to low demand and high frequency
		10.6.16	16:54	10.6.16	17:00	Machine came on FSNL as both the ICT 160 MVA TX-I & II tripped due to jek in the system.
		13.6.16	07:11	13.6.16	13:40	Machine tripped as heavy jerk observed in the system as both 160 MVA Tx-I & II tripped.
		1.7.16	02:20	1.7.16	09:18	Loss of Field alarm appeared and machine tripped on Electrical Trouble Normal Shutdown.
		2.7.16	11:40	6.7.16	15:45	Stopped due to low demand and high frequency
		6.7.16	22:50	6.7.16	23:10	Loss of Field alarm appeared and machine tripped on Electrical Trouble Normal Shutdown.
		6.7.16	23:10	7.7.16	16:26	Stopped due to low demand and high frequency
		7.7.16	18:40	7.7.16	20:09	Loss of Field alarm appeared and machine tripped on Electrical Trouble Normal Shutdown.
		9.7.16	15:35	9.7.16	16:40	Machine desynchroniz to check the Mvar problem.
		9.7.16	18:40	9.7.16	22:45	Loss of Field alarm appeared and machine tripped on Electrical Trouble Normal Shutdown.
		9.7.16	22:53	12.7.16	15:55	Stopped due to low demand and high frequency
		15.7.16	21:42	20.7.16	13:20	
		21.7.16	15:40	22.7.16	13:02	
		5.8.16	10:23	5.8.16	17:00	Machine tripped on Electrical trouble normal shut down.
		5.8.16	17:00	12.8.16	12:58	Stopped due to low demand and high frequency
		12.8.16	13:28	29.8.16	14:45	
		18.10.16	17.45	03.11.16	11.30	

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	30	4.11.16	03:01	4.11.16	05:05	Generator breaker trip alarm appeared on CRT of GT-2. M/c came on FSNL & also showing 8 MW load on CRT. After discussion with C&I, m/c manually tripped by tripping 66 KV breaker.
		26.11.16	15:47	26.11.16	16:28	Machine tripped as both 160 MVA Tr-1 & 2 tripped.
		29.11.16	10:50	29.11.16	10:58	Machine came on FSNL as both 160 MVA Tr. Tripped
		29.11.16	13:09	29.11.16	13:13	Machine came on FSNL as both 160 MVA Tr. Tripped
		30.11.16	04:38	30.11.16	05:12	Machine stopped as per instruction of SLDC.
		30.11.16	06:00	30.11.16	06:56	Machine tripped due to grid disturbance.
		30.11.16	11:44	12.12.16	15:15	Machine stopped due to high TAD and damage to filter house.
		12.12.16	15:15	17.12.16	12:23	Stopped due to low demand and high frequency
		29.12.16	05:52	29.12.16	07:47	Machine tripped on Electrical Trouble Normal shut down with Generator loss of field.
		31.12.16	08:35	31.12.16	08:46	Machine came on FSNL due to tripping of both 160 MVA Inter Connecting Transformer. As per SLDC Grid disturbance occurred due tripping of 220 KV IP to Patpargunj Ckt.
		2.1.17	00:35	2.1.17	09:22	Machine stopped by SLDC due to heavy under drawl by beneficiary.
		8.1.17	12:01	8.1.17	17:32	Machine stopped to Replace the Out let of ACW cooling line in GT#3.
		12.1.17	22:40	12.1.17	23:35	Stopped due to low demand and high frequency
		16.1.17	12:40	27.1.17	08:09	
3	30	01.02.16	19:15	17.04.16	10:45	Stopped due to low demand and high frequency
		17.04.16	10:45	17.04.16	18:45	Station shut down to attend ACW line.
		17.04.16	18:45	12.05.16	12:00	Stopped due to low demand and high frequency
		12.5.16	12:00	19.5.16	23:09	Machine under shut down as permit taken by Electrical division to replace its 66 KV breaker.
		19.5.16	23:09	20.5.16	20:52	Machine available but not taken on load due to less schedule from SLDC
		20.5.16	23:58	06.06.16	15:40	Stopped due to low demand and high frequency
		6.6.16	18:06	9.6.16	15:50	
		9.6.16	18:46	30.6.16	14:30	
		30.6.16	14:40	30.6.16	16:20	Machine tripped due 'S' communication link inoperative.
		30.6.16	17:19	30.6.16	18:05	machine tripped on false alarm in Turbine or Accessories Area.
		01.07.16	01:00	8.1.17	12:00	Stopped due to low demand and high frequency
		8.1.17	12:00	8.1.17	18:00	Machine not available due to Replacement of the Out let valve of ACW cooling line in GT#3.
		8.1.17	18:00	13.1.17	12:58	Stopped due to low demand and high frequency
		13.1.17	13:21	14.1.17	10:40	
		14.1.17	21:40	16.1.17	11:57	
		16.1.17	16:58	18.1.17	13:55	
		18.1.17	17:00	19.1.17	11:03	
		19.1.17	14:15	20.1.17	10:22	
26.1.17	13:15	26.1.17	16:00	Machinetripped on high TAD		
26.1.17	16:00	28.03.17	14:10	Stopped due to low demand and high frequency		

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
4	30	29.01.16	14:00	17.04.16	10:45	Stopped due to low demand and high frequency
		17.04.16	10:45	17.04.16	18:45	Station shut down to attend ACW line.
		17.04.16	18:45	16.05.16	15:04	Stopped due to low demand and high frequency
		16.5.16	18:04	18.5.16	16:12	Machine stopped due to low schedule from SLDC
		21.5.16	16:05	21.5.16	17:57	Supply of Computer failed.
		23.5.16	15:46	24.5.16	15:25	Machine tripped due to tripping of 160 MVA Tr-I& II. After that machine not taken on load due to less demand
		24.5.16	16:27	6.6.16	11:12	Stopped due to low demand and high frequency
		6.6.16	20:10	7.6.16	10:34	
		10.6.16	16:54	10.6.16	17:08	Machine came on FSNL as both the ICT 160 MVA TX-I & II tripped due to jek in the system.
		10.6.16	18:32	13.6.16	12:55	Stopped due to low demand and high frequency
		13.6.16	22:38	20.6.16	08:33	
		20.6.16	16:30	24.6.16	12:14	
		24.6.16	17:45	31.12.16	10:07	
		30.6.16	19:00	30.6.16	19:55	Machine tripped on over temperature alarm
		2.7.16	08:48	8.7.16	10:51	Stopped due to low demand and high frequency
		8.7.16	12:20	14.7.16	11:45	
		14.7.16	15:10	08.01.17	12:00	
		8.1.17	12:00	8.1.17	18:00	Machine not available due to Replacement of the Out let valve of ACW cooling line in GT#3.
		8.1.17	18:00	21.1.17	18:07	Stopped due to low demand and high frequency
		21.1.17	18:13	23.1.17	11:51	
23.1.17	12:33	28.3.17	14:10			
5	30	14.03.16	19:15	01.04.16	15:05	Stopped due to low demand and high frequency
		11.04.16	19:06	11.04.16	21:22	Station shut down to attend ACW line.
		17.04.16	10:45	17.04.16	18:38	
		18.04.16	12:54	24.04.16	10:55	Stopped due to low demand and high frequency
		29.04.16	19:15	13.05.16	17:10	
		13.5.16	19:30	16.5.16	13:29	
		20.5.16	23:42	21.5.16	18:08	machine stopped to attend leakage of oil from IGV
		21.5.16	18:55	21.5.16	20:04	Machine tripped on high exhaust temperature
		22.5.16	11:46	23.5.16	11:30	Stopped due to low demand and high frequency
		23.5.16	11:55	23.5.16	12:30	machine desynchronise to check the position of Bleed valve.
		23.5.16	15:46	24.5.16	15:42	Machine tripped due to tripping of 160 MVA Tr-I& II. After that machine not taken on load due to less demand
		25.5.16	16:35	26.5.16	19:05	Stopped due to low demand and high frequency
		27.5.16	00:07	27.5.16	17:20	
		27.5.16	17:25	28.5.16	11:07	
		29.5.16	22:10	29.5.16	22:22	Machine came on FSNL due to tripping of 160 MVA Tr-I& II.
		10.6.16	16:54	10.6.16	17:08	Machine came on FSNL as both the ICT 160 MVA TX-I & II tripped due to jek in the system.
11.6.16	20:45	13.6.16	11:12	Stopped due to low demand and high frequency		
20.6.16	01:04	23.6.16	15:59	Machine stopped to inspect the low load reason on mahine by M/s BGGTS		

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
		23.6.16	16:00	24.6.16	16:18	Stopped due to low demand and high frequency
		24.6.16	18:05	25.6.16	10:10	
		2.7.16	11:35	4.7.16	16:52	
		7.7.16	17:20	8.7.16	08:38	
		12.7.16	16:55	14.7.16	09:06	
		15.7.16	18:57	15.7.16	21:40	
		23.7.16	08:15	27.7.16	05:03	
		28.7.16	15:17	5.8.16	17:10	
		15.8.16	16:31	15.8.16	17:37	Heavy jerk observed in Control room. GT-5 tripped .Relay-P343 operated at protection panel.Both 160 MVA tr. Tripped.
		18.8.16	17:05	19.8.16	11:06	Stopped due to low demand and high frequency
		19.8.16	11:17	19.8.16	11:40	Machine desynchronized to check the hunting in load.
		31.8.16	10:30	04.10.16	08.34	Stopped due to low demand and high frequency
		04.10.16	19:00	18.10.16	16.32	
		3.11.16	16:03	10.11.16	12:45	
		11.11.16	00:04	30.11.16	13:18	
		7.12.16	08:35	7.12.16	17:26	Machine stopped due to TAD high.
		17.12.16	15:35	08.01.17	12.00	Stopped due to low demand and high frequency
		8.1.17	12:00	8.1.17	18:00	Machine not available due to replacement of the outlet valve of ACW cooling line in GT#3.
		8.1.17	18:00	10.3.17	16.06	Machine stopped due to low schedule from SLDC on CC spot R-LNG.
		13.3.17	18.31	21.3.17	07.00	
23.3.17	16.30	25.3.17	18.15	Machine taken to Hot Gas Path Inspection & Generator O/h.		
25.3.17	18.15	31.3.17	23.59			
6	30	19.03.16	11.40	6.04.16	12:00	Stopped due to low demand and high frequency
		06.04.16	12:00	11.04.16	18:10	machine taken under S/d for Combustion Inspection & Boroscopic Inspection
		11.04.16	21:06	17.04.16	10:45	Stopped due to low demand and high frequency
		17.04.16	10:45	17.04.16	18:45	Station shut down to attend ACW line.
		17.04.16	18:45	18.04.16	11:30	Stopped due to low demand and high frequency
		24.04.16	11:44	13.05.16	18.45	
		13.5.16	20:15	16.5.16	17:23	
		23.5.16	15:46	23.5.16	16:37	Machine tripped due to tripping of 160 MVA Tr-I& II.
		29.5.16	01:50	02.06.16	10.48	Machine stopped due to low schedule from SLDC
		10.6.16	16:54	10.6.16	17:08	Machine came on FSNL as both the ICT 160 MVA TX-I & II tripped due to jek in the system.
		11.6.16	20:45	13.6.16	20:34	Stopped due to low demand and high frequency
		20.6.16	16:35	24.6.16	13:20	
		24.6.16	18:08	25.6.16	10:04	
		6.7.16	16:55	8.7.16	11:05	
		12.7.16	15:00	14.7.16	15:05	
27.7.16	03:58	27.7.16	09:11	Machine tripped on Electrical trouble normal shut down. SF-6 second stage gas pressure low alarm appeared on protection pannel		

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
6	30	27.7.16	09:11	05.08.16	12:10	Stopped due to low demand and high frequency
		29.8.16	17:25	05.10.16	16:25	Machine stopped as there was no schedule from SLDC on Spot R-LNG.
		05.10.16	16:25	05.10.16	17:20	Trial run of GT-6 to check the sound & vibn. While shutting down
		05.10.16	17:20	18.10.16	11:25	Stopped due to low demand and high frequency
		3.11.16	13:57	10.11.16	12:12	
		10.11.16	17:01	10.11.16	19:00	Machine tripped on over temperature trip.
		10.11.16	19:00	01.12.16	12:30	Machine made available by Maintenance division but not taken on load due low schedule from beneficiary.
		17.12.16	19:40	8.1.17	12:00	Stopped due to low demand and high frequency
		8.1.17	12:00	8.1.17	18:00	Machine not available due to Replacement of the Out let valve of ACW cooling line in GT#3.
		8.1.17	18:00	11.03.17	17:38	Machine stopped due to low schedule from SLDC on CC spot R-LNG.
		23.03.17	14:17	31.03.17	23:59	
STG-1	30	29.1.16	14:00	01.04.16	18:05	M/c cleared from maintainence side but Stopped due to low demand and high frequency
		17.04.16	10:45	17.04.16	18:45	Station shut down to attend ACW line.
		17.04.16	18:45	29.04.16	19:15	Stopped due to low demand and high frequency
		01.5.16	21:27	01.5.16	22:59	Machine tripped due to failure of LT supply.
		13.5.16	16:10	13.5.16	18:48	Machine stopped due to problem in ACW line.
		23.5.16	15:46	23.5.16	17:25	Machine tripped due to tripping of 160 MVA Tr-I& II.
		23.5.16	19:20	24.5.16	14:04	Stopped due to low demand and high frequency
		29.5.16	00:50	06.06.16	11:44	
		10.6.16	16:54	10.6.16	17:53	Machine tripped as both the ICT 160 MVA TX-I & II tripped due to jek in the system.
		13.6.16	07:11	13.06.16	10:45	Machine tripped as heavy jerk observed in the system as both 160 MVA Tx-I & II tripped.
		04.07.16	17:53	06.07.16	12:20	Stopped due to low demand and high frequency
		15.07.16	21:42	21.07.16	13:29	
		31.07.16	15:31	31.07.16	16:05	
		05.08.16	19:05	29.08.16	17:20	Due to jerk CEP-1A tripped & machine tripped on low vacuum.
		05.08.16	19:05	29.08.16	17:20	Machine stopped as per sSLDC to maintain only 72 MW generation.
		14.09.16	11:35	14.09.16	12:53	Machine tripped due to turbine F JB shaft vibration very high.
		15.09.16	14:28	15.09.16	16:02	Machine tripped on generator RJB housing vibration very high.
		06.10.16	17:02	06.10.16	18:46	Machine stopped to attend hot spot on Y-phase bushing of STG#1 unit Transformer.
		07.10.16	11:52	07.10.16	12:34	Due to Jerk , equipments like BFP,CEP & ACW tripped. Equipments restarted again jerk observed and the equipments BFP,CEP and ACW tripped and machine tripped on low vacuum.
		18.10.16	17:45	03.11.16	13:38	Stopped due to low demand and high frequency
		25.11.16	13:26	25.11.16	15:28	Due to Sudden jerk 7.5 MVA tr. Tripped on earth fault relay leading to failure of auxiliary supply to critical auxiliaries like BFP,CEP and machine tripped. .
26.11.16	15:47	26.11.16	18:20	Machine tripped as both 160 MVA Tr-1 & 2 tripped.		
29.11.16	10:50	29.11.16	12:02			
29.11.16	13:09	29.11.16	13:55			
30.11.16	04:30	30.11.16	09:50			

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG-1	30	1.12.16	13:25	17.12.16	15:30	Stopped due to low demand and high frequency
		31.12.16	08:35	31.12.16	11:43	Machine tripped as Auxiliary supply failed due to tripping of both 160 MVA Inter Connecting Tx. Due to tripping of 220 KV IP -Patpargunj Ckt.
		8.1.17	12:01	8.1.17	19:02	Machine stopped to Replace the Out let of ACW cooling line in GT#3.
		20.1.17	20:01	26.1.17	18:05	Stopped due to low demand and high frequency
		13.2.17	12:29	13.2.17	14:10	Machine tripped due to low vaccum. Running BFP-1B tripped and stand by BFP was under PTW. Efforts were made to save the tripping but due to low drum pressure sbsquently reduction in PRDS pr machine tripped on low vaccum.
		3.3.17	06.48	3.3.17	09:25	Due to flash in 11 KV breaker of 2 MVA Transformer , LT supply to machine failed and machine tripped.
		3.3.17	09:48	3.3.17	10:33	Machine tripped due to maloperation of breaker.
		4.3.17	11:30	4.3.17	13:35	machine stopped to attend oil leakage from Servo motor.
		6.3.17	13:01	6.3.17	13:44	There was problem in locking mechnism of 11 KV breaker of 2 MVA Transformer due to which flash occurred and this leads to voltage dip at 6.6 KV bus causing tripping of STG Auxiliaries like BFP,CEP & ACW.
		11.3.17	18:32	23.3.17	14:08	Machine stopped due to low schedule from SLDC on CCNG mode.
STG-2	30	29.01.16	14:00	17.04.16	10:45	M/c cleared from maintainence side Stopped due to low demand and high frequency
		17.04.16	10:45	17.04.16	18:45	Station shut down to attend ACW line.
		17.04.16	18:45	19.05.16	07:45	Stopped due to low demand and high frequency
		21.5.16	16:04	21.5.16	19:15	Machine tripped due to tripping of GT#4
		23.5.16	15:46	23.5.16	17:25	Machine tripped due to tripping of 160 MVA Tr-I& II.
		23.5.16	17:25	06.06.16	17:04	Stopped due to low demand and high frequency
		6.6.16	17:19	6.6.16	19:38	Machine tripped on Hot well very high alarm as the parameter of STG# 2 got freezed and actual value of the same was not appearing on BCD.
		6.6.16	20:10	7.6.16	12:55	Stopped due to low demand and high frequency
		10.6.16	16:54	13.6.16	18:06	Machine tripped as both the ICT 160 MVA TX-I & II tripped due to jek in the system. Machine not taken on load due low demand.
		13.6.16	22:38	20.6.16	11:40	Stopped due to low demand and high frequency
		20.6.16	16:35	24.6.16	14:54	
		24.6.16	17:47	30.6.16	13:45	
		30.6.16	19:00	30.6.16	22:03	Machine tripped due to tripping of GT#4
		02.07.16	08:48	19.10.16	14:00	Stopped due to low demand and high frequency
		19.10.16	14:00	20.10.16	23:59	Fire broke down in some control and power cables near CEP-2A after that machine taken for major overhauling which was already planned from 20/10/2016 to 14/11/2016.
		21.10.16	00:00	14.01.17	21:08	Planned outage from 21.10.2016 to 20.11.2016
		14.1.17	21:15	20.1.17	13:04	Machine was under testing after O/h
		23.1.17	13:30	23.1.17	18:20	Machine stopped to attend Control Valve Pin which was dislocated from its position.
		26.1.17	13:15	26.1.17	16:00	Machine tripped due to tripping of GT#3 as it was running on single HRSG#3.
		26.1.17	16:00	28.3.17	18:45	Machine available but not taken on load due to low schedule from SLDC on CC Spot.
30.3.17	20:34	31.3.17	01:17	Machine tripped on high speed.		
31.3.17	12:28	31.3.17	14:32	Machine tripped and Turbine Ch-I & II operated. On local it was found that trip oil sensing line got detached.		

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG-3	30	19.03.16	18:15	01.04.16	17:45	Stopped due to low demand and high frequency
		01.04.16	18:30	01.04.16	19:26	Tripped on Gen. Class-A relay
		01.04.16	19:32	01.04.16	20:07	Tripped on Gen. Class-A relay
		11.04.16	21:06	11.04.16	21:45	Machine stopped due to stopping of GT#6.
		17.04.16	10:45	17.04.16	19:57	Station shut down to attend ACW line.
		29.04.16	19:15	09.05.16	15:52	Stopped due to low demand and high frequency
		16.5.16	16:02	16.5.16	16:30	Machine stopped to attend false over speed alarm
		21.5.16	21:28	21.5.16	23:52	Machine tripped on Turbine FJB shaft vibration very high
		23.5.16	15:46	23.5.16	17:30	Machine tripped due to tripping of 160 MVA Tr-I& II.
		29.5.16	22:10	29.5.16	23:45	Machine tripped due to tripping of 160 MVA Tr-I& II.
		31.5.16	20:16	31.5.16	23:45	SNH feeder tripped & found earth fault.
		2.6.16	11:36	2.6.16	14:00	Machine tripped while changing the load from auxiliary to pressure.
		10.6.16	16:54	10.6.16	17:38	machine tripped due to jek in the system.
		11.6.16	20:45	13.6.16	13:26	Stopped due to low demand and high frequency
		13.6.16	21:30	13.6.16	22:30	Machine tripped on Class A relay.
		19.6.16	07:01	19.6.16	08:02	Machine tripped on FJB shaft vibration very high.
		20.6.16	16:35	24.6.16	15:16	Stopped due to low demand and high frequency
		24.6.16	18:12	25.6.16	11:55	
		7.7.16	17:20	8.7.16	11:18	
		12.7.16	16:55	14.7.16	12:30	
		18.7.16	04:38	18.7.16	06:45	Machine tripped on FJB shaft Vibration very high.
		27.7.16	03:58	27.7.16	09:11	Machine tripped due to tripping of GT-6 as running on single HRSG#6.
		28.7.16	15:17	05.08.16	16:30	Stopped due to low demand and high frequency
		5.08.16	18:01	05.08.16	18:52	Machine tripped on turbine oil pressure very low.
		9.08.16	10:55	09.08.16	11:31	Machine tripped on low vacuum due to tripping of CWP-1
		15.08.16	16:31	15.08.16	17:28	Heavy jerk observed. STG-3 tripped due to failure of auxiliary supply.
		28.08.16	14:28	28.08.16	16:16	Machine tripped on generator housing vibration high.after replacing the Vibration card machine synchronized.
		28.08.16	16:27	28.08.16	17:03	Machine tripped on generator and turbine housing vibration high.
		31.08.16	10:30	04.10.16	13:14	Machine stopped as per sSLDC to maintain only 36 MWgeneration.
		04.10.16	19:00	18.10.16	13:25	Stopped due to low demand and high frequency
		3.11.16	16:03	10.11.16	14:15	
		11.11.16	00:04	30.11.16	16:56	
17.12.16	19:40	08.01.17	12:00			
8.1.17	12:00	8.1.17	18:00	Machine not available due to replacement of the outlet valve of ACW cooling line in GT#3.		
8.1.17	18:00	10.03.17	20:42	Stopped due to low demand and high frequency		
23.3.17	16:30	28.3.17	18:45			
28.3.17	18:45	31.3.17	23:59	Machine taken for Chemical Cleaning of Condensor		

(C) PRAGATI

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	104	01.04.16	00.00	06.04.16	06.00	Stopped due to low demand and high frequency
		01.05.16	05.58	01.05.16	13.15	Unit stopped by stn.
		07.05.16	11.37	07.05.16	12.34	Unit tripped.
		23.05.16	22.16	24.05.16	10.01	Unit stopped and started due to low demand and high frequency
		09.06.16	14:33	09.06.16	15:10	GT#1 tripped on grid disturbance.
		18.06.16	07:09	18.06.16	09:13	GT#1 tripped on grid disturbance.
		18.06.16	10:09	18.06.16	10:38	GT#1 tripped.
		11.07.16	08.10	11.07.16	09.32	Unit tripped due to grid disturbance
		16.07.16	08.50	19.07.16	11.00	Stopped due to low demand and high frequency
		19.07.16	11.00	19.07.16	14.01	Unit not available
		30.07.16	00.00	31.07.16	14.10	Stopped due to low demand and high frequency
		06.08.16	14.00	08.08.16	10.37	
		12.08.16	17.00	16.08.16	10.50	
		18.08.16	11.30	22.08.16	10.35	
		31.08.16	09.46	03.09.16	09.58	
		19.09.16	00.00	04.10.16	21.42	Unit stopped for CI.
		05.10.16	01.11	05.10.16	02.46	Stopped after trial run (VT supply failure)
		05.10.16	07.27	16.10.16	18.36	Generator cooler / winder problem attended during CI
		16.10.16	22.35	31.10.16	23.59	Stopped due to low demand and high frequency
		01.11.16	00.00	07.11.16	13.05	Stopped due to low demand and high frequency
		26.11.16	09.48	26.11.16	13.30	Stopped due to abnormal sound
		26.11.16	15.43	26.11.16	16.36	Unit tripped on grid disturbance
		28.11.16	19.29	28.11.16	22.30	Stopped due to fire at filter house
		28.11.16	22.30	29.11.16	01.00	Stopped due to low demand and high frequency
		29.11.16	01.00	29.11.16	20.12	R Phse dead dnd insulator damaged
		30.11.16	04.45	30.11.16	09.41	Unit tripped on grid disturbance
		20.12.16	19.57	31.01.17	09.22	Stopped due to low demand and high frequency
		04.02.17	07.32	04.02.17	10.00	Unit tripped due to internal fault
04.02.17	10.00	06.02.17	23.49	Stopped due to low demand and high frequency		
07.02.17	00.00	17.02.17	11.10	Unit tripped due to internal fault		
17.02.17	12.10	31.03.17	23.59	Unit tripped due to internal fault		
2	104	01.04.16	00.00	01.04.16	03.18	Stopped due to low demand and high frequency
		06.04.16	08.40	11.04.16	04.31	G.T.-2 was swpped by G.T. -1 and started as desired
		15.04.16	06.06	15.04.16	12.02	Unit stopped
		24.04.16	14.15	25.04.16	06.48	Stopped due to low demand and high frequency
		28.04.16	12.44	28.04.16	13.35	Unit tripped
		06.05.16	11.28	06.05.16	16.00	Unit tripped due to grid disturbance
		06.05.16	16.00	11.05.16	13.27	Unit tripped
		26.05.16	21.18	26.05.16	22.55	Unit tripped
		05.06.16	03:59	08.06.16	15:17	GT2 tripped
		10.06.16	16:50	10.06.16	17:38	GT#2 tripped on grid disturbance.
		13.06.16	19:49	13.06.16	20:54	GT#2 tripped on grid disturbance.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	104	18.06.16	07:09	18.06.16	09:54	GT#2 tripped on grid disturbance.
		19.06.26	05:58	20.06.16	06:00	Stopped due to low demand and high frequency
		13.07.16	16.29	15.07.16	19.18	Unit tripped
		31.07.16	07.22	03.08.16	14.24	Stopped due to low demand and high frequency
		28.08.16	12.39	28.08.16	16.00	G.T.-2 and STG was tripped due to grid disturbance
		28.08.16	16.00	28.08.16	22.45	Unit unavailable.
		03.09.16	11.05	03.09.16	12.00	Unit was swapped by G.T. -1
		03.09.16	12.00	04.09.16	18.00	Unit was remain unavailable
		04.09.16	18.00	07.09.16	22.58	Stopped due to low demand and high frequency
		01.10.16	15.13	01.10.16	16.00	G.T. -2 & STG tripped on grid disturbance
		08.10.16	13.28	08.10.16	14.15	
		30.11.16	03.13	30.11.16	07.40	GT#2 tripped on grid disturbance
		30.11.16	14.00	30.11.16	23.30	Stopped for inlet air filter
		30.11.16	23.30	01.12.16	06.05	Stopped due to low demand and high frequency
		10.12.16	08.40	10.12.16	09.39	G.T. -2 & STG tripped on grid disturbance
		10.12.16	15.23	10.12.16	15.40	
		16.12.16	22.00	17.12.16	20.45	Unit stopped for compressor washing.
		17.12.16	20.45	19.12.16	04.42	Stopped due to low demand and high frequency
		26.01.17	00.00	27.01.17	05.25	
		31.01.17	10.36	04.02.17	07.55	Unit stopped to attend hot spot.
14.02.17	08.27	14.02.17	10.03	G.T. -2 & STG tripped on grid disturbance		
10.03.17	23.10	17.03.17	05.05	Stopped due to low demand and high frequency		
STG	122	01.04.16	00.00	01.04.16	09.07	Stopped due to low demand and high frequency
		21.04.16	14.59	21.04.16	16.25	STG Tripped
		24.04.16	13.15	24.04.16	21.27	Unit stopped
		29.04.16	11.58	29.04.16	12.46	STG Tripped
		02.05.16	15.57	02.05.16	16.54	STG Tripped
		06.05.16	11.28	06.05.16	12.12	Unit tripped due to grid disturbance
		07.05.16	11.40	07.05.16	13.30	Unit tripped alongwith G.T.-1
		08.05.16	17.49	08.05.16	19.35	STG Tripped
		10.05.16	17.55	10.05.16	23.58	STG Tripped
		13.05.16	19.02	13.05.16	20.50	Stopped due to low demand and high frequency
		05.06.16	14:20	05.06.16	15:06	STG tripped on grid disturbance.
		09.06.16	14:33	09.06.16	16:22	STG tripped on grid disturbance.
		10.06.16	16:50	10.06.16	18:00	STG tripped on grid disturbance.
		13.06.16	12:14	13.06.16	17:46	Stopped due to low demand and high frequency
		13.06.16	19:49	13.06.16	21:34	STG tripped on grid disturbance.
		18.06.16	07:09	18.06.16	10:05	STG tripped on grid disturbance.
		18.06.16	10:09	18.06.16	10:57	STG tripped on GT#1 tripped
		27.06.16	19:06	28.06.16	03:36	Stopped due to low demand and high frequency
		09.07.16	12.53	09.07.16	15.19	Unit tripped
		11.07.16	08.05	11.07.16	10.52	Unit tripped due to grid disturbance
18.07.16	18.37	18.07.16	19.44	Unit tripped		

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG	122	30.07.16	09.17	30.07.16	18.23	Stopped due to low demand and high frequency
		31.07.16	07.22	31.07.16	16.17	
		28.08.16	12.39	28.08.16	14.24	Unit tripped due to grid disturbance
		01.10.16	15.13	01.10.16	16.52	G.T. -2 & STG tripped on grid disturbance
		03.10.16	16.16	03.10.16	17.09	Unit tripped on grid disturbance
		08.10.16	13.28	08.10.16	14.59	
		30.11.16	03.13	30.11.16	08.40	
		10.12.16	08.40	10.12.16	10.02	G.T. -2 & STG tripped on grid disturbance
		10.12.16	15.23	10.12.16	16.18	
		26.01.17	00.00	27.01.17	07.56	Stopped due to low demand and high frequency
		04.02.17	07.32	04.02.17	09.37	Unit tripped as GT-1 Tripped
		14.02.17	08.27	14.02.17	11.39	G.T. -2 & STG tripped on grid disturbance
		27.02.17	15.27	27.02.17	16.18	Unit stopped to attend hot spot.
		10.03.17	23.12	17.03.17	10.44	Stopped due to low demand and high frequency

(D)

BADARPUR THERMAL POWER STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	95	01.04.15	00.00	31.03.17	23.59	Stopped due to low demand and high frequency. From 01.01.2017, unit was closed due to not meeting the pollution norms as per DPCC directions
2	95	24.09.15	19.52	31.03.17	23.59	
3	95	09.10.15	01.00	31.03.17	23.59	
4	210	12.12.15	14.30	04.04.16	07.47	Stopped due to low demand and high frequency
		11.04.16	14.03	12.04.16	20.11	Economizer tube leakage
		24.04.16	16.21	24.04.16	21.52	PA Fan A lub oil sys temp high
		01.05.16	16.30	01.05.16	17.55	Human Error(Vacuum low)
		10.05.16	05.34	11.05.16	01.39	Boiler Drum Impulse line lkg
		11.05.16	09.08	21.05.16	03.10	Gen Seal problem
		21.05.16	04.04	21.05.16	04.38	ID Fan A Thermal Overload
		21.05.16	15.10	21.05.16	16.45	Relay malfunction (air flow low)
		03.06.16	21.30	05.06.16	07.03	Water Platen Lkg
		09.06.16	14.27	09.06.16	18.22	Grid Disturbance
		01.10.16	15.39	01.10.16	19.57	Unit tripped on grid disturbance
5	210	06.11.16	17.14	07.01.17	23.59	Planned shutdown
		08.01.17	00.00	31.03.17	09.47	
5	210	24.04.16	16.21	24.04.16	21.52	Stopped due to temp. high.
		06.06.16	09.50	07.06.16	13.53	Water leakage
		09.06.16	14.28	09.06.16	17.11	Tripped due to grid disturbance
		17.07.16	14.30	17.07.16	18.15	Oil surge relay cable inter core shorting.
		09.08.16	22.20	10.08.16	02.29	AVR and excitation system problem.
		01.10.16	15.39	01.10.16	18.57	Tripped due to grid disturbance
		01.10.16	19.02	01.10.16	19.20	Generator protection system
		05.10.16	03.45	07.10.16	08.54	Reheater tube leakage
		17.10.16	21.11	03.12.16	24.00	Planned shutdown
		04.12.16	00.00	20.12.16	24.00	
		21.12.16	00.00	31.03.17	23.59	

(E) BAWANA CCGT POWER STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	216	16.07.15	02.18	06.12.16	12.00	Machine tripped due to compressor stalling alarm
		06.12.16	12.00	07.12.16	22.06	Stopped due to low demand and high frequency
		09.12.16	01.26	09.12.16	04.57	Machine tripped on internal fault.
		09.12.16	10.28	09.12.16	11.38	
		07.02.17	19.20	31.03.17	23.59	Stopped due to low demand and high frequency
2	216	24.03.16	00.00	03.05.16	06.00	Stopped due to low demand and high frequency
		03.05.16	06.00	03.05.16	09.30	Machine shutdown for planned mtc.
		03.05.16	09.30	13.06.16	15.00	Stopped due to low demand and high frequency
		13.06.16	15.00	16.06.16	17.15	Machine shut down for planned maintenance due to annual testing of generator transformer .
		16.06.16	17.15	26.06.16	09.24	Stopped due to low demand and high frequency
		02.08.16	15.23	02.08.16	15.47	Machine tripped due to failure of primary DPU Card
		06.08.16	11.07	06.08.16	12.50	Machine tripped due to rebooting of Mark VI.
		01.09.16	08.45	05.09.16	12.00	Machine shutdown for attending internal fault
		05.09.16	12.00	30.11.16	23.59	Stopped due to low demand and high frequency
		08.12.16	06.35	31.03.17	23.59	
STG -1	254	28.03.16	00.00	15.04.16	10.00	Planned Shut down.
		15.04.16	10.00	03.05.16	06.00	Stopped due to low demand and high frequency
		03.05.16	06.00	03.05.16	09.30	Machine shutdown for planned mtc.
		03.05.16	09.30	13.06.16	15.00	Stopped due to low demand and high frequency
		13.06.16	15.00	16.06.16	17.15	Machine shut down for planned maintenance due to annual testing of generator transformer .
		16.06.16	17.15	26.06.16	15.20	Stopped due to low demand and high frequency
		02.08.16	15.29	02.08.16	16.14	Machine tripped due to failure of primary DPU Card
		06.08.16	11.07	06.08.16	13.59	Machine tripped due to rebooting of Mark VI.
		01.09.16	08.45	05.09.16	12.00	Machine shutdown for attending internal fault
		05.09.16	12.00	30.11.16	23.59	Stopped due to low demand and high frequency
		04.12.16	07.07	04.12.16	09.16	
		07.12.16	08.16	07.12.16	11.55	
		09.12.16	01.27	09.12.16	08.48	
		09.12.16	10.28	09.12.16	12.28	
		07.02.17	19.24	31.03.17	23.59	
3	216	08.01.16	23.15	18.04.16	05.23	Stopped due to low demand and high frequency
		18.04.16	11.16	18.04.16	19.12	Unit tripped
		03.05.16	06.08	03.05.16	08.57	Machine shutdown for planned mtc.
		23.05.16	19.04	10.08.16	14.00	Stopped due to low demand and high frequency
		10.08.16	14.00	18.08.16	00.00	Machine is shutdown for planned mtc.
		01.09.16	00.00	19.09.16	18.59	Stopped due to low demand and high frequency
		23.09.16	23.59	29.09.16	22.16	
		07.10.16	11.43	07.10.16	15.48	Machine tripped due to stator earth fault.
		14.10.16	17.30	28.03.17	17.48	Stopped due to low demand and high frequency

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage		
		Date	Time	Date	Time			
4	216	08.01.16	23.15	03.05.16	06.00	Stopped due to low demand and high frequency		
		03.05.16	06.00	03.05.16	09.30	Machine shutdown for planned mtc.		
		03.05.16	09.30	27.05.16	01.12	Stopped due to low demand and high frequency		
		30.05.16	11.16	05.09.16	00.44			
		05.10.16	13.00	14.10.16	13.30			
		29.10.16	00.02	31.10.16	23.59			
				01.11.16	00.00	09.11.16	23.59	
				30.11.16	08.50	30.11.16	17.43	Unit desynchronised as inlet air DP high.
				30.11.16	17.43	07.02.17	17.39	Stopped due to low demand and high frequency
				08.03.17	14.12	08.03.17	15.35	Unit tripped due ot grid disturbanck
		29.03.17	10.20	29.03.17	13.41	Unit tripped due to internal fault.		
STG -2	254	28.03.16	00.00	30.04.16	23.59	Planned shutdown		
		03.05.16	06.00	03.05.16	09.30	Machine shutdown for planned mtc.		
		03.05.16	06.10	03.05.16	10.39	Machine shutdown for planned mtc.		
		06.05.16	16.45	06.05.16	17.44	Unit tripped		
		23.05.16	19.06	27.05.16	08.24	Stopped due to low demand and high frequency		
		27.05.16	11.18	05.09.16	11.03			
		20.09.16	07.05	20.09.16	08.02	HRSG #3 taken out of service due to internal fault.		
		07.10.16	11.43	07.10.16	17.48	STG desynchronized due to trippeing of unit -3		
		18.10.16	03.55	18.10.16	10.10	Machine tripped due to internal problem		
		29.10.16	00.03	31.10.16	23.59	Stopped due to low demand and high frequency		
		01.11.16	00.00	10.11.16	04.07			
		10.11.16	05.38	10.11.16	07.44	Unit desynchronised on internal fault.		
		11.11.16	14.57	11.11.16	15.34	Unit desynchronised on internal fault.		
		30.11.16	08.52	30.11.16	17.43	STG#2 desynchronised as inlet air DP high.		
		30.11.16	17.43	07.02.17	18.46	Stopped due to low demand and high frequency		
		12.02.17	20.15	07.02.17	21.36	Unit tripped on cold gas temp high.		
		03.03.17	16.00	03.03.17	16.39	Unit tripped due to internal fault.		
08.03.17	14.12	08.03.17	17.04	Unit tripped due ot grid disturbanck				
27.03.17	13.40	27.03.17	14.44	Unit tripped due to internal fault.				

(F) RITHALA POWER STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	31.8	19.03.13	17:32	31.03.17	23.59	No gas availability
2	31.8	07.06.13	22:41	31.03.17	23.59	No gas availability
STG	31.8	07.06.13	22:38	31.03.17	23.59	Due to non operation of GTs

9 POWER SUPPLY POSITION OF DELHI DURING 2016-17

9.1 Power supply position during the month of April 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	51.499	50.205	50.722	49.448
2	RIHAND-I	52.880	51.549	41.735	40.683
3	RIHAND-II	85.243	83.094	73.589	71.733
4	RIHAND-III	84.651	82.507	78.944	76.943
5	UNCHAHAR-I	12.435	12.123	8.186	7.981
6	UNCHAHAR-II	17.545	17.094	12.322	12.003
7	UNCHAHAR-III	19.849	19.348	13.453	13.112
8	DADRI(TH)-I	526.255	512.973	364.146	354.984
9	DADRI(TH)-II	278.589	271.596	235.587	229.674
10	FARAKKA	5.218	5.085	4.384	4.272
11	KHELGAON	29.961	29.207	27.289	26.602
12	KHELGAON-II	104.340	101.706	97.894	95.426
13	ANTA (GT)	0.669	0.653	0.336	0.328
14	ANTA (Liquid)	19.784	19.284	0.000	0.000
15	ANTA (RLNG)	0.000	0.000	0.000	0.000
16	AURAIYA (GT)	18.252	17.796	5.335	5.203
17	AURAIYA (Liquid)	31.170	30.379	0.004	0.003
18	AURAIYA (RLNG)	0.000	0.000	0.000	0.000
19	DADRI (GT)	40.759	39.735	10.712	10.440
20	DADRI (Liquid)	20.874	20.343	0.003	0.003
21	DADRI (RLNG)	0.000	0.000	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1399.973	1364.675	1024.641	998.839
	NHPC STATIONS				
22	TANAKPUR	0.843	0.821	0.629	0.613
23	CHAMERA-I	14.195	13.834	10.589	10.321
24	CHAMERA-II	12.972	12.644	9.676	9.431
25	CHAMERA-III	7.638	7.445	5.698	5.554
26	BAIRA SUIL	8.658	8.438	6.458	6.294
27	SALAL	32.341	31.521	24.127	23.515
28	DAULI GANGA	5.105	4.976	3.808	3.712
29	DULASTI	23.493	22.900	17.526	17.083
30	URI-I	37.425	36.481	27.919	27.214
31	URI-II	21.016	20.487	15.678	15.283
32	SEWA -II	7.291	7.104	5.439	5.300
33	PARBATI-III	3.971	3.871	2.963	2.888
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	174.947	170.521	130.510	127.208
	THDC				
34	KOTESHWAR	6.138	5.982	6.138	5.982
35	TEHRI	7.369	7.182	7.369	7.182
C	TOTAL THDC (TOTAL 34 - 35)	13.507	13.164	13.507	13.164

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	30.425	29.657	30.425	29.657
37	RAPP 'C'	37.915	36.958	37.915	36.958
D	TOTAL NPC (TOTAL 36 - 37)	68.340	66.616	68.340	66.616
E	NATHPA JHAKHRI (SVNL)	28.762	28.035	21.457	20.914
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	290.159	282.831	198.057	193.093
H	TALA	2.835	2.763	2.835	2.763
I	SASAN	296.416	288.937	300.356	292.778
J	TOTAL (A+B+C+D+E+F+G+H+I)	2274.939	2217.542	1759.704	1715.374
	LTA				
38	RAJASTHAN (SOLAR)	12.291	12.000	12.000	11.698
39	CLP JHAJJAR - TPDDL	2.695	2.675	2.675	2.613
40	DVC	241.988	239.886	239.886	233.854
41	MAITHON - TPDDL	185.292	183.226	183.226	178.600
42	DVC MEJIA - BYPL	72.958	72.324	72.324	70.498
K	TOTAL LTA (38 TO 42)	515.225	510.111	510.111	497.263
	BILATERAL IMPORT				
(i)	RASJASTHAN	18.692	18.252	18.252	17.802
(ii)	MEGHALAYA	1.338	1.332	1.332	1.299
(iii)	CHATTISHGARH	1.339	1.319	1.319	1.286
(iv)	JAMMU & KASHMIR	19.252	19.087	19.087	18.616
(v)	POWER EXCHANGE(IEX)	81.701	79.608	81.701	79.608
(vi)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to vi)	122.322	119.599	121.691	118.611
M	TOTAL IMPORT	2912.486	2847.252	2391.506	2331.248
	EXPORT				
(i)	ORISSA	-70.184	-70.799	-70.799	-72.632
(ii)	UTTAR PRADESH	-7.935	-8.123	-8.123	-8.338
(iii)	CHATTISHGARH	-52.082	-53.099	-53.099	-54.473
(iv)	JAMMU & KASHMIR	-2.315	-2.341	-2.341	-2.401
(v)	KERALA	-0.301	-0.307	-0.307	-0.315
(vi)	UTTRANCHAL	-0.335	-0.345	-0.345	-0.353
(vii)	POWER EXCHANGE (IEX)	-54.719	-56.109	-54.719	-56.109
(viii)	SHARE PROJECT (HARYANA)	-6.644	-6.810	-6.644	-6.810
(ix)	POWER EXCHANGE (PUNJAB)	-6.369	-6.528	-6.369	-6.528
N	TOTAL (i to ix)	-200.883	-204.461	-202.745	-207.960
O	NET DRAWAL	2711.602	2642.791	2188.761	2123.288
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				9.116

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				25.889
(iii)	PRAGATI				166.494
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				76.006
(vi)	Timarpur - Okhla Waste Management				11.139034
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				0.000
(viii)	Delhi Municipality Solid Waste Ltd.				0.000
(ix)	IMPORT FROM BTPS				211.285
Q	TOTAL (i to ix)				490.813
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.237802
(ii)	RENEWABLE SOLAR (BRPL)				0.085620
(iii)	RENEWABLE SOLAR (BYPL)				0.025294
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				0.377678
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				0.726
S	TOTAL GENERATION WITHIN DELHI				491.539
T	GROSS CONSUMPTION (O + P + S)				2623.944
U	LOAD SHEDDING				2.609
V	REQUIREMENT (U + Y)				2615.203
W	% DEPENDENCE ON GRID				80.92
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				11.350
Y	NET CONSUMPTION OF DTL (T - X)				2612.594

9.2 Power supply position during the month of May 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	87.973	85.557	78.918	76.744
2	RIHAND-I	45.674	44.404	31.262	30.387
3	RIHAND-II	89.420	86.960	67.507	65.638
4	RIHAND-III	93.384	90.813	76.656	74.537
5	UNCHAHAAR-I	14.891	14.481	9.312	9.056
6	UNCHAHAAR-II	29.464	28.645	18.086	17.585
7	UNCHAHAAR-III	20.549	19.984	13.670	13.294
8	DADRI(TH)-I	539.028	524.196	284.087	276.253
9	DADRI(TH)-II	534.150	519.460	419.426	407.878
10	FARAKKA	11.649	11.328	9.548	9.284
11	KHELGAON	34.049	33.113	25.649	24.942
12	KHELGAON-II	107.780	104.823	85.958	83.595
13	ANTA (GT)	9.161	8.909	5.300	5.155
14	ANTA (Liquid)	21.250	20.665	0.000	0.000
15	ANTA (RLNG)	0.000	0.000	0.000	0.000
16	AURAIYA (GT)	8.306	8.075	5.266	5.124
17	AURAIYA (Liquid)	41.710	40.565	0.000	0.000
18	AURAIYA (RLNG)	0.000	0.000	0.000	0.000
19	DADRI (GT)	31.464	30.609	16.694	16.243
20	DADRI (Liquid)	30.316	29.474	0.000	0.000
21	DADRI (RLNG)	0.000	0.000	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1750.219	1702.062	1147.338	1115.714
	NHPC STATIONS				
22	TANAKPUR	2.258	2.195	1.684	1.637
23	CHAMERA-I	21.274	20.685	15.870	15.431
24	CHAMERA-II	26.946	26.199	20.100	19.543
25	CHAMERA-III	17.491	17.006	13.049	12.687
26	BAIRA SUIL	8.465	8.231	6.315	6.141
27	SALAL	48.971	47.613	36.533	35.519
28	DAULI GANGA	12.567	12.216	9.374	9.112
29	DULASTI	36.844	35.830	27.485	26.728
30	URI-I	38.945	37.873	29.053	28.253
31	URI-II	22.916	22.285	17.093	16.622
32	SEWA –II	5.632	5.476	4.201	4.085
33	PARBATI-III	8.632	8.391	6.440	6.260
B	TOTAL NHPC STATIONS (TOTAL 22-33)	250.940	243.999	187.197	182.019
	THDC				
34	KOTESHWAR	5.661	5.504	5.661	5.504
35	TEHRI	7.355	7.151	7.355	7.151
C	TOTAL THDC (TOTAL 34 - 35)	13.016	12.655	13.016	12.655

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	26.767	26.025	26.767	26.025
37	RAPP 'C'	25.967	25.259	25.967	25.259
D	TOTAL NPC (TOTAL 36 - 37)	52.734	51.284	52.734	51.284
E	NATHPA JHAKHRI (SJVNL)	89.507	87.004	66.772	64.905
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	369.741	359.426	224.200	217.842
H	TALA	4.779	4.646	4.806	4.672
I	SASAN	273.640	266.077	266.789	259.407
J	TOTAL (A+B+C+D+E+F+G+H+I)	2804.577	2727.154	1962.853	1908.499
	LTA				
38	RAJASTHAN (SOLAR)	12.265	12.029	12.029	11.699
39	CLP JHAJJAR – TPDDL	21.757	21.541	21.541	20.942
40	DVC	226.288	224.488	224.488	218.345
41	MAITHON – TPDDL	177.115	175.261	175.261	170.479
42	DVC MEJIA – BYPL	71.776	71.202	71.202	69.240
K	TOTAL LTA (38 TO 42)	509.200	504.522	504.522	490.705
	BILATERAL IMPORT				
(i)	RASJASTHAN	67.572	66.298	66.298	64.475
(ii)	MEGHALAYA	5.727	5.706	5.706	5.551
(iii)	UTTAR PRADESH	4.838	4.742	4.742	4.612
(iv)	URS	0.252	0.244	0.252	0.244
(v)	HIMACHAL PRADESH	1.189	1.166	1.166	1.133
(vi)	JAMMU & KASHMIR	279.911	277.172	277.172	269.485
(vii)	POWER EXCHANGE (IEX)	77.420	75.267	77.420	75.267
(viii)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to viii)	436.907	430.594	432.755	420.766
M	TOTAL IMPORT	3750.684	3662.270	2900.130	2819.970
	EXPORT				
(i)	UTTAR PRADESH	-4.654	-4.772	-4.772	-4.906
(ii)	KERALA	-0.273	-0.279	-0.279	-0.288
(iii)	POWER EXCHANGE (IEX)	-102.240	-105.025	-102.240	-105.025
(iv)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
(v)	SHARE PROJECT (HARYANA)	-14.791	-15.214	-14.791	-15.214
(vi)	POWER EXCHANGE (PUNJAB)	-14.409	-14.822	-14.409	-14.822
N	TOTAL (i to vi)	-136.367	-140.113	-136.492	-140.256
O	NET DRAWAL	3614.317	3522.157	2763.639	2679.714
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				-10.396

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				64.266
(iii)	PRAGATI				191.187
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				162.514
(vi)	Timarpur - Okhla Waste Management				11.587149
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				
(viii)	Delhi Municipality Solid Waste Ltd.				0.000
(ix)	IMPORT FROM BTPS				194.848
Q	TOTAL (i to ix)				624.402
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.205336
(ii)	RENEWABLE SOLAR (BRPL)				0.048224
(iii)	RENEWABLE SOLAR (BYPL)				0.026378
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				1.109067
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				1.389
S	TOTAL GENERATION WITHIN DELHI				625.791
T	GROSS CONSUMPTION (O + P + S)				3295.110
U	LOAD SHEDDING				6.273
V	REQUIREMENT (U + Y)				3285.197
W	% DEPENDENCE ON GRID				81.32
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				16.186
Y	NET CONSUMPTION OF DTL (T - X)				3278.924

9.3 Power supply position during the month of June 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	99.086	96.634	92.126	89.847
2	RIHAND-I	31.982	31.195	25.811	25.180
3	RIHAND-II	84.692	82.605	69.652	67.940
4	RIHAND-III	76.273	74.343	65.428	63.772
5	UNCHAHAAR-I	14.369	14.014	10.503	10.244
6	UNCHAHAAR-II	32.223	31.428	23.712	23.128
7	UNCHAHAAR-III	19.886	19.396	14.506	14.149
8	DADRI(TH)-I	521.640	508.773	229.084	223.356
9	DADRI(TH)-II	516.256	503.524	427.336	416.804
10	FARAKKA	14.569	14.210	10.236	9.984
11	KHELGAON	32.780	31.972	24.120	23.525
12	KHELGAON-II	104.903	102.312	82.035	80.012
13	ANTA (GT)	6.681	6.504	2.393	2.330
14	ANTA (Liquid)	21.839	21.308	0.000	0.000
15	ANTA (RLNG)	0.000	0.000	0.000	0.000
16	AURAIYA (GT)	4.589	4.482	3.509	3.427
17	AURAIYA (Liquid)	44.377	43.276	0.000	0.000
18	AURAIYA (RLNG)	0.000	0.000	0.000	0.000
19	DADRI (GT)	20.785	20.268	12.126	11.827
20	DADRI (Liquid)	39.976	38.996	0.559	0.544
21	DADRI (RLNG)	0.000	0.000	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1686.905	1645.239	1093.136	1066.071
	NHPC STATIONS				
22	TANAKPUR	3.382	3.299	2.598	2.534
23	CHAMERA-I	23.197	22.629	17.561	17.131
24	CHAMERA-II	28.048	27.357	20.922	20.407
25	CHAMERA-III	19.943	19.453	14.879	14.513
26	BAIRA SUIL	7.257	7.079	5.414	5.281
27	SALAL	53.551	52.229	40.418	39.420
28	DAULI GANGA	19.040	18.575	14.204	13.857
29	DULASTI	31.111	30.337	23.513	22.928
30	URI-I	37.495	36.570	27.971	27.281
31	URI-II	22.210	21.663	16.566	16.158
32	SEWA –II	3.448	3.362	2.572	2.508
33	PARBATI-III	12.600	12.293	9.400	9.171
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	261.282	254.846	196.018	191.188
	THDC				
34	KOTESHWAR	8.559	8.349	8.559	8.349
35	TEHRI	10.847	10.583	10.800	10.537
C	TOTAL THDC (TOTAL 34 - 35)	19.406	18.932	19.359	18.886

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	19.656	19.170	19.656	19.170
37	RAPP 'C'	37.068	36.153	37.068	36.153
D	TOTAL NPC (TOTAL 36 - 37)	56.724	55.323	56.724	55.323
E	NATHPA JHAKHRI (SJVNL)	108.703	106.023	81.091	79.091
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	473.100	461.428	320.483	312.596
H	TALA	11.238	10.962	11.238	10.962
I	SASAN	276.405	269.596	268.398	261.781
J	TOTAL (A+B+C+D+E+F+G+H+I)	2893.762	2822.349	2046.447	1995.898
	LTA				
38	RAJASTHAN (SOLAR)	11.818	11.634	11.634	11.347
39	CLP JHAJJAR - TPDDL	21.740	21.559	21.559	21.013
40	DVC	216.507	214.883	214.883	209.604
41	MAITHON - TPDDL	166.694	165.021	165.021	160.910
42	DVC MEJIA - BYPL	60.900	60.440	60.440	58.926
K	TOTAL LTA (38 TO 42)	477.660	473.537	473.537	461.800
	BILATERAL IMPORT				
(i)	RASJASTHAN	36.974	36.421	36.421	35.551
(ii)	MEGHALAYA	1.684	1.674	1.674	1.634
(iii)	MADHYA PRADESH	4.338	4.262	4.262	4.159
(iv)	UTTAR PRADESH	7.790	7.650	7.650	7.462
(v)	URS	0.059	0.057	0.059	0.057
(vi)	CHATTISHGARH	33.815	33.060	33.060	32.251
(vii)	UTTRANCHAL	0.616	0.606	0.606	0.593
(viii)	ORISSA	22.691	22.460	22.460	21.935
(ix)	HIMACHAL PRADESH	1.157	1.137	1.137	1.111
(x)	JAMMU & KASHMIR	288.772	286.442	286.442	279.370
(xi)	POWER EXCHANGE(IEX)	125.034	121.944	125.034	121.944
(xii)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to xii)	522.931	515.714	518.805	506.067
M	TOTAL IMPORT	3894.353	3811.599	3038.788	2963.765
	EXPORT				
(i)	UTTAR PRADESH	-10.066	-10.302	-10.302	-10.557
(ii)	PUNJAB	-0.877	-0.883	-0.883	-0.904
(iii)	POWER EXCHANGE (IEX)	-53.131	-54.478	-53.131	-54.478
(iv)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
(v)	SHARE PROJECT (HARYANA)	-15.015	-15.389	-15.015	-15.389
(vi)	POWER EXCHANGE (PUNJAB)	-14.121	-14.474	-14.121	-14.474
N	TOTAL (i to vi)	-93.210	-95.526	-93.452	-95.802
O	NET DRAWAL	3801.143	3716.074	2945.336	2867.963
P	OVER DRAWAL(+)/UNDER DRAWAL(-) FROM THE GRID				-19.344

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				85.871
(iii)	PRAGATI				185.241
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				152.845
(vi)	Timarpur - Okhla Waste Management				12.103076
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				
(viii)	Delhi Municipality Solid Waste Ltd.				0.000
(ix)	IMPORT FROM BTPS				221.101
Q	TOTAL (i to ix)				657.161
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.194923
(ii)	RENEWABLE SOLAR (BRPL)				0.021923
(iii)	RENEWABLE SOLAR (BYPL)				0.024571
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				0.556759
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				0.798
S	TOTAL GENERATION WITHIN DELHI				657.959
T	GROSS CONSUMPTION (O + P + S)				3506.578
U	LOAD SHEDDING				7.075
V	REQUIREMENT (U + Y)				3497.484
W	% DEPENDENCE ON GRID				81.79
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				16.169
Y	NET CONSUMPTION OF DTL (T - X)				3490.409

9.4 Power supply position during the month of July 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	104.088	101.671	93.397	91.226
2	RIHAND-I	53.902	52.666	40.705	39.768
3	RIHAND-II	88.979	86.912	62.011	60.567
4	RIHAND-III	93.203	91.038	71.341	69.681
5	UNCHAHAAR-I	14.833	14.488	9.393	9.175
6	UNCHAHAAR-II	33.250	32.478	21.380	20.882
7	UNCHAHAAR-III	20.549	20.072	13.328	13.018
8	DADRI(TH)-I	539.028	526.509	229.188	223.871
9	DADRI(TH)-II	534.207	521.799	406.454	397.005
10	FARAKKA	14.453	14.117	8.023	7.837
11	KHELGAON	33.774	32.990	19.221	18.775
12	KHELGAON-II	79.822	77.967	54.318	53.060
13	ANTA (GT)	1.595	1.557	0.884	0.862
14	ANTA (Liquid)	23.545	23.007	0.000	0.000
15	ANTA (RLNG)	6.058	5.910	0.000	0.000
16	AURAIYA (GT)	9.013	8.808	6.526	6.377
17	AURAIYA (Liquid)	37.772	36.895	0.000	0.000
18	AURAIYA (RLNG)	4.260	4.157	0.000	0.000
19	DADRI (GT)	26.691	26.073	12.411	12.128
20	DADRI (Liquid)	26.239	25.640	0.000	0.000
21	DADRI (RLNG)	11.029	10.760	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1756.290	1715.515	1048.580	1024.233
	NHPC STATIONS				
22	TANAKPUR	7.711	7.531	5.752	5.618
23	CHAMERA-I	26.460	25.845	19.737	19.278
24	CHAMERA-II	29.696	29.007	22.152	21.637
25	CHAMERA-III	21.061	20.573	15.711	15.347
26	BAIRA SUIL	7.891	7.709	5.882	5.746
27	SALAL	53.914	52.664	40.219	39.287
28	DAULI GANGA	21.564	21.055	16.087	15.707
29	DULASTI	30.888	30.172	23.044	22.510
30	URI-I	32.650	31.892	24.357	23.792
31	URI-II	22.133	21.620	16.511	16.128
32	SEWA -II	4.546	4.440	3.391	3.312
33	PARBATI-III	14.813	14.472	11.050	10.796
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	273.327	266.979	203.894	199.158
	THDC				
34	KOTESHWAR	18.723	18.284	18.723	18.284
35	TEHRI	28.733	28.059	28.733	28.059
C	TOTAL THDC (TOTAL 34 - 35)	47.456	46.343	47.456	46.343

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	30.482	29.774	30.482	29.774
37	RAPP 'C'	36.952	36.088	36.952	36.088
D	TOTAL NPC (TOTAL 36 - 37)	67.434	65.862	67.434	65.862
E	NATHPA JHAKHRI (SJVNL)	106.870	104.372	79.724	77.860
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	476.576	465.498	258.031	252.060
H	TALA	21.520	21.021	21.520	21.021
I	SASAN	258.753	252.714	232.565	227.131
J	TOTAL (A+B+C+D+E+F+G+H+I)	3008.227	2938.304	1959.203	1913.669
	LTA				
38	RAJASTHAN (SOLAR)	11.865	11.693	11.693	11.421
39	CLP JHAJJAR - TPDDL	1.127	1.120	1.120	1.094
40	DVC	186.739	185.273	185.273	180.988
41	MAITHON - TPDDL	160.661	158.993	158.993	155.304
42	DVC MEJIA - BYPL	66.395	65.872	65.872	64.344
K	TOTAL LTA (38 TO 42)	426.786	422.950	422.950	413.151
	BILATERAL IMPORT				
(i)	RASJASTHAN	47.413	46.728	46.728	45.650
(ii)	MEGHALAYA	0.340	0.338	0.338	0.330
(iii)	MADHYA PRADESH	1.261	1.239	1.239	1.209
(iv)	UTTAR PRADESH	7.038	6.919	6.919	6.759
(v)	CHATTISHGARH	86.181	84.207	84.207	82.276
(vi)	ORISSA	140.156	138.724	138.724	135.481
(vii)	HIMACHAL PRADESH	1.110	1.091	1.091	1.066
(viii)	JAMMU & KASHMIR	306.234	304.101	304.101	297.042
(ix)	POWER EXCHANGE (IEX)	42.673	41.674	42.673	41.674
(x)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to x)	632.408	625.021	626.021	611.486
M	TOTAL IMPORT	4067.420	3986.275	3008.174	2938.305
	EXPORT				
(i)	UTTAR PRADESH	-10.812	-11.058	-11.058	-11.323
(ii)	PUNJAB	-23.677	-23.842	-23.842	-24.407
(iii)	MEGHALAYA	-0.246	-0.250	-0.250	-0.256
(iv)	POWER EXCHANGE (IEX)	-176.940	-181.078	-176.940	-181.078
(v)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
(vi)	SHARE PROJECT (HARYANA)	-13.341	-13.657	-13.341	-13.657
(vii)	POWER EXCHANGE (PUNJAB)	-13.341	-13.657	-13.341	-13.657
N	TOTAL (i to vii)	-238.357	-243.540	-238.772	-244.378
O	NET DRAWAL	3829.063	3742.734	2769.402	2693.928
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				-18.516

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				73.137
(iii)	PRAGATI				180.521
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				146.221
(vi)	Timarpur - Okhla Waste Management				10.894319
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				
(viii)	Delhi Municipality Solid Waste Ltd.				-0.386
(ix)	IMPORT FROM BTPS				234.782
Q	TOTAL (i to ix)				645.169
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.145810
(ii)	RENEWABLE SOLAR (BRPL)				0.017994
(iii)	RENEWABLE SOLAR (BYPL)				0.017615
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				1.891861
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				2.073
S	TOTAL GENERATION WITHIN DELHI				647.243
T	GROSS CONSUMPTION (O + P + S)				3322.654
U	LOAD SHEDDING				2.769
V	REQUIREMENT (U + Y)				3309.717
W	% DEPENDENCE ON GRID				81.08
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				15.706
Y	NET CONSUMPTION OF DTL (T - X)				3306.948

9.5 Power supply position during the month of August 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	90.237	88.493	80.729	79.164
2	RIHAND-I	61.996	60.800	50.975	49.988
3	RIHAND-II	79.744	78.201	56.843	55.742
4	RIHAND-III	87.992	86.312	67.698	66.404
5	UNCHAHAR-I	15.650	15.351	10.176	9.981
6	UNCHAHAR-II	33.254	32.616	22.591	22.157
7	UNCHAHAR-III	20.549	20.155	13.942	13.674
8	DADRI(TH)-I	537.244	526.932	135.012	132.450
9	DADRI(TH)-II	531.637	521.435	417.715	409.697
10	FARAKKA	14.852	14.567	8.058	7.903
11	KHELGAON	31.488	30.880	17.254	16.921
12	KHELGAON-II	109.662	107.560	69.305	67.974
13	ANTA (GT)	16.444	16.122	8.845	8.676
14	ANTA (Liquid)	0.101	0.099	0.000	0.000
15	ANTA (RLNG)	13.350	13.098	0.000	0.000
16	AURAIYA (GT)	13.317	13.060	9.210	9.036
17	AURAIYA (Liquid)	3.802	3.715	0.000	0.000
18	AURAIYA (RLNG)	33.948	33.312	0.000	0.000
19	DADRI (GT)	28.774	28.222	11.203	10.993
20	DADRI (Liquid)	1.098	1.072	0.000	0.000
21	DADRI (RLNG)	30.648	30.060	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1755.786	1722.062	979.555	960.759
	NHPC STATIONS				
22	TANAKPUR	7.731	7.585	7.731	7.585
23	CHAMERA-I	31.589	30.982	31.589	30.982
24	CHAMERA-II	29.799	29.227	29.799	29.227
25	CHAMERA-III	21.476	21.064	21.476	21.064
26	BAIRA SUIL	10.408	10.208	10.408	10.208
27	SALAL	53.369	52.349	53.369	52.349
28	DAULI GANGA	20.164	19.788	20.164	19.788
29	DULASTI	35.420	34.742	35.420	34.742
30	URI-I	32.488	31.862	32.488	31.862
31	URI-II	20.887	20.483	20.887	20.483
32	SEWA -II	10.012	9.819	7.469	7.325
33	PARBATI-III	22.394	21.964	22.394	21.964
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	295.738	290.073	293.194	287.578
	THDC				
34	KOTESHWAR	21.886	21.462	21.886	21.462
35	TEHRI	38.669	37.922	38.669	37.922
C	TOTAL THDC (TOTAL 34 - 35)	60.555	59.384	60.555	59.384

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	30.041	29.463	30.041	29.463
37	RAPP 'C'	38.114	37.382	38.114	37.382
D	TOTAL NPC (TOTAL 36 - 37)	68.155	66.845	68.155	66.845
E	NATHPA JHAKHRI (SJVNL)	97.198	95.345	72.509	71.127
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	478.310	469.169	233.666	229.198
H	TALA	22.359	21.930	22.359	21.930
I	SASAN	198.463	194.596	177.858	174.393
J	TOTAL (A+B+C+D+E+F+G+H+I)	2976.563	2919.404	1907.850	1871.214
	LTA				
38	RAJASTHAN (SOLAR)	11.674	11.452	11.452	11.231
39	CLP JHAJJAR - TPDDL	15.264	15.173	15.173	14.897
40	DVC	141.969	140.484	140.484	137.783
41	MAITHON - TPDDL	133.732	132.328	132.328	129.770
42	DVC MEJIA - BYPL	68.513	67.796	67.796	66.498
K	TOTAL LTA (38 TO 42)	371.152	367.233	367.233	360.180
	BILATERAL IMPORT				
(i)	MEGHALAYA	0.077	0.076	0.076	0.075
(ii)	MADHYA PRADESH	3.320	3.275	3.275	3.212
(iii)	UTTAR PRADESH	1.107	1.091	1.091	1.070
(iv)	URS	0.149	0.147	0.149	0.147
(v)	CHATTISHGARH	102.543	100.664	100.664	98.746
(vi)	ORISSA	150.913	149.334	149.334	146.470
(vii)	HIMACHAL PRADESH	1.458	1.438	1.438	1.412
(viii)	JAMMU & KASHMIR	289.341	287.456	287.456	281.936
(ix)	POWER EXCHANGE(IEX)	30.582	29.987	30.582	29.987
(x)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to x)	579.490	573.469	574.067	563.055
M	TOTAL IMPORT	3927.206	3860.106	2849.150	2794.448
	EXPORT				
(i)	UTTAR PRADESH	-2.786	-2.838	-2.838	-2.890
(ii)	PUNJAB	-14.619	-14.749	-14.749	-15.032
(iii)	MEGHALAYA	-0.039	-0.039	-0.039	-0.040
(iv)	HIMACHAL PRADESH	-0.233	-0.237	-0.237	-0.241
(v)	POWER EXCHANGE (IEX)	-183.002	-186.531	-183.002	-186.531
(vi)	POWER EXCHANGE (PX)	-0.189	-0.192	-0.189	-0.192
(vii)	SHARE PROJECT (HARYANA)	-18.121	-18.475	-18.121	-18.475
(viii)	POWER EXCHANGE (PUNJAB)	-18.131	-18.485	-18.131	-18.485
N	TOTAL (i to viii)	-237.119	-241.547	-237.306	-241.887
O	NET DRAWAL	3690.086	3618.559	2611.844	2552.561
P	OVER DRAWAL(+)/UNDER DRAWAL(-) FROM THE GRID				11.646

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				51.743
(iii)	PRAGATI				164.740
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				194.552
(vi)	Timarpur - Okhla Waste Management				9.126012
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				
(viii)	Delhi Municipality Solid Waste Ltd.				-0.346
(ix)	IMPORT FROM BTPS				237.686
Q	TOTAL (i to ix)				657.501
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.188662
(ii)	RENEWABLE SOLAR (BRPL)				0.033657
(iii)	RENEWABLE SOLAR (BYPL)				0.021117
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				0.151703
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				0.395
S	TOTAL GENERATION WITHIN DELHI				657.897
T	GROSS CONSUMPTION (O + P + S)				3222.104
U	LOAD SHEDDING				3.228
V	REQUIREMENT (U + Y)				3210.465
W	% DEPENDENCE ON GRID				79.22
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				14.867
Y	NET CONSUMPTION OF DTL (T - X)				3207.237

9.6 Power supply position during the month of September 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	85.666	83.985	84.319	82.665
2	RIHAND-I	64.347	63.090	62.019	60.808
3	RIHAND-II	82.850	81.230	75.774	74.289
4	RIHAND-III	87.091	85.389	82.281	80.671
5	UNCHAHAAR-I	11.149	10.938	8.433	8.272
6	UNCHAHAAR-II	32.202	31.572	25.945	25.434
7	UNCHAHAAR-III	19.886	19.497	15.911	15.597
8	DADRI(TH)-I	523.467	513.221	271.848	266.441
9	DADRI(TH)-II	506.820	496.874	433.868	425.323
10	FARAKKA	13.679	13.413	9.999	9.801
11	KHELGAON	25.311	24.815	19.112	18.734
12	KHELGAON-II	100.196	98.239	83.430	81.785
13	ANTA (GT)	20.437	20.035	11.744	11.512
14	ANTA (Liquid)	0.000	0.000	0.000	0.000
15	ANTA (RLNG)	9.530	9.346	0.012	0.011
16	AURAIYA (GT)	4.215	4.140	2.726	2.677
17	AURAIYA (Liquid)	0.000	0.000	0.000	0.000
18	AURAIYA (RLNG)	44.453	43.576	0.000	0.000
19	DADRI (GT)	32.983	32.339	9.468	9.282
20	DADRI (Liquid)	0.000	0.000	0.000	0.000
21	DADRI (RLNG)	28.912	28.346	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1- 21)	1693.194	1660.044	1196.889	1173.301
	NHPC STATIONS				
22	TANAKPUR	7.660	7.511	7.660	7.511
23	CHAMERA-I	15.025	14.739	15.025	14.739
24	CHAMERA-II	20.238	19.849	20.238	19.849
25	CHAMERA-III	12.684	12.441	12.684	12.441
26	BAIRA SUIL	6.331	6.209	6.331	6.209
27	SALAL	45.669	44.781	45.669	44.781
28	DAULI GANGA	15.701	15.399	15.701	15.399
29	DULASTI	35.346	34.654	35.346	34.654
30	URI-I	25.272	24.791	25.272	24.791
31	URI-II	17.184	16.856	17.184	16.856
32	SEWA –II	4.490	4.405	4.490	4.405
33	PARBATI-III	9.835	9.647	9.835	9.647
B	TOTAL NHPC STNS (TOTAL 22-33)	215.434	211.283	215.434	211.283
	THDC				
34	KOTESHWAR	9.474	9.287	9.474	9.287
35	TEHRI	17.956	17.601	17.956	17.601
C	TOTAL THDC (TOTAL 34 - 35)	27.430	26.888	27.430	26.888

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	13.454	13.191	13.454	13.191
37	RAPP 'C'	19.877	19.510	19.826	19.461
D	TOTAL NPC (TOTAL 36 - 37)	33.331	32.701	33.281	32.652
E	NATHPA JHAKHRI (SVNL)	86.780	85.102	64.737	63.486
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	473.371	464.111	22.018	21.596
H	TALA	21.982	21.551	21.982	21.551
I	SASAN	186.496	182.777	183.211	179.559
J	TOTAL (A+B+C+D+E+F+G+H+I)	2738.018	2684.457	1764.981	1730.315
	LTA				
38	RAJASTHAN (SOLAR)	11.963	11.736	11.736	11.507
39	CLP JHAJJAR - TPDDL	11.690	11.629	11.629	11.425
40	DVC	223.177	220.691	220.691	216.397
41	MAITHON – TPDDL	106.705	105.498	105.498	103.397
42	DVC MEJIA – BYPL	59.893	59.233	59.233	58.082
K	TOTAL LTA (38 TO 42)	413.428	408.787	408.787	400.808
	BILATERAL IMPORT				
(i)	MADHYA PRADESH	0.442	0.437	0.437	0.427
(ii)	UTTAR PRADESH	6.647	6.552	6.552	6.420
(iii)	URS	0.960	0.941	0.960	0.941
(iv)	CHATTISHGARH	66.889	65.753	65.753	64.479
(v)	ORISSA	132.446	130.991	130.991	128.466
(vi)	HIMACHAL PRADESH	2.455	2.421	2.421	2.374
(vii)	JAMMU & KASHMIR	259.898	258.219	258.219	253.148
(viii)	POWER EXCHANGE (IEX)	50.291	49.310	50.291	49.310
(ix)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to ix)	520.028	514.624	515.624	505.564
M	TOTAL IMPORT	3671.475	3607.869	2689.393	2636.687
	EXPORT				
(i)	UTTAR PRADESH	-5.557	-5.667	-5.667	-5.785
(ii)	POWER EXCHANGE (IEX)	-146.372	-149.327	-146.372	-149.327
(iii)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
(iv)	SHARE PROJECT (HARYANA)	-15.139	-15.444	-15.139	-15.444
(v)	POWER EXCHANGE (PUNJAB)	-14.974	-15.276	-14.974	-15.276
N	TOTAL (i to v)	-182.041	-185.713	-182.151	-185.832
O	NET DRAWAL	3489.434	3422.156	2507.242	2450.855
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				27.835

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				55.012
(iii)	PRAGATI				144.163
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				198.118
(vi)	Timarpur - Okhla Waste Management				10.276571
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				
(viii)	Delhi Municipality Solid Waste Ltd.				0.294
(ix)	IMPORT FROM BTPS				229.706
Q	TOTAL (i to ix)				637.570
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.104156
(ii)	RENEWABLE SOLAR (BRPL)				0.095760
(iii)	RENEWABLE SOLAR (BYPL)				0.022239
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				-0.108178
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				0.114
S	TOTAL GENERATION WITHIN DELHI				637.684
T	GROSS CONSUMPTION (O + P + S)				3116.374
U	LOAD SHEDDING				2.582
V	REQUIREMENT (U + Y)				3103.636
W	% DEPENDENCE ON GRID				78.64
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				15.320
Y	NET CONSUMPTION OF DTL (T - X)				3101.054

9.7 Power supply position during the month of October 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	93.043	91.060	85.937	84.100
2	RIHAND-I	67.363	65.925	56.455	55.249
3	RIHAND-II	82.149	80.396	66.147	64.733
4	RIHAND-III	47.910	46.894	40.956	40.085
5	UNCHAHAR-I	10.006	9.794	5.708	5.588
6	UNCHAHAR-II	33.335	32.625	21.832	21.368
7	UNCHAHAR-III	20.569	20.131	13.439	13.153
8	DADRI(TH)-I	545.724	534.105	260.843	255.268
9	DADRI(TH)-II	540.091	528.593	419.551	410.622
10	FARAKKA	14.467	14.159	9.144	8.949
11	KHELGAON	33.423	32.712	20.253	19.819
12	KHELGAON-II	108.593	106.280	78.956	77.270
13	ANTA (GT)	15.087	14.761	5.646	5.526
14	ANTA (Liquid)	0.000	0.000	0.000	0.000
15	ANTA (RLNG)	15.224	14.905	0.000	0.000
16	AURAIYA (GT)	3.738	3.655	3.318	3.245
17	AURAIYA (Liquid)	0.000	0.000	0.000	0.000
18	AURAIYA (RLNG)	46.672	45.682	0.000	0.000
19	DADRI (GT)	35.512	34.756	7.452	7.294
20	DADRI (Liquid)	0.000	0.000	0.000	0.000
21	DADRI (RLNG)	28.256	27.654	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1741.162	1704.088	1095.638	1072.269
	NHPC STATIONS				
22	TANAKPUR	5.442	5.326	5.442	5.326
23	CHAMERA-I	6.531	6.391	6.531	6.391
24	CHAMERA-II	10.638	10.411	10.638	10.411
25	CHAMERA-III	6.220	6.087	6.220	6.087
26	BAIRA SUIL	3.133	3.066	3.133	3.066
27	SALAL	24.185	23.668	24.185	23.668
28	DAULI GANGA	8.977	8.786	8.977	8.786
29	DULASTI	29.969	29.329	29.969	29.329
30	URI-I	9.012	8.819	9.012	8.819
31	URI-II	7.135	6.983	7.135	6.983
32	SEWA –II	1.528	1.495	1.528	1.495
33	PARBATI-III	4.177	4.088	4.177	4.088
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	116.947	114.451	116.947	114.451
	THDC				
34	KOTESHWAR	6.788	6.643	6.788	6.643
35	TEHRI	13.209	12.927	13.209	12.927
C	TOTAL THDC (TOTAL 34 - 35)	19.996	19.570	19.996	19.570

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	18.110	17.727	18.023	17.642
37	RAPP 'C'	3.943	3.862	3.652	3.577
D	TOTAL NPC (TOTAL 36 - 37)	22.054	21.590	21.675	21.218
E	NATHPA JHAKHRI (SJVNL)	43.693	42.763	32.595	31.901
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	465.892	455.972	12.085	11.816
H	TALA	20.267	19.835	20.267	19.835
I	SASAN	248.358	243.073	246.920	241.666
J	TOTAL (A+B+C+D+E+F+G+H+I)	2678.370	2621.341	1566.123	1532.726
	LTA				
38	RAJASTHAN (SOLAR)	11.548	11.311	11.311	11.070
39	CLP JHAJJAR - TPDDL	6.824	6.769	6.769	6.624
40	DVC	237.210	234.536	234.536	229.539
41	MAITHON - TPDDL	181.107	179.186	179.186	175.369
42	DVC MEJIA - BYPL	57.415	56.768	56.768	55.555
K	TOTAL LTA (38 TO 42)	494.104	488.570	488.570	478.157
	BILATERAL IMPORT				
(i)	CHATTISHGARH	22.795	22.390	22.390	21.908
(ii)	ORISSA	34.888	34.501	34.501	33.756
(iii)	HIMACHAL PRADESH	1.704	1.681	1.681	1.645
(iv)	JAMMU & KASHMIR	3.240	3.217	3.217	3.149
(v)	POWER EXCHANGE(IEX)	86.923	85.062	86.923	85.062
(vi)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to vi)	149.550	146.852	148.713	145.519
M	TOTAL IMPORT	3322.024	3256.762	2203.405	2156.403
	EXPORT				
(i)	ASSAM	-15.052	-15.245	-15.245	-15.577
(ii)	UTTAR PRADESH	-1.444	-1.477	-1.477	-1.507
(iii)	POWER EXCHANGE (IEX)	-58.948	-60.194	-58.948	-60.194
(iv)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
(v)	SHARE PROJECT (HARYANA)	-16.675	-17.040	-16.675	-17.040
(vi)	POWER EXCHANGE (PUNJAB)	-16.087	-16.439	-16.087	-16.439
N	TOTAL (i to vi)	-108.207	-110.395	-108.432	-110.756
O	NET DRAWAL	3213.818	3146.368	2094.973	2045.646
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				22.096

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				58.279
(iii)	PRAGATI				117.612
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				200.795
(vi)	Timarpur - Okhla Waste Management				11.154512
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				
(viii)	Delhi Municipality Solid Waste Ltd.				1.644
(ix)	IMPORT FROM BTPS				176.214
Q	TOTAL (i to ix)				565.699
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.176608
(ii)	RENEWABLE SOLAR (BRPL)				0.028373
(iii)	RENEWABLE SOLAR (BYPL)				0.023521
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				-0.074
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				0.154
S	TOTAL GENERATION WITHIN DELHI				565.853
T	GROSS CONSUMPTION (O + P + S)				2633.595
U	LOAD SHEDDING				2.065
V	REQUIREMENT (U + Y)				2621.664
W	% DEPENDENCE ON GRID				77.68
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				13.996
Y	NET CONSUMPTION OF DTL (T - X)				2619.599

9.8 Power supply position during the month of November 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	96.908	94.061	88.596	85.994
2	RIHAND-I	65.254	63.344	44.265	42.980
3	RIHAND-II	86.958	84.400	62.174	60.342
4	RIHAND-III	91.041	88.362	67.748	65.764
5	UNCHAHAR-I	14.369	13.945	8.088	7.855
6	UNCHAHAR-II	32.449	31.493	19.486	18.924
7	UNCHAHAR-III	20.019	19.430	12.717	12.347
8	DADRI(TH)-I	525.303	509.832	101.611	98.715
9	DADRI(TH)-II	498.183	483.618	250.002	243.117
10	FARAKKA	14.307	13.880	7.131	6.918
11	KHELGAON	31.338	30.422	16.485	15.998
12	KHELGAON-II	106.798	103.654	65.079	63.163
13	ANTA (GT)	2.434	2.352	0.165	0.160
14	ANTA (Liquid)	0.000	0.000	0.000	0.000
15	ANTA (RLNG)	27.927	27.113	0.000	0.000
16	AURAIYA (GT)	0.000	0.000	0.000	0.000
17	AURAIYA (Liquid)	0.000	0.000	0.000	0.000
18	AURAIYA (RLNG)	48.786	47.350	0.000	0.000
19	DADRI (GT)	36.140	35.111	6.413	6.247
20	DADRI (Liquid)	0.000	0.000	0.000	0.000
21	DADRI (RLNG)	24.160	23.419	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1722.373	1671.787	749.959	728.523
	NHPC STATIONS				
22	TANAKPUR	2.979	2.893	2.979	2.893
23	CHAMERA-I	4.560	4.428	4.560	4.428
24	CHAMERA-II	5.669	5.504	5.669	5.504
25	CHAMERA-III	2.838	2.756	2.838	2.756
26	BAIRA SUIL	1.872	1.817	1.872	1.817
27	SALAL	10.229	9.934	10.229	9.934
28	DAULI GANGA	4.869	4.728	4.869	4.728
29	DULASTI	15.079	14.647	15.079	14.647
30	URI-I	6.214	6.031	6.214	6.031
31	URI-II	5.342	5.185	5.342	5.185
32	SEWA -II	1.231	1.195	1.231	1.195
33	PARBATI-III	2.289	2.223	2.289	2.223
B	TOTAL NHPC STNS (TOTAL 22 - 33)	63.171	61.341	63.171	61.341
	THDC				
34	KOTESHWAR	6.731	6.533	6.731	6.533
35	TEHRI	12.507	12.140	12.507	12.140
C	TOTAL THDC (TOTAL 34 - 35)	19.238	18.674	19.238	18.674

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	31.012	30.099	31.012	30.099
37	RAPP 'C'	19.766	19.180	19.766	19.180
D	TOTAL NPC (TOTAL 36 - 37)	50.778	49.279	50.778	49.279
E	NATHPA JHAKHRI (SJVNL)	25.175	24.444	18.837	18.290
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	460.635	447.139	8.104	7.851
H	TALA	8.569	8.326	8.607	8.363
I	SASAN	295.059	286.381	284.130	275.799
J	TOTAL (A+B+C+D+E+F+G+H+I)	2644.999	2567.372	1202.825	1168.119
	LTA				
38	RAJASTHAN (SOLAR)	9.933	9.666	9.666	9.382
39	CLP JHAJJAR - TPDDL	20.937	20.702	20.702	20.022
40	DVC	221.595	219.390	219.390	212.929
41	MAITHON – TPDDL	171.294	170.046	170.046	164.945
42	DVC MEJIA – BYPL	47.493	47.021	47.021	45.631
K	TOTAL LTA (38 TO 42)	471.253	466.825	466.825	452.908
	BILATERAL IMPORT				
(i)	HARYANA	3.610	3.568	3.568	3.451
(ii)	JAMMU & KASHMIR	0.916	0.908	0.908	0.883
(iii)	POWER EXCHANGE(IEX)	57.451	56.215	57.451	56.215
(iv)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to iv)	61.977	60.692	61.928	60.550
M	TOTAL IMPORT	3178.229	3094.889	1731.578	1681.577
	EXPORT				
(i)	RAJASTHAN	-41.653	-42.918	-42.918	-44.220
(ii)	ASSAM	-16.278	-16.498	-16.498	-17.005
(iii)	NEPAL	-4.171	-4.228	-4.228	-4.368
(iv)	BIHAR	-16.850	-17.200	-17.200	-17.722
(v)	KARNATAKA	-15.583	-15.877	-15.877	-16.422
(vi)	JAMMU & KASHMIR	-24.572	-24.807	-24.807	-25.560
(vii)	MEGHALAYA	-42.609	-43.510	-43.510	-44.821
(viii)	MADHYA PRADESH	-43.478	-44.094	-44.094	-45.432
(ix)	HARYANA	-3.367	-3.424	-3.424	-3.540
(x)	POWER EXCHANGE (IEX)	-117.598	-121.251	-117.598	-121.251
(xi)	POWER EXCHANGE (PX)	-0.010	-0.010	-0.010	-0.010
(xii)	SHARE PROJECT (HARYANA)	-11.333	-11.719	-11.333	-11.719
(xiii)	POWER EXCHANGE (PUNJAB)	-11.163	-11.542	-11.163	-11.542
N	TOTAL (i to xiii)	-348.667	-357.078	-352.661	-363.612
O	NET DRAWAL	2829.562	2737.811	1378.917	1317.965
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				47.370

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				58.623
(iii)	PRAGATI				173.470
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				128.190
(vi)	Timarpur - Okhla Waste Management				11.212884
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				0.000
(viii)	Delhi Municipality Solid Waste Ltd.				1.652
(ix)	IMPORT FROM BTPS				19.368
Q	TOTAL (i to ix)				392.516
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.140870
(ii)	RENEWABLE SOLAR (BRPL)				0.013202
(iii)	RENEWABLE SOLAR (BYPL)				0.035105
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				1.040
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				1.229
S	TOTAL GENERATION WITHIN DELHI				393.745
T	GROSS CONSUMPTION (O + P + S)				1759.080
U	LOAD SHEDDING				1.062
V	REQUIREMENT (U + Y)				1747.453
W	% DEPENDENCE ON GRID				74.92
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				12.689
Y	NET CONSUMPTION OF DTL (T - X)				1746.391

9.9 Power supply position during the month of December 2016

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	100.421	95.460	83.430	79.379
2	RIHAND-I	62.335	59.293	47.274	44.970
3	RIHAND-II	88.750	84.383	70.444	66.998
4	RIHAND-III	89.673	85.308	71.694	68.222
5	UNCHAHAAR-I	15.718	14.938	12.013	11.415
6	UNCHAHAAR-II	33.697	32.035	25.992	24.705
7	UNCHAHAAR-III	20.787	19.762	16.032	15.239
8	DADRI(TH)-I	545.724	518.825	110.836	105.474
9	DADRI(TH)-II	543.313	516.533	264.653	251.420
10	FARAKKA	14.069	13.379	7.900	7.508
11	KHELGAON	34.156	32.470	20.286	19.273
12	KHELGAON-II	109.724	104.322	77.384	73.496
13	ANTA (GT)	0.000	0.000	0.000	0.000
14	ANTA (Liquid)	0.000	0.000	0.000	0.000
15	ANTA (RLNG)	32.244	30.652	0.000	0.000
16	AURAIYA (GT)	0.000	0.000	0.000	0.000
17	AURAIYA (Liquid)	0.000	0.000	0.000	0.000
18	AURAIYA (RLNG)	50.716	48.214	0.000	0.000
19	DADRI (GT)	28.858	27.432	5.564	5.292
20	DADRI (Liquid)	0.000	0.000	0.000	0.000
21	DADRI (RLNG)	32.763	31.147	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1802.946	1714.153	813.501	773.391
	NHPC STATIONS				
22	TANAKPUR	2.206	2.098	2.206	2.098
23	CHAMERA-I	3.346	3.182	3.346	3.182
24	CHAMERA-II	4.373	4.159	4.373	4.159
25	CHAMERA-III	2.091	1.989	2.091	1.989
26	BAIRA SUIL	1.505	1.432	1.505	1.432
27	SALAL	7.564	7.198	7.564	7.198
28	DAULI GANGA	3.901	3.712	3.901	3.712
29	DULASTI	12.002	11.412	12.002	11.412
30	URI-I	6.119	5.819	6.119	5.819
31	URI-II	5.138	4.887	5.138	4.887
32	SEWA -II	0.993	0.944	0.993	0.944
33	PARBATI-III	1.673	1.591	1.673	1.591
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	50.909	48.422	50.909	48.422
	THDC				
34	KOTESHWAR	7.884	7.487	7.884	7.487
35	TEHRI	14.122	13.412	14.122	13.412
C	TOTAL THDC (TOTAL 34 - 35)	22.006	20.899	22.006	20.899

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	32.917	31.290	32.917	31.290
37	RAPP 'C'	20.877	19.846	20.877	19.846
D	TOTAL NPC (TOTAL 36 - 37)	53.794	51.136	53.794	51.136
E	NATHPA JHAKHRI (SJVNL)	20.334	19.345	15.169	14.431
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	489.230	465.087	8.334	7.983
H	TALA	5.383	5.123	5.383	5.123
I	SASAN	280.265	266.393	258.907	246.139
J	TOTAL (A+B+C+D+E+F+G+H+I)	2724.868	2590.558	1228.004	1167.524
	LTA				
38	RAJASTHAN (SOLAR)	10.256	9.979	9.979	9.485
39	CLP JHAJJAR - TPDDL	54.053	53.536	53.536	50.883
40	DVC	228.686	226.409	226.409	214.994
41	MAITHON - TPDDL	188.565	187.190	187.190	177.934
42	DVC MEJIA - BYPL	62.173	61.554	61.554	58.523
K	TOTAL LTA (38 TO 42)	543.732	538.668	538.668	511.819
	BILATERAL IMPORT				
(i)	UTTAR PRADESH	7.424	7.330	7.330	6.918
(ii)	PUNJAB	14.427	14.150	14.150	13.341
(iii)	HIMACHAL PRADESH	0.441	0.436	0.436	0.410
(iv)	POWER EXCHANGE(IEX)	62.166	58.840	62.166	58.840
(v)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to v)	84.458	80.755	84.082	79.508
M	TOTAL IMPORT	3353.058	3209.981	1850.754	1758.852
	EXPORT				
(i)	RAJASTHAN	-42.673	-43.970	-43.970	-46.256
(ii)	NEPAL	-21.202	-21.449	-21.449	-22.565
(iii)	BIHAR	-29.760	-30.380	-30.380	-31.963
(iv)	JAMMU & KASHMIR	-57.743	-58.237	-58.237	-60.812
(v)	MEGHALAYA	-58.038	-59.269	-59.269	-62.380
(vi)	HIMACHAL PRADESH	-1.014	-1.041	-1.041	-1.079
(vii)	UTTRANCHAL	-17.819	-18.071	-18.071	-19.011
(viii)	POWER EXCHANGE (IEX)	-103.287	-108.357	-103.287	-108.357
(ix)	POWER EXCHANGE (PX)	-0.002	-0.002	-0.002	-0.002
(xi)	SHARE PROJECT (HARYANA)	-17.277	-18.177	-17.277	-18.177
(xii)	POWER EXCHANGE (PUNJAB)	-17.839	-18.777	-17.839	-18.777
N	TOTAL (i to xii)	-366.654	-377.729	-370.821	-389.379
O	NET DRAWAL	2986.404	2832.252	1479.933	1369.473
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				9.550

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				60.417
(iii)	PRAGATI				166.298
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				194.786
(vi)	Timarpur - Okhla Waste Management				8.954942
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				0.000
(viii)	Delhi Municipality Solid Waste Ltd.				-0.147
(ix)	IMPORT FROM BTPS				-4.975
Q	TOTAL (i to ix)				425.334
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.133842
(ii)	RENEWABLE SOLAR (BRPL)				0.030047
(iii)	RENEWABLE SOLAR (BYPL)				0.008891
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				0.011
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				0.184
S	TOTAL GENERATION WITHIN DELHI				425.518
T	GROSS CONSUMPTION (O + P + S)				1804.541
U	LOAD SHEDDING				0.949
V	REQUIREMENT (U + Y)				1791.450
W	% DEPENDENCE ON GRID				75.89
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				14.040
Y	NET CONSUMPTION OF DTL (T - X)				1790.501

9.10 Power supply position during the month of January 2017

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	104.996	98.875	94.043	88.558
2	RIHAND-I	54.187	50.889	46.433	43.613
3	RIHAND-II	89.773	84.542	76.886	72.406
4	RIHAND-III	94.105	88.625	82.177	77.386
5	UNCHAHAR-I	16.721	15.752	13.289	12.515
6	UNCHAHAR-II	33.078	31.139	26.743	25.172
7	UNCHAHAR-III	20.766	19.555	17.002	16.010
8	DADRI(TH)-I	545.706	513.897	140.973	132.803
9	DADRI(TH)-II	543.312	511.642	213.615	200.981
10	FARAKKA	14.893	14.016	10.035	9.451
11	KHELGAON	33.968	31.988	22.361	21.062
12	KHELGAON-II	72.107	67.936	55.408	52.206
13	ANTA (GT)	0.000	0.000	0.000	0.000
14	ANTA (Liquid)	0.000	0.000	0.000	0.000
15	ANTA (RLNG)	32.856	30.941	0.000	0.000
16	AURAIYA (GT)	0.000	0.000	0.000	0.000
17	AURAIYA (Liquid)	0.000	0.000	0.000	0.000
18	AURAIYA (RLNG)	51.641	48.633	0.000	0.000
19	DADRI (GT)	20.082	18.921	5.619	5.308
20	DADRI (Liquid)	0.000	0.000	0.000	0.000
21	DADRI (RLNG)	44.124	41.544	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1772.316	1668.896	804.583	757.472
	NHPC STATIONS				
22	TANAKPUR	1.248	1.173	1.248	1.173
23	CHAMERA-I	4.643	4.383	4.643	4.383
24	CHAMERA-II	4.445	4.194	4.445	4.194
25	CHAMERA-III	2.233	2.107	2.233	2.107
26	BAIRA SUIL	2.335	2.210	2.335	2.210
27	SALAL	10.241	9.693	10.241	9.693
28	DAULI GANGA	3.135	2.951	3.135	2.951
29	DULASTI	9.582	9.026	9.582	9.026
30	URI-I	10.505	9.924	10.505	9.924
31	URI-II	8.226	7.770	8.228	7.772
32	SEWA –II	3.358	3.193	3.358	3.193
33	PARBATI-III	1.490	1.403	1.490	1.403
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	61.440	58.027	61.442	58.029
	THDC				
34	KOTESHWAR	9.409	8.861	9.409	8.861
35	TEHRI	16.596	15.626	16.589	15.620
C	TOTAL THDC (TOTAL 34 - 35)	26.005	24.487	25.998	24.481

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	33.172	31.238	33.172	31.238
37	RAPP 'C'	25.075	23.678	25.075	23.678
D	TOTAL NPC (TOTAL 36 - 37)	58.247	54.916	58.247	54.916
E	NATHPA JHAKHRI (SVNL)	18.072	17.014	13.631	12.831
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	494.968	466.116	2.053	1.929
H	TALA	2.621	2.466	2.621	2.466
I	SASAN	303.661	285.990	285.218	268.614
J	TOTAL (A+B+C+D+E+F+G+H+I)	2737.330	2577.912	1253.794	1180.737
	LTA				
38	RAJASTHAN (SOLAR)	8.516	8.149	8.149	7.680
39	CLP JHAJJAR - TPDDL	51.986	50.547	50.547	47.495
40	DVC	242.822	239.616	239.616	225.704
41	MAITHON - TPDDL	183.339	181.342	181.342	170.619
42	DVC MEJIA - BYPL	48.389	47.739	47.739	44.778
K	TOTAL LTA (38 TO 42)	535.053	527.394	527.394	496.276
	BILATERAL IMPORT				
(i)	UTTAR PRADESH	11.619	11.191	11.191	10.538
(ii)	URS	0.060	0.056	0.060	0.056
(iii)	CHATTISHGARH	0.093	0.091	0.091	0.084
(iv)	ORISSA	2.042	2.020	2.020	1.899
(v)	PUNJAB	21.595	21.024	21.024	19.797
(vi)	HIMACHAL PRADESH	0.790	0.767	0.767	0.722
(vii)	POWER EXCHANGE(IEX)	173.622	163.568	173.622	163.568
(viii)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to viii)	209.821	198.716	208.774	196.665
M	TOTAL IMPORT	3482.204	3304.022	1989.963	1873.678
	EXPORT				
(i)	RAJASTHAN	-41.746	-43.776	-43.776	-46.489
(ii)	GOA	-5.863	-5.997	-5.997	-6.368
(iii)	NEPAL	-19.571	-20.150	-20.150	-21.399
(iv)	UTTAR PRADESH	-4.485	-4.650	-4.650	-4.860
(v)	BIHAR	-26.566	-27.063	-27.063	-28.739
(vi)	JAMMU & KASHMIR	-24.636	-25.303	-25.303	-26.871
(vii)	MEGHALAYA	-19.847	-20.248	-20.248	-21.505
(viii)	POWER EXCHANGE (IEX)	-106.066	-112.714	-106.066	-112.714
(ix)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
(x)	SHARE PROJECT (HARYANA)	-17.294	-18.367	-17.294	-18.367
(xi)	POWER EXCHANGE (PUNJAB)	-17.467	-18.552	-17.467	-18.552
N	TOTAL (i to xi)	-283.541	-296.819	-288.013	-305.864
O	NET DRAWAL	3198.663	3007.203	1701.949	1567.814
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				11.409

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				49.920
(iii)	PRAGATI				112.598
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				201.280
(vi)	Timarpur - Okhla Waste Management				3.625664
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				0.000
(viii)	Delhi Municipality Solid Waste Ltd.				1.638
(ix)	IMPORT FROM BTPS				-5.693
Q	TOTAL (i to ix)				363.369
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.149497
(ii)	RENEWABLE SOLAR (BRPL)				0.588081
(iii)	RENEWABLE SOLAR (BYPL)				0.149984
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				0.537
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				1.425
S	TOTAL GENERATION WITHIN DELHI				364.793
T	GROSS CONSUMPTION (O + P + S)				1944.016
U	LOAD SHEDDING				1.172
V	REQUIREMENT (U + Y)				1932.748
W	% DEPENDENCE ON GRID				80.65
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				12.440
Y	NET CONSUMPTION OF DTL (T - X)				1931.576

9.11 Power supply position during the month of February 2017

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	82.193	79.276	76.466	73.744
2	RIHAND-I	32.406	31.264	27.269	26.300
3	RIHAND-II	81.221	78.355	67.937	65.525
4	RIHAND-III	85.882	82.855	74.049	71.427
5	UNCHAHAR-I	15.621	15.069	11.309	10.906
6	UNCHAHAR-II	30.455	29.380	22.697	21.888
7	UNCHAHAR-III	18.789	18.126	14.069	13.567
8	DADRI(TH)-I	492.040	474.685	166.906	160.991
9	DADRI(TH)-II	490.728	473.412	196.898	189.925
10	FARAKKA	13.791	13.304	9.581	9.238
11	KHELGAON	30.827	29.742	19.988	19.278
12	KHELGAON-II	85.584	82.681	63.537	61.375
13	ANTA (GT)	5.160	5.020	1.511	1.470
14	ANTA (Liquid)	0.000	0.000	0.000	0.000
15	ANTA (RLNG)	24.290	23.390	0.000	0.000
16	AURAIYA (GT)	3.712	3.610	1.954	1.901
17	AURAIYA (Liquid)	0.000	0.000	0.000	0.000
18	AURAIYA (RLNG)	43.283	41.726	0.000	0.000
19	DADRI (GT)	14.333	13.780	3.650	3.514
20	DADRI (Liquid)	0.000	0.000	0.000	0.000
21	DADRI (RLNG)	40.209	38.784	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1590.525	1534.460	757.821	731.051
	NHPC STATIONS				
22	TANAKPUR	0.544	0.525	0.544	0.525
23	CHAMERA-I	7.646	7.377	7.646	7.377
24	CHAMERA-II	5.500	5.310	5.500	5.310
25	CHAMERA-III	0.000	0.000	0.000	0.000
26	BAIRA SUIL	5.594	5.403	5.597	5.405
27	SALAL	16.155	15.596	16.155	15.596
28	DAULI GANGA	2.778	2.680	2.778	2.680
29	DULASTI	10.315	9.950	10.315	9.950
30	URI-I	29.337	28.330	29.337	28.330
31	URI-II	18.267	17.636	18.267	17.636
32	SEWA -II	9.341	9.013	9.341	9.013
33	PARBATI-III	1.415	1.365	1.415	1.365
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	106.893	103.186	106.896	103.189
	THDC				
34	KOTESHWAR	8.591	8.295	8.591	8.295
35	TEHRI	14.184	13.692	14.184	13.692
C	TOTAL THDC (TOTAL 34 - 35)	22.775	21.987	22.775	21.987

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NPC				
36	NAPP	29.676	28.628	29.676	28.628
37	RAPP 'C'	34.566	33.345	34.566	33.345
D	TOTAL NPC (TOTAL 36 - 37)	64.242	61.973	64.242	61.973
E	NATHPA JHAKHRI (SVNL)	16.907	16.311	12.613	12.168
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	439.485	423.922	41.438	40.192
H	TALA	1.413	1.362	1.413	1.362
I	SASAN	280.291	270.394	275.235	265.531
J	TOTAL (A+B+C+D+E+F+G+H+I)	2522.533	2433.596	1282.433	1237.454
	LTA				
38	RAJASTHAN (SOLAR)	10.420	10.144	10.144	9.787
39	CLP JHAJJAR - TPDDL	6.294	6.187	6.187	5.938
40	DVC	183.626	181.633	181.633	175.104
41	MAITHON - TPDDL	167.391	165.515	165.515	159.646
42	DVC MEJIA - BYPL	52.873	52.296	52.296	50.419
K	TOTAL LTA (38 TO 42)	420.604	415.775	415.775	400.895
	BILATERAL IMPORT				
(i)	MADHYA PRADESH	0.077	0.076	0.076	0.074
(ii)	UTTAR PRADESH	2.804	2.722	2.722	2.626
(iii)	CHATTISHGARH	0.179	0.176	0.176	0.171
(iv)	ORISSA	1.247	1.233	1.233	1.188
(v)	PUNJAB	6.289	6.196	6.196	5.969
(vi)	HIMACHAL PRADESH	0.743	0.729	0.729	0.704
(vii)	JAMMU & KASHMIR	0.178	0.176	0.176	0.171
(viii)	POWER EXCHANGE (IEX)	83.561	80.383	83.561	80.383
(ix)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to ix)	95.078	91.692	94.870	91.287
M	TOTAL IMPORT	3038.216	2941.063	1793.077	1729.635
	EXPORT				
(i)	RAJASTHAN	-54.997	-56.934	-56.934	-59.010
(ii)	GOA	-5.358	-5.480	-5.480	-5.680
(iii)	NEPAL	-18.154	-18.413	-18.413	-19.087
(iv)	UTTAR PRADESH	-28.731	-29.719	-29.719	-30.781
(v)	BIHAR	-21.230	-21.627	-21.627	-22.417
(vi)	JAMMU & KASHMIR	-22.813	-23.139	-23.139	-23.986
(vii)	MEGHALAYA	-18.519	-18.995	-18.995	-19.701
(viii)	POWER EXCHANGE (IEX)	-140.911	-146.001	-140.911	-146.001
(ix)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
(x)	SHARE PROJECT (HARYANA)	-16.144	-16.735	-16.144	-16.735
(xi)	POWER EXCHANGE (PUNJAB)	-16.144	-16.735	-16.144	-16.735
N	TOTAL (i to xi)	-343.001	-353.777	-347.507	-360.132
O	NET DRAWAL	2695.214	2587.286	1445.570	1369.503
P	OVER DRAWAL(+)/UNDER DRAWAL(-) FROM THE GRID				-0.864

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				55.266
(iii)	PRAGATI				108.653
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				179.007
(vi)	Timarpur - Okhla Waste Management				8.511762
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				0.000
(viii)	Delhi Municipality Solid Waste Ltd.				2.878
(ix)	IMPORT FROM BTPS				-4.772
Q	TOTAL (i to ix)				349.544
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.187170
(ii)	RENEWABLE SOLAR (BRPL)				0.994114
(iii)	RENEWABLE SOLAR (BYPL)				0.022656
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				-0.192
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				1.012
S	TOTAL GENERATION WITHIN DELHI				350.556
T	GROSS CONSUMPTION (O + P + S)				1719.195
U	LOAD SHEDDING				0.737
V	REQUIREMENT (U + Y)				1707.448
W	% DEPENDENCE ON GRID				79.66
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				12.484
Y	NET CONSUMPTION OF DTL (T - X)				1706.711

9.12 Power supply position during the month of March 2017

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	98.301	95.652	94.518	91.974
2	RIHAND-I	65.669	63.904	54.844	53.376
3	RIHAND-II	89.807	87.387	79.007	76.887
4	RIHAND-III	94.442	91.895	85.682	83.377
5	UNCHAHAAR-I	17.294	16.828	12.228	11.903
6	UNCHAHAAR-II	33.718	32.810	24.418	23.770
7	UNCHAHAAR-III	20.802	20.242	14.787	14.392
8	DADRI(TH)-I	545.724	531.025	151.070	147.148
9	DADRI(TH)-II	481.966	468.760	217.803	211.946
10	FARAKKA	12.757	12.411	7.814	7.605
11	KHELGAON	34.107	33.186	20.594	20.044
12	KHELGAON-II	110.413	107.439	76.827	74.769
13	ANTA (GT)	10.598	10.305	4.559	4.433
14	ANTA (Liquid)	0.000	0.000	0.000	0.000
15	ANTA (RLNG)	15.446	15.033	0.000	0.000
16	AURAIYA (GT)	7.946	7.726	4.638	4.510
17	AURAIYA (Liquid)	0.000	0.000	0.000	0.000
18	AURAIYA (RLNG)	44.083	42.902	0.000	0.000
19	DADRI (GT)	14.340	13.968	5.270	5.139
20	DADRI (Liquid)	0.000	0.000	0.000	0.000
21	DADRI (RLNG)	10.694	10.394	0.000	0.000
A.	TOTAL NTPC STATIONS (TOTAL 1 - 21)	1708.108	1661.868	854.059	831.272
	NHPC STATIONS				
22	TANAKPUR	0.446	0.435	0.446	0.434
23	CHAMERA-I	10.786	10.506	10.786	10.506
24	CHAMERA-II	7.299	7.110	7.299	7.110
25	CHAMERA-III	0.000	0.000	0.000	0.000
26	BAIRA SUIL	7.069	6.885	7.069	6.885
27	SALAL	19.757	19.241	19.757	19.241
28	DAULI GANGA	3.729	3.632	3.729	3.632
29	DULASTI	11.938	11.625	11.938	11.625
30	URI-I	0.766	0.750	0.766	0.750
31	URI-II	23.147	22.524	23.147	22.524
32	SEWA –II	1.225	1.200	1.225	1.200
33	PARBATI-III	1.849	1.801	1.849	1.801
B	TOTAL NHPC STATIONS (TOTAL 22 - 33)	88.013	85.708	88.013	85.708
	THDC				
34	KOTESHWAR	9.331	9.080	9.331	9.080
35	TEHRI	13.924	13.548	13.924	13.548
C	TOTAL THDC (TOTAL 34 - 35)	23.255	22.627	23.255	22.627
	NPC				
36	NAPP	32.442	31.567	32.442	31.567
37	RAPP 'C'	31.591	30.730	31.591	30.730
D	TOTAL NPC (TOTAL 36 - 37)	64.033	62.296	64.033	62.296

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
E	NATHPA JHAKHRI (SJVNL)	19.389	18.877	14.654	14.266
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	492.550	479.284	65.697	63.960
H	TALA	2.270	2.210	2.269	2.210
I	SASAN	274.293	266.929	265.277	258.163
J	TOTAL (A+B+C+D+E+F+G+H+I)	2671.910	2599.799	1377.257	1340.502
	LTA				
38	RAJASTHAN (SOLAR)	11.122	10.882	10.882	10.589
39	CLP JHAJJAR - TPDDL	7.633	7.562	7.562	7.353
40	DVC	234.189	231.855	231.855	225.558
41	MAITHON - TPDDL	159.319	157.705	157.705	153.399
42	DVC MEJIA - BYPL	68.848	68.166	68.166	66.338
K	TOTAL LTA (38 TO 42)	481.110	476.170	476.170	463.238
	BILATERAL IMPORT				
(i)	MEGHALAYA	0.629	0.624	0.624	0.611
(ii)	MADHYA PRADESH	0.103	0.101	0.101	0.099
(iii)	HARYANA	0.204	0.203	0.203	0.199
(iv)	URS	2.516	2.449	2.516	2.449
(v)	CHATTISHGARH	0.031	0.031	0.031	0.030
(vi)	ORISSA	0.409	0.406	0.406	0.397
(vii)	HIMACHAL PRADESH	1.259	1.241	1.241	1.209
(viii)	JAMMU & KASHMIR	5.093	5.046	5.046	4.910
(ix)	POWER EXCHANGE(IEX)	70.781	68.939	70.781	68.939
(x)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to x)	81.025	79.041	80.950	78.844
M	TOTAL IMPORT	3234.046	3155.009	1934.377	1882.584
	EXPORT				
(i)	RAJASTHAN	-17.453	-17.979	-17.979	-18.487
(ii)	GOA	-5.956	-6.088	-6.088	-6.257
(iii)	NEPAL	-18.098	-18.265	-18.265	-18.770
(iv)	UTTAR PRADESH	-46.909	-48.315	-48.315	-49.651
(v)	BIHAR	-50.822	-51.721	-51.721	-53.153
(vi)	ANDHRA PRADESH	-0.290	-0.294	-0.294	-0.303
(vii)	KERALA	-5.988	-6.139	-6.139	-6.307
(viii)	JHARKHAND	-3.506	-3.546	-3.546	-3.627
(ix)	MEGHALAYA	-25.508	-26.204	-26.204	-26.927
(x)	HIMACHAL PRADESH	-16.375	-16.745	-16.745	-17.223
(xi)	HARYANA	-2.181	-2.214	-2.214	-2.278
(xii)	POWER EXCHANGE (IEX)	-78.455	-80.683	-78.455	-80.683
(xiii)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
(xiv)	SHARE PROJECT (HARYANA)	-17.866	-18.361	-17.866	-18.361
(xv)	POWER EXCHANGE (PUNJAB)	-17.871	-18.366	-17.871	-18.366
N	TOTAL (i to xv)	-307.278	-314.919	-311.701	-320.393
O	NET DRAWAL	2926.768	2840.090	1622.676	1562.190
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				40.095

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	<u>AVAILABILITY FROM SOURCES WITHIN DELHI</u>				
(i)	RPH				0.000
(ii)	GT				57.661
(iii)	PRAGATI				93.469
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				213.128
(vi)	Timarpur - Okhla Waste Management				11.59177
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				0.000
(viii)	Delhi Municipality Solid Waste Ltd.				7.945
(ix)	IMPORT FROM BTPS				-3.412
Q	TOTAL (i to ix)				380.383
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				0.230498
(ii)	RENEWABLE SOLAR (BRPL)				1.168615
(iii)	RENEWABLE SOLAR (BYPL)				0.033478
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				1.349
(vi)	NON SOLAR (BRPL)				
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				2.781
S	TOTAL GENERATION WITHIN DELHI				383.164
T	GROSS CONSUMPTION (O + P + S)				1985.450
U	LOAD SHEDDING				0.980
V	REQUIREMENT (U + Y)				1968.929
W	% DEPENDENCE ON GRID				78.68
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				17.501
Y	NET CONSUMPTION OF DTL (T - X)				1967.949

9.13 Consolidated Power Supply Position for 2016-17

All figures in MUs

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
	NTPC STATIONS				
1	SINGRAULI	1094.411	1060.929	1003.201	972.843
2	RIHAND-I	657.996	638.323	529.048	513.303
3	RIHAND-II	1029.587	998.464	827.970	802.800
4	RIHAND-III	1025.646	994.341	864.654	838.268
5	UNCHAHAR-I	173.055	167.724	118.638	114.891
6	UNCHAHAR-II	374.669	363.317	265.204	257.016
7	UNCHAHAR-III	243.002	235.698	172.856	167.552
8	DADRI(TH)-I	6386.883	6194.973	2445.604	2377.753
9	DADRI(TH)-II	5999.253	5817.246	3902.908	3794.392
10	FARAKKA	158.701	153.868	101.853	98.751
11	KHELGAON	385.182	373.497	252.610	244.973
12	KHELGAON-II	1199.922	1164.919	890.131	864.131
13	ANTA (GT)	88.268	86.217	41.383	40.452
14	ANTA (Liquid)	86.519	84.362	0.000	0.000
15	ANTA (RLNG)	176.925	170.390	0.012	0.011
16	AURAIYA (GT)	73.088	71.352	42.482	41.500
17	AURAIYA (Liquid)	158.832	154.830	0.004	0.003
18	AURAIYA (RLNG)	367.842	355.551	0.000	0.000
19	DADRI (GT)	330.720	321.214	106.582	103.708
20	DADRI (Liquid)	118.502	115.525	0.562	0.548
21	DADRI (RLNG)	250.794	242.107	0.000	0.000
A.	TOTAL NTPC STNS (TOTAL 1 - 21)	20379.797	19764.848	11565.702	11232.895
	NHPC STATIONS				
22	TANAKPUR	42.450	41.391	38.919	37.947
23	CHAMERA-I	169.252	164.983	147.885	144.151
24	CHAMERA-II	185.623	180.971	160.812	156.783
25	CHAMERA-III	113.676	110.919	96.879	94.543
26	BAIRA SUIL	70.518	68.687	62.319	60.695
27	SALAL	375.947	366.487	328.466	320.201
28	DAULI GANGA	121.528	118.498	106.725	104.064
29	DULASTI	281.988	274.623	251.219	244.633
30	URI-I	266.227	259.142	229.012	222.867
31	URI-II	193.601	188.378	171.175	166.516
32	SEWA –II	53.094	51.648	45.238	43.977
33	PARBATI-III	85.138	83.108	74.976	73.198
B	TOTAL NHPC STNS (TOTAL 22 - 33)	1959.042	1908.836	1713.626	1669.575
	THDC				
34	KOTESHWAR	119.174	115.767	119.174	115.767
35	TEHRI	195.472	189.844	195.417	189.791
C	TOTAL THDC (TOTAL 34 - 35)	314.646	305.611	314.592	305.558
	NPC				
36	NAPP	328.155	317.829	328.067	317.743
37	RAPP 'C'	331.711	321.993	331.369	321.658
D	TOTAL NPC (TOTAL 36 - 37)	659.866	639.822	659.436	639.401

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
E	NATHPA JHAKHRI (SJVNL)	661.391	644.634	493.789	481.271
F	TALCHER	0.000	0.000	0.000	0.000
G	JHAJJAR	5404.019	5239.983	1394.166	1360.117
H	TALA	125.235	122.196	125.299	122.258
I	SASAN	3172.101	3073.858	3044.865	2950.959
J	TOTAL (A+B+C+D+E+F+G+H+I)	32676.097	31699.788	19311.474	18762.033
	LTA				
38	RAJASTHAN (SOLAR)	133.671	130.675	130.675	126.896
39	CLP JHAJJAR - TPDDL	222.001	218.999	218.999	210.299
40	DVC	2584.796	2559.145	2559.145	2480.800
41	MAITHON - TPDDL	1981.214	1961.311	1961.311	1900.373
42	DVC MEJIA - BYPL	737.625	730.412	730.412	708.831
K	TOTAL LTA (38 TO 42)	5659.308	5600.541	5600.541	5427.198
	BILATERAL IMPORT				
(i)	RASJASTHAN	170.651	167.699	167.699	163.478
(ii)	MEGHALAYA	9.795	9.750	9.750	9.499
(iii)	MADHYA PRADESH	9.542	9.391	9.391	9.181
(iv)	HARYANA	3.814	3.771	3.771	3.650
(v)	UTTAR PRADESH	49.266	48.199	48.199	46.404
(vi)	URS	3.997	3.894	3.997	3.894
(vii)	CHATTISHGARH	313.865	307.692	307.692	301.231
(viii)	UTTRANCHAL	0.616	0.606	0.606	0.593
(ix)	ORISSA	484.793	479.670	479.670	469.592
(x)	PUNJAB	42.311	41.369	41.369	39.106
(xi)	HIMACHAL PRADESH	12.306	12.107	12.107	11.785
(xii)	JAMMU & KASHMIR	1452.834	1441.825	1441.825	1408.710
(xiii)	POWER EXCHANGE (IEX)	942.206	910.798	942.206	910.798
(xiv)	POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
L	TOTAL (i to xix)	3495.995	3436.769	3468.280	3377.921
M	TOTAL IMPORT	41831.400	40737.098	28380.295	27567.152
	EXPORT				
(i)	RAJASTHAN	-198.523	-205.576	-205.576	-214.462
(ii)	ASSAM	-31.331	-31.743	-31.743	-32.581
(iii)	GOA	-17.177	-17.565	-17.565	-18.305
(iv)	ORISSA	-70.184	-70.799	-70.799	-72.632
(v)	NEPAL	-81.197	-82.505	-82.505	-86.189
(vi)	UTTAR PRADESH	-123.378	-126.920	-126.920	-130.599
(vii)	BIHAR	-145.228	-147.991	-147.991	-153.995
(viii)	KARNATAKA	-15.583	-15.877	-15.877	-16.422
(ix)	PUNJAB	-39.173	-39.474	-39.474	-40.344
(x)	CHATTISHGARH	-52.082	-53.099	-53.099	-54.473
(xi)	ANDHRA PRADESH	-0.290	-0.294	-0.294	-0.303
(xii)	JAMMU & KASHMIR	-132.079	-133.827	-133.827	-139.631
(xiii)	KERALA	-6.561	-6.725	-6.725	-6.910
(xiv)	JHARKHAND	-3.506	-3.546	-3.546	-3.627

S. no.	SOURCE	Availability at Power Plant bus	Availability at Delhi periphery	Allocation made by NRLDC at Power Plant	Allocation Made by NRLDC at Delhi periphery
(xv)	MEGHALAYA	-164.805	-168.516	-168.516	-175.630
(xvi)	HIMACHAL PRADESH	-17.622	-18.023	-18.023	-18.543
(xvii)	MADHYA PRADESH	-43.478	-44.094	-44.094	-45.432
(xviii)	UTTRANCHAL	-18.154	-18.416	-18.416	-19.364
(xix)	HARYANA	-5.548	-5.637	-5.637	-5.818
(xx)	POWER EXCHANGE (IEX)	-1321.669	-1361.747	-1321.669	-1361.747
(xxi)	POWER EXCHANGE (PX)	-0.200	-0.204	-0.200	-0.204
(xxii)	SHARE PROJECT (HARYANA)	-179.640	-185.387	-179.640	-185.387
(xxiii)	POWER EXCHANGE (PUNJAB)	-177.916	-183.653	-177.916	-183.653
N	TOTAL (i to xxiii)	-2845.326	-2921.618	-2870.052	-2966.251
O	NET DRAWAL	38986.074	37815.480	25510.243	24600.900
P	OVER DRAWL(+)/UNDER DRAWAL(-) FROM THE GRID				129.998
	AVAILABILITY FROM SOURCES WITHIN DELHI				0.000
(i)	RPH				0.000
(ii)	GT				696.084
(iii)	PRAGATI				1804.446
(iv)	RITHALA				0.000
(v)	BAWANA (CCGT)				2047.442
(vi)	Timarpur - Okhla Waste Management				120.178
(vii)	EAST DELHI WASTE PROCESSING CO.LTD.				0.000
(viii)	Delhi Municipality Solid Waste Ltd.				15.173
(ix)	IMPORT FROM BTPS				1506.138
Q	TOTAL (i to ix)				6189.461
	RENEWABLE SOURCES				
(i)	RENEWABLE SOLAR (NDPL)				2.095
(ii)	RENEWABLE SOLAR (BRPL)				3.126
(iii)	RENEWABLE SOLAR (BYPL)				0.411
(iv)	RENEWABLE SOLAR (NDMC)				0.000
(v)	NON SOLAR (BYPL)				6.650
(vi)	NON SOLAR (BRPL)				0.000
R	TOTAL RENEWABLE SOURCES (TOTAL i TO vi)				12.282
S	TOTAL GENERATION WITHIN DELHI				6201.743
T	GROSS CONSUMPTION (O + P + S)				30932.641
U	LOAD SHEDDING				31.501
V	REQUIREMENT (U + Y)				30791.394
W	% DEPENDENCE ON GRID				950.453
X	AUXILIARY CONSUMPTION OF STATION WITHIN DELHI				172.748
Y	NET CONSUMPTION OF DTL (T - X)				30759.893

9.14 LOAD SHEDDING DETAILS FOR 2016-17

Month	Number of Under Frequency Trippings	Load shedding due to under Frequency Relay Operation				
		BYPL	BRPL	TPDDL	NDMC	Total
Apr 2016	0	0.000	0.000	0.000	0.000	0.000
May 2016	0	0.000	0.000	0.000	0.000	0.000
Jun 2016	0	0.000	0.000	0.000	0.000	0.000
July 2016	0	0.000	0.000	0.000	0.000	0.000
Aug. 2016	0	0.000	0.000	0.000	0.000	0.000
Sept 2016	0	0.000	0.000	0.000	0.000	0.000
Oct. 2016	5	0.023	0.667	0.000	0.000	0.690
Nov. 2016	0	0.000	0.000	0.000	0.000	0.000
Dec. 2016	0	0.000	0.000	0.000	0.000	0.000
Jan. 2017	0	0.000	0.000	0.000	0.000	0.000
Feb. 2017	2	0.010	0.039	0.000	0.000	0.049
Mar. 2017	2	0.001	0.000	0.000	0.000	0.001
TOTAL	9	0.034	0.706	0.000	0.000	0.740

Months	Load Shedding due to Grid Restriction								
	To restrict over drawal at low frequency and low voltage					Due to TTC / ATC Violation			
	BYPL	BRPL	TPDDL	NDMC	MES	BYPL	BRPL	TPDDL	NDMC
Apr 2016	0.065	0.934	0.059	0.000	0.000	0.000	0.000	0.000	0.000
May 2016	0.086	0.677	0.093	0.000	0.000	0.000	0.000	0.000	0.000
Jun 2016	0.025	0.570	0.084	0.000	0.000	0.000	0.000	0.073	0.000
July 2016	0.023	0.343	0.026	0.000	0.000	0.000	0.064	0.009	0.000
Aug. 2016	0.040	0.527	0.127	0.000	0.000	0.000	0.000	0.000	0.000
Sept 2016	0.072	0.942	0.206	0.000	0.000	0.000	0.000	0.000	0.000
Oct. 2016	0.009	0.111	0.026	0.000	0.000	0.000	0.000	0.000	0.000
Nov. 2016	0.000	0.164	0.020	0.000	0.000	0.000	0.000	0.000	0.000
Dec. 2016	0.062	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jan. 2017	0.006	0.201	0.031	0.000	0.000	0.000	0.000	0.000	0.000
Feb. 2017	0.000	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar. 2017	0.000	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.388	4.533	0.691	0.000	0.000	0.000	0.064	0.082	0.000

Month	Load Shedding due to Transmission Constraints in Central Sector Transmission System				Total	Total Shedding due to Grid Restrictions
	BYPL	BRPL	TPDDL	NDMC		
Apr 2016	0.000	0.000	0.000	0.000	1.058	1.058
May 2016	0.000	0.000	0.000	0.000	0.856	0.856
Jun 2016	0.000	0.000	0.000	0.000	0.752	0.752
July 2016	0.000	0.000	0.000	0.000	0.465	0.465
Aug. 2016	0.000	0.000	0.000	0.000	0.694	0.694
Sept 2016	0.000	0.164	0.000	0.000	1.384	1.384
Oct. 2016	0.000	0.000	0.000	0.000	0.146	0.836
Nov. 2016	0.000	0.000	0.000	0.000	0.184	0.184
Dec. 2016	0.000	0.000	0.000	0.000	0.067	0.067
Jan. 2017	0.000	0.000	0.000	0.000	0.238	0.238
Feb. 2017	0.000	0.000	0.000	0.000	0.041	0.090
Mar. 2017	0.000	0.000	0.000	0.000	0.037	0.038
TOTAL	0.000	0.164	0.000	0.000	5.922	6.662

Month	Load Shedding due to Trippings / Break-downs / Shut-downs / Constraints in DTL System					Total
	BYPL	BRPL	TPDDL	NDMC	MES	
Apr 2016	0.053	0.138	0.054	0.000	0.000	0.245
May 2016	0.570	2.070	0.192	0.030	0.000	2.862
Jun 2016	0.788	1.481	0.218	0.008	0.000	2.495
July 2016	0.092	0.211	0.142	0.000	0.000	0.445
Aug. 2016	0.045	1.117	0.206	0.000	0.000	1.368
Sept 2016	0.171	0.263	0.149	0.000	0.000	0.583
Oct. 2016	0.025	0.237	0.014	0.000	0.000	0.276
Nov. 2016	0.094	0.125	0.176	0.026	0.000	0.421
Dec. 2016	0.057	0.047	0.272	0.004	0.000	0.380
Jan. 2017	0.155	0.040	0.012	0.000	0.000	0.207
Feb. 2017	0.043	0.138	0.010	0.001	0.000	0.192
Mar. 2017	0.020	0.198	0.108	0.001	0.000	0.327
TOTAL	2.113	6.065	1.553	0.070	0.000	9.801

Months	Load shedding due to Constraints in Discoms System				Load shedding due to Shut-downs / Break-downs / Trippings in the System of other utilities				
	BYPL	BRPL	TPDDL	NDMC	BYPL	BRPL	TPDDL	NDMC	Total
Apr 2016	0.077	1.113	0.060	0.000	0.000	0.009	0.007	0.000	0.016
May 2016	0.242	2.142	0.123	0.000	0.000	0.000	0.001	0.000	0.001
Jun 2016	0.289	2.135	0.185	0.000	0.165	1.047	0.007	0.000	1.219
July 2016	0.268	1.454	0.086	0.000	0.000	0.006	0.013	0.000	0.019
Aug. 2016	0.084	0.654	0.375	0.009	0.000	0.000	0.003	0.000	0.003
Sept 2016	0.131	0.312	0.088	0.000	0.001	0.000	0.000	0.000	0.001
Oct. 2016	0.067	0.424	0.050	0.000	0.079	0.273	0.001	0.000	0.353
Nov. 2016	0.034	0.148	0.149	0.000	0.014	0.064	0.004	0.000	0.082
Dec. 2016	0.050	0.201	0.037	0.000	0.000	0.011	0.003	0.000	0.014
Jan. 2017	0.025	0.400	0.157	0.000	0.000	0.000	0.000	0.000	0.000
Feb. 2017	0.027	0.286	0.070	0.032	0.000	0.016	0.003	0.000	0.019
Mar. 2017	0.090	0.305	0.124	0.000	0.008	0.078	0.001	0.000	0.087
TOTAL	1.384	9.574	1.504	0.041	0.267	1.504	0.043	0.000	1.814

Month	Load shedding carried out in theft prone areas			Total shedding due to T&D Constraints	Total Load Shedding	Net Consumption	Max Demand met in MW	Date	Time in Hrs.
	BYPL	BRPL	TPDDL						
Apr 2016	0.000	0.000	0.040	1.551	2.609	2612.594	4797	19.04.16	15:41:56
May 2016	0.000	0.000	0.047	5.417	6.273	3278.924	6188	20.05.16	15:18:12
Jun 2016	0.000	0.000	0.000	6.323	7.075	3490.409	6260	30.06.16	15:29:40
July 2016	0.000	0.000	0.032	2.304	2.769	3306.948	6261	01.07.16	15:10:35
Aug. 2016	0.000	0.000	0.041	2.534	3.228	3207.237	5707	05.08.16	15:30:47
Sept 2016	0.000	0.000	0.083	1.198	2.582	3101.054	5301	20.09.16	22:50:39
Oct. 2016	0.000	0.000	0.059	1.229	2.065	2619.599	5442	03.10.16	22:50:40
Nov. 2016	0.000	0.000	0.044	0.878	1.062	1746.391	3510	03.11.16	18:17:33
Dec. 2016	0.000	0.000	0.200	0.882	0.949	1790.501	3857	30.12.16	10:33:06
Jan. 2017	0.000	0.000	0.145	0.934	1.172	1931.576	4168	20.01.17	10:00:08
Feb. 2017	0.000	0.000	0.021	0.647	0.737	1706.711	3882	01.02.17	10:15:52
Mar. 2017	0.000	0.000	0.009	0.942	0.980	1967.949	4139	31.03.17	19:22:48
TOTAL	0.000	0.000	0.721	24.839	31.501	30759.893	6261	01.07.16	15:10:35

Month	Shedding at the time of Peak Demand	Un-restricted Demand	Maximum Un-restricted Demand in MW	Date	Time	Demand at that Time	Shedding at that time
Apr 2016	2	4799	4799	19.04.2016	15:41:56	4797	2
May 2016	120	6308	6308	20.05.2016	15:18:12	6188	120
Jun 2016	0	6260	6260	30.06.2016	15:29:40	6260	0
July 2016	81	6342	6342	01.07.2016	15:10:35	6261	81
Aug. 2016	0	5707	5707	05.08.2016	15:30:47	5707	0
Sept 2016	4	5305	5305	20.09.2016	22:50:39	5301	4
Oct. 2016	0	5442	5442	03.10.2016	22:50:40	5442	0
Nov. 2016	0	3510	3510	03.11.2016	18:17:33	3510	0
Dec. 2016	0	3857	3857	30.12.2016	10:33:06	3857	0
Jan. 2017	0	4168	4168	20.01.2017	10:00:08	4168	0
Feb. 2017	0	3882	3882	01.02.2017	10:15:52	3882	0
Mar. 2017	2	4141	4141	31.03.2017	19:22:48	4139	2
TOTAL	81	6342	6342	01.07.2016	15:10:35	6261	81

9.15 DEMAND - AVAILABILITY-DEMAND POSITION OF DELHI AT THE TIME OF PEAK DEMAND MET DURING 2016-17

Month	Date	Time of peak demand	Generation within Delhi							
			RPH	GT	PPCL	Bawana	BTPS	Rithala	TOWMC L	EDWP CL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Apr-16	19	15:41:56	0	36	269	254	314	0	14	--
May-16	20	15:18:12	0	167	288	256	181	0	16	--
Jun-16	30	15:29:40	0	164	295	297	349	0	16	--
Jul-16	1	15:10:35	0	163	292	304	356	0	16	--
Aug-16	5	15:30:47	0	65	262	296	347	0	16	--
Sep-16	20	22:50:39	0	73	144	505	359	0	16	--
Oct-16	3	22:50:40	0	71	146	501	319	0	12	--
Nov-16	3	18:17:33	0	75	152	-3	165	0	16	--
Dec-16	30	10:33:06	0	73	163	319	-3	0	11	--
Jan-17	20	10:00:08	0	36	139	253	-4	0	0	--
Feb-17	1	10:15:52	0	75	164	302	-3	0	15	--
Mar-17	31	19:22:48	0	126	144	501	151	0	14	19
Max	01.07.16	15:10:35	0	163	292	304	356	0	16	--

Month	Date	Time of peak demand	Total	Import from the Grid	Schedule from the Grid	OD (-) / UD (+)	Demand met	Shedding	Un-Restricted Demand
	(1)	(2)	(11)= (3) to (10)	(12)	(13)	(14)= (13) -(12)	(15)= (11)+ (12)	(16)	(17)= (15)+ (16)
Apr-16	19	15:41:56	887	3910	3953	43	4797	2	4799
May-16	20	15:18:12	908	5280	5290	10	6188	120	6308
Jun-16	30	15:29:40	1121	5139	5200	61	6260	0	6260
Jul-16	1	15:10:35	1131	5130	4949	-181	6261	81	6342
Aug-16	5	15:30:47	986	4721	4618	-103	5707	0	5707
Sep-16	20	22:50:39	1097	4204	4052	-152	5301	4	5305
Oct-16	3	22:50:40	1049	4393	4281	-112	5442	0	5442
Nov-16	3	18:17:33	405	3105	2971	-134	3510	0	3510
Dec-16	30	10:33:06	563	3294	3105	-189	3857	0	3857
Jan-17	20	10:00:08	424	3744	3608	-136	4168	0	4168
Feb-17	1	10:15:52	553	3329	3169	-160	3882	0	3882
Mar-17	31	19:22:48	955	3184	3152	-32	4139	2	4141
Max	01.07.2016	15:10:35	1131	5130	4949	-181	6261	81	6342

9.16 POWER AVAILABILITY- DEMAND POSITION AT THE TIME OF OCCURRENCE OF MAXIMUM UNRESTRICTED DEMAND DURING 2016-17

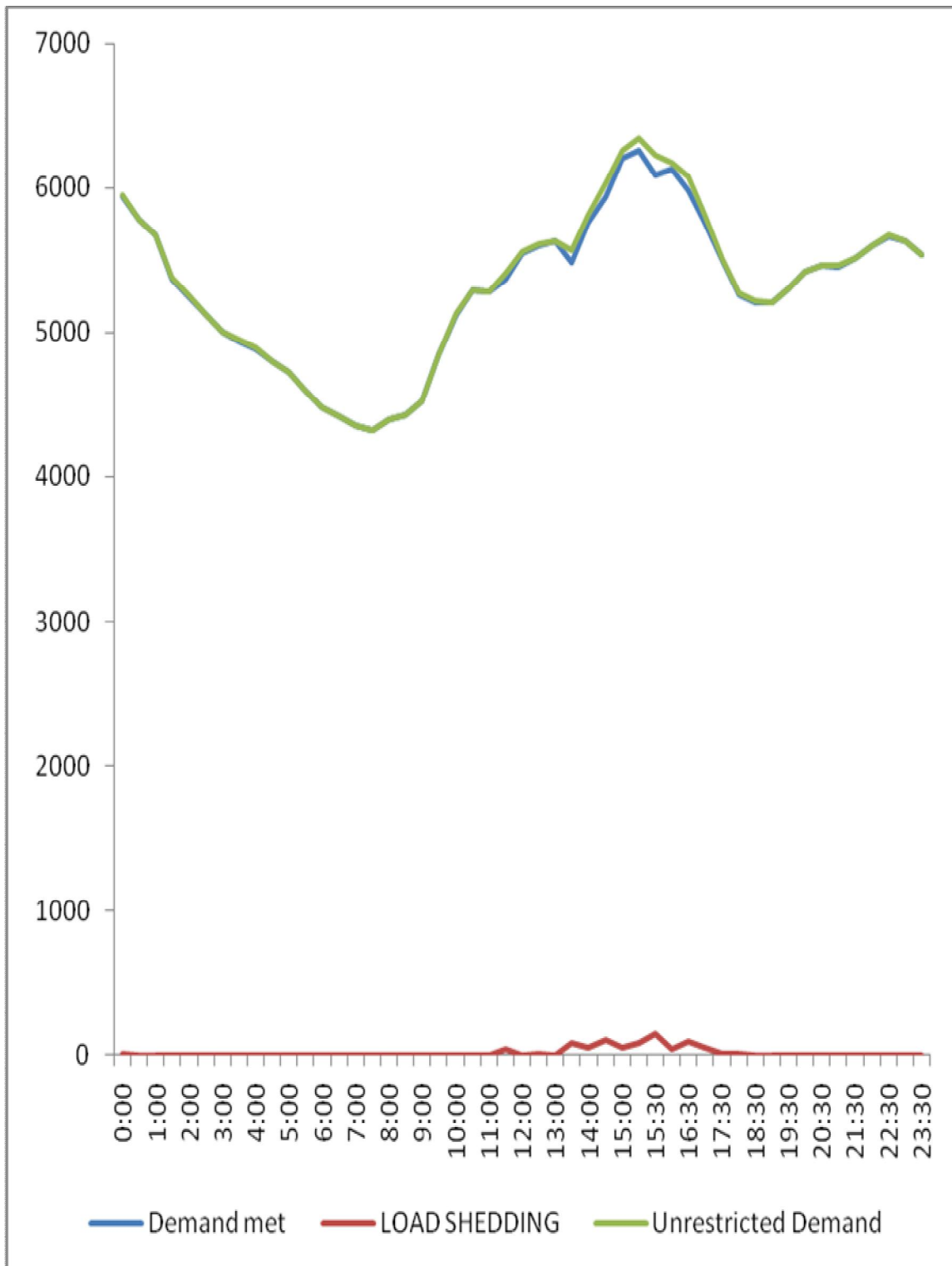
Month	Date	Time of peak demand	Generation within Delhi							
			RPH	GT	PPCL	Bawana	BTPS	Rithala	TOWMC L	EDWP CL
			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Apr-16	19	15:41:56	0	36	269	254	314	0	14	--
May-16	20	15:18:12	0	167	288	256	181	0	16	--
Jun-16	30	15:29:40	0	164	295	297	349	0	16	--
Jul-16	1	15:10:35	0	163	292	304	356	0	16	--
Aug-16	5	15:30:47	0	65	262	296	347	0	16	--
Sep-16	20	22:50:39	0	73	144	505	359	0	16	--
Oct-16	3	22:50:40	0	71	146	501	319	0	12	--
Nov-16	3	18:17:33	0	75	152	-3	165	0	16	--
Dec-16	30	10:33:06	0	73	163	319	-3	0	11	--
Jan-17	20	10:00:08	0	36	139	253	-4	0	0	--
Feb-17	1	10:15:52	0	75	164	302	-3	0	15	--
Mar-17	31	19:22:48	0	126	144	501	151	0	14	19
Max	01.07.16	15:10:35	0	163	292	304	356	0	16	--

Month	Date	Time of peak demand	Total	Import from the Grid	Schedule from the Grid	OD (-) / UD (+)	Demand met	Shedding	Un-Restricted Demand
Apr-16	19	15:41:56	887	3910	3953	43	4797	2	4799
May-16	20	15:18:12	908	5280	5290	10	6188	120	6308
Jun-16	30	15:29:40	1121	5139	5200	61	6260	0	6260
Jul-16	1	15:10:35	1131	5130	4949	-181	6261	81	6342
Aug-16	5	15:30:47	986	4721	4618	-103	5707	0	5707
Sep-16	20	22:50:39	1097	4204	4052	-152	5301	4	5305
Oct-16	3	22:50:40	1049	4393	4281	-112	5442	0	5442
Nov-16	3	18:17:33	405	3105	2971	-134	3510	0	3510
Dec-16	30	10:33:06	563	3294	3105	-189	3857	0	3857
Jan-17	20	10:00:08	424	3744	3608	-136	4168	0	4168
Feb-17	1	10:15:52	553	3329	3169	-160	3882	0	3882
Mar-17	31	19:22:48	955	3184	3152	-32	4139	2	4141
Max	01.07.16	15:10:35	1131	5130	4949	-181	6261	81	6342

9.17 LOAD PATTERN
9.17.1 SUMMER SEASON

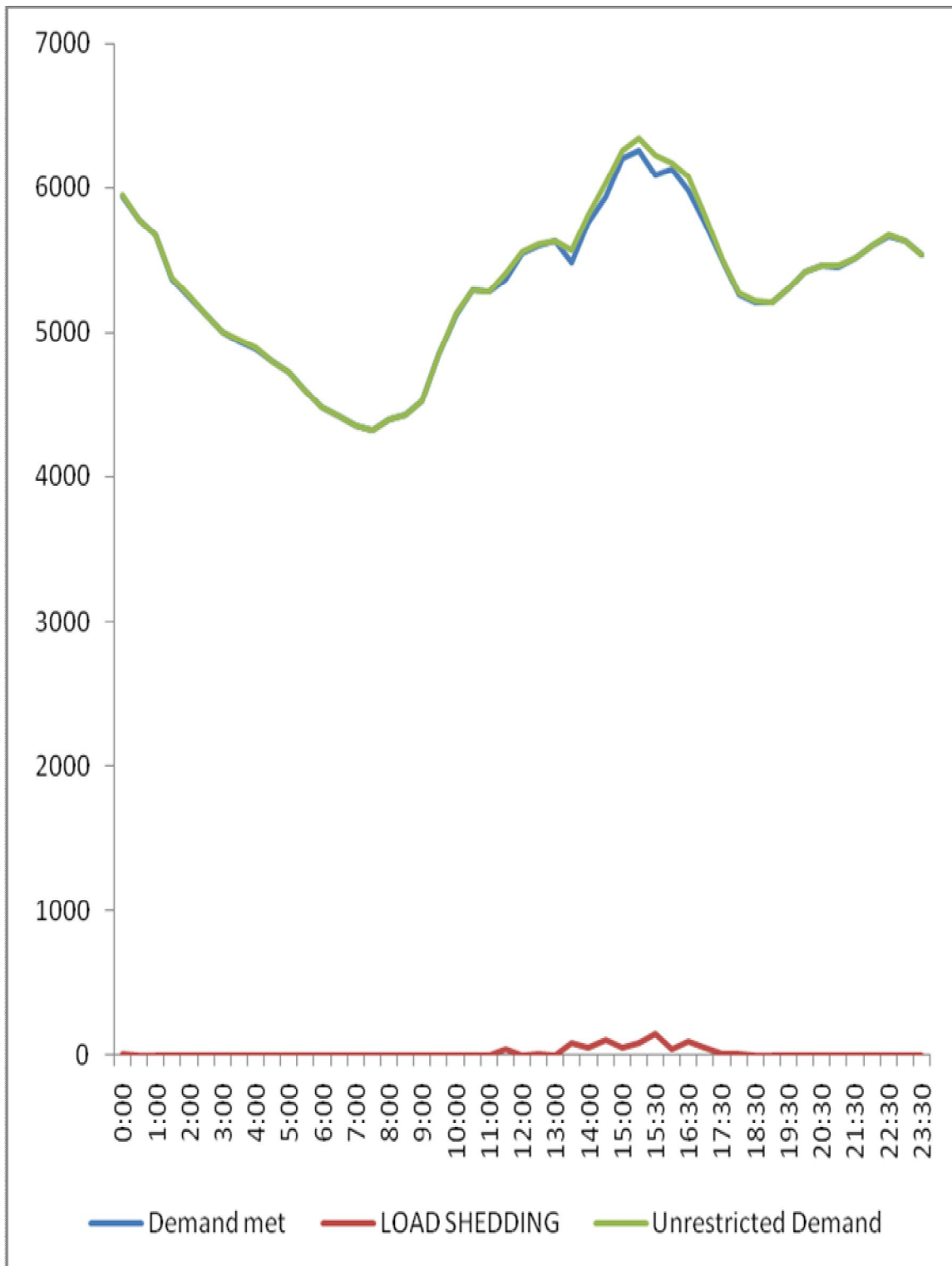
9.17.1.1 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM PEAK DEMAND MET DURING SUMMER 2016-17 - 6261MW at 15:10:35Hrs. on 01.07.2016.

Time (Hrs).	Demand in MW	Load Shedding in MW	Un-Restricted Demand in MW
0:00	5940	10	5950
0:30	5778	3	5781
1:00	5677	0	5677
1:30	5371	0	5371
2:00	5242	2	5244
2:30	5120	0	5120
3:00	5001	5	5006
3:30	4943	5	4948
4:00	4891	5	4896
4:30	4808	0	4808
5:00	4731	0	4731
5:30	4605	0	4605
6:00	4480	0	4480
6:30	4418	0	4418
7:00	4356	0	4356
7:30	4326	0	4326
8:00	4397	0	4397
8:30	4430	0	4430
9:00	4526	0	4526
9:30	4842	0	4842
10:00	5128	0	5128
10:30	5289	0	5289
11:00	5283	0	5283
11:30	5371	42	5413
12:00	5552	0	5552
12:30	5602	8	5610
13:00	5631	0	5631
13:30	5487	83	5570
14:00	5763	53	5816
14:30	5938	98	6036
15:00	6208	47	6255
15:10:35	6261	81	6342
15:30	6087	141	6228
16:00	6135	41	6176
16:30	5986	90	6076
17:00	5765	50	5815
17:30	5497	9	5506
18:00	5266	9	5275
18:30	5213	0	5213
19:00	5206	0	5206
19:30	5300	0	5300
20:00	5422	0	5422
20:30	5462	0	5462
21:00	5456	0	5456
21:30	5512	0	5512
22:00	5598	0	5598
22:30	5670	2	5672
23:00	5633	2	5635
23:30	5534	0	5534
Energy in Mus	126.447	0.373	126.820



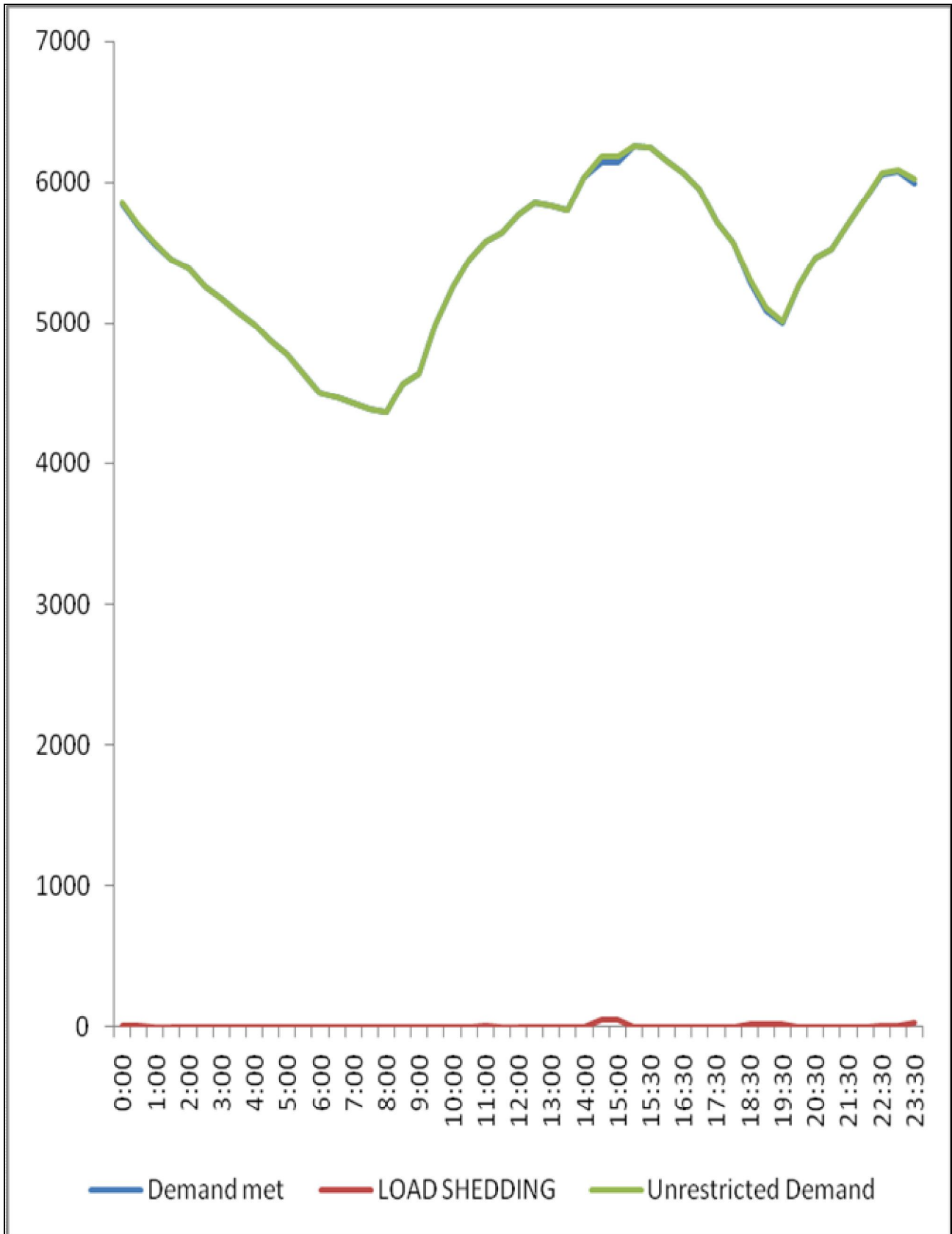
9.17.1.2 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UNRESTRICTED DEMAND DURING SUMMER 2016-17 – 6342 MW at 15:10:35Hrs. on 01.07.2016.

Time (Hrs).	Demand in MW	Load Shedding in MW	Un-Restricted Demand in MW
0:00	5940	10	5950
0:30	5778	3	5781
1:00	5677	0	5677
1:30	5371	0	5371
2:00	5242	2	5244
2:30	5120	0	5120
3:00	5001	5	5006
3:30	4943	5	4948
4:00	4891	5	4896
4:30	4808	0	4808
5:00	4731	0	4731
5:30	4605	0	4605
6:00	4480	0	4480
6:30	4418	0	4418
7:00	4356	0	4356
7:30	4326	0	4326
8:00	4397	0	4397
8:30	4430	0	4430
9:00	4526	0	4526
9:30	4842	0	4842
10:00	5128	0	5128
10:30	5289	0	5289
11:00	5283	0	5283
11:30	5371	42	5413
12:00	5552	0	5552
12:30	5602	8	5610
13:00	5631	0	5631
13:30	5487	83	5570
14:00	5763	53	5816
14:30	5938	98	6036
15:00	6208	47	6255
15:10:35	6261	81	6342
15:30	6087	141	6228
16:00	6135	41	6176
16:30	5986	90	6076
17:00	5765	50	5815
17:30	5497	9	5506
18:00	5266	9	5275
18:30	5213	0	5213
19:00	5206	0	5206
19:30	5300	0	5300
20:00	5422	0	5422
20:30	5462	0	5462
21:00	5456	0	5456
21:30	5512	0	5512
22:00	5598	0	5598
22:30	5670	2	5672
23:00	5633	2	5635
23:30	5534	0	5534
Energy in Mus	126.447	0.373	126.820



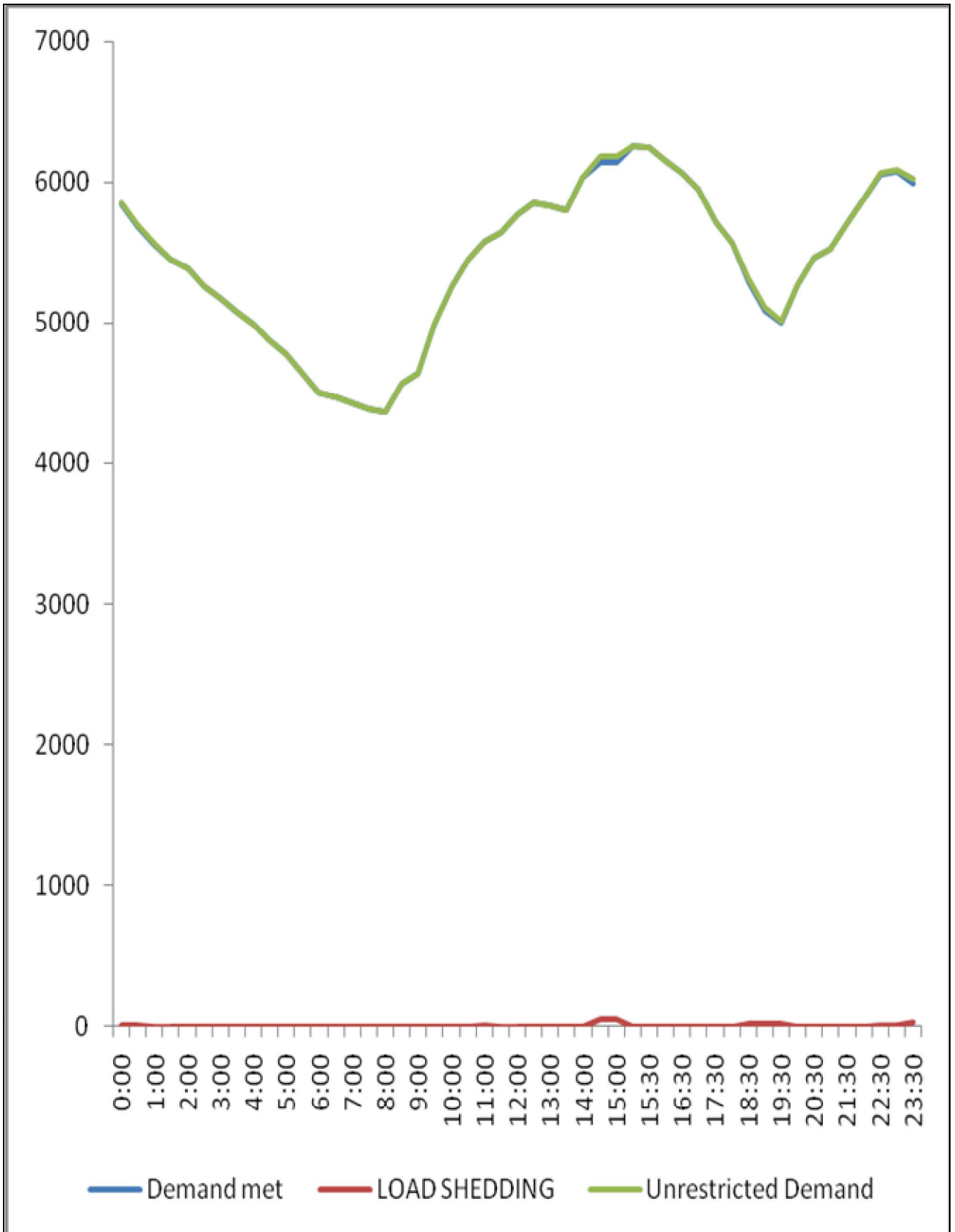
9.17.1.3 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM ENERGY CONSUMED DURING SUMMER 2016-17 – 130.580 MUs on 30.06.2016.

Time (Hrs).	Demand in MW	Load Shedding in MW	Un-Restricted Demand in MW
0:00	5845	13	5858
0:30	5689	7	5696
1:00	5559	3	5562
1:30	5447	3	5450
2:00	5382	0	5382
2:30	5256	0	5256
3:00	5171	0	5171
3:30	5073	0	5073
4:00	4994	0	4994
4:30	4876	0	4876
5:00	4776	0	4776
5:30	4639	0	4639
6:00	4505	0	4505
6:30	4466	0	4466
7:00	4428	0	4428
7:30	4388	0	4388
8:00	4363	0	4363
8:30	4561	0	4561
9:00	4638	0	4638
9:30	4988	0	4988
10:00	5263	0	5263
10:30	5449	0	5449
11:00	5574	9	5583
11:30	5639	0	5639
12:00	5771	0	5771
12:30	5856	0	5856
13:00	5833	0	5833
13:30	5807	0	5807
14:00	6038	0	6038
14:30	6143	47	6190
15:00	6146	43	6189
15:29:40	6260	0	6260
15:30	6247	0	6247
16:00	6156	0	6156
16:30	6069	0	6069
17:00	5951	0	5951
17:30	5722	0	5722
18:00	5570	0	5570
18:30	5294	20	5314
19:00	5086	20	5106
19:30	4997	20	5017
20:00	5273	0	5273
20:30	5465	0	5465
21:00	5530	0	5530
21:30	5712	0	5712
22:00	5882	2	5884
22:30	6060	10	6070
23:00	6076	9	6085
23:30	5992	29	6021
Energy in Mus	130.580	0.129	130.709



9.17.1.4 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UNRESTRICTED ENERGY DEMAND DURING SUMMER 2016-17 – 130.709 MUs on 30.06.2016.

Time (Hrs).	Demand in MW	Load Shedding in MW	Un-Restricted Demand in MW
0:00	5845	13	5858
0:30	5689	7	5696
1:00	5559	3	5562
1:30	5447	3	5450
2:00	5382	0	5382
2:30	5256	0	5256
3:00	5171	0	5171
3:30	5073	0	5073
4:00	4994	0	4994
4:30	4876	0	4876
5:00	4776	0	4776
5:30	4639	0	4639
6:00	4505	0	4505
6:30	4466	0	4466
7:00	4428	0	4428
7:30	4388	0	4388
8:00	4363	0	4363
8:30	4561	0	4561
9:00	4638	0	4638
9:30	4988	0	4988
10:00	5263	0	5263
10:30	5449	0	5449
11:00	5574	9	5583
11:30	5639	0	5639
12:00	5771	0	5771
12:30	5856	0	5856
13:00	5833	0	5833
13:30	5807	0	5807
14:00	6038	0	6038
14:30	6143	47	6190
15:00	6146	43	6189
15:29:40	6260	0	6260
15:30	6247	0	6247
16:00	6156	0	6156
16:30	6069	0	6069
17:00	5951	0	5951
17:30	5722	0	5722
18:00	5570	0	5570
18:30	5294	20	5314
19:00	5086	20	5106
19:30	4997	20	5017
20:00	5273	0	5273
20:30	5465	0	5465
21:00	5530	0	5530
21:30	5712	0	5712
22:00	5882	2	5884
22:30	6060	10	6070
23:00	6076	9	6085
23:30	5992	29	6021
Energy in Mus	130.580	0.129	130.709

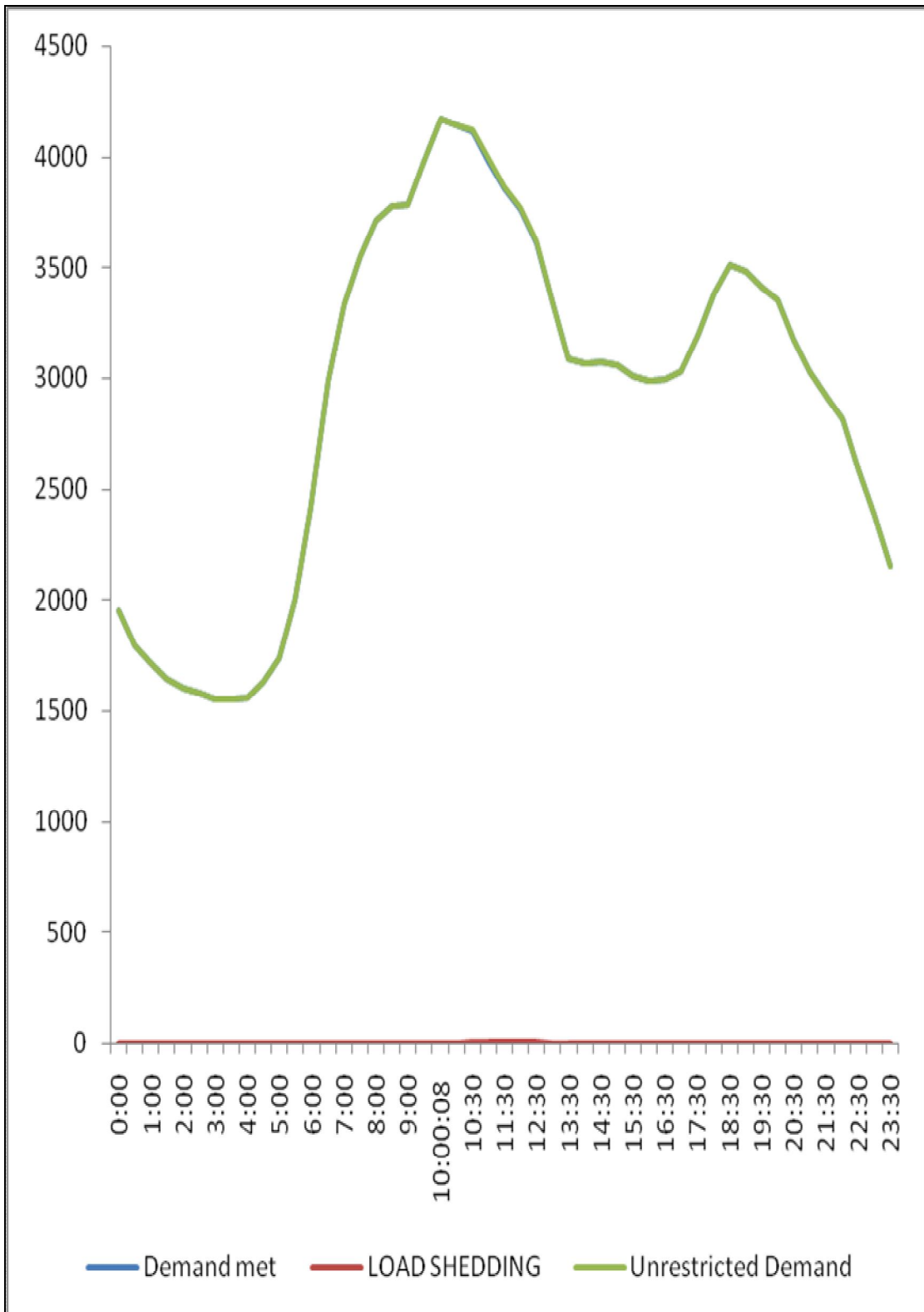


9.17.2 WINTER LOAD PATTERN

9.17.2.1 LOAD PATTERN OF DELHI ON THE DAY OF PEAK DEMAND MET DURING WINTER 2016-17 - 4168 MW at 10:00:08 Hrs. on 20.01.2017

All figures in MW

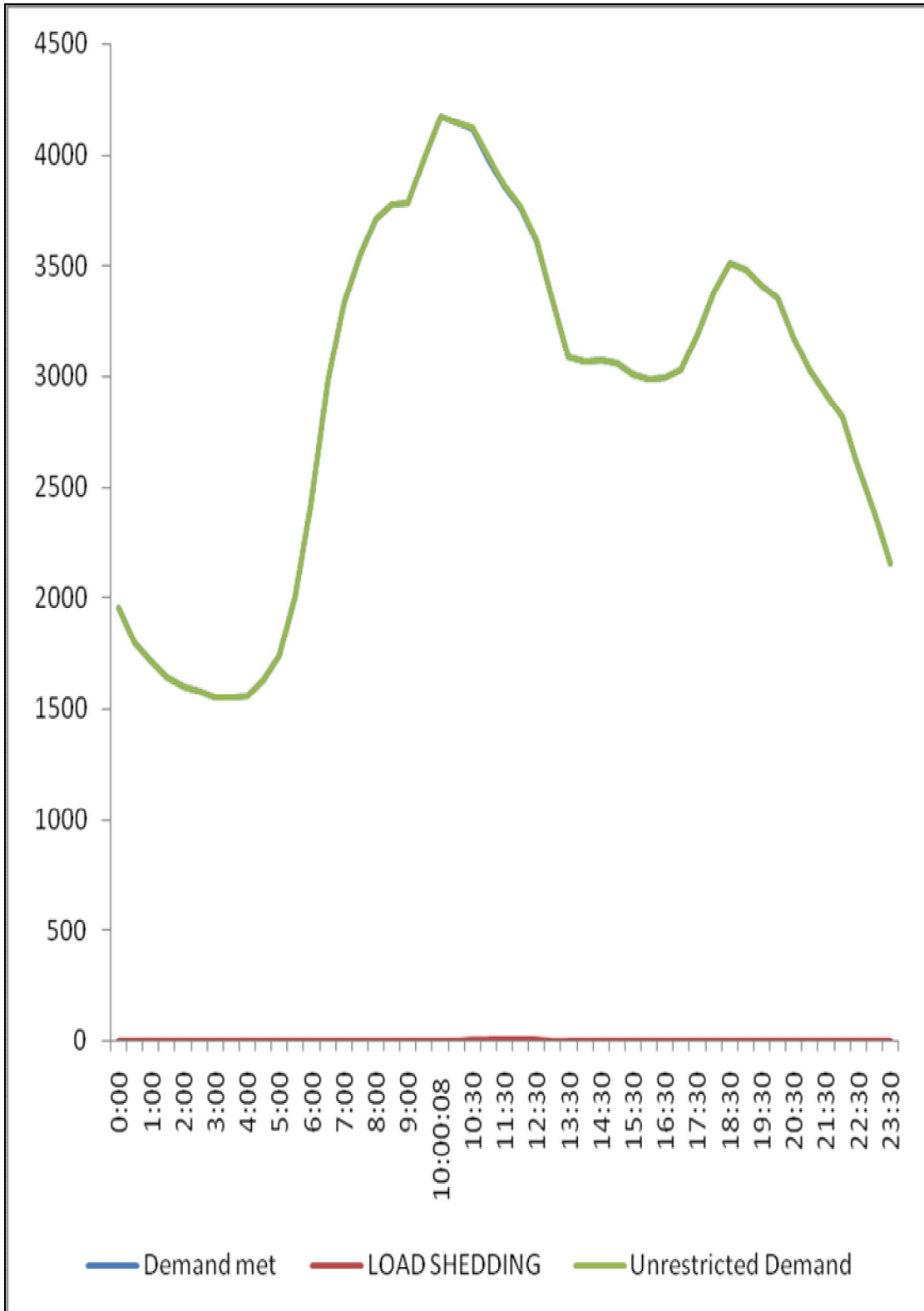
Hrs.	Demand	Load Shedding	Un-Restricted Demand
0:00	1957	0	1957
0:30	1799	0	1799
1:00	1714	0	1714
1:30	1646	0	1646
2:00	1601	0	1601
2:30	1578	0	1578
3:00	1554	0	1554
3:30	1552	0	1552
4:00	1562	0	1562
4:30	1635	0	1635
5:00	1736	0	1736
5:30	2004	0	2004
6:00	2423	0	2423
6:30	2983	0	2983
7:00	3327	0	3327
7:30	3547	0	3547
8:00	3710	0	3710
8:30	3771	0	3771
9:00	3782	0	3782
9:30	3973	0	3973
10:00:08	4168	0	4168
10:00	4142	0	4142
10:30	4109	10	4119
11:00	3976	9	3985
11:30	3851	7	3858
12:00	3762	6	3768
12:30	3609	6	3615
13:00	3344	0	3344
13:30	3084	0	3084
14:00	3065	0	3065
14:30	3068	0	3068
15:00	3058	0	3058
15:30	3009	0	3009
16:00	2988	0	2988
16:30	2995	0	2995
17:00	3031	0	3031
17:30	3195	0	3195
18:00	3377	0	3377
18:30	3511	0	3511
19:00	3482	0	3482
19:30	3412	0	3412
20:00	3350	0	3350
20:30	3173	0	3173
21:00	3029	0	3029
21:30	2917	0	2917
22:00	2811	0	2811
22:30	2587	0	2587
23:00	2382	0	2382
23:30	2157	0	2157
Energy in Mus	68.742	0.018	68.760



**9.17.2.2 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UN-RESTRICTED DEMAND
WINTER 2016-17 - 4168 MW at 10:00:08 Hrs. on 20.01.2017**

All figures in MW

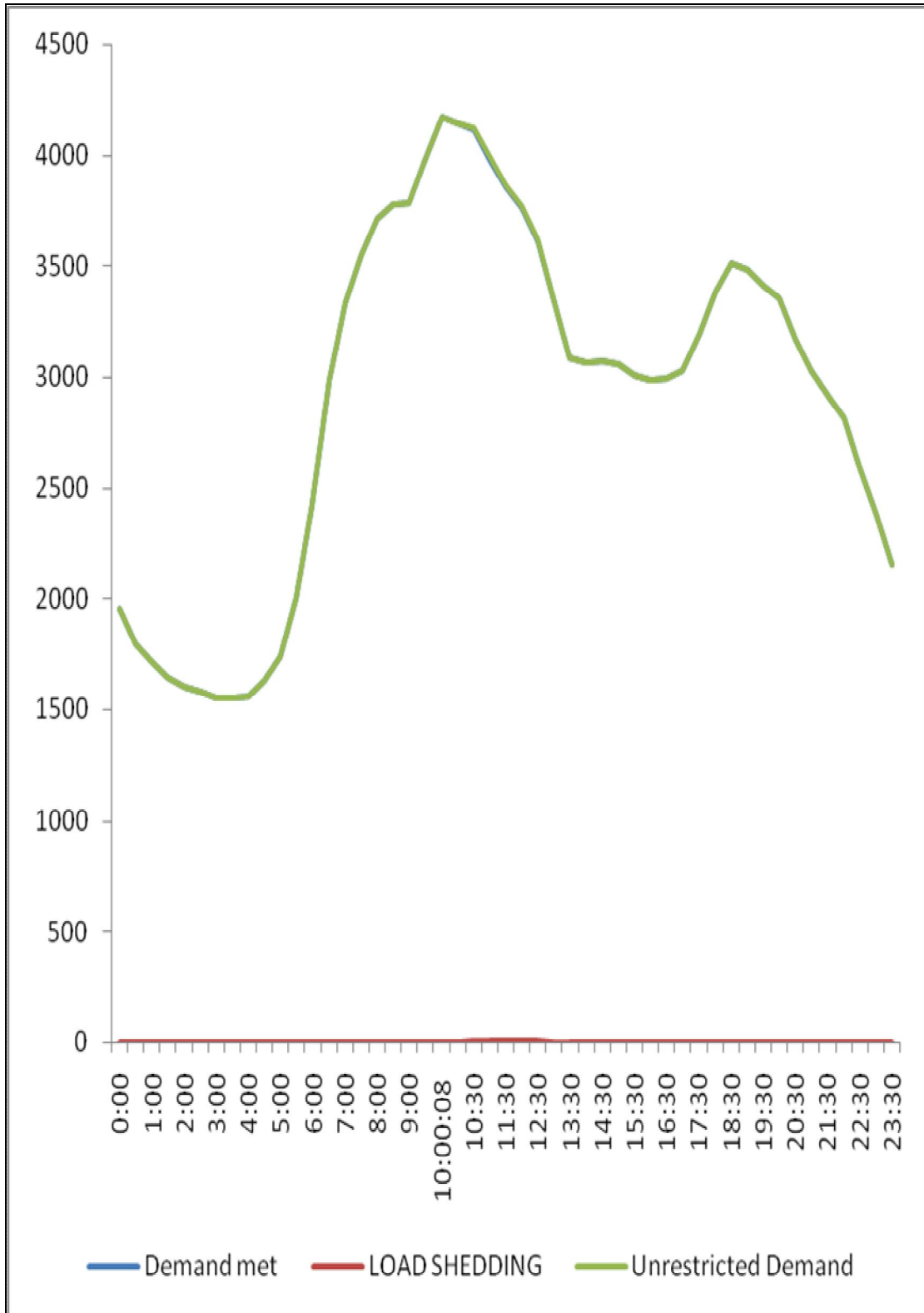
Hrs.	Demand	Load Shedding	Un-Restricted Demand
0:00	1957	0	1957
0:30	1799	0	1799
1:00	1714	0	1714
1:30	1646	0	1646
2:00	1601	0	1601
2:30	1578	0	1578
3:00	1554	0	1554
3:30	1552	0	1552
4:00	1562	0	1562
4:30	1635	0	1635
5:00	1736	0	1736
5:30	2004	0	2004
6:00	2423	0	2423
6:30	2983	0	2983
7:00	3327	0	3327
7:30	3547	0	3547
8:00	3710	0	3710
8:30	3771	0	3771
9:00	3782	0	3782
9:30	3973	0	3973
10:00:08	4168	0	4168
10:00	4142	0	4142
10:30	4109	10	4119
11:00	3976	9	3985
11:30	3851	7	3858
12:00	3762	6	3768
12:30	3609	6	3615
13:00	3344	0	3344
13:30	3084	0	3084
14:00	3065	0	3065
14:30	3068	0	3068
15:00	3058	0	3058
15:30	3009	0	3009
16:00	2988	0	2988
16:30	2995	0	2995
17:00	3031	0	3031
17:30	3195	0	3195
18:00	3377	0	3377
18:30	3511	0	3511
19:00	3482	0	3482
19:30	3412	0	3412
20:00	3350	0	3350
20:30	3173	0	3173
21:00	3029	0	3029
21:30	2917	0	2917
22:00	2811	0	2811
22:30	2587	0	2587
23:00	2382	0	2382
23:30	2157	0	2157
Energy in Mus	68.742	0.018	68.760



9.17.2.3 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM ENERGY CONSUMED DURING WINTER 2016-17 – 68.742 MUs ON 20.01.2017

All figures in MW

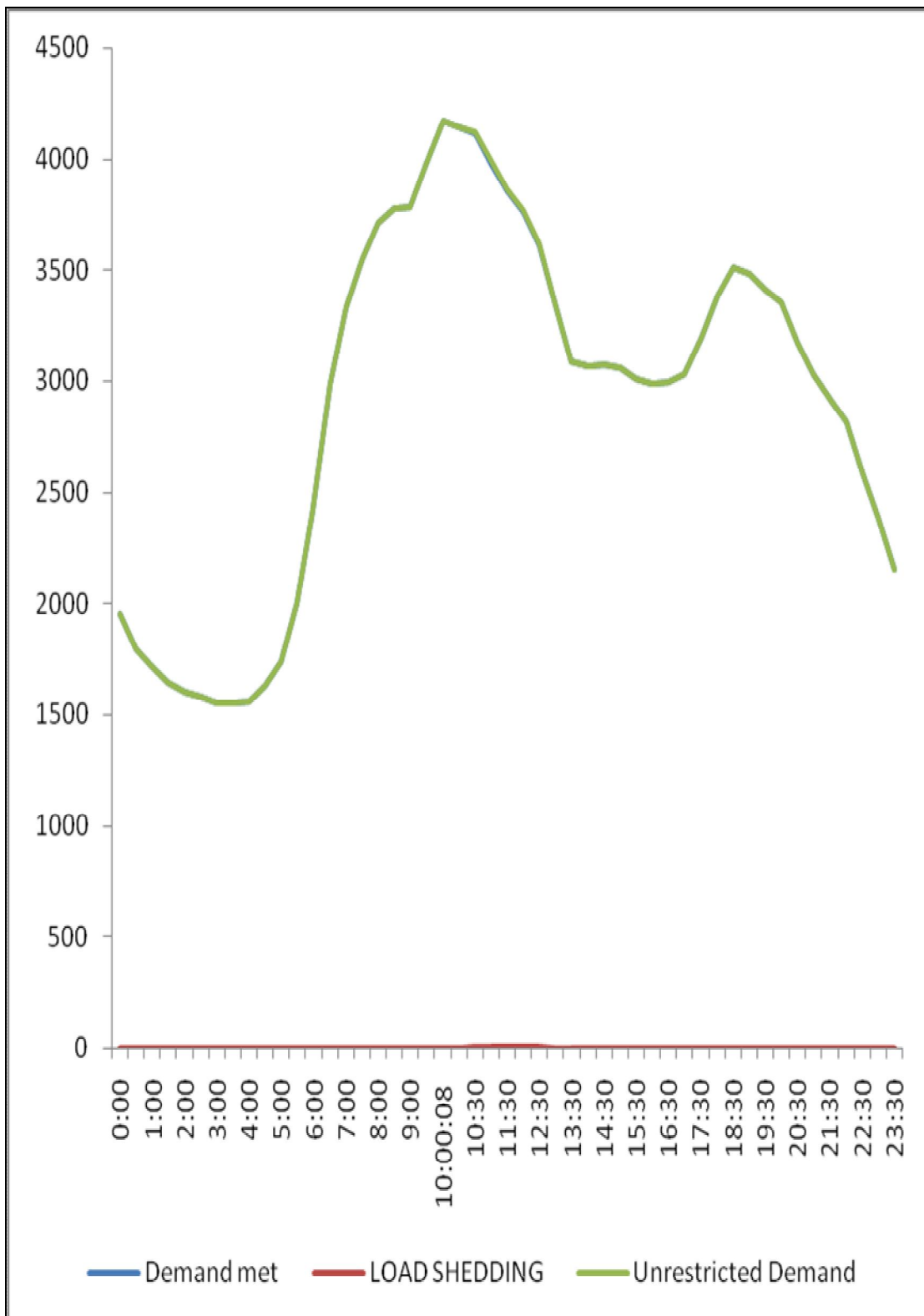
Hrs.	Demand	Load Shedding	Un-Restricted Demand
0:00	1957	0	1957
0:30	1799	0	1799
1:00	1714	0	1714
1:30	1646	0	1646
2:00	1601	0	1601
2:30	1578	0	1578
3:00	1554	0	1554
3:30	1552	0	1552
4:00	1562	0	1562
4:30	1635	0	1635
5:00	1736	0	1736
5:30	2004	0	2004
6:00	2423	0	2423
6:30	2983	0	2983
7:00	3327	0	3327
7:30	3547	0	3547
8:00	3710	0	3710
8:30	3771	0	3771
9:00	3782	0	3782
9:30	3973	0	3973
10:00:08	4168	0	4168
10:00	4142	0	4142
10:30	4109	10	4119
11:00	3976	9	3985
11:30	3851	7	3858
12:00	3762	6	3768
12:30	3609	6	3615
13:00	3344	0	3344
13:30	3084	0	3084
14:00	3065	0	3065
14:30	3068	0	3068
15:00	3058	0	3058
15:30	3009	0	3009
16:00	2988	0	2988
16:30	2995	0	2995
17:00	3031	0	3031
17:30	3195	0	3195
18:00	3377	0	3377
18:30	3511	0	3511
19:00	3482	0	3482
19:30	3412	0	3412
20:00	3350	0	3350
20:30	3173	0	3173
21:00	3029	0	3029
21:30	2917	0	2917
22:00	2811	0	2811
22:30	2587	0	2587
23:00	2382	0	2382
23:30	2157	0	2157
Energy in Mus	68.742	0.018	68.760



9.17.2.4 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UNRESTRICTED ENERGY DEMAND DURING WINTER 2016-17 – 68.760 MUs ON 20.01.2017.

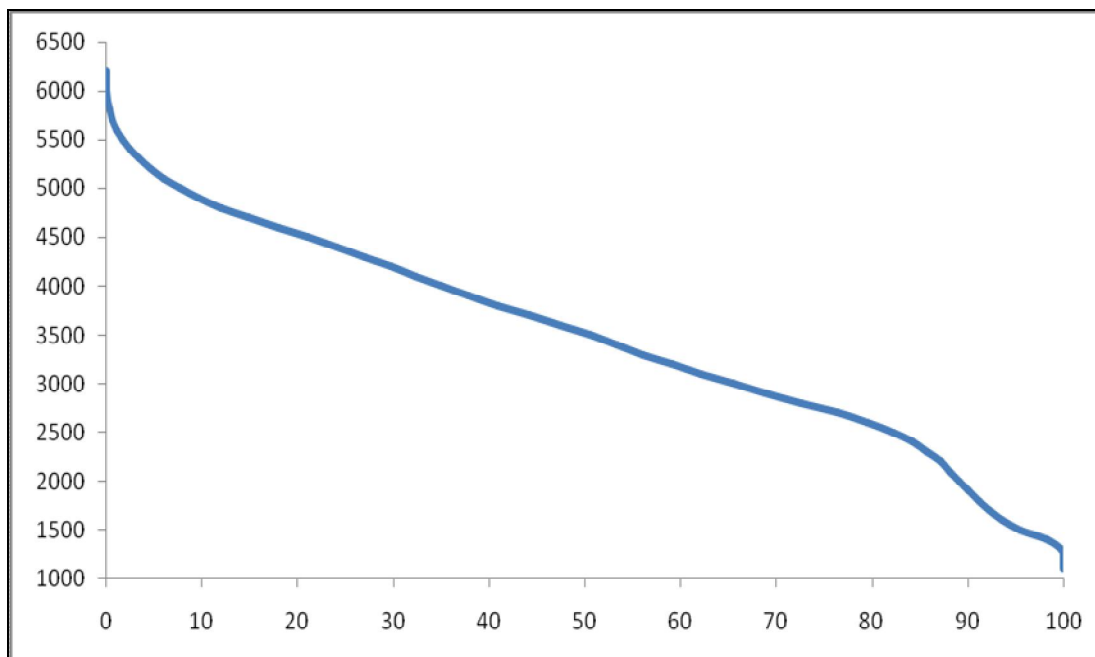
All figures in MW

Hrs.	Demand met	Load Shedding	Un-Restricted Demand
0:00	1957	0	1957
0:30	1799	0	1799
1:00	1714	0	1714
1:30	1646	0	1646
2:00	1601	0	1601
2:30	1578	0	1578
3:00	1554	0	1554
3:30	1552	0	1552
4:00	1562	0	1562
4:30	1635	0	1635
5:00	1736	0	1736
5:30	2004	0	2004
6:00	2423	0	2423
6:30	2983	0	2983
7:00	3327	0	3327
7:30	3547	0	3547
8:00	3710	0	3710
8:30	3771	0	3771
9:00	3782	0	3782
9:30	3973	0	3973
10:00:08	4168	0	4168
10:00	4142	0	4142
10:30	4109	10	4119
11:00	3976	9	3985
11:30	3851	7	3858
12:00	3762	6	3768
12:30	3609	6	3615
13:00	3344	0	3344
13:30	3084	0	3084
14:00	3065	0	3065
14:30	3068	0	3068
15:00	3058	0	3058
15:30	3009	0	3009
16:00	2988	0	2988
16:30	2995	0	2995
17:00	3031	0	3031
17:30	3195	0	3195
18:00	3377	0	3377
18:30	3511	0	3511
19:00	3482	0	3482
19:30	3412	0	3412
20:00	3350	0	3350
20:30	3173	0	3173
21:00	3029	0	3029
21:30	2917	0	2917
22:00	2811	0	2811
22:30	2587	0	2587
23:00	2382	0	2382
23:30	2157	0	2157
Energy in Mus	68.742	0.018	68.760



9.18 LOAD DURATION CURVE FOR 2016-17 (Based on SCADA)

LOAD REMAINED ABOVE IN MW	(%) OF TIME	LOAD REMAINED ABOVE IN MW	(%) OF TIME
6200	0.01	3600	47.49
6100	0.04	3500	50.54
6000	0.10	3400	53.37
5900	0.20	3300	56.08
5800	0.38	3200	59.06
5700	0.63	3100	62.19
5600	1.06	3000	65.45
5500	1.69	2900	68.81
5400	2.50	2800	72.59
5300	3.44	2700	76.43
5200	4.68	2600	79.52
5100	6.06	2500	82.22
5000	7.73	2400	84.22
4900	9.71	2300	85.81
4800	12.07	2200	87.12
4700	14.87	2100	88.12
4600	17.98	2000	89.13
4500	21.12	1900	90.11
4400	24.15	1800	91.12
4300	27.01	1700	92.20
4200	29.75	1600	93.58
4100	32.37	1500	95.53
4000	34.97	1400	98.17
3900	37.84	1300	99.77
3800	40.97	1200	99.97
3700	44.25	1100	100.00



10 FREQUENCY SPECTRUM OF NORTHERN REGION [(NORTH-EAST-WEST)(NEW)] FOR 2016-17

Month	Frequency in Hz.			Frequency Variation in ded (FVI)	Percentage of Time						
	Average Frequency (Hz.)	Maximum Instant Frequency (Hz.)	Minimum Instant Frequency (Hz.)		> 50.20 HZ (%)	> 50.10 HZ (%)	50.05 - 50.10 HZ (%)	49.90 - 50.05 HZ (%)	< 49.9 HZ (%)	< 49.8 HZ (%)	< 49.7 HZ (%) Below 49.7Hz
Apr-16	49.98	50.26	49.68	0.06	0.12	3.82	13.69	69.93	12.56	1.51	0.06
May-16	50.00	50.40	49.60	0.05	0.41	5.76	17.50	69.79	6.68	0.58	0.03
Jun-16	49.99	50.24	49.68	0.04	0.02	3.16	15.18	74.03	7.63	0.75	0.04
Jul-16	50.01	50.32	49.72	0.04	0.12	4.79	18.89	72.38	3.94	0.46	0.00
Aug-16	50.00	50.31	49.69	0.04	0.10	4.22	16.78	73.06	5.93	0.45	0.03
Sep-16	50.00	50.21	49.69	0.04	0.05	3.09	15.97	75.10	5.85	0.41	0.01
Oct-16	50.00	50.22	49.78	0.04	0.07	3.62	16.20	74.65	5.68	0.12	0.00
Nov-16	49.99	50.23	49.58	0.05	0.08	4.24	13.49	72.76	9.52	0.62	0.07
Dec-16	49.99	50.25	49.74	0.05	0.17	4.79	14.59	69.58	11.04	0.59	0.00
Jan-17	50.00	50.33	49.71	0.05	0.41	5.72	17.41	70.42	6.20	0.19	0.00
Feb-17	50.00	50.27	49.77	0.04	0.19	4.48	16.04	73.98	5.31	0.09	0.00
Mar-17	49.99	50.27	49.70	0.04	0.11	3.60	14.00	73.55	8.95	0.50	0.00
2016-17	49.86	50.40	49.58	0.04	0.15	4.27	15.78	72.22	7.42	0.52	0.02

11 DETAILS OF UNDER FREQUENCY RELAY TRIPPINGS OCCURRED IN 2016-17

MONTH	STAGE-1	STAGE-2	df/dt	TOTAL
APRIL 2016	0	0	0	0
MAY 2016	0	0	0	0
JUNE 2016	0	0	0	0
JULY 2016	0	0	0	0
AUGUST 2016	0	0	0	0
SEPTEMBER 2016	0	0	0	0
OCTOBER 2016	5	0	0	5
NOVEMBER 2016	0	0	0	0
DECEMBER 2016	0	0	0	0
JANUARY 2017	0	0	0	0
FEBRUARY 2017	2	0	0	2
MARCH 2017	2	0	0	2
TOTAL 2016-17	9	0	0	9

12 INTRASTATE TRANSMISSION LOSSES

12.1 WEEK WISE INTRASTATE TRANSMISSION LOSSES FOR 2016-17 (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
			RPH	GT	PRAGATI	BTPS	Bawana	MSW Bawana	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)=sum(4 to 9)
1	0.87	200.992	-0.043	2.578	9.720	11.150	-0.266	0.000	23.139
2	0.84	484.421	-0.100	6.053	25.493	52.316	-0.640	0.000	83.123
3	0.86	490.135	-0.133	5.471	45.000	49.053	-0.798	0.000	98.593
4	0.93	517.194	-0.148	5.684	43.437	51.959	35.872	0.000	136.804
5	0.90	501.690	-0.102	5.481	43.895	52.678	42.868	0.000	144.821
6	0.95	546.899	-0.069	9.161	38.327	53.193	41.160	0.000	141.772
7	1.02	613.086	-0.117	11.789	37.190	32.390	42.474	0.000	123.727
8	1.03	679.358	-0.115	23.782	48.383	33.604	43.078	0.000	148.733
9	1.02	609.000	-0.135	14.457	43.693	53.977	20.497	0.000	132.489
10	1.02	632.968	-0.093	8.106	43.752	48.601	31.329	0.000	131.694
11	0.99	644.058	-0.152	23.584	37.246	48.062	42.461	0.000	151.201
12	1.02	641.520	-0.161	22.131	41.322	54.106	42.796	0.000	160.193
13	1.03	693.748	-0.120	16.275	45.189	54.045	7.328	0.000	122.717
14	0.93	651.115	-0.119	23.055	44.948	54.282	39.917	0.000	162.083
15	0.92	634.287	-0.150	15.409	44.689	53.258	27.934	-0.018	141.122
16	0.93	593.934	-0.133	15.213	33.661	52.482	32.669	-0.148	133.745
17	0.43	632.039	-0.117	16.070	40.266	52.962	22.471	-0.123	131.530
18	0.86	552.405	-0.122	15.365	37.404	53.078	42.260	-0.098	147.887
19	0.86	590.242	-0.104	10.380	33.515	53.976	41.952	-0.048	139.672
20	0.93	581.074	-0.095	12.070	37.102	53.055	42.357	-0.102	144.388
21	0.89	561.292	-0.072	10.995	30.919	53.535	42.532	-0.043	137.866
22	0.79	584.464	-0.076	11.845	42.018	54.060	42.740	-0.133	150.454
23	0.84	561.114	-0.085	10.560	32.144	53.995	19.721	-0.048	116.288
24	0.85	566.394	-0.077	12.676	37.019	54.522	40.450	-0.089	144.502
25	0.88	572.974	-0.078	12.733	45.373	54.361	42.430	0.048	154.867
26	0.86	571.678	-0.074	12.853	25.358	55.120	67.658	0.179	161.094
27	0.93	584.306	-0.077	12.784	25.051	53.850	62.824	0.152	154.584

Week No.	Avg Trans. Loss in %age	Actual drawal from the grid in Mus	Actual Ex-bus generation with in Delhi in Mus						
			RPH	GT	PRAGATI	BTPS	Bawana	MSW Bawana	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)=sum(4 to 9)
28	0.88	567.335	-0.087	12.462	25.934	45.716	55.770	0.344	140.139
29	0.55	442.273	-0.098	13.032	26.106	54.498	42.046	0.694	136.278
30	0.83	432.064	-0.085	12.755	25.766	30.905	40.941	0.363	110.645
31	1.00	407.016	-0.065	12.889	26.076	27.194	29.658	0.293	96.045
32	1.19	363.279	-0.058	13.065	26.416	26.221	-0.900	0.166	64.909
33	1.13	328.048	-0.062	13.893	43.630	-0.982	22.633	0.461	79.574
34	1.13	285.431	-0.072	13.421	44.800	-0.660	42.186	0.694	100.370
35	1.10	289.700	-0.070	13.165	44.578	-0.773	42.521	0.358	99.780
36	1.32	301.661	-0.062	12.804	38.884	-0.943	40.370	-0.066	90.987
37	1.72	301.331	-0.064	12.909	44.388	-1.129	40.403	-0.030	96.477
38	1.50	308.537	-0.064	13.491	38.954	-1.078	42.553	-0.030	93.826
39	1.25	328.899	-0.063	13.730	30.702	-1.243	43.061	-0.024	86.163
40	1.32	340.555	-0.070	12.993	27.013	-1.280	44.214	-0.055	82.814
41	1.36	338.409	-0.076	12.729	26.847	-1.280	43.378	0.336	81.933
42	0.88	367.420	-0.078	13.653	25.894	-1.041	45.725	0.114	84.268
43	1.01	393.559	-0.074	7.318	24.204	-1.259	44.092	0.535	74.816
44	1.19	356.405	-0.074	8.928	21.532	-1.091	43.619	0.204	73.118
45	1.11	355.186	-0.072	13.559	26.868	-1.101	43.846	0.132	83.232
46	1.05	346.440	-0.073	13.586	27.119	-1.358	43.135	0.704	83.114
47	1.05	343.772	-0.078	13.338	26.178	-1.164	42.570	1.012	81.857
48	1.05	336.762	-0.067	13.354	26.504	-1.029	42.711	0.498	81.972
49	1.01	338.372	-0.078	13.120	26.257	-1.073	42.929	2.202	83.356
50	1.09	342.575	-0.083	13.381	18.614	-1.001	41.367	1.223	73.500
51	1.26	328.329	-0.085	6.805	9.775	-1.036	43.152	1.699	60.309
52	1.09	383.021	-0.094	11.358	25.762	-1.097	42.413	1.923	80.265
53	1.02	319.051	-0.082	14.030	18.137	0.770	48.317	1.515	82.687
Total	0.98	24737.818	-4.799	672.330	1759.051	1511.356	1968.786	15.173	5921.521

Week	Total Consumption of Delhi at DTL periphery in Mus	Actual drawal of distribution licensees and deemed licensees in MUs							Transmission losses in	
		TPDDL	BRPL	BYPL	NDMC	MES	IP	Total	in Mus	in %
(1)	(11)=(3)+(10)	(12)	(13)	(14)	(15)	(16)	(17)	(18)=(12)+(13)+(14)+(15)+(16)+(17)	(19)=(11)-(18)	(20)=(19)*100/11
1	224.131	66.468	89.524	52.838	11.703	1.649	0.000	222.182	1.948	0.87
2	567.544	168.840	227.906	130.833	31.024	4.149	0.000	562.753	4.792	0.84
3	588.728	173.916	238.675	136.473	30.446	4.183	0.001	583.693	5.035	0.86
4	653.998	188.773	267.781	151.649	34.954	4.763	0.001	647.921	6.078	0.93
5	646.510	184.967	265.786	151.657	33.535	4.764	0.001	640.710	5.800	0.90
6	688.671	197.508	283.171	160.921	35.444	5.064	0.001	682.110	6.561	0.95
7	736.813	209.846	306.281	170.236	37.573	5.386	0.001	729.323	7.490	1.02
8	828.091	235.224	347.486	189.525	41.521	5.787	0.002	819.545	8.547	1.03
9	741.490	211.190	307.020	172.280	38.112	5.310	0.003	733.915	7.574	1.02
10	764.662	217.792	315.463	181.105	37.192	5.321	0.001	756.874	7.787	1.02
11	795.259	222.405	334.110	187.070	38.219	5.618	0.003	787.424	7.835	0.99
12	801.713	223.504	339.125	187.660	37.451	5.808	0.002	793.551	8.163	1.02
13	816.465	230.072	342.801	191.879	37.385	5.894	0.002	808.033	8.432	1.03
14	813.198	229.176	340.301	192.345	37.790	6.036	0.003	805.652	7.547	0.93
15	775.409	222.582	324.838	180.255	34.811	5.756	0.003	768.244	7.165	0.92
16	727.678	207.936	301.025	171.225	35.253	5.503	0.003	720.944	6.735	0.93
17	763.569	219.639	317.994	180.380	36.661	5.602	0.002	760.277	3.292	0.43
18	700.293	203.063	288.992	162.621	34.341	5.269	0.002	694.288	6.004	0.86
19	729.914	212.180	301.922	169.030	35.162	5.347	0.002	723.642	6.272	0.86
20	725.463	211.354	298.365	168.909	34.813	5.268	0.001	718.710	6.752	0.93
21	699.157	199.357	291.547	164.613	32.597	4.802	0.001	692.917	6.241	0.89
22	734.918	210.288	305.693	173.882	34.152	5.132	0.001	729.148	5.770	0.79
23	677.403	195.134	279.656	159.441	32.584	4.921	0.001	671.737	5.666	0.84
24	710.896	207.064	292.607	167.730	32.339	5.119	0.001	704.861	6.035	0.85
25	727.842	212.402	301.901	170.171	31.802	5.135	0.001	721.412	6.429	0.88
26	732.773	213.840	303.367	171.041	32.913	5.298	0.002	726.460	6.312	0.86
27	738.890	213.526	307.990	172.424	32.816	5.290	0.001	732.048	6.842	0.93

Week	Total Consumption of Delhi at DTL periphery in Mus	Actual drawal of distribution licensees and deemed licensees in MUs							Transmission losses in	
		TPDDL	BRPL	BYPL	NDMC	MES	IP	Total	in Mus	in %
(1)	(11)=(3)+(10)	(12)	(13)	(14)	(15)	(16)	(17)	(18)=(12)+(13)+(14)+(15)+(16)+(17)	(19)=(11)-(18)	(20)=(19)*100/11
28	707.474	207.735	291.237	165.975	31.320	5.000	0.001	701.268	6.206	0.88
29	578.550	174.111	235.274	137.779	24.393	3.834	0.001	575.393	3.157	0.55
30	542.709	167.819	214.686	127.637	24.399	3.684	0.001	538.228	4.481	0.83
31	503.061	153.639	201.405	117.020	22.525	3.448	0.001	498.039	5.021	1.00
32	428.188	127.749	173.587	98.147	20.398	3.198	0.001	423.079	5.109	1.19
33	407.622	125.253	165.038	90.000	19.473	3.255	0.001	403.020	4.602	1.13
34	385.801	115.656	160.020	83.815	18.664	3.299	0.001	381.455	4.346	1.13
35	389.481	117.966	159.643	84.749	19.478	3.375	0.001	385.212	4.268	1.10
36	392.648	119.111	160.476	85.091	19.284	3.520	0.001	387.484	5.164	1.32
37	397.808	121.279	161.331	85.092	19.451	3.798	0.001	390.951	6.857	1.72
38	402.363	123.504	164.205	85.934	18.739	3.935	0.001	396.318	6.045	1.50
39	415.062	127.546	169.770	88.667	19.457	4.430	0.001	409.870	5.192	1.25
40	423.369	129.578	172.268	90.769	20.538	4.644	0.001	417.798	5.571	1.32
41	420.341	128.745	170.763	90.023	20.558	4.514	0.001	414.604	5.737	1.36
42	451.688	137.652	185.216	96.721	22.788	5.355	0.001	447.733	3.955	0.88
43	468.375	142.290	192.516	99.532	23.734	5.561	0.001	463.634	4.741	1.01
44	429.523	133.000	173.228	92.879	20.442	4.855	0.001	424.405	5.118	1.19
45	438.418	140.681	173.391	94.175	20.756	4.544	0.001	433.548	4.870	1.11
46	429.554	139.111	170.018	91.753	19.918	4.254	0.001	425.055	4.499	1.05
47	425.628	139.569	167.081	91.283	19.406	3.835	0.001	421.174	4.454	1.05
48	418.734	138.243	162.764	91.509	18.453	3.349	0.001	414.318	4.415	1.05
49	421.728	137.622	163.649	93.869	19.007	3.328	0.001	417.476	4.252	1.01
50	416.075	135.485	161.583	92.290	18.840	3.322	0.000	411.520	4.555	1.09
51	388.638	120.858	154.559	87.105	18.002	3.227	0.000	383.751	4.887	1.26
52	463.286	147.357	180.449	105.588	21.385	3.474	0.001	458.253	5.033	1.09
53	401.737	123.363	158.673	92.322	20.360	2.902	0.001	397.621	4.117	1.02
Total	30659.712	9062.968	12564.158	7027.916	1464.361	240.115	0.064	30359.583	300.129	0.98

12.2 MONTH WISE TRANSMISSION LOSSES FOR 2016-17

Month	TPDDL	BRPL	BYPL	NDMC	MES	IP	Total supply to disoms
1	2	3	4	5	6	7	8=sum(2 to 7)
Apr-16	757.597576	1052.692768	602.302308	137.919030	18.883839	0.002581	2569.398102
May-16	933.445061	1356.744663	757.197993	166.465601	23.531669	0.007799	3237.392786
Jun-16	977.748205	1460.998811	819.560411	163.849205	24.951192	0.009109	3447.116933
Jul-16	944.110683	1367.843410	771.889917	155.181739	24.494102	0.010596	3263.530446
Aug-16	918.470457	1321.248982	745.872449	151.820778	22.777938	0.006203	3160.196807
Sep-16	899.555471	1274.877870	722.493898	139.359916	22.125329	0.005887	3058.418371
Oct-16	774.853143	1054.745055	610.773645	113.607066	17.836665	0.005182	2571.820756
Nov-16	523.773854	702.351009	379.384451	83.468594	14.157492	0.003613	1703.139013
Dec-16	552.501389	735.747320	386.851388	86.507053	18.212575	0.003829	1779.823554
Jan-17	599.746783	795.262557	418.220630	96.377702	22.305045	0.004061	1931.916778
Feb-17	556.488519	669.508201	368.282451	77.769363	15.565096	0.003131	1687.616761
Mar-17	624.677075	772.137621	445.086947	92.034673	15.274104	0.002334	1949.212753
2016-17	9062.968214	12564.158267	7027.916488	1464.360719	240.115046	0.064325	30359.583060

Month	GT	RPH	PPCL	BTPS	Drawal from the Grid	Bawana	MSW Bawana
1	8	9	10	11	12	13	14
Apr-16	24.430875	-0.517613	161.989200	209.893848	2125.421532	70.962910	0.000000
May-16	61.519488	-0.471304	185.941902	195.829488	2671.745962	155.822125	0.000000
Jun-16	83.157563	-0.565458	180.166752	220.589640	2852.281588	146.259117	0.000000
Jul-16	70.556257	-0.574310	175.517578	234.883944	2669.400928	140.366103	-0.385823
Aug-16	50.037925	-0.381014	161.131734	237.620400	2551.840828	187.717859	-0.345559
Sep-16	53.217097	-0.336417	140.377461	234.867948	2466.673135	190.322849	0.294235
Oct-16	56.645277	-0.363608	114.642599	176.232552	2051.571504	192.888559	1.644362
Nov-16	56.960129	-0.279580	169.325126	19.487880	1353.217167	122.413166	1.652197
Dec-16	58.702439	-0.286159	162.421745	-5.103972	1401.731780	188.620508	-0.147237
Jan-17	48.441840	-0.333152	110.104349	-5.187525	1604.119274	195.112838	1.638077
Feb-17	53.761982	-0.290850	106.367484	-4.705828	1375.127235	172.518909	2.877821
Mar-17	54.898862	-0.399842	91.065114	-3.054855	1614.687168	205.780972	7.945143
2016-17	672.329734	-4.799308	1759.051044	1511.353520	24737.818101	1968.785916	15.173216

Month	Total Injection For supply to Discoms	Losses in MUs	Losses in %	Losses in % during previous year
1	15=Sum(8to14)	16=15-7	17=16*100/15	18
Apr-16	2592.180752	22.782649	0.88	0.64
May-16	3270.387661	32.994875	1.01	0.70
Jun-16	3481.889202	34.772269	1.00	0.86
Jul-16	3289.764677	26.234231	0.80	0.84
Aug-16	3187.622173	27.425366	0.86	0.77
Sep-16	3085.416307	26.997936	0.88	0.89
Oct-16	2593.261245	21.440489	0.83	0.88
Nov-16	1722.776085	19.637072	1.14	0.82
Dec-16	1805.939104	26.115550	1.45	0.99
Jan-17	1953.895701	21.978923	1.12	1.04
Feb-17	1705.656753	18.039992	1.06	0.98
Mar-17	1970.922562	21.709809	1.10	1.00
2016-17	30659.712223	300.129163	0.98	0.85

ALLOCATION OF POWER TO DISCOMS FOR 2016-17 FROM INTER STATE GENERATING STATIONS.

All figures in MW

Name of the Stn	Installed capacity	Total Un-allocated	Basic Allocation	Basic Allocation at periphery	Allocation out of Unallocated Quota	Allocation out of Un-allocation Quota at Delhi periphery	Total allocation at Delhi periphery
1	2	3	4	5	6	7	(8)=(5)+(7)
<u>NTPC STATIONS</u>							
Singrauli STPS	2000	300	150	130	0	0	130
Rihand-I	1000	150	100	87	0	0	87
Rihand Stage -II	1000	150	126	109	0	0	109
Rihand Stage -III	1000	150	132	115	0	0	115
ANTA GPS	419	63	44	41	0	0	41
Auriya GPS	663.36	99	72	67	0	0	67
Dadri GPS	829.78	129	91	85	0	0	85
Dadri NCTPS (Th)	840	0	756	657	0	0	657
Dadri NCTPS (Th) Stage-II	980	147	735	639	0	0	639
Unchahaar-I TPS	420	20	24	21	0	0	21
Unchahaar-II TPS	420	63	47	41	0	0	41
Unchahaar-III TPS	210	31	29	25	0	0	25
TOTAL	9782	1302	2306	2016	0	0	2016
<u>NHPC</u>							
Baira Suil HPS	180	0	20	19	0	0	19
Salal HPS	690	0	80	76	0	0	76
Tanakpur HEP	94	0	12	11	0	0	11
Chamera HEP	540	0	43	41	0	0	41
Chamera-II HEP	300	54	40	38	0	0	38
Chamera-III HEP	231	35	29	28	0	0	28
URI-I HEP	480	0	53	50	0	0	50
URI-II HEP	240	0	32	31	0	0	31
Sewa HEP	120	18	16	15	0	0	15
Dhaulti Ganga HEP	280	42	37	35	0	0	35
Dulhasti HEP	390	58	50	48	0	0	48
Parbati-III HEP	520	66	66	63	0	0	63
TOTAL	4065	272	479	455	0	0	455

Name of the Stn	Installed capacity	Total Un-allocated	Basic Allocation	Basic Allocation at periphery	Allocation out of Unallocated Quota	Allocation out of Un-allocation Quota at Delhi periphery	Total allocation at Delhi periphery
1	2	3	4	5	6	7	(8)=(5)+(7)
<u>NPC</u>							
Narora APS	440	64	47	41	0	0	41
RAPP (C)	440	64	56	49	0	0	49
TOTAL	880	128	103	89	0	0	89
<u>SJVNL</u>							
Nathpa Jhakri HEP	1500	149	142	135	0	0	135
<u>THDC</u>							
Tehri Hydro	1000	99	63	60	0	0	60
Koteshwar HEP	400	40	39	37	0	0	37
TOTAL	1400	139	102	97	0	0	97
Total	17627	1990	3132	2793	0	0	2793
<u>Allocation from ER and Tala HEP</u>							
Farakka	1600	0	22	19	0	0	19
Kahalgaon	840	0	51	43	0	0	43
Talchar	1000	0	0	0	0	0	0
Tala HEP	1020	153	30	25	0	0	25
Kahalgaon-II	1500	0	157	131	0	0	131
Total ER	5960	153	261	217	0	0	217
<u>Joint Venture</u>							
Jhajjar TPS	1500	114	693	622	0	0	622
<u>Ultra Mega Projects</u>							
Sasan	3960	0	446	400	0	0	400
Grand Total	29047	2257	4531	4032	0	0	4032

13.2 ALLOCATION OF POWER TO DELHI DISCOMS FROM VARIOUS SOURCES

a) ALLOCATION OF POWER TO VARIOUS LICENSEES

i) ALLOCATION W.E.F. 15.03.2016 to 31.03.2017.

(Allocation In %)

SOURCES	LICENSEES					
	BRPL	BYPL	TPDDL	NDMC	MES	Total
BTPS	33.42	18.99	22.77	17.73	7.09	100.00
RPH	43.92	25.40	30.68	0.00	0.00	100.00
GT	61.03	8.59	30.25	0.00	0.00	99.87
Pragati	28.29	16.07	19.28	30.30	6.06	100.00
DADRI TH-I	48.694	9.488	25.284	16.534	0.00	100.00
Bawana	31.130	18.000	21.750	7.300	1.820	80.00
Singrauli**	19.76	49.56	30.68	0.00	0.000	100.00
Sasan**	14.832	54.488	30.680	0.00	0.000	100.00
Aravali Jhajjar***	57.89	11.43	30.68	0.00	0.000	100.00
Dadri Th-II	43.92	25.40	30.68	0.00	0.000	100.00
Tehri HEP	69.317	0.000	30.683	0.00	0.000	100.00
Koteshwar	69.320	0.000	30.680	0.00	0.000	100.00

Note :-

- i) 1MW(0.13) MW allocated from unallocated quota from GT to IP.
- ii) The allocation from Sasan, Singrauli, Dadri(Th)-I & Jhajjar was revised w.e.f. 01.08.2014 as per DERC order. Further allocation from Sasan, BTPS & GT was revised w.e.f. 08.10.2016 as per DERC Tariff order for FY 2016-17.
- iii) Allocation from Dadri (Th)-I w.e.f. 01.09.2016 is as per NRPC allocation order.
- iv) Allocation from Koldam HEP is NIL to Delhi Discoms.
- v) Allocation from Tehri & Koteshwar HEP transfer from BYPL to BRPL w.e.f 15.03.2017
- vi) Allocation from other CSGS sources as per DERC order dated 27.02.2014 (effective from 01.04.2014) is as under:
BRPL : 43.92%, BYPL : 25.40%, TPDDL : 30.68%
- vii) Haryana and Punjab each has 10% share in Bawana CCGT

14 **DERC vide its letter no.F3(288)/Tariff/DERC/2011-12/3115/4054 dated 28.11.2014 revised the rates of inter discom transfer of surplus power as Indian Energy Exchange + 10Ps per unit.**

14.1 **Inter Discom Transfer of surplus power on day ahead basis @ Indian Exchange Rate + 10Ps per unit for 2016-17**

All figures in MU

Months	BRPL Energy Sale to				
	BYPL	MES	NDMC	TPDDL	Total
Apr-16	0.000000	0.000000	0.000000	0.141720	0.141720
May-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jun-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jul-16	0.027117	0.000000	0.000000	0.000000	0.027117
Aug-16	0.000000	0.000000	0.000000	0.000000	0.000000
Sep-16	0.000287	0.000000	0.000000	0.000000	0.000287
Oct-16	0.000000	0.000000	0.000000	0.000000	0.000000
Nov-16	0.000000	0.000000	0.000000	0.000000	0.000000
Dec-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jan-17	0.000000	0.009642	0.000000	0.000000	0.009642
Feb-17	0.000000	0.047169	0.000000	0.000000	0.047169
Mar-17	0.000000	0.082004	0.000000	0.000000	0.082004
Total	0.027403	0.138815	0.000000	0.141720	0.307938

Months	BYPL Energy Sale to				
	BRPL	MES	NDMC	TPDDL	Total
Apr-16	0.469563	0.000000	0.000000	0.637635	1.107198
May-16	0.613354	0.000000	0.000000	0.000000	0.613354
Jun-16	0.310495	0.000000	0.000000	0.000000	0.310495
Jul-16	0.222857	0.000000	0.000000	0.000000	0.222857
Aug-16	0.006250	0.000000	0.000000	0.000000	0.006250
Sep-16	0.654238	0.000000	0.000000	0.000000	0.654238
Oct-16	0.138915	0.000000	0.000000	0.000000	0.138915
Nov-16	13.852130	0.000000	0.000000	3.101389	16.953520
Dec-16	8.082404	0.000000	0.000000	0.000000	8.082404
Jan-17	19.836094	0.244400	0.000000	0.006199	20.086694
Feb-17	5.906733	0.357368	0.000000	0.000000	6.264101
Mar-17	0.883602	0.276723	0.000000	0.000000	1.160324
Total	50.976635	0.878490	0.000000	3.745223	55.600348

Months	MES Energy Sale to				
	BRPL	BYPL	NDMC	TPDDL	Total
Apr-16	0.000000	0.000000	0.000000	0.000000	0.000000
May-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jun-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jul-16	0.000000	0.000000	0.000000	0.000000	0.000000
Aug-16	0.000000	0.000000	0.000000	0.000000	0.000000
Sep-16	0.000000	0.000000	0.000000	0.000000	0.000000
Oct-16	0.000000	0.000000	0.000000	0.000000	0.000000
Nov-16	0.000000	0.000000	0.000000	0.000000	0.000000
Dec-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jan-17	0.019464	0.001626	0.000000	0.000000	0.021089
Feb-17	0.000000	0.000000	0.000000	0.000000	0.000000
Mar-17	0.000000	0.000000	0.000000	0.000000	0.000000
Total	0.019464	0.001626	0.000000	0.000000	0.021089

Months	NDMC Energy Sale to				
	BRPL	BYPL	MES	TPDDL	Total
Apr-16	0.000000	0.000000	0.000000	0.000000	0.000000
May-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jun-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jul-16	0.000000	0.000000	0.000000	0.000000	0.000000
Aug-16	0.000000	0.000000	0.000000	0.000000	0.000000
Sep-16	0.000000	0.000000	0.000000	0.000000	0.000000
Oct-16	0.000000	0.000000	0.000000	0.000000	0.000000
Nov-16	0.000000	0.000000	0.000000	0.000000	0.000000
Dec-16	0.000000	0.000000	0.000000	0.000000	0.000000
Jan-17	0.000000	0.000000	0.000000	0.000000	0.000000
Feb-17	0.000000	0.000000	0.000000	0.000000	0.000000
Mar-17	0.000000	0.000000	0.000000	0.000000	0.000000
Total	0.000000	0.000000	0.000000	0.000000	0.000000

Months	TPDDL Energy Sale to				
	BRPL	BYPL	MES	NDMC	Total
Apr-16	1.770879	0.020009	0.000000	0.000000	1.790888
May-16	29.029201	1.306194	0.000000	0.000000	30.335395
Jun-16	53.032201	5.634305	0.000000	0.000000	58.666506
Jul-16	30.638118	6.426680	0.000000	0.000000	37.064798
Aug-16	19.753330	11.018456	0.000000	0.000000	30.771786
Sep-16	41.962944	12.803379	0.000000	0.000000	54.766323
Oct-16	6.345281	8.118492	0.000000	0.000000	14.463772
Nov-16	4.680054	0.000000	0.000000	0.000000	4.680054
Dec-16	36.108766	0.909886	0.000000	0.000000	37.018652
Jan-17	27.563028	0.206948	0.389603	0.000000	28.159578
Feb-17	18.912737	0.010000	1.074270	0.000000	19.997007
Mar-17	5.020106	0.129378	1.461192	0.000000	6.610676
Total	274.816643	46.583726	2.925065	0.000000	324.325434

14.2 Inter Discom Transfer of surplus power to avoid penalty on the basis of Actual Energy Meter data (IDT-II)

All figures in MU

Month	BRPL	Sale Energy To			Total
	BYPL	MES	NDMC	TPDDL	
Apr-16	0.073285	0.025438	0.185811	0.252624	0.537158
May-16	0.577956	0.155809	0.247632	0.955742	1.937139
Jun-16	0.108051	0.279242	0.116523	0.641236	1.145052
Jul-16	0.108051	0.279242	0.116523	0.641259	1.145075
Aug-16	0.079178	0.033918	0.004146	0.053269	0.170510
Sep-16	0.031296	0.000653	0.005855	0.000000	0.037804
Oct-16	0.010835	0.005065	0.041144	0.015617	0.072661
Nov-16	0.001641	0.008644	0.001802	0.002596	0.014683
Dec-16	0.010864	0.000000	0.002287	0.042471	0.055622
Jan-17	0.003028	0.000524	0.101659	0.118284	0.223495
Feb-17	0.000000	0.000000	0.024207	0.028851	0.053058
Mar-17	0.116274	0.046360	0.065693	0.059114	0.287440
Total	1.120459	0.834894	0.913281	2.811064	5.679697

All figures in MU

Month	BYPL Sale Energy To				
	BRPL	MES	NDMC	TPDDL	Total
Apr-16	0.034773	0.010611	0.031716	0.031355	0.108456
May-16	0.184441	0.018173	0.081858	0.134279	0.418751
Jun-16	0.391547	0.044773	0.007745	0.129561	0.573625
Jul-16	0.420797	0.044773	0.007745	0.129641	0.602955
Aug-16	0.167779	0.023201	0.000000	0.020413	0.211394
Sep-16	0.078554	0.006273	0.000000	0.000000	0.084827
Oct-16	0.765803	0.007640	0.000000	0.000053	0.773496
Nov-16	0.342741	0.013400	0.015502	0.016963	0.388606
Dec-16	0.130070	0.000805	0.005586	0.020316	0.156777
Jan-17	0.022791	0.009129	0.029328	0.054275	0.115523
Feb-17	0.000000	0.003612	0.007992	0.008431	0.020035
Mar-17	0.000621	0.000000	0.002401	0.001200	0.004223
Total	2.539918	0.182390	0.189873	0.546487	3.458668

Month	TPDDL Sale Energy To				
	BRPL	BYPL	NDMC	MES	Total
Apr-16	0.054160	0.011574	0.148180	0.043637	0.257550
May-16	0.741250	0.418006	0.155005	0.291041	1.605302
Jun-16	1.951004	0.423176	0.084423	0.756070	3.214672
Jul-16	1.982520	0.423176	0.084423	0.756207	3.246325
Aug-16	1.154070	0.470912	0.010724	0.109373	1.745080
Sep-16	1.423183	0.188659	0.017517	0.000424	1.629783
Oct-16	2.169844	0.184198	0.015419	0.018160	2.387621
Nov-16	1.505191	0.060105	0.121348	0.088046	1.774691
Dec-16	0.393341	0.010853	0.026682	0.171030	0.601906
Jan-17	0.127869	0.028793	0.103699	0.289773	0.550134
Feb-17	0.075271	0.048125	0.027768	0.094877	0.246041
Mar-17	0.006418	0.044038	0.214602	0.048121	0.313179
Total	11.584120	2.311615	1.009791	2.666759	17.572285

All figures in MU

Month	Sale Energy To				Total
	BRPL	BYPL	MES	TPDDL	
Apr-16	0.024810	0.011501	0.010574	0.011872	0.058757
May-16	0.228526	0.130835	0.018545	0.222898	0.600804
Jun-16	1.029022	0.462086	0.196652	0.504640	2.192400
Jul-16	1.040734	0.462086	0.196652	0.504720	2.204192
Aug-16	0.867807	0.376694	0.142918	0.128315	1.515734
Sep-16	2.949815	0.643361	0.447124	0.004037	4.044336
Oct-16	3.552134	0.520042	0.234362	0.005599	4.312137
Nov-16	1.790002	0.037381	0.028002	0.026819	1.882204
Dec-16	0.375084	0.084596	0.057866	0.070199	0.587745
Jan-17	0.003196	0.000965	0.000595	0.004431	0.009187
Feb-17	0.004573	0.045985	0.016710	0.010004	0.077271
Mar-17	0.070749	0.071342	0.058401	0.006526	0.207019
Total	11.936452	2.846876	1.408399	1.500059	17.691786

Month	Sale Energy To				Total
	BRPL	BYPL	NDMC	TPDDL	
Apr-16	0.014649	0.005025	0.001012	0.023154	0.043840
May-16	0.010859	0.000864	0.000695	0.004816	0.017234
Jun-16	0.002575	0.001693	0.000000	0.000000	0.004268
Jul-16	0.002752	0.001693	0.000000	0.000000	0.004444
Aug-16	0.086560	0.045412	0.006198	0.002276	0.140446
Sep-16	2.100291	0.297085	0.147618	0.020645	2.565639
Oct-16	2.105696	0.279367	0.156250	0.000000	2.541312
Nov-16	0.907469	0.031112	0.065711	0.019449	1.023742
Dec-16	0.178817	0.036176	0.001427	0.001080	0.217499
Jan-17	0.019598	0.004531	0.017492	0.048980	0.090601
Feb-17	0.016863	0.037579	0.016800	0.000077	0.071320
Mar-17	0.040076	0.062611	0.060047	0.009135	0.171869
Total	5.486205	0.803150	0.473248	0.129613	6.892216

15 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 DSM Pool Account is also operated by SLDC as per the DERC order. The details of Main meters used for ABT billing are as under :

15.1 For Intrastate (Meters provided by DTL) -As on 1/4/2017

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)	TPDDL	64	36	100	85	57	0	57	46	131
2)	BRPL	89	36	125	84	75	08	83	65	149
3)	BYPL	72	22	94	57	65	1	66	49	106
4)	NDMC	38	6	44	40	31	4	35	35	75
5)	MES	8	8	16	15	8	7	15	15	30
	TOTAL	271	108	379	281	236	20	256	210	491
	GRAND TOTAL			635	491					

15.2 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	PPCL BWN	0	4	4
02	RPH	12	2	2
03	G.T.	8	2	2
04	Pragati	3	3	-
05	BTPS	6	6	6
	TOTAL	29	17	14

- a) No. of Meters involved for Intrastate = 281 (M)+ 210 (C)+27 (Local TX.)
ABT billing with DISCOMs
- b) No of Meters involved for UI billing of Genco= 17 (M)+ 14 (C)
- c) Overall meters dealt by DTL = 549

15.3 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	38	38
	Total		76

15.4 The details of the DSM Transactions for 2016-17 at Intrastate Level are as under:

15.4.1 DSM Transactions of TPDDL

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	Deviation Energy in Mus	Deviation Amount as per Intrastate Deviation Account in Rs. Lacs	Adjusted Deviation amount to euqte the same with Interstate Deviation Account issued by NRPC in Rs. Lacs	Different ial Cap Amount in Rs, Lacs	Additi-onal Deviation Amount in Rs, Lacs	Net UI Amount in Rs. Lacs
Apr-16	764.348	757.598	-6.750	-89.804	-79.975	37.022	4.201	-38.753
May-16	945.841	933.445	-12.396	-45.188	-77.129	82.975	30.951	36.798
Jun-16	1000.551	977.748	-22.802	-154.095	-270.347	243.751	22.038	-4.559
Jul-16	959.577	944.111	-15.467	-42.487	-153.120	143.343	35.175	25.398
Aug-16	932.293	918.470	-13.822	-25.337	-129.252	150.496	23.689	44.933
Sep-16	907.969	899.555	-8.414	-124.604	-170.283	56.451	9.687	-104.145
Oct-16	785.120	774.853	-10.267	-99.814	-145.263	78.332	13.297	-53.635
Nov-16	534.144	523.774	-10.370	-127.049	-109.567	49.897	31.085	-28.585
Dec-16	559.684	552.501	-7.182	-29.302	2.695	17.574	9.321	-9.885
Jan-17	600.199	599.747	-0.452				15.322	68.250
Feb-17	563.659	556.489	-7.170				5.792	-74.866
Mar-17	623.518	624.677	1.159				10.114	90.585
Total	9176.902	9062.968	-113.934	-737.681	-1132.241	859.841	210.671	-48.462

Note :

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

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

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

15.4.2 DSM Transactions of BRPL

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Additional UI Amount in Rs. Lacs	Differenc e in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	1062.488	1052.693	-9.795	-79.468	-95.034	87.992	27.130	20.088
May-16	1370.410	1356.745	-13.666	-53.972	-134.589	147.511	43.947	56.870
Jun-16	1473.725	1460.999	-12.726	16.216	-110.783	250.607	55.562	195.386
Jul-16	1367.605	1367.843	0.239	186.667	115.431	88.811	51.237	255.478
Aug-16	1305.215	1321.249	16.034	421.495	411.483	45.274	78.764	535.521
Sep-16	1241.827	1274.878	33.051	687.960	690.477	11.285	86.066	787.827
Oct-16	1020.474	1054.745	34.271	723.291	808.135	13.302	74.449	895.886
Nov-16	650.769	702.351	51.582	1143.491	1300.842	1.592	259.691	1562.124
Dec-16	705.341	735.747	30.406	184.195	248.350	11.936	139.638	938.421
Jan-17	782.166	795.263	13.097				42.200	348.515
Feb-17	664.464	669.508	5.044				9.205	111.734
Mar-17	772.137	772.138	0.001				8.100	48.764
Total	12416.621	12564.158	147.537	3229.875	3234.311	658.310	875.987	5756.614

Note :

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

15.4.3 DSM Transactions of BYPL

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Additional UI Amount in Rs. Lacs	Difference in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	603.883	602.302	-1.581	-4.931	21.724	13.851	6.503	42.078
May-16	757.538	757.198	-0.340	57.008	58.120	30.179	39.988	128.287
Jun-16	820.170	819.560	-0.609	75.098	81.049	57.126	27.883	166.058
Jul-16	776.803	771.890	-4.913	-17.987	-44.757	38.805	14.335	8.383
Aug-16	738.122	745.872	7.751	218.586	207.546	23.355	47.875	278.776
Sep-16	713.235	722.494	9.259	195.172	189.174	8.631	20.516	218.321
Oct-16	607.298	610.774	3.476	111.276	108.616	28.010	9.331	145.958
Nov-16	376.981	379.384	2.404	75.591	84.633	7.301	6.991	98.925
Dec-16	382.892	386.851	3.960	59.399	75.146	3.852	9.877	159.774
Jan-17	411.813	418.221	6.408				8.009	141.543
Feb-17	360.542	368.282	7.741				6.925	158.157
Mar-17	435.048	445.087	10.039				12.817	256.145
Total	6984.322	7027.916	43.594	769.212	781.251	211.110	211.051	1802.404

Note :

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

15.4.4 DSM Transactions of NDMC

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Addition al UI Amount in Rs. Lacs	Differenc e in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	133.511	137.919	4.408	132.661	157.555	16.479	20.587	194.621
May-16	169.868	166.466	-3.402	-10.687	-5.121	21.063	11.946	27.888
Jun-16	176.027	163.849	-12.177	-184.581	-144.707	26.343	0.163	-118.201
Jul-16	171.116	155.182	-15.935	-215.665	-214.706	22.834	0.206	-191.666
Aug-16	164.261	151.821	-12.440	-197.831	-194.846	10.553	0.034	-184.259
Sep-16	153.741	139.360	-14.381	-257.578	-265.070	10.696	0.104	-254.270
Oct-16	130.404	113.607	-16.797	-293.362	-243.560	19.096	0.119	-224.345
Nov-16	89.901	83.469	-6.432	-107.146	-55.805	0.002	5.814	-49.988
Dec-16	90.786	86.507	-4.279	-73.436	-22.507	0.000	0.063	-31.092
Jan-17	88.925	96.378	7.453				2.028	134.208
Feb-17	80.267	77.769	-2.498				0.008	-43.440
Mar-17	94.024	92.035	-1.989				0.012	-28.983
Total	1542.830	1464.361	-78.469	-1207.626	-988.768	127.067	41.084	-769.527

Note :

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

15.4.5 DSM Transactions of MES

Month	Schedule drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Additional UI Amount in Rs. Lacs	Difference in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	17.478	18.884	1.406	40.372	50.389	2.011	29.116	81.516
May-16	19.975	23.532	3.557	74.964	100.667	1.166	41.964	143.797
Jun-16	21.452	24.951	3.499	73.992	113.710	0.000	0.000	113.710
Jul-16	23.086	24.494	1.408	28.231	36.174	0.000	0.000	36.174
Aug-16	22.045	22.778	0.733	17.527	22.203	0.000	0.000	22.203
Sep-16	26.097	22.125	-3.972	-72.247	-70.889	0.000	0.000	-70.889
Oct-16	22.547	17.837	-4.710	-87.038	-64.951	0.000	0.000	-64.951
Nov-16	15.490	14.157	-1.333	-19.820	6.166	0.000	0.295	6.461
Dec-16	16.138	18.213	2.074	6.419	11.933	0.000	0.000	61.460
Jan-17	15.964	22.305	6.341				0.000	120.262
Feb-17	15.004	15.565	0.561				0.000	10.061
Mar-17	15.222	15.274	0.052				0.000	3.665
Total	230.499	240.115	9.616	62.399	205.401	3.177	71.374	463.467

Note :

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

15.4.6 DSM Transactions of IP

Month	Schedule d drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Addition al UI Amount in Rs. Lacs	Difference in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	0.720	0.003	-0.717	-15.606	0.046	13.693	0.039	13.778
May-16	0.744	0.008	-0.736	-12.941	-8.935	10.320	0.342	1.727
Jun-16	0.720	0.009	-0.711	-11.813	-6.741	-2.238	0.000	-8.979
Jul-16	0.744	0.011	-0.733	-10.877	-9.724	-1.240	0.000	-10.964
Aug-16	0.744	0.006	-0.738	-13.580	-10.888	0.000	0.000	-10.888
Sep-16	0.424	0.006	-0.418	-7.928	-7.253	0.000	0.000	-7.253
Oct-16	0.260	0.005	-0.255	-4.914	-3.548	0.000	0.000	-3.548
Nov-16	0.252	0.004	-0.248	-5.153	3.032	0.000	0.000	3.032
Dec-16	0.260	0.004	-0.257	-2.008	2.455	0.000	0.000	-0.985
Jan-17	0.260	0.004	-0.256				0.000	-4.648
Feb-17	0.235	0.003	-0.232				0.000	-4.264
Mar-17	0.260	0.002	-0.258				0.000	-5.426
Total	5.624	0.064	-5.560	-84.819	-41.555	20.535	0.381	-38.417

Note :

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

15.4.7 DSM Transactions of RPH

Month	Schedule drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Additional UI Amount in Rs. Lacs	Difference in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	-0.882	-0.518	0.364	-8.383	-3.378	6.416	0.067	3.106
May-16	-0.942	-0.471	0.471	-8.775	-5.907	6.380	0.412	0.885
Jun-16	-0.882	-0.565	0.317	-6.734	-3.678	0.525	0.000	-3.153
Jul-16	-0.744	-0.574	0.170	-2.755	-2.576	0.091	0.000	-2.485
Aug-16	-0.679	-0.381	0.298	-5.495	-3.744	0.283	0.000	-3.461
Sep-16	-0.504	-0.336	0.168	-3.448	-3.252	0.213	0.000	-3.039
Oct-16	-0.521	-0.364	0.157	-3.415	-2.527	0.170	0.000	-2.357
Nov-16	-0.504	-0.280	0.224	-5.535	3.330	0.480	0.000	3.810
Dec-16	-0.521	-0.286	0.235	-2.136	3.528	0.216	0.000	0.801
Jan-17	-0.521	-0.333	0.188				0.000	-3.347
Feb-17	-0.470	-0.291	0.180				0.000	-3.291
Mar-17	-0.521	-0.400	0.121				0.000	-2.379
Total	-7.691	-4.799	2.891	-46.676	-18.204	14.774	0.480	-14.910

Note :

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

15.4.8 DSM Transactions of GT

Month	Schedule d drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Additional UI Amount in Rs. Lacs	Difference in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	24.238	24.431	0.193	-0.026	3.561	0.976	0.847	5.384
May-16	61.881	61.519	-0.361	12.839	17.627	1.568	3.826	23.020
Jun-16	83.045	83.158	0.112	-0.836	7.676	0.018	0.027	7.722
Jul-16	70.785	70.556	-0.229	6.080	7.680	0.031	0.000	7.711
Aug-16	50.210	50.038	-0.172	6.042	7.500	0.000	0.000	7.500
Sep-16	53.188	53.217	0.029	0.454	0.434	0.000	0.000	0.434
Oct-16	56.540	56.645	0.106	-1.607	-0.409	0.000	0.000	-0.409
Nov-16	57.136	56.960	-0.176	7.184	11.395	0.000	0.160	11.555
Dec-16	58.683	58.702	0.019	6.168	9.427	0.000	0.000	9.781
Jan-17	48.696	48.442	-0.254				0.000	3.617
Feb-17	53.691	53.762	0.071				0.000	-0.954
Mar-17	54.822	54.899	0.077				0.012	-0.956
Total	672.915	672.330	-0.585	36.298	64.891	2.593	4.872	74.403

Note :

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

15.4.9 DSM Transactions of Pragati

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Additional UI Amount in Rs. Lacs	Difference in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	161.490	161.989	0.499	-9.523	-3.193	2.365	4.082	3.254
May-16	185.816	185.942	0.126	-2.522	1.030	0.704	4.428	6.161
Jun-16	179.809	180.167	0.358	-7.305	-2.484	0.524	2.617	0.658
Jul-16	175.212	175.518	0.305	-6.965	-5.564	0.009	0.893	-4.662
Aug-16	160.814	161.132	0.318	-5.785	-3.252	0.000	0.943	-2.308
Sep-16	140.020	140.377	0.357	-6.628	-6.522	0.180	0.117	-6.225
Oct-16	114.335	114.643	0.308	-5.052	-3.059	0.000	0.584	-2.475
Nov-16	168.642	169.325	0.683	-15.738	51.891	1.024	1.440	54.355
Dec-16	161.736	162.422	0.686	-6.432	4.218	0.000	0.000	-3.732
Jan-17	109.574	110.104	0.530				0.000	-9.426
Feb-17	106.162	106.367	0.205				1.269	-0.869
Mar-17	90.771	91.065	0.294				0.009	-5.645
Total	1754.381	1759.051	4.670	-65.951	33.064	4.805	16.383	29.084

Note :

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

15.4.10 DSM Transactions of BTPS

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Additional UI Amount in Rs. Lacs	Difference in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	219.479	209.894	-9.585	203.323	283.771	-15.147	2.199	270.822
May-16	206.840	195.829	-11.011	188.523	279.204	-9.701	7.863	277.366
Jun-16	229.871	220.590	-9.282	185.493	323.400	-11.651	7.090	318.839
Jul-16	245.875	234.884	-10.991	178.787	229.478	-5.198	1.189	225.468
Aug-16	244.840	237.620	-7.220	125.918	157.773	-2.538	0.303	155.537
Sep-16	239.899	234.868	-5.031	98.433	100.627	-5.000	0.215	95.842
Oct-16	180.239	176.233	-4.006	73.102	85.535	-1.935	3.095	86.695
Nov-16	22.605	19.488	-3.117	57.835	64.181	-2.320	0.009	61.870
Dec-16	0.000	-5.104	-5.104	32.841	59.419	-1.581	0.000	120.179
Jan-17	0.000	-5.188	-5.188				0.000	94.098
Feb-17	0.000	-4.706	-4.706				0.049	87.135
Mar-17	1.880	-3.055	-4.935				1.200	92.342
Total	1591.528	1511.354	-80.174	1144.255	1583.388	-55.072	23.211	1886.193

Note :

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

15.4.11 DSM Transactions of Bawana

Month	Scheduled drawal in Mus	Actual drawal in MUs in Mus	UI Energy in Mus	UI amount as per Intrastate UI account in Rs. Lacs	Adjusted UI Amount to equivate the same with Interstate UI Issued by NRPC for the state Delhi as a whole in Rs. Lacs	Additional UI Amount in Rs. Lacs	Difference in UI Capp Amount in Rs. Lacs	Net UI Amount in Rs. Lacs
Apr-16	70.494	70.963	0.469	-10.376	-2.098	6.798	10.740	15.440
May-16	154.217	155.822	1.605	-32.219	-22.412	1.775	2.806	-17.831
Jun-16	144.698	146.259	1.562	-33.464	-17.955	0.943	0.043	-16.968
Jul-16	138.977	140.366	1.389	-21.666	-18.279	0.000	0.000	-18.279
Aug-16	186.685	187.718	1.033	-22.925	-17.104	0.000	1.772	-15.332
Sep-16	188.817	190.323	1.506	-24.409	-24.590	0.000	0.087	-24.502
Oct-16	192.403	192.889	0.485	-5.786	3.117	0.000	5.134	8.251
Nov-16	122.444	122.413	-0.030	4.088	8.656	0.000	5.359	14.015
Dec-16	187.380	188.621	1.241	-18.563	6.017	0.000	8.005	5.486
Jan-17	194.611	195.113	0.502				0.000	-11.026
Feb-17	172.483	172.519	0.036				1.148	0.335
Mar-17	204.389	205.781	1.392				2.929	-29.094
Total	1957.595	1968.786	11.191	-165.320	-84.648	9.517	38.024	-89.505

Note :

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

16 REACTIVE POWER MANAGEMENT

16.1 INSTALLED CAPACITY OF CAPACITORS IN DELHI AS ON 31.03.2017.

DETAILS OF THE CAPACITORS INSTALLED IN DELHI SYSTEM LUMPED TO THE NEAREST 220KV GRID SUB-STATIONS AS ON 31.03.2017 IS AS UNDER :-
(All figures in MVAR)

S. No.	SUB-STATION	Name of Utility	INSTALLED CAPACITY			
			66KV	33kV	11kV	TOTAL
1	IP YARD			30.00		30.00
1	Kamla Market	BYPL			16.35	16.35
2	Minto Road	BYPL				0.00
3	GB Pant Hosp	BYPL			10.48	10.48
4	Delhi Gate	BYPL			10.90	10.90
5	Tilakmarg	NDMC			5.04	5.04
7	Cannaught Place	NDMC			10.08	10.08
8	Kilokri	BRPL		10.08	10.48	20.56
9	NDSE-II	BRPL				0.00
11	Nizamuddin	BRPL				0.00
12	Exhibition-I	BRPL				0.00
13	Exhibition-II	BRPL				0.00
14	Defence Colony	BRPL				0.00
15	IG Stadium	BYPL		10.08	5.45	15.53
16	Lajpat Nagar	BRPL				0.00
17	IP Estate	BYPL			10.90	10.90
			0.00	50.16	79.68	129.84
2	Electric Lane					
1	Electric Lane	NDMC			5.04	5.04
2	Scindia House	NDMC			10.44	10.44
3	Mandi House	NDMC			10.80	10.80
4	Raisina Road	NDMC			10.08	10.08
5	Raja Bazar	NDMC			10.08	10.08
			0.00	0.00	46.44	46.44
3	RPH Station			20.00		20.00
1	Lahori Gate	BYPL			10.49	10.49
2	Jama Masjid	BYPL			10.48	10.48
4	Kamla Market	BYPL				0.00
5	Minto Road	BYPL			10.90	10.90
6	GB Pant Hosp	BYPL				0.00
7	IG Stadium	BYPL				0.00
			0.00	20.00	31.87	51.87

S. No.	SUB-STATION	Name of Utility	INSTALLED CAPACITY			
			66KV	33kV	11kV	TOTAL
4	Parkstreet S/stn		20.00	20.00		40.00
1	Shastri Park	BYPL		10.90	5.45	16.35
2	Faiz Road	BYPL			18.05	18.05
3	Motia Khan	BYPL			16.30	16.30
4	Prasad Nagar	BYPL			16.25	16.25
5	Anand Parbat	BYPL			10.80	10.80
6	Shankar Road	BYPL			0.00	0.00
7	Rama Road	TPDDL			0.00	0.00
8	Baird Road	NDMC			10.08	10.08
9	Hanuman Road	NDMC			10.08	10.08
10	Pusa	TPDDL			5.44	5.44
11	Ridge Valley	BRPL			0.00	0.00
12	B. D. Marg	NDMC			5.40	5.40
13	Nirman Bhawan	NDMC			5.04	5.04
			20.00	30.90	102.89	153.79
5	Naraina S/stn			20.00	5.04	25.04
1	DMS	BYPL			10.85	10.85
2	Mayapuri	BRPL		10.87	10.40	21.27
3	Inderpuri	TPDDL		13.26	5.04	18.30
4	Rewari line	TPDDL				0.00
5	Khyber Lane	MES		10.05		10.05
6	Kirbi Place	MES		10.05		10.05
7	Payal	TPDDL			10.08	10.08
8	A-21 Naraina	TPDDL			4.08	4.08
8	Saraswati Garden	TPDDL			10.08	10.08
			0.00	64.23	55.57	119.80
6	Mehrauli S/stn		80.00		5.04	85.04
1	Adchini	BRPL			14.61	14.61
2	Andheria Bagh	BRPL			10.85	10.85
3	IIT	BRPL			10.90	10.90
4	JNU	BRPL		10.03	10.03	20.06
5	Bijwasan	BRPL			15.47	15.47
6	DC Saket	BRPL		10.08	9.98	20.06
7	Malviya Nagar	BRPL				0.00
8	C Dot	BRPL			10.48	10.48
9	Vasant kunj B-Blk	BRPL	21.79		10.90	32.69
10	Vasant kunj C-Blk	BRPL	20.16		10.48	30.64
11	Palam	BRPL				0.00
12	IGNOU	BRPL			5.04	5.04
13	R. K. Puram-I	BRPL			10.07	10.07
14	Vasant Vihar	BRPL			19.25	19.25

S. No.	SUB-STATION	Name of Utility	INSTALLED CAPACITY			
			66KV	33kV	11kV	TOTAL
15	Pusp Vihar	BRPL			10.44	10.44
16	Bhikaji Cama Place	BRPL		10.08	10.07	20.15
			121.95	30.19	163.61	315.75
7	Vasantkunj S/stn		40.00		5.04	45.04
1	R. K. Puram-II	BRPL			10.80	10.80
2	Vasant kunj C-Blk	BRPL				0.00
3	Vasant kunj D-Blk	BRPL			9.63	9.63
4	Ridge Valley	BRPL				0.00
			40.00	0.00	25.47	65.47
8	Okhla S/stn		60.00	10.00	5.04	75.04
1	Balaji	BRPL			10.80	10.80
2	East of Kailash	BRPL			15.89	15.89
3	Alaknanda	BRPL			16.30	16.30
4	Malviya Nagar	BRPL	21.79	20.16	10.85	52.80
5	Masjid Moth	BRPL			16.30	16.30
6	Nehru Place	BRPL			21.34	21.34
7	Okhla Ph-I	BRPL	21.79		16.30	38.09
8	Okhla Ph-II	BRPL		20.93	15.47	36.40
9	Shivalik	BRPL			10.80	10.80
10	Batra	BRPL			15.90	15.90
11	VSNL	BRPL			10.90	10.90
12	Siri Fort	BRPL			10.49	10.49
13	Tuglakabad	BRPL			10.85	10.85
			103.58	51.09	187.23	341.90
9	Lodhi Road S/stn				20.00	20.00
1	Defence Colony	BRPL			14.85	14.85
2	Hudco	BRPL			10.90	10.90
3	Lajpat Nagar	BRPL			10.90	10.90
4	Nizamuddin	BRPL			10.44	10.44
5	Vidyut Bhawan (Shahjahan Road)	NDMC			10.80	10.80
6	Ex. Gr. II	BRPL			0.00	0.00
7	IHC	BRPL			0.00	0.00
			0.00	0.00	324.06	324.06
10	Sarita Vihar S/stn		20.00		5.04	25.04
1	Sarita Vihar	BRPL			10.07	10.07
2	MCIE	BRPL			10.06	10.06
3	Mathura Road	BRPL	20.16		11.69	31.85
4	Jamia Millia	BRPL			10.89	10.89
5	Sarai Julena	BRPL		10.08	16.29	26.37
6	Jasola	BRPL			5.44	5.44
			40.16	10.08	69.48	119.72

S. No.	SUB-STATION	Name of Utility	INSTALLED CAPACITY			
			66KV	33kV	11kV	TOTAL
11	Wazirabad					
1	Bhagirathi	BYPL		14.40	10.90	25.30
2	Ghonda	BYPL	21.79	22.56	15.94	60.29
3	Seelam Pur	BYPL		10.08	21.39	31.47
4	Dwarkapuri	BYPL			15.46	15.46
5	Nandnagri	BYPL	20.16		16.35	36.51
6	Yamuna Vihar	BYPL			14.40	14.40
7	East of Loni Road	BYPL			10.80	10.80
8	Shastri Park	BYPL			10.90	10.90
9	Karawal Nagar	BYPL			5.40	5.40
10	Sonia Vihar	BYPL			14.70	14.70
			41.95	47.04	136.24	225.23
12	Geeta Colony					
1	Geeta Colony	BYPL			10.49	10.49
2	Kanti Nagar	BYPL			10.49	10.49
3	Kailash Nagar	BYPL			15.48	15.48
4	Seelam Pur	BYPL				0.00
5	Shakar Pur	BYPL			10.80	10.80
			0.00	0.00	36.77	36.77
13	Gazipur S/stn	DTL	40.00		5.04	45.04
1	Dallupura	BYPL	28.80		10.90	39.70
2	Vivek Vihar	BYPL			9.57	9.57
3	GT Road	BYPL			10.85	10.85
4	Kondli	BYPL	20.16		10.85	31.01
5	MVR-I	BYPL			10.90	10.90
6	MVR-II	BYPL	20.16		10.90	31.06
7	PPG Ind. Area	BYPL			10.06	10.06
			109.12	0.00	79.07	188.19
14	Patparganj S/stn	DTL	40.00	20.00	5.04	65.04
1	GH-I	BYPL	19.89		10.45	30.34
2	GH-II	BYPL	20.09		10.90	30.99
3	CBD	BYPL		10.03	15.48	25.51
4	Guru Angad Nagar	BYPL			15.49	15.49
5	Karkadooma	BYPL		10.80	10.44	21.24
6	Preet Vihar	BYPL			10.07	10.07
7	CBD-II	BYPL			10.80	10.80
8	Shakarpur	BYPL				0.00
9	Jhilmil	BYPL			10.80	10.80
10	Dilshad Garden	BYPL	20.16		16.35	36.51
11	Khichripur	BYPL	21.79		10.49	32.28
12	Mother Dairy	BYPL				0.00

S. No.	SUB-STATION	Name of Utility	INSTALLED CAPACITY			
			66KV	33kV	11kV	TOTAL
13	Scope Building	BYPL				0.00
14	Vivek Vihar	BYPL				0.00
15	Akhardham	BYPL			14.60	14.60
			121.93	40.83	140.91	303.67
15	Najafgarh S/stn		60.00		5.04	65.04
1	A4 Paschim Vihar	BRPL			10.80	10.80
2	Nangloi	BRPL	21.73		15.84	37.57
3	Nangloi W/W	BRPL	20.89		10.85	31.74
4	Pankha Road	BRPL			15.88	15.88
5	Jaffarpur	BRPL			15.43	15.43
7	Inst. Area Janakpuri (Sagarpur)	BRPL			17.60	17.60
8	Paschimpuri	BRPL		10.05	15.47	25.52
9	Paschim Vihar	BRPL	41.83		15.43	57.26
10	Mukherjee Park	BRPL			20.83	20.83
11	Udyog Nagar	BRPL			10.43	10.43
12	Choukhandi	BRPL			10.07	10.07
			144.45	10.05	163.67	318.17
16	Pappankalan-I S/stn	BRPL	20.00		5.04	25.04
1	Bindapur Grid G-3 PPK	BRPL	21.73		15.85	37.58
2	Bodella-I	BRPL	20.10		16.24	36.34
3	Bodella-II	BRPL	21.73		17.64	39.37
4	DC Janakpuri	BRPL			10.03	10.03
5	G-2 PPK (Nasirpur)	BRPL			10.80	10.80
6	G-5 PPK (Matiala)	BRPL			15.51	15.51
7	G-6 PPK	BRPL			5.40	5.40
8	G-15 PPK	BRPL			10.80	10.80
9	Harinagar	BRPL	21.18		16.25	37.43
10	Rewari line	TPDDL			5.44	5.44
			104.74	0.00	129.00	233.74
17	BBMB Rohtak Road					
1	S.B. Mill	BRPL			10.07	10.07
2	Rama Road	TPDDL			10.88	10.88
3	Ram Pura	TPDDL			10.48	10.48
4	Rohtak Road	TPDDL			10.08	10.08
5	Vishal	BRPL			10.40	10.40
6	Tri Nagar	TPDDL			5.44	5.44
7	Madipur	BRPL			10.43	10.43
8	Sudershan Park	TPDDL			10.08	10.08
9	Kirti Nagar	TPDDL			5.44	5.44
			0.00	0.00	83.30	83.30

S. No.	SUB-STATION	Name of Utility	INSTALLED CAPACITY			
			66KV	33kV	11kV	TOTAL
18	Shalimarbagh S/stn			40.00	6.00	46.00
1	S.G.T. Nagar	TPDDL			5.44	5.44
2	Wazirpur-1	TPDDL			17.18	17.18
3	Wazirpur-2	TPDDL			13.20	13.20
4	Ashok Vihar	TPDDL			7.20	7.20
5	Rani Bagh	TPDDL			10.88	10.88
6	Haiderpur	TPDDL			11.39	11.39
7	SMB FC	TPDDL			5.44	5.44
8	SMB KHOSLA	TPDDL			5.44	5.44
			0.00	40.00	82.17	122.17
19	Subzimandi S/stn				6.00	6.00
1	Shakti Nagar	TPDDL			5.04	5.04
2	Gulabibagh	TPDDL			10.88	10.88
3	Shahzadabagh	TPDDL			15.79	15.79
4	DU	TPDDL			5.44	5.44
5	Tripolia	TPDDL			10.88	10.88
6	B. G. Road	BYPL			5.40	5.40
			0.00	0.00	59.43	59.43
20	Narela S/stn		40.00		5.04	45.04
1	A-7 Narela	TPDDL			10.88	10.88
2	AIR Kham pur	TPDDL			5.95	5.95
3	Ashok vihar	TPDDL			10.60	10.60
4	Azad Pur	TPDDL			5.44	5.44
5	Tri Nagar	TPDDL			5.44	5.44
6	Badli	TPDDL	20.00		5.95	25.95
7	DSIDC Narela-1	TPDDL			5.95	5.95
8	GTK	TPDDL			5.94	5.94
9	Jahangirpuri	TPDDL	20.00	10.00	0.00	30.00
10	Bhalswa	TPDDL			4.80	4.80
11	Pitampura-I	TPDDL	20.00		5.04	25.04
12	RG-1	TPDDL			5.44	5.44
			100.00	10.00	76.47	186.47
21	Gopalpur S/stn			30.00	5.04	35.04
1	Azad Pur	TPDDL			10.88	10.88
2	Hudson Lane	TPDDL			5.95	5.95
3	Wazirabad	TPDDL			7.20	7.20
4	Indra Vihar	TPDDL			5.95	5.95
5	DIFR	TPDDL			5.44	5.44
6	GTK Road	TPDDL			5.44	5.44
7	Jahangirpuri	TPDDL		10.00	5.95	15.95
8	Civil lines	TPDDL			7.20	7.20

S. No.	SUB-STATION	Name of Utility	INSTALLED CAPACITY			
			66KV	33kV	11kV	TOTAL
9	Pitam Pura-1	TPDDL			5.44	5.44
10	Pitam Pura-3	TPDDL			5.44	5.44
11	Air Khampur	TPDDL			5.95	5.95
12	SGT Nagar	TPDDL			5.95	5.95
13	Tiggipur	TPDDL			10.88	10.88
14	Model Town	TPDDL			0.00	0.00
			0.00	40.00	92.71	132.71
22	Rohini S/stn		40.00		6.00	46.00
1	Rohini Sec-22	TPDDL			10.88	10.88
2	Rohini Sec-24	TPDDL			5.44	5.44
3	Rohini-2	TPDDL			5.95	5.95
4	Rohini-3	TPDDL			5.95	5.95
5	Rohini-4	TPDDL			11.39	11.39
6	Rohini-5	TPDDL			11.39	11.39
7	Rohini-6	TPDDL			13.15	13.15
8	Mangolpuri-1	TPDDL			7.20	7.20
9	Mangolpuri-2	TPDDL	20.00		7.20	27.20
10	Pitam Pura-2	TPDDL			10.48	10.48
11	Rohini DC-1	TPDDL			14.40	14.40
			60.00	0.00	109.43	169.43
23	Kanjhawala S/stn		20.00		5.04	25.04
1	Bawana Clear Water	TPDDL			21.60	21.60
2	Pooth Khoord	TPDDL	20.00		5.44	25.44
3	Rohini Sec-23	TPDDL	20.00		5.44	25.44
4	Rohini -2	TPDDL			7.20	7.20
			60.00	0.00	44.72	104.72
24	BAWANA S/stn					
1	Bawana S/stn No. 6	TPDDL			10.88	10.88
2	Bawana S/stn No. 7	TPDDL				0.00
			0.00	0.00	10.88	10.88
25	Kashmeregata S/stn				5.04	5.04
1	Civil lines	TPDDL			7.20	7.20
2	Town Hall	BYPL			8.64	8.64
3	Fountain	BYPL			5.45	5.45
			0.00	0.00	26.33	26.33
26	Pappankalan-II					
1	DMRC	BRPL				0.00
2	HASTAL	BRPL			21.60	21.60
3	GGSH	BRPL			10.80	10.80
			0.00	0.00	32.40	32.40

S. No.	SUB-STATION	Name of Utility	INSTALLED CAPACITY			
			66KV	33kV	11kV	TOTAL
27	Trauma Center (AIIMS)					
1	AIIMS	NDMC		13.26	5.04	18.30
2	Trauma Center	NDMC			10.08	10.08
3	Netaji Nagar	NDMC			15.12	15.12
4	Sanjay Camp	NDMC			10.08	10.08
5	Kidwai Nagar	NDMC			10.08	10.08
6	SJ Airport	NDMC			5.04	5.04
7	Race Course	NDMC			10.44	10.44
			0.00	13.26	65.88	79.14
28	MUNDKA					
1	Mangolpuri-I	TPDDL			13.15	13.15
			0.00	0.00	13.15	13.15
29	DSIDC BAWANA					
1	DSIDC NRL-1	TPDDL	20.00			20.00
2	DSIDC NRL-2	TPDDL			16.32	16.32
			20.00	0.00	16.32	36.32
30	RIDGE VALLEY					
1	Keventry Diary	NDMC			10.08	10.08
2	Nehru Park	NDMC			5.04	5.04
3	State Guest House	NDMC			5.40	5.40
4	Bapu Dham	NDMC			15.48	15.48
			0.00	0.00	36.00	36.00
31	IP EXTN (PRAGATI)					
1	Vidyut Bhawan	NDMC			10.08	10.08
2	Dalhousie Road	NDMC			5.04	5.04
3	National Archives	NDMC			10.08	10.08
4	School Lane	NDMC			10.44	10.44
			0.00	0.00	35.64	35.64
						0.00
	TOTAL CAPACITY					
	Utility		HT	LT	Total	
	BYPL		858.39	102.00	960.39	
	BRPL		1221.29	242.00	1463.29	
	TPDDL		739.78	119.00	858.78	
	NDMC		253.74	24.00	277.74	
	DTL		753.52	0.00	753.52	
	RPH		20.00	0.00	20.00	
	MES		20.10	0.00	20.10	
	TOTAL		3866.82	487.00	4353.82	

16.2 REACTIVE ENERGY TRANSACTIONS OF DISCOMS WITH DTL

TPDDL					
Month	MVARh Drawal		Amount in Rs. Lacs		Net Amount in Rs. Lacs
	High Voltage	Low Voltage	High Voltage	Low Voltage	
Apr-16	1586.900	-2735.500	-2.06297	-3.55615	-5.61912
May-16	-4358.100	3154.100	58.83435	4.10033	62.93468
Jun-16	-1544.000	683.800	20.84400	0.88894	21.73294
Jul-16	-5393.600	717.100	72.81360	0.93223	73.74583
Aug-16	-5140.000	1729.500	69.39000	2.24835	71.63835
Sep-16	-2945.000	1444.200	39.75750	1.87746	41.63496
Oct-16	-4986.800	-695.500	67.32180	-0.90415	66.41765
Nov-16	-12125.800	-1735.300	163.69830	-2.25589	161.44241
Dec-16	-22354.700	-3462.900	301.78845	-4.50177	297.28668
Jan-17	-22439.800	-6393.600	302.93730	-8.31168	294.62562
Feb-17	-17479.400	-2204.600	235.97190	-2.86598	233.10592
Mar-17	-14327.400	-1655.300	18.62562	-2.15189	16.47373
Total	-111507.700	-11154.000	1349.91985	-14.50020	1335.41965

BRPL					
Month	MVARh Drawal		Amount in Rs. Lacs		Net Amount in Rs. Lacs
	High Voltage	Low Voltage	High Voltage	Low Voltage	
Apr-16	553.900	-282.200	-0.72007	-0.36686	-1.08693
May-16	735.900	25048.900	-9.93465	32.56357	22.62892
Jun-16	-3062.900	3720.000	41.34915	4.83600	46.18515
Jul-16	-2199.800	26388.800	29.69730	34.30544	64.00274
Aug-16	-1780.500	14485.100	24.03675	18.83063	42.86738
Sep-16	-446.400	1384.700	6.02640	1.80011	7.82651
Oct-16	9642.800	-2399.200	-130.17780	-3.11896	-133.29676
Nov-16	-20122.700	-3325.400	271.65645	-4.32302	267.33343
Dec-16	-23927.800	-4407.400	323.02530	-5.72962	317.29568
Jan-17	-22854.100	-2415.700	308.53035	-3.14041	305.38994
Feb-17	-15530.000	-169.900	209.65500	-0.22087	209.43413
Mar-17	-16389.700	-710.300	21.30661	-0.92339	20.38322
Total	-95381.300	57317.400	1094.45079	74.51262	1168.96341

BYPL					
Month	MVARh Drawal		Amount in Rs. Lacs		Net Amount in Rs. Lacs
	High Voltage	Low Voltage	High Voltage	Low Voltage	
Apr-16	-281.500	1479.400	0.36595	1.92322	2.28917
May-16	1113.100	10853.300	-15.02685	14.10929	-0.91756
Jun-16	1288.200	13406.400	-17.39070	17.42832	0.03762
Jul-16	1381.500	8917.900	-18.65025	11.59327	-7.05698
Aug-16	-1465.200	5745.900	19.78020	7.46967	27.24987
Sep-16	-1886.500	30677.700	25.46775	39.88101	65.34876
Oct-16	-4685.800	-4994.700	63.25830	-6.49311	56.76519
Nov-16	3525.700	-6361.100	-47.59695	-8.26943	-55.86638
Dec-16	-11627.600	-5704.900	156.97260	-7.41637	149.55623
Jan-17	-7255.000	-7712.200	97.94250	-10.02586	87.91664
Feb-17	-4554.300	-1850.600	61.48305	-2.40578	59.07727
Mar-17	-2520.400	-1575.900	3.27652	-2.04867	1.22785
Total	-26967.800	42881.200	329.88212	55.74556	385.62768

NDMC					
Month	MVARh Drawal		Amount in Rs. Lacs		Net Amount in Rs. Lacs
	High Voltage	Low Voltage	High Voltage	Low Voltage	
Apr-16	6347.700	895.300	-8.25201	1.16389	-7.08812
May-16	1892.500	5308.300	-25.54875	6.90079	-18.64796
Jun-16	1185.100	80.300	-15.99885	0.10439	-15.89446
Jul-16	2049.300	3918.200	-27.66555	5.09366	-22.57189
Aug-16	2144.000	2611.800	-28.94400	3.39534	-25.54866
Sep-16	1127.400	1972.500	-15.21990	2.56425	-12.65565
Oct-16	4471.700	439.000	-60.36795	0.57070	-59.79725
Nov-16	4025.500	-2096.700	-54.34425	-2.72571	-57.06996
Dec-16	2255.900	-2470.100	-30.45465	-3.21113	-33.66578
Jan-17	1387.200	-1871.100	-18.72720	-2.43243	-21.15963
Feb-17	822.800	-756.600	-11.10780	-0.98358	-12.09138
Mar-17	2542.700	806.500	-3.30551	1.04845	-2.25706
Total	30251.800	8837.400	-299.93642	11.48862	-288.44780

MES					
Month	MVARh Drawal		Amount in Rs. Lacs		Net Amount in Rs. Lacs
	High Voltage	Low Voltage	High Voltage	Low Voltage	
Apr-16	11.700	3630.000	-0.01521	4.71900	4.70379
May-16	59.200	4628.800	-0.79920	6.01744	5.21824
Jun-16	93.300	4231.600	-1.25955	5.50108	4.24153
Jul-16	78.300	2670.200	-1.05705	3.47126	2.41421
Aug-16	52.300	3903.800	-0.70605	5.07494	4.36889
Sep-16	64.200	3068.900	-0.86670	3.98957	3.12287
Oct-16	353.100	1766.700	-4.76685	2.29671	-2.47014
Nov-16	920.100	211.900	-12.42135	0.27547	-12.14588
Dec-16	279.900	348.200	-3.77865	0.45266	-3.32599
Jan-17	121.900	347.800	-1.64565	0.45214	-1.19351
Feb-17	31.900	444.600	-0.43065	0.57798	0.14733
Mar-17	42.200	866.900	-0.05486	1.12697	1.07211
Total	2108.100	26119.400	-27.80177	33.95522	6.15345

TOTAL DISCOMS					
Month	MVARh Drawal		Amount in Rs. Lacs		Net Amount in Rs. Lacs
	High Voltage	Low Voltage	High Voltage	Low Voltage	
Apr-16	8218.700	2987.000	-10.68431	3.88310	-6.80121
May-16	-557.400	48993.400	7.52490	63.69142	71.21632
Jun-16	-2040.300	22122.100	27.54405	28.75873	56.30278
Jul-16	-4084.300	42612.200	55.13805	55.39586	110.53391
Aug-16	-6189.400	28476.100	83.55690	37.01893	120.57583
Sep-16	-4086.300	38548.000	55.16505	50.11240	105.27745
Oct-16	4795.000	-5883.700	-64.73250	-7.64881	-72.38131
Nov-16	-23777.200	-13306.600	320.99220	-17.29858	303.69362
Dec-16	-55374.300	-15697.100	747.55305	-20.40623	727.14682
Jan-17	-51039.800	-18044.800	689.03730	-23.45824	665.57906
Feb-17	-36709.000	-4537.100	495.57150	-5.89823	489.67327
Mar-17	-30652.600	-2268.100	39.84838	-2.94853	36.89985
Total	-201496.900	124001.400	2446.51457	161.20182	2607.71639

Note : (+) incase of amount is payable by the utility to DTL.

17. **TRANSMISSION SYSTEM AVAILABILITY OF DELHI TRANSCO LTD. FOR THE YEAR 2016-17**

Sl. No.	Name of Elements	Availability in %age
1	AVAILABILITY OF 16NOS. 400/220kV ICTs	97.31
2	AVAILABILITY OF 10NOS. 400kV LINES	99.23
3	AVAILABILITY OF 97NOS. 220kV LINES	99.17
4	AVAILABILITY OF 63NOS. 220/66kV ICTs	99.10
5	AVAILABILITY OF 41NOS. 220/33kV ICTs	95.31
6	AVAILABILITY OF 3NOS. 66/33kV ICTs	99.70
7	AVAILABILITY OF 24NOS. 66/11kV PR. TXS	98.84
8	AVAILABILITY OF 16NOS. 33/11kV PR. TXS	99.78
9	AVAILABILITY OF 145NOS. 66kV FEEDER BAYs	99.91
10	AVAILABILITY OF 176NOS. 33kV FEEDER BAYs	99.89
11	AVAILABILITY OF 197NOS. 11kV FEEDER BAYs	99.98
12	AVAILABILITY OF 59NOS. CAP. BA NKS	99.95
TOTAL AVAILABILITY OF DTL SYSTEM =		98.009

$$\frac{(97.31*16+99.23*10+99.17*97+99.10*63+95.31*41+99.70*3+98.84*24+99.78*16+99.91*145+99.89*176+99.98*197+99.95*59)}{(16+10+97+63+41+3+24+16+145+176+197+59)}=98.009\%$$

18. NEW ELEMENTS COMMISSIONED IN TRANSMISSION SYSTEM

The following transmission system elements added during the year 2016-17

S. No.	Name of the Element	Date and time of energization
220kV System		
1	220kV Bawana-Rohini-2 Ckt-I (6.1KMs)	Ckt charged on no load on 30.06.16 at 21:09 hrs and load was taken on 01.07.16 at 18:36hrs.
2	220kV Bawana-Rohini-2 Ckt-II (6.1KMs)	Ckt charged on no load on 04.07.16 at 12:24hrs and load was taken on 04.07.2016 at 13:28hrs.
3	220kV Harsh Vihar- Preet Vihar Ckt-I (10.98KMs)	Ckt charged on no load on 22.12.16 at 14:52hrs and load was taken on 23.12.16 at 16:23hrs.
4	220kV Harsh Vihar- Preet Vihar Ckt-II (10.98KMs)	Ckt charged on no load on 22.12.16 at 15:06hrs and load was taken on 23.12.16 at 16:23hrs.
5	220kV Preet Vihar- Patparganj Ckt-I (3.7KMs)	Ckt charged on no load on 22.12.16 at 13:45hrs and load was taken on 23.12.16 at 16:23hrs.
6	220kV Preet Vihar- Patparganj Ckt-II (3.7KMs)	Ckt charged on no load on 22.12.16 at 13:45hrs and load was taken on 28.12.16 at 13:10hrs.
7	220kV Feeder Bay No-209 at 220kV Gazipur S/Stn. (220kV Noida Sector-62)	Bay charged on 28.05.16 at 17:18hrs.
8	220kV Feeder Bay No-210 at 220kV Gazipur S/Stn. (220kV Shahibabad)	Bay charged on 29.06.16 at 19:30hrs.
9	220kV Feeder Bay No-211 at 220kV Shalimarbagh S/Stn.	Bay charged on 02.11.16 at 17:27hrs.
10	220kV Feeder Bay No-212 at 220kV Shalimarbagh S/Stn.	Bay charged on 02.11.16 at 17:27hrs.
11	220/33kV 100MVA TR. -II at Preet Vihar	Tr. charged on no load on 16.02.2017 at 16.04hrs.
12	220/33kV 100MVA TR. -II at Preet Vihar	Tr. charged on no load on 22.03.2017 at 12.46hrs. and load was taken on 22.03.2017 at 13.03hrs.
66kV System		
1	66kV G-4 Dwarka Ckt-I at 220kV Pappankalan-II S/Stn.	Ckt charged on 30.05.16 at 21:12 hrs.
2	66kV G-4 Dwarka Ckt-II at 220kV Pappankalan-II S/Stn.	Ckt charged on 30.05.16 at 21:12 hrs.
3	66kV Ghevra Shavda Ckt-II at 220kV Khanjhawala S/Stn.	Ckt charged on 29.08.16 at 18:22 hrs.
4	66kV Ghevra Shavda Ckt-I at 220kV Khanjhawala S/Stn.	Ckt charged on 16.09.16 at 20:59 hrs.
33kV System		
1	33kV Bay No—17 (Court Complex-1) at 220kV Masjid Moth S/Stn.	Ckt charged on 13.06.16 at 15:10hrs.
2	33kV Mayapuri Ckt-II at 220kV Naraina S/Stn.	Ckt charged on 19.06.16 at 21:02hrs.
3	33kV IIT Ckt at 220kV Trauma Centre S/Stn.	Ckt charged on 04.07.16 at 17:18 hrs.
4	33kV Mayapuri Ckt-I at 220kV Naraina S/Stn.	Ckt charged on 30.08.16 at 22:05 hrs.

19 TRIPPINGS / BREAK-DOWNS IN 400/220KV SYSTEM FOR THE YEAR 2016-17

19.1 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH APRIL 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	1.4.16	11:40	220KV MEHRAULI - VASANT KUNJ CKT.-I	1.4.16	11:58	AT VASANTKUNJ CKT TRIPPED ON C-PH,E/F. CKT DID NOT TRIP AT MEHRAULI.
2	1.4.16	12:30	220KV MEHRAULI - VASANT KUNJ CKT.-I	1.4.16	16:06	AT VASANTKUNJ CKT TRIPPED ON C-PH,E/F,86. CKT DID NOT TRIP AT MEHRAULI.
3	1.4.16	15:35	220KV WAZIRABAD - MANDOLA CKT-I	1.4.16	17:14	AT WZB CKT TRIPPED ON D/P,Z-1,B&C-PH,DIST-4.023 KM. AT MANDOLA CKT TRIPPED ON D/P,Y&B-PH,DIST-9.778 KM.
4	1.4.16	17:35	SARITA VIHAR 66/11kV, 20MVA Tx-I	2.4.16	1:05	TX TRIPPED ON O/C,51A,51C,86.
5	2.4.16	13:18	220KV BAWANA-SHALIMARBAGH CKT-I	2.4.16	18:22	AT BWN CKT TRIPPED ON D/P,Z-1,186A&B,C-PH. CKT DID NOT TRIP AT SHALIMARBAGH.
6	4.4.16	13:05	220KV GAZIPUR - BTPS CKT	4.4.16	15:50	AT BTPS CKT TRIPPED ON D/P,Z-1,B-PH & E/F.CKT DID NOT TRIP AT GAZIPUR.
7	4.4.16	13:05	220KV GAZIPUR-PATPARGANJ CKT	5.5.16	14:58	AT PPG CKT TRIPPED ON D/P,Z-1,RY&B-PH. AT GZP CKT TRIPPED ON D/P,DIST-2.76KM. B-PH CABLE FAULTY.
8	4.4.16	13:05	220KV OKHLA - BTPS CKT. - II	4.4.16	14:50	AT BTPS CKT TRIPPED ON D/P,Z-1,B-Y PHASE,DIST-6.8KM. CKT DID NOT TRIP AT OKHLA. MONKEY FOUND ELECTROCUTED IN IDLE SECTION OF LINE NEAR TUGLAKABAD.
9	5.4.16	5:15	PAPPANKALAN-I 66/11kV, 20MVA Tx-I	5.4.16	8:50	TR. TRIPPED ON BUCHOLZ ALONGWITH I/C
10	5.4.16	17:20	220KVBAWANA- ROHINI CKT-II	5.4.16	18:37	AT BAWANA CKT. TRIPPED N D/P, 186 A&B, DC-I FAIL AT ROHINI SUPPLY FAIL
11	5.4.16	17:29	BAWANA 220/66kV 100MVA Tx	5.4.16	17:38	TR. TRIPPED WITHOUT INDICATION
12	5.4.16	19:23	BAWANA 400/220KV 315MVA ICT-I	5.4.16	19:48	ICT TRIPPED ON CB AUTO TRIP
13	5.4.16	21:07	GAZIPUR 220/66kV 100MVA Tx-I	6.4.16	17:55	TR. PUT OFF FROM BOTH SIDES DUE TO OUTAGE OF MAIN PROTECTION RELAY
14	9.4.16	11:45	220KV KANJHAWALA-NAJAFGARH CKT	9.4.16	12:44	CKT TRIPPED WITHOUT INDICATION AT KANJHAWALA.
15	9.4.16	15:07	220KV BAMNAULI - DIAL CKT-I	9.4.16	16:16	AT BAMNAULI CKT TRIPPED ON D/P,Z-1,DIST-9.049KM. AT DIAL CKT TRIPPED ON D/P,Z-1.
16	9.4.16	23:16	NARELA 220/66kV 100MVA Tx-II	9.4.16	23:53	TX TRIPPED WITHOUT INDICATION.
17	10.4.16	6:28	220KV PRAGATI - SARITA VIHAR CKT - I	10.4.16	12:15	AT PRAGATI CKT TRIPPED ON D/P,Z-1,ABC-PH,DIST-8.826KM 186. AT SARITA VIHAR CKT TRIPPED ON D/P,Z-1,ABC-PH, DIST-4.39KM,186A&B.
18	10.4.16	17:10	220KV MAHARANI BAGH - LODHI ROAD CKT-I	10.4.16	18:52	AT MAHARANI BAGH CKT TRIPPED ON D/P,Z-1,R&Y-PH. CKT DID NOT TRIP AT LODHI ROAD.
19	10.4.16	23:18	220KV GAZIPUR - BTPS CKT	11.4.16	18:33	AT BTPS CKT TRIPPED ON D/P,Z-1,DIST-3.8KM. CKT DID NOT TRIP AT GAZIPUR.
20	11.4.16	11:10	SARITA VIHAR 220/66kV 100MVA Tx-III	11.4.16	18:15	TX TRIPPED ON DIFFERENTIAL TRIP,B-PH,86B,95B.66KV I/C-3 TRIPPED ON INTER TRIPPING.
21	11.4.16	11:10	220KV MEHRAULI - BTPS CKT. - I	11.4.16	19:23	AT MEHRAULI CKT TRIPPED ON D/P,Z-1,B-PH,186. AT BTPS CKT TRIPPED ON D/P,Z-1,DIST-9.6KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
22	12.4.16	5:10	MEHRAULI 66/11kV, 20MVA Tx-I	12.4.16	8:13	I/C -I TRIPPED WITHOUT INDICATION.
23	13.4.16	14:35	220kV DIAL- MEHRAULI CKT-II	13.4.16	15:17	AT MEHRAULI CKT TRIPPED ON B-PH LINE DIFFERENTIAL,86 & 186. AT DIAL CKT TRIPPED ON D/P,Z-1,B-PH.
24	14.4.16	12:23	220kV MEHRAULI - BTPS CKT. - II	14.4.16	16:18	AT BTPS CKT TRIPPED ON D/P,Z-1,R-PH,DIST-6.8KM,E/F. AT MEHRAULI CKT TRIPPED ON D/P,Z-1,DIST-13.16KM.
25	15.4.16	2:08	220kV BAMNAULI-PAPPANKALAN-I CKT-I	15.4.16	3:10	AT PPK-1 CKT TRIPPED ON 86. CKT DID NOT TRIP AT BAMNAULI.
26	15.4.16	9:58	SARITA VIHAR 220/66kV 100MVA Tx-III	15.4.16	12:30	TX TRIPPED ON SPR.
27	15.4.16	12:58	220kV MEHRAULI - VASANT KUNJ CKT.-I	15.4.16	14:08	AT MEHRAULI CKT TRIPPED ON D/P,R-PH,A/R,186,E/F. CKT DID NOT TRIP AT VASANTKUNJ.
28	15.4.16	13:11	220kV NARELA - MANDOLA CKT-I	15.4.16	14:47	AT MANDOLA CKT TRIPPED ON D/P,R-PH,DIST-23KM. CB OF CKT WAS IN OFF POSITION AT NARELA.
29	15.4.16	13:53	220kV GOPALPUR-MANDOLACKT-I	15.4.16	15:39	AT MANDOLA CKT TRIPPED ON D/P,R-PH,DIST-20.6KM. CKT DID NOT TRIP AT GOPALPUR.
30	16.4.16	12:46	220kV MEHRAULI - BTPS CKT. - II	16.4.16	18:45	AT MEHRAULI CKT TRIPPED ON D/P,Z-2,DIST-16.68KM,186. AT BTPS CKT TRIPPED ON D/P,Z-1,DIST-0.5KM.
31	16.4.16	12:46	OKHLA 220/66kV 100MVA Tx-I	16.4.16	13:30	66KV I/C-1 OF TX TRIPPED ON 51CX,E/F. FIRE REPORTED ON 66KV CAP BANK-3.
32	16.4.16	12:46	OKHLA 220/66kV 100MVA Tx-II	16.4.16	13:30	66KV I/C-2 OF TX TRIPPED ON 51CX,E/F. FIRE REPORTED ON 66KV CAP BANK-3.
33	17.4.16	16:22	220kV BAMNAULI - DIAL CKT-I	17.4.16	22:18	AT DIAL CKT. TRIPPED ON REL MAIN-II, RYB PHASE TRIP, PROT TRIP, R PHASE FAULTY, ZONE-II AT BAMNAULI DIST PROT, DIST 1.3KM, ZONE -I, A PHASE
34	17.4.16	16:22	220kV DIAL- MEHRAULI CKT-I	17.4.16	16:46	AT DIAL CKT .TRIPPED ON MAIN -I, RYB PHASE, 86A, 86B AT MEHRAULI CKT. DID NOT TRIPED
35	19.4.16	6:20	OKHLA 66/11kV, 20MVA Tx-II	19.4.16	14:35	TR. TRIPPED ON 65 LV PROTECTION, E/F, 64 RLA, 11KV I/C-II TRIPPED ON 86
36	19.4.16	9:05	220kV PRAGATI - SARITA VIHAR CKT-II	19.4.16	23:41	AT PRAGATI CKT. TRIPPED ON ABCPHASE, 186-186, 85B AT SARITA VIHAR CKT. TRIPPED ON ABC PHASE, 186 A&B, ZONE-I, DIST 2.746KMS
37	19.4.16	9:55	220kV MEHRAULI - BTPS CKT. - II	19.4.16	12:52	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, ABC GROUP, TRIP ABC PHSE, DIST 4.182KM AT BTPS CKT. TRIPPED ON R PHASE, E/F, ZONE-I, DIST 16.9KM
38	19.4.16	19:20	220kV GAZIPUR - BTPS CKT	19.4.16	22:52	AT BTPS CKT. TRIPPED N ZONE-I, R PHASE, DIST 16.5KM AT GAZIPUR CB OF THE CKT. WAS IN OPEN POSITION
39	22.4.16	10:30	220kV NARELA - MANDOLA CKT-I	22.4.16	10:55	CKT. TRIPPED AT MANDOLA ON SPS NO TRIPPING AT NARELA
40	22.4.16	10:30	220kV NARELA - MANDOLA CKT-II	22.4.16	10:55	CKT. TRIPPED AT MANDOLA ON SPS NO TRIPPING AT NARELA
41	22.4.16	14:25	220kV NARELA - MANDOLA CKT-I	22.4.16	15:52	AT MANDOLA CKT. TRIPPED ON DIST PROT. AT NARELA CKT. WAS IN OFF POSITION
42	22.4.16	16:43	220kV WAZIRABAD - MANDOLA CKT-IV	22.4.16	17:54	AT WAZIRABAD CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.06KM FROM MANDOLA. AT MANDOLA ZONE-III, DIST 12KM
43	23.4.16	15:10	220kV PRAGATI - SARITA VIHAR CKT - I	23.4.16	16:18	AT SARITA VIHAR CKT. TRIPPED ON DIST PROT, ZONE -I, DIST 1.332KM, ABC PHSE AT PRAGATI CKT. TRIPED ON TRIP PHASE ABC, ZONE-II, FAULT LOCATION 10.61KM, 186, 186
44	25.4.16	5:30	SUBZI MANDI 33/11kV, 16MVA Tx-II	25.4.16	15:20	TR. TRIPPED ON 86 , 87 RELAY

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
45	25.4.16	10:39	GAZIPUR 66kV VIVEK VIHAR CKT-I (PPG INDUSTRIAL AREA)	25.4.16	10:47	CKT. TRIPPED ON 86, ZONE-I, DUE TO PT FUSE FAILURE
46	25.4.16	10:39	GAZIPUR 66kV KONDLI CKT-I	25.4.16	10:47	CKT. TRIPPED ON 86, ZONE-I, DUE TO PT FUSE FAILURE
47	25.4.16	10:39	GAZIPUR 66kV KONDLI CKT-II	25.4.16	10:47	CKT. TRIPPED ON 86, ZONE-I, DUE TO PT FUSE FAILURE
48	25.4.16	10:39	GAZIPUR 66kV VIVEK VIHAR CKT- 2	25.4.16	10:47	CKT. TRIPPED ON 86, ZONE-I, DUE TO PT FUSE FAILURE
49	26.4.16	9:45	NAJAFGARH 66/11kV, 20MVA Tx-I	26.4.16	9:58	TR. TRIPPED ON 86
50	26.4.16	12:30	220kV MEHRAULI - VASANT KUNJ CKT.-I	26.4.16	14:37	AT MEHRAULI CKT. TRIPPED ON ZONE-I, DIST TRIP, PHASE ABN, TRIP AB PHASE, ACTIVE GROUP-I, DIST 2.47KM AT VASANT KUNJ CKT. DID NOT TRIPPED.
51	26.4.16	13:00	220kV MEHRAULI - BTPS CKT. - II	26.4.16	18:20	AT BTPS CKT. TRIPPED ON ZONE-II, R PHASE, DIST PROT, DIST. 19.5KM AT MEHRAULI CKT. TRIPPED ON ZONE-I, GROUP -I, TRIP ABC, DIST 1.331KM
52	26.4.16	16:27	220kV KANJHAWALA-NAJAFGARH CKT	26.4.16	20:42	AT KHANJAWALA CKT. TRIPPED ON MAIN I&II, RB PHASE, , SOTF APPEARED
53	26.4.16	16:46	NAJAFGARH 66/11kV, 20MVA Tx-II	26.4.16	16:56	TR. TRIPPED ON 86, NEUTRAL UNBALANCE
54	26.4.16	22:10	NAJAFGARH 66/11kV, 20MVA Tx-I	27.4.16	19:20	TR. TRIPPED ON 86, 87
55	26.4.16	22:07	220kV MUNDKA-NAJAFGARH CKT	27.4.16	15:53	AT MUNDKA CKT. TRIPPED ON AB PHASE, RYB PHASE TRIP, NO TRIPPING AT NAJAFGARH
56	27.4.16	0:00	PAPPANKALAN-II 220/66kV 100MVA Tx-II	27.4.16	20:15	TR. TRIPPED ON SRP TRIP. OIL LEVEL LOW ALARM, OLTC BUCH TRIP, PROT RELAY
57	27.4.16	7:32	OKHLA 220/33kV 100MVA Tx-V	27.4.16	13:50	TR. TRIPPED ON PRV, 86
58	27.4.16	14:28	220kV DIAL - MEHRAULI CKT-I	27.4.16	18:50	AT MEHRAULI CKT. TRIPPED ON DIFF , R PHASE, DIST PROT, ZONE-I, DISTANCE 7.585KM AT DIAL CKT. TRIPPED ON R PHASE TRIP, ZONE-I, DIFFERENTIAL, R PHASE, DIST 3.71KM
59	27.4.16	15:02	220kV GAZIPUR - BTPS CKT	27.4.16	17:22	AT BTPS CKT .TRIPPED ON DIST PROT, R PHASE, ZONE-I, DIST 7.23KM AT GAZIPUR CKT. DID NOT TRIPPED
60	28.4.16	14:15	220kV BAMNAULI-PAPPANKALAN-I CKT-I	28.4.16	17:01	AT BAMNAULI CKT. TRIPPED ON 186 A&B , C PHASE, ZONE-I, DIST 4KM AT PAPPANKALAN-I CKT. DID NOT TRIPPED
61	29.4.16	13:36	BAWANA 400/220kV 315MVA ICT-II	29.4.16	18:52	ICT PUT OFF DUE TO CONTROL CABLE CAUGHT FIRE
62	29.4.16	13:36	220kV BAWANA - KANJHAWALA CKT-2	29.4.16	19:37	AT BAWANA CKT. TRIPPED ON DIST PROT, A - PHASE ZONE - II , DIST 6.81 KM AT KHANJAWALA CKT. DID NOT TRIPPED.
63	29.4.16	13:36	220kV BAWANA - KANJHAWALA CKT - 1	30.4.16	11:41	AT BAWANA CKT. TRIPPED ON DIST PROT, A PHSE ZONE-I, DIST 0.01KM AT KHANJAWALA SUPPLY FAIL
64	30.4.16	7:03	220kV NARAINA-RIDGE VALLEY CKT-I	30.4.16	7:50	AT NARAINA CKT. TRIPPED ON POLE DISCREPANCY AT RIDGE VALLY CKT. DID NOT TRIPPED.
65	30.4.16	13:20	GAZIPUR 220/66kV 100MVA Tx-I	30.4.16	13:48	TR. TRIPPED WITHOUT INDICATION
66	30.4.16	14:25	220kV MUNDKA-NAJAFGARH CKT	30.4.16	15:14	AT MUNDKA CKT. TRIPPED ON DIST PROT, Y AND B PHASE AT NAJAFGARH SUPPLY FAIL.

19.2 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH MAY 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	17.4.15	18:42	220KV MAHARANI BAGH- ELECTRIC LANE CKT-II	30.5.16	18:46	AT MAHARANI BAGH CKT TRIPPED ON FAULT LOOP B TO E. AT ELECTRIC LANE CKT TRIPPED ON D/P,Z-1,C-PH,186,LBB, BUS BAR PROTECTION. CABLE DAMAGED DURING EXCAVATION BY MTNL.
2	02.02.16	13:35	GEETA COLONY 220/33KV 100MVA TX-I	25.05.16	20:42	TR. TRIPPED ON 30G
3	8.3.16	12:01	BAWANA 400/220KV 315MVA ICT-IV	19.05.16	18:02	ICT TRIPPED ON 87 DIFFERENTIAL PROTECTION, PRV TRIP, O/C, E/F. ICT DAMAGED DUE TO FIRE.
4	17.03.16	9:55	400KV BALLABHGARH-BAMNAULI CKT-II	29.05.16	18:08	CKT WAS MADE OFF TO ATTEND SPACER. AFTER CLEARANCE CKT WAS CHARGED AT 18:34 HRS BUT TRIPPED ON D/P,C-PH, SOTF, DIST-219 METER,186A&B. B1-PH CABLE JOINT BOX DAMAGED.
5	2.5.16	10:50	220KV GEETA COLONY- PATPARGANJ CKT-I	2.5.16	16:13	AT GEETA COLONY CKT. TRIPPED ON ABC PHASE, ACTIVE GROUP-I, DIST O/C, E/F, ZONE-I, DISTANCE 1.99KM AT PATPARGANJ DIST PROT, DIST 3.186KM, GROP -I,
6	2.5.16	10:58	NAJAFGARH 66/11KV, 20MVA TX-II	2.5.16	11:00	TR. TRIPPED ON 86. NEUTRAL UNBALANCING
7	2.5.16	11:00	220KV BAMNAULI-PAPPANKALAN-II CKT-I	2.5.16	14:26	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 9.396KM AT PAPANKANAL-II DIST PROT, ZONE-I, 86
8	2.5.16	11:39	400KV BAWANA-MUNDKA CKT-II	2.5.16	19:20	AT MUNDKA AUTO LOCKOUT, ZONE-I, DIST 13.34KM AT BAWANA CKT. TRIPPED ON A PHASE, ZONE-I
9	2.5.16	12:10	220KV NARELA - MANDOLA CKT-I	2.5.16	20:26	AT MANDOLA CKT. TRIPPED ON R PHASE, E/F, ZONE-II, DIST 25KM AT NARELA NO TRIPPING
10	2.5.16	12:53	220KV MEHRAULI - BTPS CKT. - II	2.5.16	15:49	AT BTPS CKT. TRIPPED ON ZONE-I, R PHASE, DIST 9.7KM AT MEHRAULI CKT. TRIPPED ON 186, 186, 86X, DIST PROT, TRIP PHASE ABC, ZONE-I
11	2.5.16	12:56	220KV DIAL-MEHRAULI CKT-II	2.5.16	14:57	AT MEHRAULI CKT. TRIPPED ON 186, 186, DIFFERENTIAL, AT DIAL MAIN-II, B PHASE , B PHASE FAULTY , ZONE-I
12	2.5.16	13:12	220KV DIAL-MEHRAULI CKT-I	2.5.16	15:47	AT MEHRAULI CKT TRIPPED ON DIST PROT, DIST 3.402KM, ZONE-I, A PHASE, DIFFERENTIAL TRIP AT DIAL CKT. TRIPPED ON B PHASE, DIFFERENTIAL TRIP, R PHASE FAULTY
13	2.5.16	15:05	220KV GOPALPUR-MANDOLACKT-I	2.5.16	16:19	AT GOPALPUR CKT. TRIPPED ON ZONE-I, R&B PHASE DIST PROT, AT MANDOLA R AND B PHASE FAULTY, DIST PROT, DIST 18KM
14	2.5.16	15:53	220KV BAWANA - KANJHAWALA CKT-2	2.5.16	17:30	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 10.19KM AT KHANJAWALA NO TRIPPING
15	2.5.16	15:53	220KV BAWANA - KANJHAWALA CKT - 1	2.5.16	17:30	AT BAWANA CKT. TRIPPED ON ZONE-I, DIST PROT, DIST 5.91KM, A PHASE AT KHANJAWALA NO TRIPPING
16	2.5.16	16:00	BAWANA 400/220KV 315MVA ICT-VI	2.5.16	20:00	ICT MADE OFF DUE TO HEAVY OIL LEAKAGE ON Y PHASE 220KV BUSHING
17	2.5.16	16:10	220KV WAZIRABAD - MANDOLA CKT-III	2.5.16	18:25	AT MANDOLA CKT. TRIPPED ON ZONE-I, DIST 11.51KM AT WAZIRABAD CKT. TRIPPED ON ZONE-II, TRIP PHASE -II

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
18	2.5.16	17:05	PAPPANKALAN-II 220/66KV 100MVA TX-II	2.5.16	21:17	TR. TRIPPED ON LBB PROT, LV REF, HV REF
19	2.5.16	18:50	INDRAPRASTHA POWER 220/33KV 100MVA TX-II	2.5.16	21:00	CONTROL WIRE OF TR. CAUGHT FIRE
20	2.5.16	18:50	INDRAPRASTHA POWER 33KV CONNAUGHT PLACE CKT (BAY-28)	7.5.16	14:30	BAY TRIPPED ON E/F, PROBLEM IN CB AT I.P. END
21	2.5.16	18:52	INDRAPRASTHA POWER 220/33KV 100MVA TX-I	2.5.16	22:42	I/C OF TR. MADE OF MANUALLY DUE TO SAFETY REASONS DUE TO FIRE IN TR. -II AND THEN TR. -I TRIPED ON E/F, O/C
22	3.5.16	17:12	220KV GAZIPUR - BTPS CKT	3.5.16	20:24	AT BTPS CKT TRIPPED ON R,B PHASE, ZONE-I, DIST PROT, DIST 6.6KM AT GAZIPUR NO TRIPPING
23	3.5.16	20:11	NAJAFGARH 220/66KV 100MVA TX-III	3.5.16	20:30	I/C-III TRIPPED ON WITHOUT INDICATION
24	3.5.16	20:11	NAJAFGARH 220/66KV 100MVA TX-I	3.5.16	20:30	I/C-I TRIPPED ON O/C
25	3.5.16	22:30	KANJHAWALA 66/11KV, 20MVA TX-II	4.5.16	0:40	TR. TRIPPED WITHOUT INDICATION , TRIPPING COIL BURNT
26	4.5.16	23:20	KANJHAWALA 66/11KV, 20MVA TX-II	4.5.16	23:39	TR. TRIPPED WITHOUT INDICATION
27	5.5.16	12:05	KANJHAWALA 66/11KV, 20MVA TX-II	5.5.16	13:30	TR. TRIPPED WITHOUT INDICATION
28	5.5.16	20:40	220KV MEHRAULI - BTPS CKT. - I	5.5.16	21:25	AT BTPS CKT. TRIPPED ON ZONE-I, B PHASE, DIST 1.7KM AT MEHRAULI CKT TRIPPED ON DIST PROT, ZONE-II, DIST 14.86KM
29	6.5.16	11:28	220KV MEHRAULI - BTPS CKT. - II	6.5.16	22:25	AT MEHRAULI: D/P,Z-1,DIST-5.239KMS,186. AT BTPS: D/P,Z-1,DIST.-13KMS
30	6.5.16	11:28	220KV SARITA VIHAR - BTPS CKT.-II	6.5.16	12:03	AT BTPS: D/P, Z-1, Y-B-PH, DIST.-2.64KMS AT SARITA VIHAR: NO TRIPPING
31	6.5.16	11:28	220KV SARITA VIHAR - BTPS CKT.-I	6.5.16	11:55	AT SARITA VIHAR: D/P, Z-1, B-C-PH DIST-2.7KMS. AT BTPS: D/P, Z-1,Y-B-PH, DIST.-13KMS
32	6.5.16	11:28	PARKSTREET 220/66KV 100MVA TX-I	6.5.16	11:37	TR. TRIPPED ON OVER FLUX, 86. 66KV I/C-I TRIPPED ON INTER TRIPPING.
33	7.5.16	19:02	220KV MAHARANI BAGH - LODHI ROAD CKT-I	8.5.16	2:04	AT MAHARANI BAGH CKT. TRIPPED ON ZONE-I, LA REPORTED TO BE DAMAGED AT LODHI ROAD NO TRIPPING
34	8.5.16	13:03	220 KV GOPALPUR- WAZIRABAD CKT - 1	9.5.16	21:01	AT GOPALPUR SUPPLY FAIL AT WAZIRABAD CKT. TRIPPED ON ZONE2&3, E/F
35	8.5.16	13:03	220KV GOPALPUR- MANDOLACKT-II	8.5.16	13:43	AT GOPALPUR SUPPLY FAIL AT MANDOLA CKT. TRIPPED ON ZONE-I, DIST PORT, R PHASE , DIST 23.4KM
36	8.5.16	13:22	GOPALPUR 33KV MODEL TOWN CKT-I	8.5.16	23:05	CKT. TRIPPED ON D/P, ZONE-I, R PHASE LA BLAST
37	9.5.16	18:10	GAZIPUR 220/66KV 160MVA TX-I	9.5.16	18:17	TR. TRIPPED WHILE GRID STAFF WAS TESTING DC LEAKAGE
38	10.5.16	10:37	220KV GAZIPUR - BTPS CKT	10.5.16	16:03	AT BTPS CKT TRIPPED ON D/P,Z-1,DIST-6.9KM. CKT CB WAS IN OPEN POSITION AT GAZIPUR.
39	11.5.16	0:19	220KV GOPALPUR- MANDOLACKT-I	11.5.16	0:30	AT MANDOLA CKT TRIPPED ON D/P,Z-1,DIST-1.14KM. SUPPLY FAILED AT GOPALPUR.
40	11.5.16	1:21	220KV WAZIRABAD- GEETA COLONY CKT- II	11.5.16	2:37	AT WZB CKT TRIPPED ON D/P,Z-1,DIST-4.3 KM. AT GEETA COLONY CKT TRIPPED ON D/P,Z-1,DIST-2.33 KM,E/F.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
41	11.5.16	2:05	220KV GAZIPUR - BTPS CKT	11.5.16	20:15	AT BTPS CKT TRIPPED ON D/P,Z-1,DIST-7.21KM. CKT WAS IN OFF POSITION AT GAZIPUR.
42	12.5.16	13:30	220KV DIAL-MEHRAULI CKT-I	12.5.16	13:46	AT DIAL CKT TRIPPED D/P,RY&B-PH,E/F. AT MEHRAULI CKT TRIPPED ON B-PH DIFFERENTIAL PROTECTION.
43	12.5.16	13:30	220KV DIAL-MEHRAULI CKT-II	12.5.16	13:46	AT DIAL CKT TRIPPED D/P,RY&B-PH,E/F. AT MEHRAULI CKT TRIPPED ON B-PH DIFFERENTIAL PROTECTION.
44	12.5.16	19:05	220KV BAMNAULI-NAJAFGARH CKT-II	12.5.16	19:09	AT NJF CKT TRIPPED ON 186. NO TRIPPING AT BAMNAULI.
45	13.5.16	12:06	220KV KANJHAWALA-NAJAFGARH CKT	13.5.16	12:18	AT KANJHAWALA CKT TRIPPED ON D/P,Z-1,DIST-14.2KM.
46	13.5.16	12:54	220KV DIAL-MEHRAULI CKT-I	13.5.16	13:21	AT DIAL CKT TRIPPED ON D/P,Z-2,RY&B-PH.AT MEHRAULI CKT DID NOT TRIP.
47	13.5.16	12:54	220KV DIAL-MEHRAULI CKT-II	13.5.16	13:50	AT MEHRAULI CKT TRIPPED ON B-PH DIFFERENTIAL PROTECTION.
48	13.5.16	12:54	220KV MEHRAULI - BTPS CKT. - II	13.5.16	22:44	AT MEHRAULI CKT TRIPPED ON B-PH E/F. FIRE REPORTED AT TOWER NO-1 AND JUMPER SNAPPED.
49	13.5.16	13:00	220KV KANJHAWALA-NAJAFGARH CKT	13.5.16	14:42	AT KANJHAWALA CKT TRIPPED ON D/P,Z-1. CKT DID NOT TRIP AT NJF.
50	13.5.16	13:31	220KV MUNDKA-NAJAFGARH CKT	13.5.16	14:40	AT MUNDKA CKT TRIPPED ON AUTO D/P,Z-2,R-PH,DIST-11.26 KM, 86. SPARKING OCCURRED ON R-PH DROPPER CONDUCTOR FROM ISOLATOR CLAMP.
51	13.5.16	13:50	220KV BAMNAULI-NAJAFGARH CKT-I	13.5.16	14:02	AT BAMNAULI CKT TRIPPED ON D/P,Z-1,DIST-5.341 KM,186 A&B. SUPPLY FAILED AT NAJAFGARH.
52	13.5.16	18:29	220KV GAZIPUR - BTPS CKT	13.5.16	20:55	AT BTPS CKT TRIPPED ON D/P,Z-1,DIST-16.7KM.
53	14.5.16	7:40	BAMNAULI 400/220KV 500MVA ICT-II	14.5.16	14:06	ICT TRIPPED ON GROUP-1&2,186A&B,86A,30S PRESSURE RELEASE TRIP.
54	14.5.16	17:42	SHALIMAR BAGH 33KV RANI BAGH CKT-I	15.05.16	19:13	CKT DID NOT TRIP BUT R-PH CT OF RANI BAGH CKT-I DAMAGED.
55	14.5.16	17:42	SHALIMAR BAGH 220/33KV 100MVA TX-I	14.5.16	18:20	33KV I/C-1 OF TX TRIPPED ON 51N,86. R-PH CT OF RANI BAGH CKT-I DAMAGED.
56	14.5.16	17:42	SHALIMAR BAGH 220/33KV 100MVA TX-II	14.5.16	18:20	33KV I/C-1 OF TX TRIPPED ON 51N,86. R-PH CT OF RANI BAGH CKT-I DAMAGED.
57	15.5.16	14:47	MUNDKA 400/220KV 315MVA ICT-III	15.5.16	19:57	ICT TRIPPED ON GROUP A PORT, 86, 220KV I/C-III TRIPPED ON TRIP COIL SUPER VISION ALL PHASE 295
58	16.5.16	9:55	NARELA 66KV 20MVAR CAP. BANK-II	17.5.16	9:50	CAPACITOR BANK TRIPPED ON 64 RLB INSTANT EARTH FAULT
59	16.5.16	14:10	NARELA 66KV 20MVAR CAP. BANK-II	17.5.16	9:50	CAPACITOR BANK TRIPPED ON 64RLB, INSTANT E/F
60	17.5.16	5:36	220KV BAMNAULI - DIAL CKT-II	17.5.16	5:49	AT DIAL CKT. TRIPPED ON B PHASE, ZONE-I, AT BAMNAULI CKT. TRIPPED ON ZONE-I, C PHASE, DIST . 10.02KM
61	17.5.16	6:38	OKHLA 220/33KV 100MVA TX-IV	17.5.16	6:55	I/C TRIPPED ON 86, O/C
62	17.5.16	6:38	OKHLA 220/33KV 100MVA TX-III	17.5.16	6:55	I/C TRIPPED ON 51 O/C
63	17.5.16	6:38	OKHLA 33KV EAST OF KAILASH CKT	19.5.16	10:50	CKT. TRIPPED ON 67NX, R PHASE CT DAMAGED. R PHASE BUS ISOLATOR JAW BURNT

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
64	18.5.16	6:23	ROHINI 220/66KV 100MVA TX-II	18.5.16	18:36	TR. TRIPPED ON 30ABC, 30E, SPR, 30F, 30G, BUCHLOZ, AND 86
65	18.5.16	13:10	220KV BAMNAULI-NAJAFGARH CKT-II	18.5.16	16:09	AT BAMNAULI CKT .TRIPPED ON 186 A&B, DIST C PHASE, ZONE-II, DIST 7.437KMS. AT NAJAFGARH SUPPLY FAIL.
66	18.5.16	17:31	400KV BAWANA-MUNDKA CKT-II	18.5.16	19:30	AT MUNDKA CKT. TRIPPED ON ZONE-I, RYB PHASE, ABC TRIP SUPERVISION, DIST 1.66KM AT BAWANA CKT. TRIPPED ON B PHASE C PHZSE, ZONE-II, 186AB, A PHASE
67	19.5.16	12:04	220KV BAMNAULI-PAPPANKALAN-I CKT-I	19.5.16	12:57	AT BAMNAULI CKT. TRIPPED ON DIST PROT, DIST 6.603KM, ZONE-II, 186 AT PAPPANKALAN-I CKT. TRIPPED ON E/F, 186
68	20.5.16	11:34	220KV MAHARANI BAGH - LODHI ROAD CKT-I	20.06.17	13:29	AT MAHARANI BAGH CKT. TRIPPED ON ZONE-I, RYB PHASE, CABLE END BOX DAMAGE AT LODHI ROAD CKT. TRIPPED ON 186AB
69	20.5.16	11:34	220KV MAHARANI BAGH- MASJID MOTH CKT-II	20.5.16	13:50	AT MAHARANI BAGH CKT. TRIPPED B PHASE ZONE-I AT MASJID MOTH DIST. PROT, ZONE-I, 86
70	21.5.16	14:33	220KV MAHARANI BAGH - LODHI ROAD CKT-II	21.5.16	23:09	AT MAHARANI BAGH CKT. TRIPPED ON ZONE-I, L-1, L-3, R&B PHASE, E/F, DIST 3.3KM AT LODHI ROAD CKT. DID NOT TRIPPED, TRIPPED MANUALLY
71	22.5.16	7:45	SHALIMAR BAGH 33/11KV, 16MVA TX-I	22.5.16	10:20	TR. TRIPPED ON 86 & 87
72	22.5.16	20:30	220KV BAMNAULI-PAPPANKALAN-II CKT-II	22.5.16	22:05	AT BAMNAULI : Z-I, C PHASE, CN, 186, DIST 489.6METERS, FAULT CURRENT 27.23KAMPS. AT PAPPANKALAN -II : DIST PROT, M-I, M-II, DIST 10.0KMS., 86
73	22.5.16	20:30	400KV BAMNAULI-JHATIKARA CKT-II	08.06.16	19:19	AT BAMNAULI : M-I, A PHASE, Z-I, Z-5, DT SENT, LBB, DIST 766.4METERS, FAULT CURRENT 18.5KAMPS AT 765KV JHATIKRA : NOT AVAILABLE
74	22.5.16	20:30	400KV BAMNAULI-JHATIKARA CKT-I	STILL	OUT	AT BAMNAULI : AB PHASE, Z-I, Z-5, DT SENT, LBB, DIST 438.4METERS AT 765KV JHATIKRA : NOT AVAILABLE
75	23.5.16	3:15	220KVBAWANA-ROHINI CKT-II	23.5.16	7:28	AT BAWANA CKT. TRIPPED ON B PHASE ZONE-I, AT ROHINI -I CKT. TRIPPED ON B PHASE, ZONE-I, 186A AT ROHINI -II CKT. TRIPPED ON SOTF, B PHASE
76	23.5.16	13:52	PAPPANKALAN-I 220/66KV 100MVA TX-III	23.5.16	14:06	I/C-III TRIPPED ON E/F
77	23.5.16	13:52	PAPPANKALAN-I 220/66KV 100MVA TX-IV	23.5.16	14:27	TR. TRIPPED WITHOUT INDICATION, I/C TRIPPED ON 86
78	23.5.16	13:52	PAPPANKALAN-I 220/66KV 100MVA TX-II	23.5.16	14:06	I/C-II TRIPPED ON E/F
79	23.5.16	15:09	220KVBAWANA-ROHINI CKT-II	23.5.16	20:39	AT BAWANA CKT. TRIPPED ON DIST PROT, B PHASE, ZONE-I, TRIP PHASE CN DIST 3.9KM AT ROHINI CKT. TRIPPED ON ZONE-I, 2, SOTF BPHASE
80	23.5.16	15:32	220KV WAZIRABAD - MANDOLA CKT-IV	23.5.16	17:27	AT MANDOLA: DIST. PROT, ZONE-1, DIST-10.43KM.Y-N PHASE & E/F. AT WAZIRABAD: DIST PROT, ZONE-1, Y-PHASE, DIST-3.393 KMS
81	23.5.16	15:47	220KV WAZIRABAD-GEETA COLONY CKT-II	23.5.16	16:32	AT WAZIRABAD : DIST PROT, ZONE 1, DIST. 0.21KMS. AT GEETA COLONY: DIST PROT, ZONE-2,E/F.
82	23.5.16	15:47	220KV WAZIRABAD-GEETA COLONY CKT-I	23.5.16	16:32	AT WAZIRABAD: DIST PROT, ZONE 1, 2 & 3, RYB PHASE. DIST. 0KMS. AT GEETA COLONY: DIST PROT, ZONE-2 .E/F.
83	23.5.16	15:47	WAZIRABAD 220/66 KV 100MVA TX-III	23.5.16	16:38	TR. TRIPPED ON E/F. 66KV I/C -I TRIPPED ON INTER TRIPPING

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
84	23.5.16	15:47	WAZIRABAD 220/66KV 100MVA TX-I	23.5.16	16:25	TR. TRIPPED ON E/F. 66KV I/C -I TRIPPED ON INTER TRIPPING
85	23.5.16	20:19	220KV MEHRAULI - BTPS CKT. - I	23.5.16	23:04	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 7.03KM AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 15KM
86	23.5.16	20:23	220KV OKHLA - BTPS CKT. - II	23.5.16	20:35	AT BTPS CKT. TRIPPED ON ZONE-I, Y PHASE, DIST 5.4KM AT OKHLA SUPPLY FAIL
87	24.5.16	0:10	220KV PRAGATI - SARITA VIHAR CKT-II	24.5.16	0:50	AT PRAGATI CKT. TRIPPED ON 186, 186, DIST PROR. AT SARITA VIHAR, CKT. TRIPPED ON ABC PHSE, ZONE-I, DIST 8.174KM
88	25.5.16	7:25	WAZIRABAD 220/66 KV 160MVA TX-I	25.5.16	17:08	B PHASE LV BUSHING JUMPER SNAPPED OF TR. ON DIFFERENTIAL ALONGWITH 66KV I/C-IV
89	25.5.16	10:47	220KV KANJHAWALA-NAJAFGARH CKT	25.5.16	11:04	AT NAJAFGARH CKT. TRIPPED ON 186, CVT AVAILABLE AT KHANJAWALA NO TRIPPING
90	28.5.16	8:06	GAZIPUR 220/66KV 100MVA TX-II	28.5.16	8:28	TR. TRIPPED ON GENERAL TRIP
91	28.5.16	21:34	BAWANA 400/220KV 315MVA ICT-VI	29.5.16	11:47	ICT TRIPPED ON 86, BUCHOLZ
92	28.5.16	21:34	BAWANA 400/220KV 315MVA ICT-II	28.5.16	23:47	ICT TRIPPED ON TRIP RELAY , 186A&B, GROUP A, 86A, O/C, PHASE C
93	28.5.16	21:34	BAWANA 400/220KV 315MVA ICT-IV	29.5.16	0:01	ICT TRIPPED ON 86 TRIP, OSR BUCHHOLZ, R PHASE TRIP
94	28.5.16	21:34	220KV BAWANA-DSIDC BAWANA CKT-I	29.5.16	22:58	AT BAWANA NO TRIPPING AT DSIDC BAWANA CKT TRIPPED ON DIST PROT, AUTO RECLOSE, ZONE-II, ABC PHASE, DIST 8.168KM
95	29.5.16	20:17	400KV MUNDKA-JHATIKARA CKT-I	30.5.16	17:08	AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 4.33KM AT JHATIKARA NO TRIPPING
96	29.5.16	20:19	220KV BAMNAULI-PAPPANKALAN-II CKT-II	29.5.16	21:26	AT BAMNAULI CKT. TRIPPED ON C PHASE, ZONE-I, 186A&B, AT PAPANKALAN-II MANUALLY MADE OFF
97	29.5.16	21:50	220KV KANJHAWALA-NAJAFGARH CKT	29.5.16	22:20	AT NAJAFGARH CKT. TRIPPED ON 186-186, CVT AVAILABLE AT KHANJAWALA NO TRIPPING
98	29.5.16	21:50	400KV MANDOLA-BAWANA CKT-I	29.5.16	22:15	AT BAWANA CKT. TRIPPED ON ZONE1,2&3, DIST 8.383KM. AT MANDOLA NO RELAY
99	29.5.16	21:53	MUNDKA 400/220KV 315MVA ICT-II	29.5.16	23:34	ICT TRIPPED WITHOUT INDICATION
100	30.5.16	3:20	MEHRAULI 220/66KV 100MVA TX-III	30.5.16	18:33	TR. TRIPPED ON DIFFERENTIAL
101	30.5.16	10:14	NAJAFGARH 66/11KV, 20MVA TX-II	30.5.16	13:40	TR. TRIPPED ON BUCHHOLZ, 86, 30B
102	30.5.16	10:37	OKHLA 220/66KV 100MVA TX-I	30.5.16	13:58	TR. TRIPPED ON BUCHHOLZ
103	30.5.16	15:13	PAPPANKALAN-I 220/66KV 160MVA TX-I	30.5.16	15:50	TR. TRIPPED ON B PHASE GENERAL TRIP
104	30.5.16	15:13	220KV BAMNAULI-PAPPANKALAN-I CKT-I	30.5.16	15:50	AT PAPANKALAN-I CKT. TRIPPED ON B PHASE, O/C, AT BAMNAULI SUPPLY FAIL
105	31.5.16	6:04	GAZIPUR 220/66KV 160MVA TX-I	31.5.16	15:40	TR. TRIPPED ON TRIP RELAY COIL UNHEALTHY HV/LV, REF, CTR ALARM
106	31.5.16	6:32	ROHINI 220/66KV 100MVA TX-I	31.5.16	7:20	TR. TRIPPED ON 30C, 30J, 86-86, TEMP HIGH
107	31.5.16	6:45	VASANT KUNJ 66/11KV, 20MVA TX-I	31.5.16	15:35	TR. TRIPPED ON 86, 87, 67RLV
108	31.5.16	7:56	SHALIMAR BAGH 220/33KV 100MVA TX-I	31.5.16	8:16	33KV I/C-I TRIPPED ON 86, E/F
109	31.5.16	7:56	SHALIMAR BAGH 220/33KV 100MVA TX-III	31.5.16	8:54	I/C TRIPPED ON 86, O/C, B PHASE, E/F
110	31.5.16	12:04	OKHLA 220/33KV 100MVA TX-IV	31.5.16	13:25	TR. TRIPPED ON SPR, CTR, 86,86 WHILE ARRANGING OF TR. -III

19.3 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH JUNE 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	1.6.16	7:24	LODHI RD 220/33KV 100MVA TX-I	1.6.16	11:25	TR. TRIPPED ON 186X, 186A&B.
2	1.6.16	7:50	PARKSTREET 220/33KV 100MVA TX-II	1.6.16	8:04	TR. TRIPPED ON E/F.
3	2.6.16	9:52	220KV MEHRAULI - BTPS CKT. - II	2.6.16	13:08	AT MEHRAULI CKT .TRIPPED ON 186A, 186B, DIST. PROT., ZONE-II, DIST 14.63KM, TRIP PHASE ABC. AT BTPS CKT. ZONE-I, R PHASE DIST 1.6KM.
4	2.6.16	14:20	SHALIMAR BAGH 220/33KV 100MVA TX-I	2.6.16	14:50	TR. TRIPPED ON 30D, OLTC, BUCHHOLZ.
5	3.6.16	17:35	220KV MEHRAULI - BTPS CKT. - II	3.6.16	19:00	AT MEHRAULI CKT. TRIPPED ON 186 A&B, DIST. PROT, DIST 4.479KM. AT BTPS ZONE-I, DIST. PROT, DIST 15.1KM.
6	3.6.16	20:54	PAPPANKALAN-I 220/66KV 100MVA TX-IV	4.6.16	10:35	TR. TRIPPED ON 86B. GROUP B, OLTC, BUCHHOLZ, SUDDEN PRESSURE TRIP.
7	5.6.16	14:19	220KV PRAGATI - SARITA VIHAR CKT-II	5.6.16	14:55	AT PRAGATI CKT. TRIPPED ON 86X, TRIP ABC PHASE, DIST PROT, ZONE-II, 186. AT SARITA VIHAR CKT. TRIPPED ON TRIP PHASE ABC, 186B, 186X, DIST PROT, ZONE-I, DIST 897MTS.
8	6.6.16	10:16	NARELA 66/11KV, 20MVA TX-II	6.6.16	12:21	TR. TRIPPED ON 86, 186, BUCHHOLZ.
9	7.6.16	11:07	220KV MEHRAULI - BTPS CKT. - II	7.6.16	22:19	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-II, 186, DIST 14.49KM. AT BTPS CKT. DID NOT TRIP.
10	7.6.16	11:07	220KV MEHRAULI - BTPS CKT. - I	7.6.16	12:52	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-II, 186, TRIP PHASE ABC, DIST 15.24KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, Y PHASE, DIST 2.39KM, E/F.
11	8.6.16	11:10	220KV GAZIPUR - BTPS CKT	8.6.16	16:49	AT GAZIPUR CKT. TRIPPED ON DIST PROT, ZONE-I, R&B PHASE. AT BTPS CKT. WAS IN OFF POSITION.
12	9.6.16	14:28	GAZIPUR 220/66KV 100MVA TX-II	9.6.16	15:40	TR. TRIPPED ON GEN TRIP, OVER FLUX.
13	9.6.16	16:36	220KV NARAINA-RIDGE VALLEY CKT-I	9.6.16	18:20	AT NARAINA CKT. TRIPPED ON DIRECTIONAL E/F, AUTO RECLOSE. CKT DIDNOT TRIP AT RIDGE VALLEY.
14	9.6.16	17:08	220KV BAMNAULI-NARAINA CKT-I	9.6.16	17:40	AT BAMNAULI CKT. TRIPPED ON ZONE-I, Y PHASE, DIST PROT, DIST 11.69KM. AT NARAINA CKT. TRIPPED ON DIST PROT, B PHASE, 86B, 186A, 186B.
15	9.6.16	18:09	400KV BALLABHGARH-BAMNAULI CKT-II	9.6.16	19:06	AT BAMNAULI CKT. TRIPPED ON DIST PROT., ZONE-I, RYB PHASE, DIST 33.87KM. AT BALLABGARH TRIPPED ON DIST. PROT, ZONE-I, R PHASE DIST 21.4KM.
16	10.6.16	4:22	NARELA 66/11KV, 20MVA TX-II	10.6.16	12:51	TR. TRIPPED ON 30B, OLTC BUCHOLZ.
17	10.6.16	15:36	220KV GOPALPUR-MANDOLACKT-II	10.6.16	16:08	AT MANDOLA CKT. TRIPPED ON DIST PROT, DIST 14KM, RYB PHASE. AT GOPALPUR CKT. TRIPPED ON ZONE-I, GEN TRIP, DIST 2.4KM.
18	10.6.16	15:44	220KV GOPALPUR-MANDOLACKT-I	10.6.16	16:41	AT MANDOLA CKT. TRIPPED ON DIST PROT, R&Y PHASE, DIST 18KM. AT GOPALPUR DIST PROT, ZONE-I, RYB PHASE.
19	10.6.16	16:47	220KV BAWANA-DSIIDC BAWANA CKT-I	10.6.16	17:20	AT BAWANA CKT. TRIPPED ON DIST PROT, RYB PHASE, 86B. AT DSIDC BAWANA CKT. DID NOT TRIPPED.
20	10.6.16	16:47	220KV DSIIDC BAWANA-NARELA CKT-I	10.6.16	18:31	AT DSIDC BAWANA CKT. TRIPPED ON AUTO RECLOSE LOCKOUT, C PHASE, DIST PROT, DIST 8.804KM. AT NARELA CKT. WAS IN OFF POSITION.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
21	10.6.16	16:47	220KV BAWANA-DSIIDC BAWANA CKT-II	10.6.16	17:19	AT BAWANA CKT. TRIPPED ON DIST PROT, RYB PHASE, 86B. AT DSIDC BAWANA CKT. DID NOT TRIP.
22	10.6.16	16:48	220KV WAZIRABAD-GEETA COLONY CKT-II	10.6.16	17:06	AT WAZIRABAD : DIST. PROT, ZONE-1, RYB PHSAE. DIST. 0.0KM. AT GEETA COLONY : DIST PROT, Z-2, DIST 5.758KMS, E/F.
23	10.6.16	16:48	220KV WAZIRABAD-GEETA COLONY CKT-I	10.6.16	17:09	AT GEETA COLONY : DIST PROT, ZONE-2, DIST 7.354KMS.E/F. AT WAZIRABAD :RYB PHASE, Z-I, DIST PROT, DIST. 6.3KM.
24	10.6.16	16:48	WAZIRABAD 220/66KV 100MVA TX-I	10.6.16	17:03	TR. TRIPPED ON E/F.
25	10.6.16	16:48	WAZIRABAD 220/66KV 100MVA TX-III	10.6.16	17:03	TR. TRIPPED ON E/F.
26	10.6.16	16:57	220KV PRAGATI - SARITA VIHAR CKT-II	10.6.16	17:30	AT SARITA VIHAR CKT. TRIPPED ON DIST PROT, ABC PHASE, ZONE-I, DIST 7.881KM, 86A&B. AT PRAGATI TRIPPED ON ABC PHASE, 186-186.
27	10.6.16	17:13	220KV GEETA COLONY- PATPARGANJ CKT -II	10.6.16	17:20	AT GEETA COLONY CKT. TRIPPED ON SOTF, DIST PROT. AT PATPARGANJ CKT. DID NOT TRIP.
28	10.6.16	17:13	220KV GEETA COLONY- PATPARGANJ CKT-I	10.6.16	17:20	AT GEETA COLONY CKT. TRIPPED ON SOTF, DIST PROT. AT PATPARGANJ CKT. DID NOT TRIP.
29	11.6.16	4:22	NARELA 66/11KV, 20MVA TX-II	11.6.16	12:51	TR. TRIPPED ON 30B, OLTC.
30	11.6.16	14:39	SHALIMAR BAGH 220/33KV 100MVA TX-I	11.6.16	15:26	TR. TRIPPED ON 86.
31	11.6.16	15:56	LODHI RD 220/33KV 100MVA TX-II	11.6.16	16:28	TRIPPED ON 67N, 86A & B.
32	12.6.16	14:30	SHALIMAR BAGH 220/33KV 100MVA TX-I	12.6.16	17:00	TR. TRIPPED ON BUCHHOLZ.
33	12.6.16	22:52	PAPPANKALAN-I 220/66KV 160MVA TX-I	12.6.16	23:30	TR. TRIPPED ON O/C.
34	12.6.16	22:52	PAPPANKALAN-I 220/66KV 100MVA TX-I	12.6.16	23:16	TR. TRIPPED ON 86B.
35	13.6.16	5:04	GAZIPUR 220/66KV 100MVA TX-II	13.6.16	5:22	TR. TRIPPED ON OVER FLUX.
36	13.6.16	7:09	PRAGATI 220/66KV 160MVA TX-I	13.6.16	7:50	MONKEY FOUND ELECTROCUTED ON 66KV BUS SECTION-III IN GPTS YARD AND B PHASE JUMPER AND Y PHASE INSULATOR DAMAGED. 66KV I/C-I CLOSED AT 07.37HRS. BUT MADE OFF AT 07.38HRS. DUE TO SPARKING OBSERVED ON BUS ISOLATOR OF G.T.-#6.
37	13.6.16	7:09	PRAGATI 220/66KV 160MVA TX-II	13.6.16	8:10	MONKEY FOUND ELECTROCUTED ON 66KV BUS SECTION-III IN GPTS YARD AND B PHASE JUMPER AND Y PHASE INSULATOR DAMAGED. 66KV I/C-I CLOSED AT 07.37HRS. BUT MADE OFF AT 07.38HRS. DUE TO SPARKING OBSERVED ON BUS ISOLATOR OF G.T.-#6.
38	13.6.16	15:12	GAZIPUR 220/66KV 100MVA TX-II	13.6.16	15:42	TR. TRIPPED ON BUS BAR PROTECTION.
39	13.6.16	15:12	GAZIPUR 220/66KV 160MVA TX-I	13.6.16	15:42	TR. TRIPPED ON BUS BAR PROTECTION.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
40	13.6.16	15:12	220KV GAZIPUR - MAHARANIBAGH CKT. -II	13.6.16	15:38	AT GAZIPUR CKT. TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION. AT MAHARANI BAGH CKT. DID NOT TRIP.
41	13.6.16	18:50	220KV BAWANA - KANJHAWALA CKT-2	13.6.16	20:31	AT BAWANA CKT. TRIPPED ON AUTO RECLOSE LOCK OUT. AT KHANJAWALA CKT. DID NOT TRIP.
42	13.6.16	18:50	220KV BAWANA - KANJHAWALA CKT - 1	14.6.16	13:04	AT BAWANA CKT. TRIPPED ON AUTO RECLOSE LOCKOUT, DIST PROT, ZONE-I, DIST 6.97KM. AT KHANJAWALA CKT. TRIPPED ON DIST PROT, ZONE-I, RYB PHASE, DIST 11.8KM.
43	13.6.16	18:50	KANJHAWALA 220/66KV 160MVA TX-I	13.6.16	19:58	TR. TRIPPED ON O/C, E/F.
44	13.6.16	19:16	400KV BAWANA-MUNDKA CKT-II	13.6.16	20:19	AT BAWANA CKT. TRIPPED ON 186. AT MUNDKA CKT. DID NOT TRIP.
45	13.6.16	19:16	400KV BAWANA-MUNDKA CKT-I	14.6.16	10:52	AT BAWANA CKT. TRIPPED ON 186. AT MUNDKA PUT OFF MANUALLY DUE TO HEAVY SPARKING AT B PHASE ISOLATOR JUMPER.
46	13.6.16	19:30	220KV GOPALPUR-MANDOLACKT-I	13.6.16	20:04	AT GOPALPUR CKT. TRIPPED ON DIST PROT, ZONE-I, Y&B PHASE. AT MANDOLA TRIPPED ON B PHASE NEUTRAL.
47	13.6.16	19:31	220KV WAZIRABAD-GEETA COLONY CKT-II	13.6.16	20:30	AT WAZIRABAD CKT. TRIPPED ON RYB PHASE, DIST. PROT, ZONE-I. AT GEETA COLONY TRIPPED ON DIST PROT, DIST 5.54KM.
48	13.6.16	19:31	WAZIRABAD 220/66KV 100MVA TX-III	13.6.16	20:35	TR. TRIPPED ON E/F.
49	13.6.16	19:32	220 KV GOPALPUR-WAZIRABAD CKT - 1	13.6.16	21:26	AT WAZIRABAD CKT. TRIPPED ON DIST. PROT, B PHASE. ZONE-I. AT GOPALPUR CKT. DID NOT TRIP.
50	13.6.16	19:47	220KV PRAGATI - SARITA VIHAR CKT - I	13.6.16	20:20	AT PRAGATI : DIST PROT., ZONE-II, B PHASE , DIST. 11.06KMS. AT SARITA VIHAR : ABC PHASE, ZONE-I, 186 A&B, AUTO RECLOSE.
51	13.6.16	19:47	220KV PRAGATI - SARITA VIHAR CKT-II	13.6.16	20:21	AT PRAGATI : DIST PROT., ABC PHASE , DIST. 0 METER. AT SARITA VIHAR : DIST PROT, ABC PHASE, ZONE-I, DIST. 2.77KMS., 186 A&B.
52	13.6.16	19:47	220KV PRAGATI - PARK STREET CKT-II	13.6.16	20:11	AT PARK STREET CKT. TRIPPED ON 86ABC. AT PRAGATI CKT. DID NOT TRIP.
53	13.6.16	20:01	HARSH VIHAR 220/66KV 160MVA ICT-3	13.6.16	20:48	66KV I/C TRIPPED ON 86-1 & 2, TRIP CKT FAULTY.
54	13.6.16	20:01	HARSH VIHAR 220/66KV 160MVA ICT-1	13.6.16	20:48	66KV I/C TRIPPED ON 86-1 & 2, TRIP CKT FAULTY.
55	13.6.16	20:01	HARSH VIHAR 220/66KV 160MVA ICT-2	13.6.16	20:48	66KV I/C TRIPPED ON 86-1 & 2, TRIP CKT FAULTY.
56	14.6.16	6:02	GAZIPUR 220/66KV 100MVA TX-II	14.6.16	6:30	TR. TRIPPED ON OVER FLUX AND GEN TRIP.
57	14.6.16	6:47	GAZIPUR 220/66KV 100MVA TX-II	14.6.16	7:15	TR. TRIPPED ON OVER FLUX AND GEN TRIP.
58	14.6.16	8:05	GAZIPUR 220/66KV 100MVA TX-II	14.6.16	12:04	TR. TRIPPED ON OVER FLUX AND GEN TRIP.
59	14.6.16	12:02	OKHLA 33KV NEHRU PLACE CKT-IV	14.6.16	12:07	TR. MADE OFF BY OPERATION STAFF DUE TO HEAVY SPARKING ON BUS ISOLATOR ON EMERGENCY BASIS.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
60	15.6.16	6:32	DSIIDC BAWANA 220/66KV 160MVA TX-I	15.6.16	7:52	TR. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
61	15.6.16	6:32	DSIIDC BAWANA 66 KV DSIDC-2 CKT-2	15.6.16	14:45	CKT. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
62	15.6.16	6:32	DSIIDC BAWANA 220/66KV 100MVA TX-II	15.6.16	8:02	TR. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
63	15.6.16	6:32	DSIIDC BAWANA 66 KV BAWANA SECTOR-1 CKT-2	15.6.16	9:29	CKT. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
64	15.6.16	6:32	DSIIDC BAWANA 66 KV BAWANA SECTOR-1 CKT-1	15.6.16	9:29	CKT. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
65	15.6.16	6:32	DSIIDC BAWANA 220/66KV 100MVA TX-III	15.6.16	8:02	TR. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
66	15.6.16	6:32	DSIIDC BAWANA 66 KV DSIDC-2 CKT-1	15.6.16	8:22	CKT. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
67	15.6.16	6:32	220KV BAWANA-DSIIDC BAWANA CKT-II	15.6.16	7:52	CKT. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
68	15.6.16	6:32	220KV BAWANA-DSIIDC BAWANA CKT-I	15.6.16	7:52	CKT. MADE OFF FOR SAFETY PURPOSE AS BLAST OCCURED ON 66KV SPARE BAY NO. 619. EARTHING WIRE OF 66KV BUS-1 DAMAGED.
69	16.6.16	0:04	220KV KANJHAWALA-NAJAFGARH CKT	16.6.16	0:20	AT NAJAFGARH CKT .TRIPPED ON 186. AT KHANJAWALA CKT. DID NOT TRIP.
70	16.6.16	0:04	NAJAFGARH 220/66KV 100MVA TX-III	16.6.16	0:35	66KV I/C-III TRIPPED ON E/F.
71	16.6.16	0:04	NAJAFGARH 220/66KV 100MVA TX-I	16.6.16	1:05	TR. TRIPPED ON HV, REF, 86.
72	17.6.16	17:53	220KV MEHRAULI - VASANT KUNJ CKT.-I	17.6.16	18:16	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 6.42KM, 186A&B. AT VASANT KUNJ CKT. DID NOT TRIP.
73	17.6.16	19:26	WAZIRABAD 220/66KV 100MVA TX-I	17.6.16	19:39	66KV I/C TRIPPED ON 86, E/F.
74	17.6.16	19:26	WAZIRABAD 220/66KV 100MVA TX-II	17.6.16	19:39	66KV I/C TRIPPED ON 86, E/F.
75	17.6.16	19:26	WAZIRABAD 220/66KV 100MVA TX-III	17.6.16	19:39	66KV I/C TRIPPED ON 86, E/F.
76	18.6.16	6:40	SARITA VIHAR 220/66KV 100MVA TX-I	18.6.16	7:20	TR. TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION.
77	18.6.16	6:40	SARITA VIHAR 220/66KV 100MVA TX-II	18.6.16	7:20	TR. TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION.
78	18.6.16	6:40	SARITA VIHAR 220/66KV 100MVA TX-III	18.6.16	8:35	TR. TRIPPED ON GEN. TRIP, OVER FLUX, 96.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
79	18.6.16	6:40	220KV PRAGATI - SARITA VIHAR CKT-II	19.6.16	17:32	AT SARITA VIHAR CKT. TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION, 96. AT PRAGATI CKT DID NOT TRIP.
80	18.6.16	6:40	220KV PRAGATI - SARITA VIHAR CKT - I	19.6.16	17:32	AT SARITA VIHAR CKT. TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION, 96. AT PRAGATI CKT DID NOT TRIP.
81	18.6.16	6:40	220KV SARITA VIHAR - BTPS CKT. -I	18.6.16	8:18	AT BTPS CKT TRIPED ON DIST PROT, R PHASE. AT SARITA VIHAR CKT. TRIPPED ON 186 A&B, B PHASE, DIST PROT, ZONE-I, DIST 5.682KMS.
82	18.6.16	12:21	220KV GAZIPUR - BTPS CKT	18.6.16	14:50	AT GAZIPUR CKT. TRIPPED ON E/F, ZONE-I, DIST PROT, DIST 6.9KM.
83	20.6.16	8:58	DIAL 220/66KV 160MVA TX-I	20.6.16	9:08	TR. TRIPPED ON 86A&B, CB TROUBLE ALARM.
84	20.6.16	14:17	VASANT KUNJ 220/66KV 100MVA TX-II	20.6.16	19:25	TR. TRIPPED ON POLE DISCREPANCY.
85	20.6.16	14:30	INDRAPRASTHA POWER 220/33KV 100MVA TX-III	20.6.16	15:15	TR. TRIPPED ON BUCHHOLZ.
86	20.6.16	15:17	220KV KANJHAWALA-NAJAFGARH CKT	20.6.16	16:04	AT KHANJAWALA CKT. TRIPPED MAIN 1, RYB PHASE, MAIN 2, YB PHASE, DIST PROT, ZONE2 & 3, DIST 17.54KM. AT NAJAFGARH CKT. DID NOT TRIP.
87	20.6.16	20:16	HARSH VIHAR 400/220KV 315MVA ICT-I	20.6.16	22:26	ICT TRIPPED ON 861, 862, 86PRD I & 2.
88	21.6.16	5:26	PARKSTREET 220/33KV 100MVA TX-I	21.6.16	6:00	TR. TRIPPED ON 86. BIRDAGE OCCURED IN YARD.
89	22.6.16	5:22	BAWANA 400/220KV 315MVA ICT-II	22.6.16	11:36	ICT TRIPPED ON 186 &B, 86A&B, OLTC AUX, BUCHHOLZ.
90	22.6.16	9:26	PAPPANKALAN-I 220/66KV 160MVA TX-I	22.6.16	9:28	DURING NORMALIZATION OF 66KV BUS-1 BUS ISOLATOR OF 66KV I/C-5 GOT STUCK CAUSING SPARKING.
91	22.6.16	13:18	220KV DIAL-MEHRAULI CKT-II	22.6.16	14:53	AT DIAL CKT. TRIPPED ON B PHASE TRIP, DIST. PROT, ZONE-I. AT MEHRAULI CKT. TRIPPED ON DIFF, B PHASE, DIST PROT, ZONE-I, DIST 6.161KM.
92	23.6.16	14:44	WAZIRABAD 220/66KV 160MVA TX-I	23.6.16	15:40	TR. TRIPPED ON O/C, R&Y PHASE, DIFFERENTIAL PROT, B PHASE.
93	23.6.16	22:05	220KV GAZIPUR - MAHARANIBAGH CKT. -II	24.6.16	16:27	AT GAZIPUR CKT. TRIPPED ON Y PHASE, E/F. AT MAHARANI BAGH DIST PROT, ZONE-I.
94	24.6.16	17:52	PAPPANKALAN-I 66KV REWARI LINE CKT	25.6.16	14:25	CKT. TRIPPED ON DIRECTIONAL EARTH FAULT, ZONE-I, 86. Y PHASE POLE OF CB DAMAGED AT PAPANALAN-I.
95	24.6.16	20:51	WAZIRPUR 220/33KV 100MVA TX-I	25.6.16	17:55	TR. TRIPPED ON 86A&B.
96	24.6.16	21:47	PAPPANKALAN-I 220/66KV 100MVA TX-I	24.6.16	22:14	TR. TRIPPED ON O/C.
97	24.6.16	21:47	PAPPANKALAN-I 220/66KV 160MVA TX-I	25.6.16	0:43	TR. TRIPPED ON O/C.
98	27.6.16	13:08	SHALIMAR BAGH 220/33KV 100MVA TX-III	27.6.16	17:34	TR. TRIPPED ON 64 RLV, 87 DIFFERENTIAL.
99	28.6.16	0:06	220KV MEHRAULI - BTPS CKT. - II	28.6.16	5:58	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.812KM. AT BTPS TRIPPED ON DIST PROT, B PHASE, ZONE-II.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
100	28.6.16	1:25	SARITA VIHAR 66/11KV, 20MVA TX-I	28.6.16	5:05	11KV I/C TRIPPED ON O/C WITH HEAVY JERK, SMOKE IN VCB ROOM.
101	28.6.16	1:55	PATPARGANJ 33/11KV, 20MVA TX	28.6.16	3:00	TR. TRIPPED WITHOUT INDICATOIN.
102	28.6.16	2:05	GAZIPUR 220/66KV 160MVA TX-I	28.6.16	7:55	TR. TRIP ON 86, PRV TRIP.
103	28.6.16	2:38	PATPARGANJ 33/11KV, 16MVA TX	28.6.16	3:00	TR. TRIPPED ON O/C.
104	28.6.16	7:43	ROHINI 220/66KV 100MVA TX-III	28.6.16	8:05	TR. TRIPPED ON E/F, 86.
105	28.6.16	7:43	ROHINI 220/66KV 100MVA TX-IV	28.6.16	8:05	TR. TRIPPED ON 86.
106	28.6.16	15:30	MASJID MOTH 220/33KV 100MVA TX-I	28.6.16	19:00	TR. TRIPPED ON PRV, O/C.
107	28.6.16	17:45	PATPARGANJ 220/33KV 100MVA TX-III	28.6.16	18:19	TR. TRIPPED ON 67A.
108	28.6.16	17:45	PATPARGANJ 220/33KV 100MVA TX-IV	28.6.16	18:19	TR. TRIPPED ON 86.
109	28.6.16	17:45	PATPARGANJ 220/33KV 100MVA TX-I	28.6.16	18:19	TR. TRIPPED WITHOUT INDICATION.
110	28.6.16	20:45	PATPARGANJ 33/11KV, 20MVA TX	28.6.16	20:50	11KV I/C TRIPPED ON O/C, R&B PHASE RELAY.
111	28.6.16	21:57	NAJAFGARH 220/66KV 100MVA TX-I	28.6.16	22:48	TR. TRIPPED ON 86.
112	28.6.16	21:57	MUNDKA 400/220KV 315MVA ICT-III	28.6.16	22:37	ICT TRIPPED ON O/C, 86.
113	28.6.16	21:57	MUNDKA 400/220KV 315MVA ICT-IV	28.6.16	22:38	ICT TRIPPED ON O/C, 86.
114	28.6.16	21:57	220KV MUNDKA- NAJAFGARH CKT	29.6.16	2:14	AT MUNDKA CKT. TRIPPED ON AUTO RECLOSE, TRIP PHASE ABC. AT NAJAFGARH CKT. TRIPPED ON 186.
115	29.6.16	6:52	ROHINI 220/66KV 100MVA TX-I	29.6.16	7:12	66KV I/C-I TRIPPED ON 86, 51N, E/F.
116	29.6.16	6:52	ROHINI 220/66KV 100MVA TX-II	29.6.16	7:12	66KV I/C TRIPPED ON E/F, 86.
117	29.6.16	17:22	220KV WAZIRABAD - KASHMEREGATE CKT-II	29.6.16	17:53	AT WAZIRABAD CKT. TRIPPED ON DIST PROT, Y PHASE, ZONE-I, DIST 1.023KM. AT KASHMIRI GATE CKT. DID NOT TRIP.
118	29.6.16	18:11	220KVBAWANA- ROHINI CKT-II	29.6.16	18:12	AT ROHINI CKT. TRIPPED WITHOUT INDICATION AT BAWANA CKT. DID NOT TRIP.
119	30.6.16	8:28	MASJID MOTH 220/33KV 100MVA TX-II	30.6.16	9:45	33KV I/C TRIPPED ON CB TROUBLE ALARM, GAS PRESSURE LOW.
120	30.6.16	9:55	MASJID MOTH 220/33KV 100MVA TX-II	30.6.16	15:05	33KV I/C TRIPPED ON CB TROUBLE ALARM, GAS PRESSURE LOW.
120	30.6.16	9:55	MASJID MOTH 220/33KV 100MVA TX-II	30.6.16	15:05	33KV I/C TRIPPED ON CB TROUBLE ALARM, GAS PRESSURE LOW.

19.4 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH JULY 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	1.7.16	2:15	220KV MEHRAULI - BTPS CKT. - I	1.7.16	7:50	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, ACTIVE GROUP 1, DIST 13.82KM AT BTPS ZONE -I, B PHSAE, E/F, DIST 7.6KM.
2	1.7.16	10:35	220 KV GOPALPUR-WAZIRABAD CKT - I	1.7.16	17:49	AT WAZIRABAD CKT. TRIPPED ON R PHASE, ZONE-II, DIST 4.159KM AT GOPALPUR NO TRIPPING.
3	3.7.16	7:00	220KV BAWANA-DSIIDC BAWANA CKT-I	3.7.16	11:03	AT DSDIC CKT. TRIPPED ON DIST PROT, 86B, AUTO RECLOSE, RYB PHASE TRIP. AT BAWANA CKT. TRIPPED ON 86B, AUTO RECLOSE, RYB PHASE TRIP.
4	4.7.16	12:27	220KV GOPALPUR-MANDOLACKT-II	4.7.16	13:12	AT GOPALPUR CKT. TRIPPED ON M2B, M2T, M2R, ZONE-I, DIST 1.9KM. AT MANDOLA CKT. TRIPPED ON ZONE-I, DIST 19.32KM, B PHASE.
5	4.7.16	0:56	OKHLA 220/33KV 100MVA TX-III	4.7.16	9:30	TR. TRIPPED WITHOUT INDICAITON.
6	4.7.16	2:00	PATPARGANJ 220/66KV 100MVA TX-I	4.7.16	6:30	TRIPPED ON 86, OLTC, BUCHHOLZ.
7	4.7.16	6:40	PATPARGANJ 220/66KV 100MVA TX-I	4.7.16	10:50	TRIPPED ON OLTC, BUCHHOLZ , 86.
8	4.7.16	17:24	220KV GOPALPUR-MANDOLACKT-I	4.7.16	17:52	AT GOPALPUR SUPPLY FAIL. AT MANDOLA CKT. TRIPPED ON DIST PROT, DIST 16KM.
9	5.7.16	10:55	OKHLA 220/33KV 100MVA TX-IV	1.8.16	18:40	TR. TRIPPED ON 30A, BUCHOLZ, CTR, DIFFERENTIAL RELAY, 86, 164, INTERNAL FLASH IN WINDING AND BUSHING GOT DAMAGED.
10	5.7.16	12:52	220KV MEHRAULI - BTPS CKT. - I	5.7.16	13:14	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST. 15.3KM, B PHASE, E/F. AT MEHRAULI CKT. TRIPPED ON DIST PROT, DIST. 11KM, ZONE-I, ACTIVE GROUP-1, 186, 186.
11	5.7.16	18:11	MEHRAULI 220/66KV 100MVA TX-III	5.7.16	18:34	TR. TRIPPED WITHOUT INDICATION.
12	5.7.16	18:11	MEHRAULI 220/66KV 100MVA TX-I	5.7.16	18:19	100MVA TR. -III TRIPPED ALONGWITH I/C-1 TRIPPED ON O/C.
13	8.7.16	12:30	SARITA VIHAR 220/66KV 100MVA TX-I	8.7.16	13:25	TR. TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION.
14	8.7.16	12:30	SARITA VIHAR 220/66KV 100MVA TX-III	8.7.16	18:35	TR. TRIPPED AS BUS COUPLER TRIPPED ON BUS BAR PROTECTION.
15	8.7.16	12:30	220KV PRAGATI - SARITA VIHAR CKT - I	8.7.16	18:45	AT SARITA VIHAR CKT. TRIPPED ON POLE DISCREPANCY. AT PRAGATI CKT. DID NOT TRIP.
16	10.7.16	2:10	220KV MUNDKA-NAJAFGARH CKT	10.7.16	6:57	AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-II, 86. AT NAJAFGARH CKT. DID NOT TRIP.
17	10.7.16	12:04	220KV MUNDKA-KANJHAWALA CKT	10.7.16	20:41	AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-I, R PHASE AT KHANJAWALA CKT. DID NOT TRIP.
18	11.7.16	0:40	220KV PRAGATI - SARITA VIHAR CKT - I	11.7.16	13:25	AT SARITA VIHAR CKT. TRIPPED ON BUS BAR PROT., 96, AUTO RECLOSE, 186A&B. AT PRAGATI CKT. DID NOT TRIP.
19	11.7.16	0:40	220KV SARITA VIHAR - BTPS CKT.-I	11.7.16	1:31	AT SARITA VIHAR CKT. TRIPPED ON 96 A&B. AT BTPS CKT. DID NOT TRIP.
20	11.7.16	0:40	SARITA VIHAR 220/66KV 100MVA TX-I	11.7.16	1:31	TR. TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
21	11.7.16	1:31	400KV BALLABHGARH-BAMNAULI CKT-I	11.7.16	1:53	AT BAMNAULI CKT. TRIPPED ON 186 A&B. AT BALLABGARH CKT. DID NOT TRIP.
22	11.7.16	8:05	220KV PRAGATI - SARITA VIHAR CKT-II	11.7.16	8:10	AT SARITA VIHAR CKT. TRIPPED DUE TO OPERATION OF BUS BAR PROT. AT PRAGATI CKT. DID NOT TRIP.
23	11.7.16	8:05	220KV SARITA VIHAR - BTPS CKT.-I	11.7.16	8:08	AT SARITA VIHAR CKT. TRIPPED DUE TO OPERATION OF BUS BAR PROT. AT BTPS CKT. DID NOT TRIP.
24	11.7.16	8:05	220KV SARITA VIHAR - BTPS CKT.-II	11.7.16	8:08	AT SARITA VIHAR CKT. TRIPPED DUE TO OPERATION OF BUS BAR PROT. AT BTPS CKT. DID NOT TRIP.
25	11.7.16	8:05	PARKSTREET 220/33KV 100MVA TX-II	11.7.16	8:17	TR. TRIPPED ON OVER FLUX, 186.
26	11.7.16	8:05	SARITA VIHAR 220/66KV 100MVA TX-II	11.7.16	8:08	TR. TRIPPED DUE TO OPERATION OF BUS BAR PROT.
27	11.7.16	8:05	SARITA VIHAR 220/66KV 100MVA TX-I	11.7.16	8:08	TR. TRIPPED DUE TO OPERATION OF BUS BAR PROT.
28	11.7.16	8:42	SARITA VIHAR 220/66KV 100MVA TX-II	11.7.16	9:17	TR. TRIPPED DUE TO OPERATION OF BUS BAR PROT.
29	11.7.16	8:42	SARITA VIHAR 220/66KV 100MVA TX-I	11.7.16	9:09	TR. TRIPPED DUE TO OPERATION OF BUS BAR PROT.
30	11.7.16	8:42	220KV SARITA VIHAR - BTPS CKT.-I	11.7.16	9:09	AT SARITA VIHAR CKT. TRIPPED DUE TO OPERATOIN OF BUS BAR PROT. AT BTPS CKT. DID NOT TRIP.
31	11.7.16	8:42	220KV PRAGATI - SARITA VIHAR CKT-II	11.7.16	14:16	AT SARITA VIHAR CKT. TRIPPED DUE TO BUS BAR PROT. OPERATED. AT PRAGATI CKT. DID NOT TRIP.
32	11.7.16	18:05	RIDGE VALLEY 220/66KV 160MVA TX-I	11.7.16	14:50	TR. TRIPPED ON DIFFERENTIAL , Y PHASE LA DAMAGE, 66KV I/C-I TRIPPED ON REF.
33	12.7.16	3:35	NARAINA 220/33KV 100MVA TX-II	12.7.16	10:45	TR. TRIPPED ON 86.
34	12.7.16	6:12	220KV MUNDKA-NAJAFGARH CKT	12.7.16	6:41	AT MUNDKA CKT. TRIPPED ON DIST PROT. ZONE-I, RYB PHASE, 86 AT NAJAFGARH CKT. DID NOT TRIP.
35	12.7.16	7:49	NARAINA 220/33KV 100MVA TX-I	12.7.16	8:12	I/C TRIPPED ON 86, O/C, R PHASE, E/F, B PHASE.
36	12.7.16	7:49	NARAINA 220/33KV 100MVA TX-III	12.7.16	8:12	I/C TRIPPED ON 86, O/C, E/F.
37	12.7.16	16:32	DSIIDC BAWANA 220/66KV 100MVA TX-II	12.7.16	20:22	TR. TRIPPED ON O/C, E/F, BUCHOLZ, DIFFERENTIAL PROT, 30ABC.
38	12.7.16	22:32	220KV GOPALPUR-SUBZI MANDI CKT-I	13.7.16	14:41	AT GOPALPUR CKT. TRIPPED ON E/F. AT SUBZI MANDI CKT. DID NOT TRIP.
39	13.7.16	0:26	PATPARGANJ 220/33KV 100MVA TX-IV	13.7.16	1:39	TR. TRIPPED ON ATDDL-I & II.
40	14.7.16	11:58	220KV KANJHAWALA-NAJAFGARH CKT-2	14.7.16	12:25	AT KHANJAWALA CKT. TRIPPED ON B PHASE, 86. AT NAJAFGARH CKT. TRIPPED ON ZONE 2,3 &4, ABC PHASE.
41	14.7.16	14:10	VASANT KUNJ 66/11KV, 20MVA TX-I	14.7.16	14:25	TX TRIPPED ON 51B&C PHASE.
42	14.7.16	18:51	220KV BAMNAULI-PAPPANKALAN-II CKT-II	14.7.16	19:18	AT BAMNAULI CKT TRIPPED ON D/P,Z-1,C-PH,DIST-3.96KMS. AT PPK-2 CKT TRIPPED ON D/P,Z-1,AB&C-PH,DIST-7.4KMS.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
43	16.7.16	3:02	220KV OKHLA - BTPS CKT. - II	16.7.16	9:37	AT BTPS CKT. TRIPPED WITHOUT INDICATION. AT OKHLA CKT. DID NOT TRIP. AT OKHLA CKT. TRIED HELD OK. AT BTPS CKT. DID NOT CHARGE DUE TO BREAKER PROBLEM AT BTPS END SHUTDOWN GIVEN AT OKHLA END TO REPLACE DAMAGED JUMPER AT TOWER NO. 15 ON CKT.
44	16.7.16	7:33	400KV BAWANA-MUNDKA CKT-I	16.7.16	12:16	AT MUNDKA CKT. TRIPPED DUE TO OPERAITON OF BUS BAR PROTECTION. AT 400KV BUS-I. CKT. TRIED BUT DID NOT HOLD AND TRIPPED ON SOTF. AT BAWANA CKT. DID NOT TRIP.
45	16.7.16	11:30	PATPARGANJ 33/11KV, 20MVA TX	16.7.16	11:40	TR. TRIPPED WITHOUT INDICATION.
46	16.7.16	14:25	INDRAPRASTHA POWER 220/33KV 100MVA TX-III	16.7.16	18:10	33KV I/C-III OF TR. TRIPPED. SNAKE ELECTROCUTED IN THE YARD.
47	16.7.16	14:25	INDRAPRASTHA POWER 220/33KV 100MVA TX-I	16.7.16	15:10	33KV I/C-I OF TR. TRIPPED ON O/C, E/F. SNAKE ELECTROCUTED IN THE YARD.
48	16.7.16	14:25	INDRAPRASTHA POWER 220/33KV 100MVA TX-II	16.7.16	15:10	33KV I/C-II TRIPPED ON WITHOUT INDICATION. SNAKE ELECTROCUTED IN THE YARD.
49	17.7.16	11:45	220KV PRAGATI - PARK STREET CKT-II	17.7.16	12:10	AT PARK STREET CKT. TRIPPED ON 86A. AT PRAGATI CKT. DID NOT TRIP.
50	18.7.16	8:45	SARITA VIHAR 220/66KV 100MVA TX-III	18.7.16	11:05	TR. TRIPPED PRV, WTI, OTI.
51	18.7.16	15:28	OKHLA 220/33KV 100MVA TX-III	18.7.16	15:37	33KV I/C -III TRIPPED ON 86, 51C.
52	18.7.16	18:25	400KV BAMNAULI-JHATIKARA CKT-II	19.7.16	13:40	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-II, III , DIST 6.6KM AT JHATIKRA CKT. DID NOT TRIP.
53	19.7.16	11:25	SARITA VIHAR 220/66KV 100MVA TX-III	19.7.16	12:45	TR. TRIPPED ON 130, E/F. 66KV I/C TRIP ON INTER TRIP, 86.
54	19.7.16	17:57	ROHINI 66/11KV, 20MVA TX-I	19.7.16	20:41	TR. TRIPPED ON 51X, 51C, FLASH IN 11KV BUS SECTION.
55	20.7.16	14:30	INDRAPRASTHA POWER 220/33KV 100MVA TX-III	20.7.16	19:05	TR. TRIPPED ON 51A, 86, 186, B PHASE JUMPER SNAPPED.
56	20.7.16	15:40	220KV BAWANA-DSIIDC BAWANA CKT-II	20.7.16	16:36	AT DSIDC BAWANA CKT. TRIPPED DUE TO FAILURE OF VT FUSE. AT BAWANA CKT. TRIPPED ON 86B.
57	20.7.16	15:40	220KV BAWANA-DSIIDC BAWANA CKT-I	20.7.16	16:36	AT DSIDC BAWANA CKT TRIPPED DUE TO FAILURE OF VT FUSE. AT BAWANA CKT. TRIPPED ON 186A&B.
58	20.7.16	15:40	220KV DSIIIDC BAWANA-NARELA CKT-II	20.7.16	18:01	AT DSIDC CKT. TRIPPED ON ZONE-I, DIST PROT, C PHASE, DIST 8.019KM AT NARELA CKT. DID NOT TRIP.
59	21.7.16	16:43	220KV PRAGATI - PARK STREET CKT-II	21.7.16	16:52	AT PARK STREET CKT. TRIPPED ON 86A. AT PRAGATI CKT. DID NOT TRIP.
60	21.7.16	16:55	220KV PRAGATI - PARK STREET CKT-II	21.7.16	17:00	AT PARK STREET CKT. TRIPPED ON 86A. AT PRAGATI CKT. DID NOT TRIP.
61	21.7.16	19:10	220KV PRAGATI - PARK STREET CKT-II	21.7.16	19:15	AT PARK STREET CKT. TRIPPED ON 86A. AT PRAGATI CKT. DID NOT TRIP.
62	22.7.16	3:40	NARAINA 220/33KV 100MVA TX-II	22.7.16	8:00	TR. TRIPPED DUE TO LOW GAS PRESSURE.
63	22.7.16	10:18	NARAINA 220/33KV 100MVA TX-II	22.7.16	19:25	33KV I/C-II TRIPPED ON LOW GAS PRESSURE, B PHASE POLE OF CB DAMAGE.
64	22.7.16	15:00	NARAINA 220/33KV 100MVA TX-III	22.7.16	16:00	33KV I/C-III TRIPPED ON E/F, O/C.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
65	22.7.16	15:00	NARAINA 220/33KV 100MVA TX-I	22.7.16	15:05	33KV I/C-I TRIPPED ON E/F, O/C R&B PHASE.
66	22.7.16	15:22	WAZIRABAD 220/66KV 160MVA TX-I	22.7.16	20:39	TR. TRIPPED ON BUCHHOLZ, WTI, DIFFERENTIAL PRV.
67	22.7.16	18:19	220KV WAZIRABAD-GEETA COLONY CKT-I	22.7.16	18:51	AT WAZIRABAD CKT. TRIPPED ON ZONE-I, DIST PROT. AT GEETA COLONY CKT. TRIPPED ON BC PHASE, TRIP PHASE ABC, O/C. DIST PROT, ZONE -I, DIST 3.726KM.
68	22.7.16	18:52	220KV BAMNAULI-NARAINA CKT-II	22.7.16	20:01	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST. 11.6KM. AT NARAINA. CT SUPPLY FAIL.
69	23.7.16	12:48	220KV KANJHAWALA-NAJAFGARH CKT	23.7.16	13:41	AT KHANJAWALA CKT. TRIPPED ON C PHASE , ZONE -II. AT NAJAFGARH CKT. TRIPPED ON ZON E-II. TRIP ABC, 186.
70	24.7.16	13:02	220KV GEETA COLONY-PATPARGANJ CKT-I	24.7.16	15:10	AT GEETA COLONY CKT. TRIPPED ON DIST PROT, ZONE-I, O/C, DIST 1.728KM, E/F. AT PATPARGANJ CKT. TRIPPED ON 186, 186, DIST PROT, ZONE-I.
71	24.7.16	14:27	400KV BALLABHGARH-BAMNAULI CKT-I	24.7.16	17:34	AT BAMNAULI CKT. TRIPPED ON 186A&B., 130F.
72	24.7.16	15:46	OKHLA 33KV MASJID MOTH CKT	24.7.16	16:50	CKT. TRIPPED ON O/C, R&B PHASE, REPAIR OF FLASH IN CT.
73	26.7.16	6:02	220KV MEHRAULI - BTPS CKT. - II	26.7.16	6:41	AT MEHRAULI CKT. TRIP ON ABC PHASE, DIST PROT, ZONE-I, DIST 9.531KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, Y PHASE, E/F, DIST 9.2KM.
74	26.7.16	13:14	220KV MEHRAULI - BTPS CKT. - II	26.7.16	13:46	AT BTPS CKT. TRIPPED ON DIST PROT., ZONE-I, DIST 14.5KM. AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 6.89KM.
75	26.7.16	14:59	PATPARGANJ 33/11KV, 16MVA TX	26.7.16	16:42	TR. TRIPPED WITHOUT INDICATION.
76	27.7.16	7:05	PAPPANKALAN-II 220/66KV 160MVA TX-IV	27.7.16	7:28	66KV I/C-IV TRIPPED ON O/C, E/F, 50/51G, MASTER TRIP.
77	29.7.16	10:48	220KV BAMNAULI - DIAL CKT-I	29.7.16	14:35	AT BAMNAULI CKT. TRIPPED ON POLE DISCREPANCY.
78	29.7.16	16:23	KANJHAWALA 220/66KV 100MVA TX-II	29.7.16	20:10	TR. TRIPPED ON LOW AIR PRESSURE.
79	29.7.16	21:34	KANJHAWALA 220/66KV 100MVA TX-II	30.7.16	10:12	TR. TRIPPED ON LOW AIR PRESSURE.
80	30.7.16	3:54	VASANT KUNJ 220/66KV 100MVA TX-II	30.7.16	4:24	TR. TRIPPED ON 86, 30F.
81	30.7.16	23:40	VASANT KUNJ 220/66KV 100MVA TX-II	31.7.16	0:04	TR. TRIPPED ON 86.
82	31.7.16	13:16	220KV BAWANA-DSIIDC BAWANA CKT-I	31.7.16	18:32	AT DSIDC BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 3.994KM. AT CKT. TRIPPED ON BAWANA 86A, 86B.
83	31.7.16	18:22	220KV GOPALPUR-SUBZI MANDI CKT-I	31.7.16	19:34	AT GOPALPUR CKT. TRIPPED ON GEN TRIP, DIST PROT, ZONE-I, DIST 0.3KM. AT SUBZI MANDI CKT. DID NOT TRIP.
84	31.7.16	18:22	220KV GOPALPUR-SUBZI MANDI CKT-I	31.7.16	19:34	AT GOPALPUR CKT. TRIPPED ON GEN TRIP, DIST PROT, ZONE-I, DIST 0.3KM. AT SUBZI MANDI CKT. DID NOT TRIP.

19.5 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH AUGUST 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	5.7.16	10:55	OKHLA 220/33KV 100MVA TX-IV	1.8.16	18:40	TR. TRIPPED ON 30A, BUCHOLZ, CTR, DIFFERENTIAL RELAY, 86, 164, INTERNAL FLASH IN WINDING AND BUSHING GOT DAMAGED.
2	1.8.16	6:40	400KV BALLABHGARH- BAMNAULI CKT-I	1.8.16	7:49	AT BAMNAULI CKT. TRIPPED ON 186A&B, 85LO.
3	1.8.16	10:15	VASANT KUNJ 66/11KV, 20MVA TX-I	2.8.16	16:10	11KV I/C-II TRIPPED ON 51A, R PHASE, 86.
4	1.8.16	15:57	220KV WAZIRABAD- GEETA COLONY CKT- I	1.8.16	17:20	AT WAZIRABAD CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.3KM. AT GEETA COLONY CKT. TRIPPED ON TRIP PHASE ABC, O/C, DIST PROT, ZONE-I, DIST 3.974KM.
5	2.8.16	13:40	220KV PRAGATI - SARITA VIHAR CKT-II	2.8.16	14:05	AT PRAGATI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.008KM. AT SARITA VIHAR CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 6.48KM, 186ABC.
6	3.8.16	6:05	OKHLA 220/33KV 100MVA TX-IV	3.8.16	9:15	33KV I/C-3 OF TX TRIPPED ON E/F,86.
7	3.8.16	6:05	OKHLA 33KV NEHRU PLACE CKT-I	4.8.16	0:30	CKT TRIPPED ON D/P,Z-1&2,R-PH,DIST-01KM,E/F. R & Y-PH CT DAMAGED AND R-PH JUMPER OF THE CKT TOWARDS BUS-2 SNAPPED.
8	3.8.16	6:05	OKHLA 220/33KV 100MVA TX-III	3.8.16	9:15	33KV I/C-3 OF TX TRIPPED ON E/F,86.
9	3.8.16	11:20	220KV DIAL- MEHRAULI CKT-II	3.8.16	15:21	AT MEHRAULI CKT TRIPPED ON 186A&B. R-PH LINE ISOLATOR JUMPER SNAPPED AT MEHRAULI YARD. CKT DID NOT TRIP AT DIAL.
10	4.8.16	10:12	SUBZI MANDI 33/11KV, 16MVA TX-I	4.8.16	11:15	TX TRIPPED ON 30ABC,86.
11	4.8.16	10:29	SUBZI MANDI 33/11KV, 16MVA TX-II	4.8.16	10:38	TX TRIPPED ON B-PH O/C.
12	4.8.16	11:40	RIDGE VALLEY 220/66KV 160MVA TX- I	4.8.16	13:25	TX TRIPPED ON PRV, 86A & 86B.
13	4.8.16	12:24	BAMNAULI 400/220KV 315MVA ICT-IV	4.8.16	13:07	ICT TRIPPED ON 186A&B GROUP-2 ALONG WITH I/C-4.
14	4.8.16	12:24	NAJAFGARH 220/66KV 100MVA TX-IV	4.8.16	13:32	TX TRIPPED ON E/F,86.
15	4.8.16	12:24	BAMNAULI 400/220KV 500MVA ICT-II	4.8.16	13:07	ICT TRIPPED ON 186A&B GROUP-2 ALONG WITH I/C-2.
16	4.8.16	12:24	BAMNAULI 400/220KV 315MVA ICT-I	4.8.16	13:07	ICT TRIPPED ON 186A&B GROUP-2 ALONG WITH I/C-1.
17	4.8.16	12:24	PAPPANKALAN-I 220/66KV 100MVA TX- I	4.8.16	13:23	TX TRIPPED ON 51N,86B.
18	4.8.16	12:24	BAMNAULI 400/220KV 500MVA ICT-III	4.8.16	13:07	ICT TRIPPED ON 186A&B GROUP-2 ALONG WITH I/C-3.
19	4.8.16	12:24	220KV BAMNAULI- PAPPANKALAN-II CKT-I	4.8.16	13:12	AT PPK-2 CKT TRIPPED ON D/P,Z-1&2,86. CKT DID NOT TRIP AT BAMNAULI.
20	4.8.16	12:24	220KV BAMNAULI- PAPPANKALAN-I CKT-II	4.8.16	13:26	AT PPK-1 CKT TRIPPED ON 51N, 86B. CKT DID NOT TRIP AT BAMNAULI.
21	4.8.16	12:24	220KV BAMNAULI - DIAL CKT-I	4.8.16	13:09	AT DIAL CKT TRIPPED ON D/P,Z-2,R,Y&B-PH,REL MAIN-II. CKT DID NOT TRIP AT BAMNAULI.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
22	4.8.16	12:24	220KV BAMNAULI - DIAL CKT-II	4.8.16	13:27	AT DIAL CKT TRIPPED ON D/P,Z-2,R,Y&B-PH,REL MAIN-II. CKT DID NOT TRIP AT BAMNAULI.
23	4.8.16	12:27	220KV MEHRAULI - BTPS CKT. - II	5.8.16	0:33	AT BTPS CKT TRIPPED ON D/P,Z-1,R-PH,DIST-4.5KM. CKT DID NOT TRIP AT MEHRAULI.
24	4.8.16	15:45	RIDGE VALLEY 220/66KV 160MVA TX-II	4.8.16	16:30	TX TRIPPED WITHOUT INDICATION. 66KV I/C-2 TRIPPED ON GEN TRIP TOC R-PH 86A&B.
25	5.8.16	22:11	PAPPANKALAN-I 220/66KV 100MVA TX-I	5.8.16	22:54	TX TRIPPED ON O/C.
26	5.8.16	22:11	PAPPANKALAN-I 220/66KV 160MVA TX-I	5.8.16	22:47	TX TRIPPED ON O/C.
27	5.8.16	22:59	SUBZI MANDI 220/33KV 100MVA TX-II	6.8.16	12:38	TX TRIPPED ON E/F,86 AND 33KV I/C-2 OF TX TRIPPED ON E/F,186,86.
28	6.8.16	1:05	GAZIPUR 66/11KV, 20MVA TX-II	6.8.16	7:05	TR. TRIPPED ON SUPERVISION RELAY, 86. I/C ALSO TRIPPED.
29	6.8.16	4:15	NARAINA 220/33KV 100MVA TX-III	6.8.16	12:42	TR. TRIPPED ON 86, 69LV, E/F. I/C -III TRIPPED ON AC SUPERVISION RELAY.
30	6.8.16	15:55	220KV MUNDKA-NAJAFGARH CKT	6.8.16	16:04	AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-I, RYB PHASE, 86AB. AT NAJAFGARH CKT. DID NOT TRIP.
31	6.8.16	21:25	GAZIPUR 66/11KV, 20MVA TX-II	6.8.16	21:58	TR. TRIPPED ALONGWITH I/C WHICH TRIP ON INTER TRIPPING.
32	7.8.16	10:45	220KV GAZIPUR - BTPS CKT	7.8.16	17:40	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 13.19KM. CKT. WAS IN OFF POSITION AT GAZIPUR.
33	8.8.16	9:20	RIDGE VALLEY 220/66KV 160MVA TX-I	8.8.16	13:45	TR. TRIPPED ON 86AB, PRD RELAY. 66KV I/C-I TRIPPED ON 86.
34	8.8.16	18:18	220KV GOPALPUR-SUBZI MANDI CKT-I	8.8.16	19:32	AT GOPALPUR CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.4KM, AT SUBZI MANDI CKT. DID NOT TRIP.
35	9.8.16	5:50	SARITA VIHAR 66/11KV, 20MVA TX-II	9.8.16	6:12	TR. TRIPPED ON 30D, OLTC, BUCHHOLZ.
36	9.8.16	5:50	SARITA VIHAR 11KV JAIPUR	9.8.16	6:10	CKT. TRIPPED ALONGWITH 20MVA -II WHICH WAS TRIPPED ON 30D, OLTC, BUCHHOLZ.
37	11.8.16	3:09	BAMNAULI 400/220KV 315MVA ICT-I	10.8.16	9:45	ICT TRIPPED ON BUCHHOLZ, OLTC, B PHASE, 186A&B.
38	11.8.16	13:50	400KV BALLABHGARH-BAMNAULI CKT-I	11.8.16	14:39	AT BAMNAULI CKT. TRIPPED ON 186A&B.
39	12.8.16	10:10	220KV BAMNAULI - DIAL CKT-II	12.8.16	10:14	AT DIAL CKT. TRIPPED ON GEN TRIP., LINE DIFF. OPERATED. RYB PHASE TRIP. AT BAMNAULI CKT. DID NOT TRIP.
40	13.8.16	11:37	220KV MUNDKA-KANJHAWALA CKT	13.8.16	12:10	AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-II, R PHASE. AT KHANJAWALA CKT. WAS IN OFF POSITION.
41	13.8.16	14:27	220KV MEHRAULI - BTPS CKT. - II	13.8.16	19:35	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 5.276KM, ACTIVE GROUP -I, TRIP PHASE ABC. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 14KM, R PHASE.
42	13.8.16	14:30	NARAINA 220/33KV 100MVA TX-III	13.8.16	15:31	TR. TRIPPED WITHOUT INDICATION. 33KV I/C-III DID NOT TRIP.
43	14.8.16	7:36	WAZIRABAD 220/66KV 160MVA TX-I	14.8.16	8:13	TR. TRIPPED DURING CHECKING OF GAS LEAKAGE.
44	14.8.16	10:02	220KV BAWANA-DSIIDC BAWANA CKT-I	14.8.16	12:55	AT DSIDC CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 3.795KM. AT BAWANA CKT. TRIPPED ON DIST PROT. ZONE-I, DIST 1.7KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
45	15.8.16	6:55	PATPARGANJ 220/33KV 100MVA TX-III	15.8.16	12:27	TR. TRIPPED ON E/F, 86, DIFFERENTIAL, 33KV I/C-III TRIPPED WITHOUT INDICATION.
46	15.8.16	8:05	MEHRAULI 220/66KV 100MVA TX-III	15.8.16	12:15	TR. TRIPPED WITHOUT INDICATION. I/C DID NOT TRIP.
47	15.8.16	9:09	220KV WAZIRABAD - MANDOLA CKT-IV	15.8.16	10:46	AT WAZIRABAD CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 6.367KM. AT MANDOLA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.059KM.
48	15.8.16	9:16	220KV GAZIPUR - BTPS CKT	15.8.16	12:07	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 10.7KM, E/F. CKT. WAS IN OFF POSITION AT GAZIPUR.
49	15.8.16	11:55	220 KV I.P.- RPH CKT-I	15.8.16	12:23	AT I.P. CKT. TRIPPED ON DIST PROT, ZONE-I, 86ABC. AT RPH CKT. DID NOT TRIP.
50	15.8.16	11:55	220 KV I.P.- RPH CKT-II	15.8.16	12:23	AT I.P. CKT. TRIPPED ON DIST PROT, ZONE-I, 86ABC. AT RPH CKT. DID NOT TRIP.
51	15.8.16	14:38	220KV GOPALPUR-MANDOLACKT-I	15.8.16	15:04	AT GOPALPUR CKT. DID NOT TRIP. AT MANDOLA CKT. TRIPPED ON DIST PROT, DIST 18.77KM, YB PHASE.
52	15.8.16	16:31	220KV GEETA COLONY-PATPARGANJ CKT -II	15.8.16	16:50	AT GEETA COLONY : ACTIVE GROUP-I, TRIP PHASE ABC, DIST PROT, ZONE-II, DIST 4.882KMS. AT PATPARGANJ : CKT. DID NOT TRIP.
53	15.8.16	16:31	220 KV PATPARGANJ - I.P. CKT-I	15.8.16	16:50	AT I.P.: 86, 186, DIST PROT, ZONE-I, TRIP PHASE ABC. AT PATPARGANJ : CKT. DID NOT TRIP.
54	15.8.16	16:31	220KV GEETA COLONY-PATPARGANJ CKT-I	15.8.16	16:50	AT GEETA COLONY : ACTIVE GROUP-I, TRIP PHASE ABC, DIST PROT, ZONE-II, DIST 4.882KMS. AT PATPARGANJ : CKT. DID NOT TRIP.
55	15.8.16	19:50	LODHI RD 220/33KV 100MVA TX-I	16.8.16	15:32	TR. TRIPPED ON DIST PROT, AUTO RECLOSE, 80DC-1, 80-DC-2.
56	15.8.16	23:15	OKHLA 33KV MASJID MOTH CKT	16.8.16	11:10	CKT. TRIPPED ON O/C, E/F. PROBLEM IN CIRCUIT BREAKER AT OKHLA.
57	15.8.16	23:15	OKHLA 220/33KV 100MVA TX-IV	15.8.16	23:27	33KV I/C TRIPPED ON 86, E/F.
58	15.8.16	23:15	OKHLA 220/33KV 100MVA TX-III	15.8.16	23:27	33KV I/C TRIPPED ON 86, E/F.
59	16.8.16	10:00	NARAINA 220/33KV 100MVA TX-III	16.8.16	10:24	TR. TRIPPED ON 64 RHV & RLV.
60	16.8.16	16:49	220KV GEETA COLONY-PATPARGANJ CKT -II	16.8.16	16:58	AT GEETA COLONY CKT. TRIPPED ON DIST PROT, DIST 2.417KM. AT PATPARGANJ CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.694KM, 186.
61	18.8.16	16:10	220KV WAZIRABAD-GEETA COLONY CKT-I	18.8.16	16:44	AT GEETA COLONY CKT. TRIPPED ON ACTIVE GROUP-I, DIST PROT, ZONE-I, DIST 2.488KM. AT WAZIRABAD CKT .TRIPPED ON DIST PROT, ZONE-I, DIST 2.9KM.
62	19.8.16	11:03	220KV GEETA COLONY-PATPARGANJ CKT-I	19.8.16	11:09	AT PATPARGANJ CKT. TRIPPED ON 186, TRIP ABC. AT GEETA COLONY CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.226KM.
63	19.8.16	16:55	NARAINA 220/33KV 100MVA TX-III	19.8.16	17:32	33KV I/C-III TRIPPED WITHOUT INDICATION.
64	19.8.16	17:10	NARAINA 220/33KV 100MVA TX-I	19.8.16	17:32	33KV I/C-I TRIPPED ON 86.
65	19.8.16	17:10	NARAINA 220/33KV 100MVA TX-II	19.8.16	17:32	33KV I/C-I TRIPPED ON 86B, O/C, E/F.
66	20.8.16	12:45	220KV KANJHAWALA-NAJAFGARH CKT	20.8.16	13:01	AT NAJAFGARH CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 12.69KM, TRIP PHASE ABC. AT KHANJAWALA CKT. TRIPPED ON DIST PROT, Y & B PHASE.
67	20.8.16	19:10	220KV GAZIPUR - BTPS CKT	20.8.16	22:21	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.2KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
68	21.8.16	12:15	NARAINA 220/33KV 100MVA TX-III	21.8.16	17:42	TR. TRIPPED ON 86A, BUCHOLZ, 30ABC. I/C TRIPPED ON SUPERVISION RELAY.
69	21.8.16	15:58	WAZIRABAD 66/11KV, 20MVA TX-III	21.8.16	16:08	TR. TRIPPED ON E/F.
70	23.8.16	15:24	HARSH VIHAR 400/220KV 315MVA ICT-III	23.8.16	17:22	ICT TRIPPED ON OLTC, SURGE RELAY. 86.
71	23.8.16	15:26	220KV KANJHAWALA-NAJAFGARH CKT-2	23.8.16	15:36	AT KHANJAWALA CKT. TRIPPED ON DIST PROT., ZONE-I, DIST 5.1KM. AT NAJAFGARH CKT. DID NOT TRIP.
72	23.8.16	17:22	NARAINA 220/33KV 100MVA TX-II	23.8.16	22:22	TR. TRIPPED ON 30AB, PROTECTION GROUP 86A.
73	24.8.16	10:04	220KV PRAGATI - SARITA VIHAR CKT-II	24.8.16	12:19	AT PRAGATI CKT. TRIPPED ON DIST PROT, ZONE-II, 186, AT SARITA VIHAR CKT. TRIPPED ON DIST PROT, ZONE-I, DIST .365KM, 186A.
74	24.8.16	15:11	NARAINA 220/33KV 100MVA TX-II	24.8.16	15:36	TR. TRIPPED ON 86A, TROUBLE ABC, 30B.
75	24.8.16	18:01	220KV GOPALPUR-MANDOLACKT-I	24.8.16	18:30	AT GOPALPUR CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 22.7KM. AT MANDOLA CKT. TRIPPED ON DIST PROT, DIST 21.4KM.
76	24.8.16	19:01	220KV GOPALPUR-MANDOLACKT-I	24.8.16	21:20	AT MANDOLA CKT. TRIPPED ON DIST PROT, DIST 21.18KM. AT GOPALPUR CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 22.7KM.
77	26.8.16	10:51	220KV NARELA - MANDOLA CKT-I	26.8.16	14:25	AT NARELA CKT. TRIPPED ON DIST PORT, ZONE-I, DIST 1.26KM.
78	26.8.16	14:09	400KV MANDOLA-BAWANA CKT-I	26.8.16	17:55	AT BAWANA CKT. TRIPPED ON E/F, DIST PROT, ZONE-I, DIST 3.382KM. AT MANDOLA CKT. TRIPPED ON DIST PROT, DIST 18.31KM.
79	26.8.16	17:10	220KV MEHRAULI - VASANT KUNJ CKT.-I	26.8.16	19:50	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, R PHASE. AT VASANT KUNJ CKT. DID NOT TRIP.
80	27.8.16	16:36	HARSH VIHAR 220/66KV 160MVA ICT-2	27.8.16	16:47	TR. TRIPPED WHILE CHECKING DC LEAKAGE ON 86, REF. I/C TRIPPED ON 86LB.
81	28.8.16	12:36	220KV PRAGATI - SARITA VIHAR CKT - I	28.8.16	12:39	AT SARITA VIHAR : TRIPPED ON ABC PHASE, DIST PROT, ZONE-I, O/C, E/F. AT PRAGATI : CKT. DID NOT TRIP.
82	28.8.16	12:36	220KV PRAGATI - PARK STREET CKT-II	28.8.16	12:56	AT SARITA VIHAR : TRIPPED ON ABC PHASE, DIST PROT, ZONE-II, DIST. 12.25KMS. 186, AUTO RECLOSE. AT PRAGATI : 186, 186, DIST PROT, TRIP PHASE ABC.
83	28.8.16	16:08	HARSH VIHAR 220/66KV 160MVA ICT-2	28.8.16	16:23	66KV I/C-II TRIPPED ON DIRECTIONAL INDICATION.
84	29.8.16	11:28	220KV MEHRAULI - VASANT KUNJ CKT.- II	29.8.16	12:02	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, 186A&B. AT VASANT KUNJ CKT. DID NOT TRIP.
85	29.8.16	11:35	NAJAFGARH 66KV JAFFERPUR CKT-I	29.8.16	13:50	SHUTDOWN OF CKT. TO ATTEND B PHASE ISOLATOR COMMON JUMPER.
86	29.8.16	11:40	MASJID MOTH 220/33KV 100MVA TX-II	29.8.16	11:50	33KV I/C-II TRIPPED ON O/C, E/F, 86.
87	29.8.16	14:13	220KV MEHRAULI - BTPS CKT. - I	29.8.16	15:03	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.040KM. AT BTPS CKT. TRIPPED ON B PHASE, DIST PROT, DIST 16.9KM.
88	29.8.16	17:31	220KVBAWANA-ROHINI CKT-II	29.8.16	19:10	AT BAWANA CKT. TRIPPED ON DIST PROT, R PHASE. AT ROHINI CKT. DID NOT TRIP.
89	29.8.16	19:53	BAWANA 400/220KV 315MVA ICT-IV	30.8.16	12:47	ICT TRIPPED ON DIFFERENTIAL PROT. RELAY & PRV RELAY.
90	29.8.16	23:11	400KV MANDOLA-BAWANA CKT-I	30.8.16	0:09	AT BAWANA CB NO. 1552 & CB NO. 1652 TRIPPED ON 186A&B AND CB 1652 ON DIST PROT, ZONE-I, DIST 23.58KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
91	30.8.16	4:11	NARAINA 220/33KV 100MVA TX-III	30.8.16	9:07	TR. TRIPPED ON 86B, LV 64 RLV, I/C TRIPPED ON INTERTRIP.
92	30.8.16	10:52	400KV BALLABHGARH-BAMNAULI CKT-I	30.8.16	12:50	AT BAMNAULI CKT TRIPPED ON D/P,Z-1.RY&B-PH,DIST-7.19KM.
93	31.8.16	7:43	PATPARGANJ 220/66KV 100MVA TX-II	31.8.16	13:40	TX TRIPPED ON REF,86,PSC AND 66KV I/C-2 TRIPPED WITHOUT INDICATION.
94	31.8.16	9:47	DSIIDC BAWANA 220/66KV 100MVA TX-III	31.8.16	12:20	TX TRIPPED ON DIFFERENTIAL PROTECTION,86.
95	31.8.16	10:15	INDRAPRASTHA POWER 220/33KV 100MVA TX-I	31.8.16	10:47	33KV I/C-1 OF TX TRIPPED ON O/C,E/F,R&B-PH,86. MONKEY ELECTROCUTED IN YARD.
96	31.8.16	10:15	INDRAPRASTHA POWER 220/33KV 100MVA TX-II	31.8.16	10:47	TX TRIPPED WITHOUT INDICATION.
97	31.8.16	10:15	INDRAPRASTHA POWER 33KV CONNAUGHT PLACE CKT (BAY-42)	31.8.16	16:43	CKT TRIPPED DUE TO MONKEY ELECTROCUTED IN YARD. R-PH ISOLATOR OF CKT DAMAGED.
98	31.8.16	15:40	PAPPANKALAN-I 66KV 20MVAR CAP. BANK	31.8.16	17:50	CAP BANK TRIPPED WITHOUT INDICATION.
99	31.8.16	17:31	PRAGATI 220/66KV 160MVA TX-II	31.8.16	19:01	TX TRIPPED ON REF,86 AND I/C-2 TRIPPED ON E/F.
100	31.8.16	22:54	PAPPANKALAN-I 220/66KV 100MVA TX-I	31.8.16	23:12	66KV I/C-1 TRIPPED WITHOUT INDICATION.
101	31.8.16	15:40	PAPPANKALAN-I 66KV 20MVAR CAP. BANK	31.8.16	17:50	CAP BANK TRIPPED WITHOUT INDICATION.
102	31.8.16	17:31	PRAGATI 220/66KV 160MVA TX-II	31.8.16	19:01	TX TRIPPED ON REF,86 AND I/C-2 TRIPPED ON E/F.
103	31.8.16	22:54	PAPPANKALAN-I 220/66KV 100MVA TX-I	31.8.16	23:12	66KV I/C-1 TRIPPED WITHOUT INDICATION.

19.6 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH SEPTEMBER 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	1.9.16	0:15	220 KV I.P.- RPH CKT-I	1.9.16	0:22	AT RPH CKT. TRIPPED ON 186A, 186B, 152X, 186 ALL PHASE. AT IP CKT. DID NOT TRIP.
2	1.9.16	0:15	220 KV I.P.- RPH CKT-II	1.9.16	0:22	AT RPH CKT. TRIPPED ON 186A, 186B, 152X, 186 ALL PHASE. AT IP CKT. DID NOT TRIP.
3	1.9.16	7:16	SUBZI MANDI 33/11KV, 16MVA TX-II	1.9.16	7:30	TR. TRIPPED ON 86, DIFFERENTIAL 87.
4	1.9.16	17:41	KANJHAWALA 220/66KV 100MVA TX-I	12.9.16	21:35	TR. TRIPPED ON DIFFERENTIAL, E/F LV.
5	3.9.16	13:28	220KVBAWANA-ROHINI-2 CKT-II	3.9.16	13:44	AT BAWANA CKT. TRIPPED ON 186A&B, AUTO RECLOSE. AT ROHINI -II CKT. DID NOT TRIP.
6	3.9.16	13:43	220KV BAMNAULI-NAJAFGARH CKT-II	3.9.16	13:49	AT BAMNAULI CKT. TRIPPED ON 186. AT NAJAFGARH CKT. DID NOT TRIP.
7	3.9.16	14:47	220KV MEHRAULI - BTPS CKT. - II	3.9.16	17:15	AT MEHRAULI CKT TRIPPED ON DIST PROT, ZONE-I, DSIT 419MTS, AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 16.9KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
8	3.9.16	17:35	220KV BAWANA-ROHINI-2 CKT-II	3.9.16	17:49	AT BAWANA CKT. TRIPPED ON 186A&B., AUTO RECLOSE LOCKOUT.
9	3.9.16	19:11	220KV PRAGATI - PARK STREET CKT-I	4.9.16	0:30	AT PRAGATI CKT. TRIPPED ON DIRECTIONAL E/F, 67NX, 50A. AT PARK STREET SUPPLY FAILED
10	3.9.16	19:11	PARKSTREET 220/33KV 100MVA TX-I	3.9.16	19:41	TR. TRIPPED ON O/C, 51N, E/F 86B RELAY.
11	3.9.16	19:11	PARKSTREET 220/33KV 100MVA TX-II	3.9.16	19:41	TR. TRIPPED ON O/C, 51N, E/F 86B RELAY.
12	4.9.16	0:04	NARAINA 220/33KV 100MVA TX-I	4.9.16	15:38	TR. TRIPPED ON BUCH, 30G, TROUBLE ALARM, I/C TRIPPED ON 86, R PHASE, O/C.
13	4.9.16	0:08	NARAINA 220/33KV 100MVA TX-III	4.9.16	0:23	TR. TRIPPED ON TRIP SUSPENSION RELAY.
14	4.9.16	0:08	NARAINA 220/33KV 100MVA TX-II	4.9.16	0:23	TR. TRIPPED ON 86, O/C.
15	4.9.16	6:35	PAPPANKALAN-I 220/66KV 100MVA TX-III	05.04.17	17:36	TR. TRIPPED ON DIFFERENTIAL, 86A&B, 30A(BUCHHOLZ), 30D (BUCHHOLZ ALARM), 30H (SUDDEN PRESSURE), 30J (PRESSURE RELEASE TRIP), LEAKAGE IN R&Y PHASE HV BUSHING AND R&Y PHASE LV BUSHING.
16	4.9.16	14:19	220KV GAZIPUR - BTPS CKT	4.9.16	17:35	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 16.8KM.
17	5.9.16	3:33	NARELA 66/33KV, 30MVA TX	5.9.16	14:43	TR. TRIPPED ON BUCHOLZ, PRV RELAY.
18	5.9.16	10:15	GOPALPUR 33KV 10MVAR CAP. BANK-II	5.9.16	14:34	CAPACITOR BANK TRIPPED ON E/F.
19	6.9.16	19:43	400KV BALLABHGARH-BAMNAULI CKT-II	6.9.16	19:55	CKT. TRIPPED ON DIST PROT, ZONE-III, 186, RYB PHASE.
20	6.9.16	19:58	220KV KANJHAWALA-NAJAFGARH CKT	6.9.16	20:30	AT KANJHAWALA CKT TRIPPED ON 86A. CKT DID NOT TRIP AT NJF.
21	6.9.16	22:05	220KV KANJHAWALA-NAJAFGARH CKT	6.9.16	22:22	AT KANJHAWALA CKT TRIPPED ON D/P.Z-1, DIST-5.1 KM. CKT DID NOT TRIP AT NJF.
22	7.9.16	6:50	INDRAPRASTHA POWER 33KV NIZAMUDDIN CKT (BAY-13)	7.9.16	22:02	BUS ISOLATOR INSULATOR DAMAGED.
23	7.9.16	6:50	INDRAPRASTHA POWER 220/33KV 100MVA TX-III	7.9.16	10:00	TR. TRIPPED ON 95 ABC WITH 33KV I/C-III TRIPPED ON 86 & 51NX.
24	7.9.16	6:50	INDRAPRASTHA POWER 220/33KV 100MVA TX-I	7.9.16	7:25	33KV I/C-I TRIPPED ON 86 & 51 NX.
25	7.9.16	13:20	220KV MEHRAULI - BTPS CKT. - II	7.9.16	14:05	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 15.3KM, R PHASE, E/F. AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 6.523KM.
26	9.9.16	13:40	PATPARGANJ 220/33KV 100MVA TX-IV	9.9.16	14:04	I/C-IV TRIPPED ON 186, E/F.
27	9.9.16	13:40	PATPARGANJ 220/33KV 100MVA TX-III	9.9.16	14:04	I/C-III TRIPPED ON O/C.
28	9.9.16	13:40	PATPARGANJ 220/33KV 100MVA TX-I	9.9.16	14:04	I/C -I TRIPPED ON O/C, E/F.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
29	10.9.16	10:58	220KV GEETA COLONY- PATPARGANJ CKT -II	10.9.16	15:13	AT GEETA COLONY CKT. TRIPPED ON O/C, TRIP PHASE ABC. AT PATPARGANJ CKT. TRIPPED ON DIST PROT, ZONE-I, 186.
30	11.9.16	10:47	PARKSTREET 220/66KV 100MVA TX-II	11.9.16	12:45	TR. TRIPPED ON 86A, DIFFERENTIAL RELAY, 30A, BUCH.
31	11.9.16	13:14	220KV MUNDKA-KANJHAWALA CKT	11.9.16	14:13	AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-I, R PHASE DIST 13.12KM.
32	11.9.16	14:22	220KV BAMNAULI-NARAINA CKT-II	11.9.16	14:32	AT NARAINA CKT TRIPPED ON 95B, 51N.
33	11.9.16	14:22	NARAINA 220/33KV 100MVA TX-II	11.9.16	14:35	TR. TRIPPED ON 86.
34	11.9.16	20:43	PARKSTREET 220/33KV 100MVA TX-II	30.03.17	19:29	TR. PUT OFF DUE TO RISE IN OIL TEMPERATURE.
35	12.9.16	10:00	MASJID MOTH 220/33KV 100MVA TX-II	13.9.16	20:15	I/C TRIPPED ON 86.
36	12.9.16	10:00	MASJID MOTH 33 KV SHIVALIK	13.9.16	20:15	Y PHASE POLE CB OC KT. DAMAGED AND OIL CT LEAKAGE IN CT.
37	13.9.16	0:03	220KV GOPALPUR-MANDOLACKT-II	13.9.16	0:38	AT GOPALPUR CKT. TRIPPED ON DIST PROT, ZONE-I
38	13.9.16	12:26	220KV GEETA COLONY- PATPARGANJ CKT -II	13.9.16	12:40	AT GEETA COLONY CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.87KM. AT PATPARGANJ CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.708KM, E/F., 86.
39	13.9.16	19:17	BAMNAULI 400/220KV 500MVA ICT-II	13.9.16	19:37	LOCK OUT RELAY APPEAR ON THE BREAKER OF THE CKT.
40	14.9.16	14:46	220KV BAWANA-SHALIMARBAGH CKT-II	14.9.16	23:18	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 0.34KM, AT SHALIMARBAGH CKT. DID NOT TRIP.
41	14.9.16	15:40	220KV MEHRAULI - BTPS CKT. - II	14.9.16	16:15	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 13.719KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 3.1KM.
42	14.9.16	18:02	MASJID MOTH 220/33KV 100MVA TX-II	14.9.16	20:30	TR. PUT OFF DUE TO SPARKING IN Y PHASE BUSHING CLAMP.
43	15.9.16	11:08	220KV BAMNAULI - DIAL CKT-I	15.9.16	11:41	AT BAMNAULI: DIST PROT, A PHASE, ZONE-I, DIST 5.2KM. ZONE-I, FAULT CURRENT 10.95KA AT DIAL : DIST PROT, ZONE-I, DIST 9.5KM, R PH, LINE DIFFERENTIAL, FAULT CURRENT 7.95KA
44	15.9.16	11:08	400KV BALLABHGARH-BAMNAULI CKT-II	15.9.16	12:13	AT BAMNAULI: DIST PROT, RYB PHASE, ZONE-I, 186, 186. AT BALLABGARH : CKT. DID NOT TRIP.
45	16.9.16	4:52	400KV BALLABHGARH-BAMNAULI CKT-I	16.9.16	7:29	AT BAMNAULI: DIST PROT, RYB PHASE, ZONE-I, 186, A &B. AT BALLABGARH : DIST PROT, ZONE-II, MAIN-1, DIST 53KMS. , MAIN - 2 , DIST 54.8KMS, B PHASE TO GROUND FAULT, CURRENT 7.5KAMPS.
46	16.9.16	4:52	400KV BALLABHGARH-BAMNAULI CKT-II	16.9.16	5:07	AT BAMNAULI: DIST PROT, RYB PHASE, ZONE-I, 186, A &B. AT BALLABGARH : CKT. DID NOT TRIP.
47	16.9.16	11:06	220KV MUNDKA-NAJAFGARH CKT	16.9.16	11:34	AT MUNDKA CKT. TRIPPED ON 86, AUTO RE CLOSE. AT NAJAFGARH CKT. TRIPPED ON DIST PROT, ZONE-I, 86.
48	16.9.16	12:17	220KV BAMNAULI-PAPPANKALAN-II CKT-I	16.9.16	12:47	AT PAPPANKALAN -II CKT. TRIPPED ON DIST PROT, ZONE-I, BN PHASE.
49	16.9.16	12:36	400KV BALLABHGARH-BAMNAULI CKT-II	16.9.16	14:05	AT BAMNAULI CKT. TRIPPED ON 85LO, 186A&B, DIST PROT,DIST 57.17KM. AT BALLABGARH CKT. TRIPPED ON R PHASE, E/F, DIST PROT, DIST 6.3KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
50	17.9.16	12:44	PARKSTREET 220/66KV 100MVA TX-II	17.9.16	17:25	TR. TRIPPED ON E/F, 51N, 86.
51	17.9.16	18:13	400KV BALLABHGARH-BAMNAULI CKT-II	17.9.16	18:23	AT BAMNAULI: DIST PROT, RYB PHASE, 186, A&B. AT BALLABGARH : CKT. DID NOT TRIP.
52	17.9.16	18:13	400KV BALLABHGARH-BAMNAULI CKT-I	18.9.16	2:13	AT BAMNAULI: DIST PROT, RYB PHASE, ZONE-I, ZONE-IV, 186, A&B. AT BALLABGARH : DIST. PROT., ZONE-II & III, DIST 100%. (B -PH LA FOUND DAMAGED IN 400KV BAMNAULI YARD.)
53	17.9.16	18:13	220KV MEHRAULI - BTPS CKT. - II	17.9.16	22:12	AT BTPS : E/F, R- PH, DIST PROT, ZONE-I, 4.2KM. AT MEHRAULI : DIST PROT, ZONE-I, 11.28 KM, (BOTTOM PHASE JUMPER SNAPPED AT TOWER NO.19.)
54	18.9.16	10:32	220KV MEHRAULI - VASANT KUNJ CKT. - II	18.9.16	11:52	AT MEHRAULI CKT. TRIPPED ON 186, E/F, DIST PROT, DIST 2.78KM. AT VASANT KUNJ CKT. DID NOT TRIP.
55	18.9.16	12:57	220KV MEHRAULI - BTPS CKT. - I	18.9.16	22:53	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 9.9KM. AT MEHRAULI CKT. DID NOT TRIP.
56	19.9.16	11:17	220KV MEHRAULI - BTPS CKT. - II	19.9.16	11:56	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 5.195KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 14.2KM.
57	19.9.16	12:46	220KV MEHRAULI - BTPS CKT. - II	19.9.16	19:30	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 13.86KM. AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 4.2KM.
58	20.9.16	5:27	NARAINA 33KV KIRBI PLACE CKT-I	20.9.16	11:12	CKT. TRIPPED ON LOW GAS PRESSURE ON CB.
59	20.9.16	11:50	220KV GAZIPUR-PATPARGANJ CKT	20.9.16	12:10	AT PATPARGANJ CKT. TRIPPED ON 186. AT GAZIPUR CKT. DID NOT TRIP.
60	20.9.16	12:26	220KV BAWANA - KANJHAWALA CKT-2	20.9.16	16:43	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.7KM. AT KHANJAWALA CKT. DID NOT TRIP.
61	20.9.16	16:15	220KV GOPALPUR-MANDOLACKT-II	20.9.16	16:33	AT GOPALPUR CKT. TRIPPED ON DIST PROT, ZONE-I, RYB PHASE GEN TRIP. AT MANDOLA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 19.33KM.
62	22.9.16	1:35	INDRAPRASTHA POWER 220/33KV 100MVA TX-II	22.9.16	2:05	I/C TRIPPED ON O/C, E/F.
63	22.9.16	1:35	INDRAPRASTHA POWER 33KV CONNAUGHT PLACE CKT (BAY-42)	30.9.16	19:10	CKT. TRIPPED ON O/C, B&Y PHASE.
64	22.9.16	1:35	INDRAPRASTHA POWER 220/33KV 100MVA TX-I	22.9.16	2:05	I/C TRIPPED ON E/F.
65	22.9.16	13:17	NARAINA 220/33KV 100MVA TX-III	22.9.16	13:19	I/C TRIPPED WHILE OPERATION OF BUS COUPLER.
66	22.9.16	13:17	NARAINA 220/33KV 100MVA TX-II	22.9.16	20:16	I/C TRIPPED ON E/F.
67	22.9.16	17:58	MUNDKA 220/66KV 160MVA TX-II	22.9.16	21:12	TR. TRIPPED ON DIFFERENTIAL , 86.
68	23.9.16	17:13	220KV MEHRAULI - BTPS CKT. - I	23.9.16	22:26	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 4.496KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 12.1KM.
69	23.9.16	20:45	GOPALPUR 220/33KV 100MVA TX-III	23.9.16	21:04	33KV I/C -III TRIPPED ON O/C.
70	23.9.16	20:45	GOPALPUR 33KV WAZIRABAD-II	24.9.16	20:35	TRIPPED ON E/F, 86. R&Y PHASE BREAKER DAMAGED.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
71	26.9.16	12:57	220KV BAMNAULI - DIAL CKT-II	26.9.16	13:20	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 4.127KM. AT DIAL CKT. TRIPPED ON MAIN-I, DIFFERENTIAL TRIP.
72	26.9.16	13:16	220KV GAZIPUR - BTPS CKT	26.9.16	16:20	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, E/F, DIST 16.1KM.
73	27.9.16	22:58	PATPARGANJ 33/11KV, 20MVA TX	27.9.16	23:15	I/C TRIPPED ON O/C, E/F.
74	27.9.16	23:39	PATPARGANJ 33/11KV, 20MVA TX	28.9.16	2:50	I/C TRIPPED ON O/C, E/F.
75	28.9.16	11:10	220KV NARELA - MANDOLA CKT-I	28.9.16	15:53	AT NARELA CKT. TRIPPED ON DIST PROT, DIST 4.8KM, 86. AT MANDOLA CKT. TRIPPED ON DIST PROT, DIST 16KM.
76	28.9.16	13:42	RIDGE VALLEY 220/66KV 160MVA TX-I	28.9.16	16:15	TR. TRIPPED ON 86A&B. 66KV I/C TRIPPED ON 86A&B.
77	28.9.16	17:30	220KV MEHRAULI - BTPS CKT. - II	28.9.16	21:03	AT BTPS CKT. TRIPPED ON DIST PROT. ZONE-I, DIST 10.21KM., E/F. R PHASE. AT MEHRAULI CKT. TRIPPED ON DIST PROT., ZONE-I, DIST 8.361KM.
78	29.9.16	5:15	OKHLA 33KV ALAKNANDA CKT-I	29.9.16	6:29	CKT. TRIPPED ON LOW GAS PRESSURE.
79	29.9.16	12:35	220KV SARITA VIHAR - BTPS CKT.-II	29.9.16	14:18	AT SARITA VIHAR CKT. TRIPPED ON DIST PRO, ZONE II & III, A&B PHSE, DIST 3.62KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 0.6KM. R&Y PHASE.
80	30.9.16	12:25	400KV DADRI-HARSH VIHAR CKT-I	30.9.16	13:08	AT HARSH VIHAR CKT. TRIPPED ON DIST PROT, ZONE-I, B PHASE, 86.

19.7 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH OCTOBER 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	2.10.16	12:08	MASJID MOTH 220/33KV 100MVA TX-II	2.10.16	12:52	I/C TRIPPED ON O/C E/F, 86.
2	2.10.16	15:25	220KV OKHLA - BTPS CKT. - II	2.10.16	15:35	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE -I, DIST 3.0KM. B PHASE E/F.
3	2.10.16	18:10	MASJID MOTH 220/33KV 100MVA TX-I	2.10.16	22:10	33KV I/C TRIPPED ON ON DIRECTIONAL O/C, E/F, MASTER RELAY 86.
4	3.10.16	10:45	MASJID MOTH 220/33KV 100MVA TX-I	3.10.16	13:10	33KV I/C-I TRIPPED ON O/C, E/F, 86.
5	3.10.16	13:12	220KV MEHRAULI - VASANT KUNJ CKT.- II	3.10.16	16:45	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-II, B PHASE. AT VASANT KUNJ CKT. TRIPPED ON R PHASE, 186.
6	3.10.16	13:40	MASJID MOTH 220/33KV 100MVA TX-I	3.10.16	17:50	I/C TRIPPED ON O/C, E/F.
7	3.10.16	16:15	220KV WAZIRABAD - KASHMERE GATE CKT-I	3.10.16	18:38	AT WAZIRABAD CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.785KM.
8	4.10.16	9:10	INDRAPRASTHA POWER 220/33KV 100MVA TX-II	4.10.16	9:22	TR. TRIPPED ON B PHASE, O/C, 51B., R PHASE. 33KV I/C TRIPPED ON O/C, R PHASE.
9	4.10.16	12:25	PRAGATI 220/66KV 160MVA TX-I	4.10.16	16:54	TR. TRIPPED ON OLTC, SPR TRIP, 30A, 30D, BUCHHOLZ TRIP.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
10	6.10.16	13:54	220KV MEHRAULI - VASANT KUNJ CKT.- II	6.10.16	14:13	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-II, R PHASE TRIP. AT VASANT KUNJ CKT. WAS IN OFF POSITION.
11	6.10.16	14:34	220KVBAWANA-ROHINI CKT-II	6.10.16	18:41	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 10.18KM, R PHASE,186A&B. AT ROHINI CKT. DID NOT TRIP.
12	7.10.16	11:10	220KV MEHRAULI - VASANT KUNJ CKT.- II	7.10.16	17:36	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 4.281KM, AT VASANT KUNJ CKT. DID NOT TRIP.
13	7.10.16	11:18	220KV OKHLA - BTPS CKT. - II	7.10.16	11:26	AT BTPS CKT. TRIPPED ON DIST PROT. ZONE-I, DIST 5.2KM. AT OKHLA CKT. DID NOT TRIP.
14	7.10.16	11:47	220 KV PATPARGANJ - I.P. CKT-II	7.10.16	12:01	AT I.P. CKT. TRIPPED ON DIST PROT, ZONE-II, ABC PHASE, 86, 186. AT PATPARGANJ CKT. TRIPPED ON 186.
15	7.10.16	12:02	220KV BAWANA-SHALIMARBAGH CKT-II	7.10.16	12:41	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 8.891KM. AT SHALIMARBAGH CKT. DID NOT TRIP.
16	7.10.16	13:14	220KV DIAL-MEHRAULI CKT-I	7.10.16	13:24	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, II, III. AT DIAL CKT. DID NOT TRIP.
17	7.10.16	13:36	220KV MEHRAULI - BTPS CKT. - I	7.10.16	14:08	AT MEHRAULI CKT .TRIPPED ON 186, DIST PROT, ZONE-I, DIST 9.651KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 14.3KM, B PHASE.
18	8.10.16	2:32	220KV BAWANA - KANJHAWALA CKT - 1	8.10.16	3:07	AT BAWANA CKT. TRIPPED ON DIST PROT, DIST 10.5KM. AT KHANJAWALA CKT. TRIPPED ON DIST PROT, ZONE-II.
19	8.10.16	8:16	220 KV PATPARGANJ - I.P. CKT-II	8.10.16	13:30	AT I.P. CKT. TRIPPED NO 186, 86X.DIRECTIONAL EARTH FAULT. AT PAPPARGANJ CKT. DID NO TRIP, CVT AVAILABLE AT I.P.
20	8.10.16	13:05	220KV GAZIPUR - BTPS CKT	8.10.16	18:07	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 0.37KM, R PHASE.
21	8.10.16	13:25	220KV SARITA VIHAR - BTPS CKT.-I	8.10.16	14:02	AT SARITA VIHAR : TRIPPED ON 186 A &B. AT BTPS : B-PH ,E/F ,DIST.PROT. ,DIST-6 KM .
22	8.10.16	13:26	220KV SARITA VIHAR - BTPS CKT.-II	8.10.16	19:15	AT SARITA VIHAR : CKT DID NOT TRIP. AT BTPS : CKT MANUALLY MADE OFF .
23	8.10.16	23:26	220KV MUNDKA-NAJAFGARH CKT	9.10.16	0:22	AT MUNDKA CKT. TRIPPED ON 86A,R,Y PHAES.
24	9.10.16	12:27	220KV MUNDKA-KANJHAWALA CKT	9.10.16	12:47	AT KHANJAWALA CKT. TRIPPED ON ABC PHASE. AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-I, POLE DISCREPANCY.
25	9.10.16	12:28	220KV DIAL-MEHRAULI CKT-II	9.10.16	13:51	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-3, DIST 7.55KM, 186. AT DIAL CKT. TRIPPED ON DIST PROT, ZONE-I, MAIN-1.
26	9.10.16	12:50	220KV MUNDKA-KANJHAWALA CKT	9.10.16	16:17	AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-II, DISTANCE 15.3KM. AT KHANJAWALA CKT. DID NOT TRIPPED.
27	9.10.16	14:16	MASJID MOTH 220/33KV 100MVA TX-II	9.10.16	18:55	TR. TRIPPED ON DIFFERENTIAL, O/C, E/F.
28	14.10.16	11:12	220KV MUNDKA-KANJHAWALA CKT	14.10.16	11:56	AT MUNDKA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 14.93KM. AT KHANJAWALA CKT. DID NOT TRIP.
29	15.10.16	7:05	SHALIMAR BAGH 220/33KV 100MVA TX-III	15.10.16	16:05	TR. TRIPPED ON O/C, E/F, 86.
30	19.10.16	7:40	VASANT KUNJ 66/11KV, 20MVA TX-I	19.10.16	10:50	TR. TRIPPED ON 30D, OLTC, 86, TROUBLE ALARM.
31	19.10.16	16:25	VASANT KUNJ 66/11KV, 20MVA TX-I	19.10.16	19:35	TR. PUT OFF DUE TO FIRE.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
32	19.10.16	16:48	WAZIRPUR 220/33KV 100MVA TX-I	20.10.16	18:04	TR. TRIPPED ON TROUBLE ALARM, DIFFERENTIAL RELAY, B PHASE, GROUP A, 86A, 86B, BUCHHOLZ.
33	19.10.16	20:42	220KV KANJHAWALA-NAJAFGARH CKT	19.10.16	21:55	AT KHANJAWALA CKT. TRIPPED ON DIST PROT, ZONE-II, R&B PHASE. AT NAJAFGARH CKT. DID NOT TRIP.
34	19.10.16	20:42	220KV BAMNAULI-NAJAFGARH CKT-I	19.10.16	23:17	AT BAMNAULI CKT. TRIPPED ON 186A&B, DIST PROT, ZONE-I, DIST 5.529KM. AT NAJAFGARH CKT. TRIPPED ON DIST PROT, ZONE-I, R PHASE, 186.
35	19.10.16	20:42	400KV BALLABHGARH-BAMNAULI CKT-II	19.10.16	21:29	AT BAMNAULI CKT. TRIPPED ON 186, A&B PHASE, DIST PROT, ZONE-I.
36	20.10.16	10:57	MEHRAULI 66/11KV, 20MVA TX-II	20.10.16	12:49	TR. TRIPPED ON DIFFERENTIAL PROTECTION AND 86 & 95C.
37	20.10.16	12:59	HARSH VIHAR 220/66KV 160MVA ICT-3	20.10.16	13:22	66KV I/C-III TRIPPED ON 86.
38	20.10.16	12:59	HARSH VIHAR 220/66KV 160MVA ICT-2	20.10.16	13:22	66KV I/C-II TRIPPED ON 86.
39	22.10.16	13:05	220KV MEHRAULI - BTPS CKT. - II	22.10.16	14:40	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 13.63KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 3.4KM.
40	22.10.16	16:10	GAZIPUR 66/11KV, 20MVA TX-II	22.10.16	18:47	TR. TRIPPED ON 86, DIFFERENTIAL B PHASE.
41	24.10.16	21:45	220KV PRAGATI - SARITA VIHAR CKT - I	24.10.16	22:50	AT SARITA VIHAR CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 3.13KM, 186A, 186B. AT PRAGATI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.420KM.
42	24.10.16	23:58	NARELA 220/66KV 100MVA TX-II	25.10.16	7:15	66KV I/C-II TRIPPED WITHOUT INDICATION.
43	25.10.16	16:16	SHALIMAR BAGH 220/33KV 100MVA TX-III	25.10.16	16:24	TR. TRIPPED ON 96.
44	29.10.16	12:05	220KV DIAL-MEHRAULI CKT-II	29.10.16	14:15	AT MEHRAULI CKT .TRIPPED ON ACTIVE GROUP -I, TRIP PHASE ABC. CKT. DID NOT TRIP AT DIAL.
45	29.10.16	12:05	220KV DIAL-MEHRAULI CKT-I	29.10.16	14:15	AT MEHRAULI CKT. TRIPPED ON 64BX. AT DIAL CKT. DID NOT TRIPPED.
46	29.10.16	12:06	400KV BALLABHGARH-BAMNAULI CKT-I	29.10.16	14:03	AT BAMNAULI: CB 252 IS IN LOCK OUT POSITION. AT BALLABGARH : MANUALLY MADE OFF TO ARRANGE SHUTDOWN.
47	29.10.16	12:06	400KV BALLABHGARH-BAMNAULI CKT-II	29.10.16	12:48	AT BAMNAULI: 85LO , 186 A , 186 B AND CKT INTER-TRIPPED. AT BALLABGARH :LBB ,O/C AND E/F.
48	29.10.16	12:12	220KV MUNDKA-NAJAFGARH CKT	29.10.16	13:02	AT MUNDKA CKT. TRIPPED ON 86 A&B. AT NAJAFGARH CKT. DID NOT TRIP.
47	29.10.16	12:06	400KV BALLABHGARH-BAMNAULI CKT-II	29.10.16	12:48	AT BAMNAULI: 85LO , 186 A , 186 B AND CKT INTER-TRIPPED. AT BALLABGARH :LBB ,O/C AND E/F.
48	29.10.16	12:12	220KV MUNDKA-NAJAFGARH CKT	29.10.16	13:02	AT MUNDKA CKT. TRIPPED ON 86 A&B. AT NAJAFGARH CKT. DID NOT TRIP.

19.8 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH NOVEMBER 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	1.11.16	17:30	220KV BAWANA-SHALIMARBAGH CKT-II	1.11.16	17:53	AT SHALIMARBAGH CKT. TRIPPED ON 97AX, BUS BAR PROT. OPERATED. AT BAWANA CKT. DID NOT TRIPPED.
2	1.11.16	17:30	SHALIMAR BAGH 220/33KV 100MVA TX-II	1.11.16	17:37	TR. TRIPPED ON 97AX.
3	1.11.16	17:30	SHALIMAR BAGH 220/33KV 100MVA TX-I	1.11.16	17:37	TR. TRIPPED ON 97AX.
4	2.11.16	15:38	LODHI RD 220/33KV 100MVA TX-II	3.11.16	2:10	TR. TRIPPED ON DIFFERENTIAL, 86.
5	3.11.16	11:14	SARITA VIHAR 220/66KV 100MVA TX-I	3.11.16	12:05	TR. TRIPPED ON 30B, HIGH WINDING TEMP.
6	2.11.16	23:20	220KV BAMNAULI-PAPPANKALAN-I CKT-I	3.11.16	8:40	AT PAPANALAN-I CKT. TRIPPED ON 195.
7	4.11.16	14:10	220KV GAZIPUR - MAHARANIBAGH CKT. -II	4.11.16	17:20	AT MAHARANI BAGH CKT. TRIPPED ON DIST PROT, ZONE-I, GEN TRIP. AT GAZIPUR CKT. TRIPPED ON DIST PROT, ZONE-I, R-Y PHASE.
8	7.11.16	1:00	GAZIPUR 220/66KV 100MVA TX-II	7.11.16	7:10	TR. TRIPPED WITHOUT INDICATION.
9	7.11.16	1:45	220KV PRAGATI - SARITA VIHAR CKT - I	7.11.16	2:45	AT SARITA VIHAR CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 653.7M. AT PRAGARI CKT. TRIPPED N DIST. PROT, ZONE-I, DIST 10.33KM.
10	7.11.16	11:37	220KV DIAL-MEHRAULI CKT-I	7.11.16	13:57	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.539KM. AT DIAL CKT. TRIPPED ON R PHASE LINE DIFFERENTIAL.
11	7.11.16	15:28	220KV GAZIPUR - BTPS CKT	7.11.16	17:50	AT BTPS CKT. TRIPPED ON DIST PROT, DIST 4.3KM, CB OF CKT. WAS OPEN AT GAZIPUR.
12	9.11.16	7:10	KANJHAWALA 220 /66KV 100MVA TX-II	9.11.16	7:17	TR. TRIPPED ON AIR PRESSURE LEAK OUT.
13	11.11.16	3:51	400KV BALLABH GARH-BAMNAULI CKT-I	11.11.16	6:10	AT BAMNAULI CKT. TRIPPED ON 186A&B.
14	12.11.16	3:02	MEHRAULI 66/11KV 20MVA TR. -I	12.11.16	7:17	TR. TRIPPED ON O/C, 11KV I/C TRIPPED ON INTERTRIP.
15	12.11.16	3:02	220KV OKHLA - BTPS CKT. - II	12.11.16	7:17	AT BTPS CKT. TRIPPED ON TEF RELAY, CB NOT READY. AT OKHLA CKT. DID NOT TRIP.
16	14.11.16	1:58	OKHLA 220/33KV 100MVA TX-V	14.11.16	2:44	TR. TRIPPED ON 186 & O/C. I/C -V TRIPPED ON 186, O/C.
17	14.11.16	1:58	OKHLA 220/33KV 100MVA TX-IV	14.11.16	2:44	TR. TRIPPED ON 186. I/C -IV TRIPPED ON 86.
18	14.11.16	1:58	OKHLA 220/33KV 100MVA TX-III	14.11.16	2:44	TR. TRIPPED ON 86, 51N (E/F).
19	17.11.16	12:46	NARAINA 220/33KV 100MVA TX-II	18.11.16	16:20	O/C, E/F RELAY APPEARED ON 33KV I/C-II.
20	17.11.16	14:13	220KV PRAGATI - I.P.CKT - I	17.11.16	18:55	AT PRAGATI CKT. TRIPPED ON DIST PROT,ZONE-I. AT I.P. CKT. TRIPPED ON DIST PROT, ZONE-I,DIST 80.86.
21	17.11.16	14:13	220KV PRAGATI - I.P.CKT - II	17.11.16	18:55	AT PRAGATI CKT. TRIPPED ON 86A, 86B, 86C, DIST PROT. ZONE-II. AT I.P. CKT. TRIPPED ON DIST PROT, ZONE-I.
22	18.11.16	23:10	GOPALPUR 33/11KV, 16MVA TX-I	19.11.16	3:38	I/C-I TRIPPED ON O/C, R&B PHASE.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
23	18.11.16	23:10	GOPALPUR 33/11KV, 16MVA TX-II	19.11.16	4:42	I/C-I TRIPPED ON O/C, R&B PHASE.
24	19.11.16	18:21	SARITA VIHAR 220/66KV 100MVA TX-III	19.11.16	19:15	TR. TRIPPED ON O/C, E/F.
25	20.11.16	3:26	220KV MAHARANIBAGH-TRAUMA CENTER CKT-I	20.11.16	6:05	AT TRAUMA CENTER CKT. TRIPPED ON AUXILLARY RELAY AT MAHARANI BAGH CKT. DID NOT TRIP
26	20.11.16	13:10	220KV BAMNAULI - DIAL CKT-I	20.11.16	14:04	AT BAMNAULI CKT. TRIPPED ON DIST PROT. ZONE-I, 86A&B. AT DIAL CKT. TRIPPED ON DIST PROT, DIST 12.56KM.
27	20.11.16	13:10	400KV BALLABHGARH-BAMNAULI CKT-II	20.11.16	14:04	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, 186A&B.
28	21.11.16	1:18	220KV MAHARANIBAGH-TRAUMA CENTER CKT-I	21.11.16	1:45	AT TRAUMA CENTER CKT. TRIPPED ON 86A, PHASE ABC. AT MAHARANI BAGH CKT. DID NOT TRIP.
29	21.11.16	1:18	220KV MAHARANIBAGH - TRAUMA CENTER CKT-II	21.11.16	1:45	AT MAHARANI BAGH CKT. TRIPPED ON Y&B PHASE. AT TRAUMA CENTER CKT. DID NOT TRIP.
30	21.11.16	13:45	PAPPANKALAN-I 66/11KV, 20MVA TX-III	21.11.16	15:30	TR. TRIPPED ON O/C. 11KV I/C-III TRIPPED ON O/C.
31	24.11.16	16:20	PATPARGANJ 220/33KV 100MVA TX-IV	24.11.16	20:30	TR. TRIPPED ON 51N, 86B.
32	24.11.16	19:33	NAJAFGARH 66/11KV, 20MVA TX-II	25.11.16	14:40	AIR COMPRESSOR JAMMED HENCE TR. PUT OFF.
33	25.11.16	13:27	220 KV PATPARGANJ - I.P. CKT-I	25.11.16	19:13	AT PATPARGANJ CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 3.489KM., 186. AT I.P. CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 153MTS, 186, ABC PHAESE.
34	25.11.16	17:44	220KV GOPALPUR-MANDOLACKT-I	25.11.16	18:55	AT GOPALPUR CKT. DID NOT TRIP. CKT. TRIPPED AT MANDOLA.
35	26.11.16	15:39	PARKSTREET 220/66KV 100MVA TX-II	26.11.16	15:59	TR. TRIPPED ON 86.
36	26.11.16	15:40	220KV GEETA COLONY-PATPARGANJ CKT -II	26.11.16	15:44	AT GEETA COLONY : CKT. TRIPPED ON O/C, B-N PHASE AT PATPARGANJ : CKT. DID NOT TRIP.
37	26.11.16	15:40	PRAGATI 220/66KV 160MVA TX-I	26.11.16	15:59	TR. TRIPPED ON 86.
38	26.11.16	16:10	PRAGATI 220/66KV 160MVA TX-II	26.11.16	16:17	TR. TRIPPED ON 86.
39	26.11.16	16:10	220 KV PATPARGANJ - I.P. CKT-II	26.11.16	19:18	AT PATPARGANJ : CKT. TRIPPED ON E/F, ABC PHASE, 186. AT I.P. : CKT. DID NOT TRIP.
40	26.11.16	16:10	220 KV PATPARGANJ - I.P. CKT-I	26.11.16	18:46	AT PATPARGANJ : CKT. TRIPPED ON E/F, ABC PHASE, 186. AT I.P. : CKT. DID NOT TRIP.
41	28.11.16	14:00	PARKSTREET 220/33KV 100MVA TX-I	28.11.16	17:08	TR. TRIPPED ON BUCHOLZ.
42	29.11.16	6:00	SUBZI MANDI 33/11KV, 16MVA TX-II	29.11.16	10:50	TR. TRIPPED ON BUCHOLZ.
43	29.11.16	10:52	220KV GEETA COLONY-PATPARGANJ CKT -II	29.11.16	11:00	AT GEETA COLONY CKT. TRIPPED ON RYB PHASE, 30E, 86. AT PATPARGANJ CKT .DID NOT TRIP.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
44	29.11.16	13:10	220KV GEETA COLONY- PATPARGANJ CKT -II	29.11.16	16:52	AT GEETA COLONY CKT. TRIPPED ON RYB PHASE, 86, DIST PROT, DIST 4.5KM, AUTO RECLOSE. AT PATPARGANJ CKT. DID NOT TRIP.
45	29.11.16	16:40	SARITA VIHAR 220/66KV 100MVA TX-III	1.12.16	11:45	TR. MADE OFF DUE TO FORMATION OF AETYLENE GAS.
46	30.11.16	2:35	220KV SARITA VIHAR - BTPS CKT.-I	30.11.16	11:34	AT BTPS : CKT. TRIPPED ON DIST PROT, DIST. 1.5KM, ZONE -I, R PHASE. AT SARITA VIHAR : 186A, 186B, AUTO RECLOSE 67N.
47	30.11.16	3:15	220KV SARITA VIHAR - BTPS CKT.-II	30.11.16	11:38	AT BTPS : CKT. TRIPPED ON DIST PROT, DIST 2.29KM. AT SARITA VIHAR : CKT. DID NOT TRIP.
48	30.11.16	3:44	220KV PRAGATI - SARITA VIHAR CKT-II	30.11.16	12:13	AT SARITA VIHAR : CKT. DID NOT TRIP. AT PRAGATI : CKT. TRIPPED ON TRIP PHASE ABC, DIST PROT, /ZONE-II, 86X, 186, 186.
49	30.11.16	3:53	SARITA VIHAR 220/66KV 100MVA TX-II	30.11.16	11:45	TR. TRIPPED ON 87DB, 87TC, 86, 86
50	30.11.16	3:56	220KV PRAGATI - PARK STREET CKT-II	30.11.16	4:17	AT PRAGATI CKT. TRIPPED DUE TO BUS BAR PROT. OPERATED AT PARK STREET CKT. DID NOT TRIP.
51	30.11.16	3:56	220KV PRAGATI - PARK STREET CKT-I	30.11.16	4:18	AT PRAGATI CKT. TRIPPED DUE TO BUS BAR PROT. OPERATED AT PARK STREET CKT. DID NOT TRIP.
52	30.11.16	3:56	220KV PRAGATI - SARITA VIHAR CKT - I	30.11.16	10:52	AT SARITA VIHAR : AUTO RECLOSE, DIST PROT, ABC PHASE ZONE-I, 180X, 180A&B AT PRAGATI : BUS BAR PROTECTION OPERATED
53	30.11.16	4:23	220KV GEETA COLONY- PATPARGANJ CKT-I	30.11.16	14:42	AT PATPARGANJ : CKT. DID NOT TRIP. AT GEETA COLONY : CKT. TRIPPED ON ACTIVE GROUP-I, DIST PROT, ZONE-II, DIST 5.343KMS.
54	30.11.16	4:23	220KV GEETA COLONY- PATPARGANJ CKT -II	30.11.16	4:50	AT PATPARGANJ : CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.051KMS, 186, 186, 86X AT GEETA COLONY : CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 3.162KMS.
55	30.11.16	5:15	220KV GOPALPUR- MANDOLACKT-I	30.11.16	10:32	AT GOPALPUR : CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 0.210KMS. R PHASE.
56	30.11.16	5:58	220KV WAZIRABAD- GEETA COLONY CKT- II	30.11.16	6:10	AT GEETA COLONY : CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.776KMS. AT WAZIRABAD : CKT. DID NOT TRIP
57	30.11.16	6:00	220KV GOPALPUR- MANDOLACKT-II	30.11.16	19:03	AT GOPALPUR : CKT. TRIP.
58	30.11.16	6:01	220KV GEETA COLONY- PATPARGANJ CKT -II	30.11.16	6:10	AT PATPARGANJ : CKT. TRIPPED WITHOUT INDICATION AT GEETA COLONY : CKT. TRIPPED ON DIST PROT, 0.196KMS
59	30.11.16	6:03	220KV GOPALPUR- SUBZI MANDI CKT-I	30.11.16	6:51	AT GOPALPUR : CKT .TRIPPED ON DIST PROT, ZONE-I, R PHASE AT SUBZI MANDI : CKT. DID NOT TRIP.
60	30.11.16	6:13	220KV WAZIRABAD - MANDOLA CKT-IV	30.11.16	17:06	AT WAZIRBAD CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.354KM. Y PHASE, TRIP PHASE BCN.
61	30.11.16	6:28	220KV BAMNAULI- NARAINA CKT-II	30.11.16	6:50	AT NARAINA CKT. TRIPPED ON DIST PROT, ZONE-I, ABC PHASE AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-II, B PHASE, 186A&B, DIST 14.08KM.
62	30.11.16	6:38	220KV BAMNAULI- NARAINA CKT-I	30.11.16	6:50	AT NARAINA CKT. TRIPPED ON DIST PROT, ZONE-I, ABC PHASE AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 12.30KM

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
63	30.11.16	6:52	220KV NARELA - MANDOLA CKT-I	30.11.16	10:12	AT NARELA : CKT. TRIPPED ON 86X, 186, E/F. AT MANDOLA CKT. TRIPPED, RELAY INDICATIONS NOT AVAILABLE.
64	30.11.16	6:58	220KV WAZIRABAD-GEETA COLONY CKT-II	30.11.16	7:00	AT GEETA COLONY : CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 0.948KMS. AT WAZIRABAD : CKT. DID NOT TRIP.
65	30.11.16	7:08	PATPARGANJ 220/66KV 100MVA TX-I	30.11.16	7:38	66KV I/C-I TRIPPED ON E/F.
66	30.11.16	7:10	220KV NARELA - MANDOLA CKT-II	30.11.16	10:14	AT NARELA : CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.59KMS., B PHASE. CKT. TRIPPED AT MANDOLA.
67	30.11.16	7:10	220KV DSIIDC BAWANA-NARELA CKT-II	30.11.16	11:03	AT NARELA CKT. DID NOT TRIP. BAWANA : CKT. TRIPPED ON DIST PROT, DIST 7.8KMS. B PHASE.
68	30.11.16	7:18	220KV DSIIDC BAWANA-NARELA CKT-II	30.11.16	17:45	AT DSIDC BAWANA : CKT. TRIPPED ON 21 M-I & M-II, B PHASE, DIST PROT, DIST 7.8KMS. AT NARELA : CKT. DID NOT TRIP
69	30.11.16	7:18	220KV BAMNAULI-PAPPANKALAN-I CKT-II	30.11.16	17:24	AT PAPANALAN-I : CKT. DID NOT TRIP. AT BAMNAULI : CKT. TRIPPED ON DIST PROT, ZONE-II, DIST. 7.78KMS. R PHASE.
70	30.11.16	7:28	220KV BAMNAULI-NARAINA CKT-II	30.11.16	10:17	AT NARAINA CKT. TRIPPED ON DIST PROT, ZONE -I, ABC PHASE AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST, 12.70KM
71	30.11.16	7:58	220KV DSIIDC BAWANA-NARELA CKT-II	30.11.16	11:03	AT DSIDC BAWANA : CKT. TRIPPED ON 21 M-I & M-II, AB PHASE, DIST PROT, DIST 1.27KMS. AT NARELA : CKT. DID NOT TRIP.
72	30.11.16	8:06	220KV WAZIRABAD - MANDOLA CKT-II	30.11.16	17:06	AT WAZIRBAD CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 16.85KM. Y PHASE, TRIP SUPERVISION RELAY, TRIP PHASE BN.
73	30.11.16	8:09	220KV DSIIDC BAWANA-NARELA CKT-I	30.11.16	11:03	AT DSIDC BAWANA : CKT. TRIPPED ON 21 M-I & M-II, C PHASE, DIST PROT, DIST 7.699KMS. AT NARELA : CKT. DID NOT TRIP.
72	30.11.16	8:06	220KV WAZIRABAD - MANDOLA CKT-II	30.11.16	17:06	AT WAZIRBAD CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 16.85KM. Y PHASE, TRIP SUPERVISION RELAY, TRIP PHASE BN.
73	30.11.16	8:09	220KV DSIIDC BAWANA-NARELA CKT-I	30.11.16	11:03	AT DSIDC BAWANA : CKT. TRIPPED ON 21 M-I & M-II, C PHASE, DIST PROT, DIST 7.699KMS. AT NARELA : CKT. DID NOT TRIP.

19.9 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH DECEMBER 2016

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
1	1.12.16	8:38	GEETA COLONY 220/33KV 100MVA TX-II	27.04.17	13.37	TR. TRIPPED ON BUCHOLZ RELAY.
2	1.12.16	5:22	220KV BAWANA - KANJHAWALA CKT - 1	1.12.16	13:02	AT BAWANA : CKT. TRIPPED ON DIST PROT, ZONE-2, DIST 17.32KMS., 86. AT KHANJAWALA : CKT. DID NOT TRIP.
3	1.12.16	5:22	220KV BAWANA - KANJHAWALA CKT-2	1.12.16	13:02	AT BAWANA : CKT. TRIPPED ON DIST PROT, ZONE-1, DIST 2.47KMS. . AT KHANJAWALA : CKT. DID NOT TRIP.
4	1.12.16	7:11	220KV PRAGATI - SARITA VIHAR CKT-II	1.12.16	10:24	AT SARITA VIHAR : CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 5.912KMS.186AB. AT PRAGATI : CKT. TRIPPED ON DIST PROT, TRIP PHASE ABC, 186.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
5	1.12.16	7:31	220KV DSIIDC BAWANA-NARELA CKT-II	2.12.16	14:42	AT BAWANA : CKT. MASTER RELAY, DIST PROT, DIST 1.315KMS. AT NARELA : CKT. DID NOT TRIP.
6	1.12.16	8:09	220KV GEETA COLONY- PATPARGANJ CKT-I	1.12.16	9:43	AT PATPARGANJ : CKT. TRIPPED ON 186, 186, DIST PROT, ZONE-I,2,333, ACTIVE GROUP -I. AT GEETA COLONY : CKT. TRIPPED ON ACTIVE GROUP-I, DIST PROT, ZONE-1,2,3, DIST 56MTS.
7	1.12.16	8:42	220KV BAMNAULI-NARAINA CKT-II	1.12.16	13:40	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 12.47KMS. 186 ABC. AT NARAINA CKT. DID NOT TRIP.
8	1.12.16	8:48	220KV WAZIRABAD-GEETA COLONY CKT-II	1.12.16	9:08	AT GEETA COLONY CKT. TRIPPED ON DIST PROT, DIST 7.17KMS. AT WAZIRABAD CKT. DID NOT TRIP.
9	2.12.16	3:36	220KV BAWANA - KANJHAWALA CKT - 1	2.12.16	10:40	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.43KM. CKT DID NOT TRIP AT KHANJAWALA.
10	2.12.16	3:36	220KV BAWANA - KANJHAWALA CKT-2	2.12.16	10:40	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 11.5KM. CKT DID NOT TRIP AT KHANJAWALA.
11	2.12.16	7:34	220KV BAMNAULI-NARAINA CKT-I	3.12.16	16:58	AT BAMNAULI CKT. TRIPPED ON 186A&B, DIST PROT, ZONE-II. AT NARAINA CKT. DID NOT TRIPPED.
12	2.12.16	7:51	220KV KANJHAWALA-NAJAFGARH CKT-2	2.12.16	21:07	AT KHANJAWALA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 18.44KM. AT NAJAFGARH CKT. DID NOT TRIPPED.
13	2.12.16	19:57	KANJHAWALA 220/66KV 100MVA TX-I	2.12.16	20:19	TR. TRIPPED ON LOW GAS PRESSURE.
14	3.12.16	6:06	220KV MUNDKA-KANJHAWALA CKT	3.12.16	10:22	AT MUNDKA CKT. TRIPPED ON 86. AT KHANJAWALA CKT. TRIPPED ON DIST PROT, ZONE-I.
15	3.12.16	7:03	220KV BAWANA - KANJHAWALA CKT-2	3.12.16	17:40	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.25KM. AT KHANJAWALA CKT. DID NOT TRIP.
16	3.12.16	13:51	PATPARGANJ 33/11KV, 20MVA TX	3.12.16	19:05	TR. TRIPPED ON 86.
17	4.12.16	19:37	BAWANA 220/66KV 100MVA TX	7.12.16	17:24	TR. TRIPPED ON BUCHOLZ.
18	5.12.16	14:15	LODHI RD 220/33KV 100MVA TX-I	5.12.16	14:23	TR. TRIPPED ON AUTO RELEASE, 86B.
19	5.12.16	14:15	LODHI RD 220/33KV 100MVA TX-II	5.12.16	14:23	TR. TRIPPED ON AUTO RELEASE, 86B.
20	7.12.16	1:32	220KV DSIIDC BAWANA-NARELA CKT-I	7.12.16	12:10	AT DISDC CKT. TRIPPED ON DIST PROT, DIST 5.13KM, C PHASE. AT NARELA CB WAS IN OFF POSITION.
21	7.12.16	1:35	220KV GAZIPUR - BTPS CKT	7.12.16	11:35	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 12.9KM. AT GAZIPUR CB WAS IN OFF POSITION.
22	7.12.16	1:46	220KVBAWANA-ROHINI-2 CKT-II	7.12.16	15:25	AT BAWANA CKT. TRIPPED ON DIST PROT, DIST 5.057KM, E/F, 67N. AT ROHINI -II CKT. TRIPPED ON DIST PROT, ZONE-I.
23	7.12.16	1:46	220KV BAWANA - KANJHAWALA CKT-2	7.12.16	18:11	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.48KM. AT KHANJAWALA CKT. DID NOT TRIP.
24	7.12.16	3:27	220KV DSIIDC BAWANA-NARELA CKT-II	7.12.16	12:10	AT DSIIDC CKT. TRIPPED ON DIST PROT, DIST. 1.35KM. AT NARELA CKT. DID NOT TRIP.
25	7.12.16	3:52	220KV MUNDKA-KANJHAWALA CKT	7.12.16	5:10	AT MUNDKA CKT. TRIPPED ON 86 A&B. AT NARELA CKT. DID NOT TRIP.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
26	7.12.16	4:13	220KV NARAINA-RIDGE VALLEY CKT-I	7.12.16	4:38	AT RIDGE CKT. TRIPPED ON 86 &B. AT NARAINA CKT. DID NOT TRIP.
27	7.12.16	4:13	220KV BAMNAULI-NARAINA CKT-II	7.12.16	7:26	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 13.24KM. AT NARAINA CKT. TRIPPED ON DIST PROT, B PHASE, AUTO RECLOSE LOCKOUT.
28	7.12.16	4:38	220KV BAWANA-DSIIDC BAWANA CKT-II	7.12.16	11:52	AT BAWANA CKT .TRIPPED ON AUTO RECLOSE, LBB, 86 A&B. AT DSIDC CK.T TRIPPED ON DIST PROT, DIST 1.2KM.
29	7.12.16	6:06	220KV MUNDKA-KANJHAWALA CKT	7.12.16	19:06	AT MUNDKA CKT .TRIPPED ON 86A&B. AT KHANJAWALA CKT. DID NOT TRIP.
30	7.12.16	18:50	220KV BAMNAULI-PAPPANKALAN-II CKT-I	7.12.16	0:08	AT PAPANALAN -II CKT. TRIPPED ON DIST PROT, MAIN-I, ZONE-I. AT BAMNAULI CKT TRIPPED ON DIST PROT, ZONE-I, DIST 29.54KM, 186A&B.
31	8.12.16	8:21	SUBZI MANDI 33/11KV, 16MVA TX-II	8.12.16	13:28	TR. TRIPPED ON DIFFERENTIAL.
32	8.12.16	13:00	220KV SARITA VIHAR - BTPS CKT.-I	8.12.16	13:13	AT SARITA VIHAR CKT. TRIPPED ON 186A&B. AT BTPS CKT. DID NOT TRIP.
33	10.12.16	8:12	220 KV PATPARGANJ - I.P. CKT-II	10.12.16	14:16	AT PATPARGANJ CKT. TRIPPED ON 186, DIST PROT, DIST 2.954KM. AT I.P. CKT. TRIPPED ON DIST PROT, ZONE-I. 186.
34	10.12.16	8:40	220KV SARITA VIHAR - BTPS CKT.-I	10.12.16	8:50	AT BTPS : NO TRIPPING. AT SARITA VIHAR : BUS BAR PROT. 96, 186A, 186B.
35	10.12.16	8:40	220KV PRAGATI - SARITA VIHAR CKT-II	10.12.16	8:55	AT PRAGATI : NO TRIPPING. AT SARITA VIHAR : BUS BAR PROT. 96, 186A, 186B.
36	10.12.16	8:40	220KV SARITA VIHAR - BTPS CKT.-II	10.12.16	8:55	AT PRAGATI : NO TRIPPING. AT SARITA VIHAR : BUS BAR PROT. 96, 186A, 186B.
37	10.12.16	8:40	220KV PRAGATI - PARK STREET CKT-II	10.12.16	8:49	AT PARK STREET CKT. TRIPPED ON 86. AT PRAGATI CKT. DID NOT TRIP.
38	10.12.16	8:40	220KV PRAGATI - PARK STREET CKT-I	10.12.16	8:49	AT PARK STREET CKT. TRIPPED ON 86. AT PRAGATI CKT. DID NOT TRIP.
39	10.12.16	8:40	SARITA VIHAR 220/66KV 100MVA TX-I	10.12.16	9:05	BUS BAR PROTECTION OPERATED AT SARITA VIHAR.
40	10.12.16	8:40	PARKSTREET 220/66KV 100MVA TX-I	10.12.16	8:49	TR. TRIPPED ON OVER FLUX, 86.
41	10.12.16	8:40	SARITA VIHAR 220/66KV 100MVA TX-II	10.12.16	9:05	BUS BAR PROTECTION OPERATED AT SARITA VIHAR.
42	10.12.16	15:15	220KV PRAGATI - SARITA VIHAR CKT-II	10.12.16	20:22	AT SARITA VIHAR CKT. TRIPPED ON 96, BUS BARPROT, OPERATED. AT PRAGATI CKT. DID NOT TRIPPED.
43	11.12.16	8:37	220KVBAWANA-ROHINI CKT-II	11.12.16	21:48	AT BAWANA : DIST PROT, ZONE-I, Y PHASE, DIST. 1.17KM., E/F, 186 A&B, 195 A&B. AT ROHINI -I : SUPPLY FAILED.
44	11.12.16	8:37	BAWANA 400/220KV 315MVA ICT-IV	11.12.16	22:31	ICT TRIPPED ON BUCHOLZ ALARM, 86A&B. 220KV I/C IV TRIPPED ON 86.
45	11.12.16	8:37	BAWANA 400/220KV 315MVA ICT-III	11.12.16	19:35	ICT TRIPPED ON CB AUTO TRIP, TRIP CKT SUPERVISION TC-1, 167, 195, 295 & 86B.
46	11.12.16	8:37	BAWANA 400/220KV 315MVA ICT-V	11.12.16	13:37	220KV I/C V TRIPPED ON 86 A&B, LBB PROT.
47	11.12.16	8:37	BAWANA 400/220KV 315MVA ICT-I	28.03.17	21.35	ICT MAIN CB 420-52 & TIE CB 421-52 TRIPPED ON O/C, E/F, DIFFERENTIAL PROT., R&Y PHASE, OTI TRIP, WTI/PRV TRIP, BUCHOLZ. ALARM OPERATED. 220KV I/C OF ICT TRIPPED ON CB AUTO TRIP, 195AC, 195 BC, 195CC, 295AC, 295 BC, 295CC.
48	11.12.16	17:23	SUBZI MANDI 33/11KV, 16MVA TX-I	11.12.16	19:42	TR. TRIPPED ON DIFFERENTIAL.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
49	12.12.16	1:58	220KV NARAINA-RIDGE VALLEY CKT-I	13.12.16	23:00	AT RIDGE VALLEY CKT. TRIPPED ON 86 A&B.
50	12.12.16	4:00	400KV BALLABHGARH-BAMNAULI CKT-II	12.12.16	5:00	AT BAMNAULI CKT. TRIPPED ON 186ABB, RYB PHASE. AT BALLABGARH CKT. DID NOT. TRIP.
51	14.12.16	11:17	220KV SHALIMAR BAGH - DMRC CKT	14.12.16	11:29	AT SHALIMAR BAGH CKT. TRIPPED ON LOW GAS PRESSURE. AT DMRC CKT. DID NOT TRIP.
52	14.12.16	17:21	400KV BALLABHGARH-BAMNAULI CKT-I	14.12.16	18:24	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I,II, III, DIST 36.64KM. 186A&B.
53	15.12.16	16:58	400KV DADRI-HARSH VIHAR CKT-I	15.12.16	16:51	AT HARSH VIHAR CKT. TRIPPED ON DIST PROT, MAIN -I & II, ZONE-I, R PHASE.
54	15.12.16	18:23	220KV DSIIDC BAWANA-NARELA CKT-II	15.12.16	18:34	AT DISDC CKT. TRIPPED ON 86.
55	16.12.16	1:45	MASJID MOTH 220/33KV 100MVA TX-I	16.12.16	9:25	I/C TRIPPED ON TURBO ALARM.
56	17.12.16	7:50	BAMNAULI 400/220KV 500MVA ICT-II	17.12.16	17:25	ICT TRIPPED ON POLE DISCREPANCY.
57	17.12.16	10:56	400KV BALLABHGARH-BAMNAULI CKT-I	19.12.16	21:45	AT BAMNAULI CKT. TRIPPED ON DIST PROT. ZONE-I, RYB PHASE.
58	20.12.16	3:15	ROHINI-II 220/66KV 160MVA TX-I	20.12.16	6:55	TR. TRIPPED ON 86, 86 A&B, GEN TRIP.
59	21.12.16	10:43	220KV DIAL-MEHRAULI CKT-I	21.12.16	10:50	AT DIAL CKT. TRIPPED ON LINE DIFFERENTIAL, 86. AT MEHRAULI CKT. DID NOT TRIP.
60	21.12.16	10:44	BAWANA 400/220KV 315MVA ICT-III	21.12.16	12:18	ICT MADE OFF MANUALLY DUE TO FIRE OBSERVED BY GRID STAFF.
61	21.12.16	10:55	BAWANA 400/220KV 315MVA ICT-V	21.12.16	11:49	ICT TRIPPED ON OVERLOADING.
62	23.12.16	7:42	220KV BAWANA - KANJHAWALA CKT - 1	23.12.16	10:55	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, R PHASE, 86.
63	23.12.16	9:28	DSIIDC BAWANA 220/66KV 100MVA TX-III	23.12.16	9:50	TR. TRIPPED ON O/C, E/F.
64	23.12.16	9:28	DSIIDC BAWANA 220/66KV 100MVA TX-II	23.12.16	10:40	TR. TRIPPED ON O/C, E/F. ALONGWITH 66KV I/C-II.
65	27.12.16	8:21	220KV BAWANA - KANJHAWALA CKT - 1	27.12.16	8:35	AT BAWANA CKT TRIPPED ON DIRECTIONAL O/C,D/P,Z-1,R-PH, DIST-3.685KM.
66	27.12.16	16:45	220KV SHALIMARBAGH-WAZIRPUR CKT-II	27.12.16	17:08	CKT TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION AT WAZIRPUR S/STN.
67	27.12.16	16:45	220KV PEERAGARHI-WAZIRPUR CKT-II	27.12.16	17:08	CKT TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION AT WAZIRPUR S/STN.
68	27.12.16	16:45	WAZIRPUR 220/33KV 100MVA TX-II	27.12.16	17:08	TX TRIPPED DUE TO OPERATION OF BUS BAR PROTECTION.
69	28.12.16	3:29	KANJHAWALA 220/66KV 100MVA TX-II	28.12.16	4:00	TX TRIPPED ON LOW AIR PRESSURE.
70	28.12.16	4:02	DIAL 220/66KV 160MVA TX-II	28.12.16	5:09	TX TRIPPED ON OVER FLUX,86 A&B.
71	29.12.16	5:12	KANJHAWALA 220/66KV 100MVA TX-II	29.12.16	5:30	TX TRIPPED WITHOUT INDICATION.
72	29.12.16	7:36	KANJHAWALA 220/66KV 100MVA TX-II	29.12.16	7:51	TX TRIPPED WITHOUT INDICATION.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
73	30.12.16	0:34	PARKSTREET 220/66KV 100MVA TX-I	30.12.16	8:15	66KV I/C-I TRIPPED ON E/F.
74	30.12.16	0:42	PARKSTREET 220/66KV 100MVA TX-II	30.12.16	0:57	TR. TRIPPED ON E/F.
75	30.12.16	1:02	PARKSTREET 220/66KV 100MVA TX-II	30.12.16	1:05	I/C-II TRIPPED ON E/F.
76	30.12.16	1:05	DSIIDC BAWANA 220/66KV 100MVA TX-III	30.12.16	1:45	TR. TRIPPED ON O/C, 86C.
77	30.12.16	1:05	DSIIDC BAWANA 220/66KV 100MVA TX-II	30.12.16	1:57	TR. TRIPPED ON O/C, 86C.
78	30.12.16	1:06	220KV DSIIDC BAWANA-NARELA CKT-II	30.12.16	18:18	AT NARELA CKT. TRIPPED ON DIRECTIONAL E/F, O/C, DIFFERENTIAL. AT DSIDC BAWANA CKT. DID NOT TRIP.
79	30.12.16	3:49	DIAL 220/66KV 160MVA TX-II	30.12.16	6:29	TR. TRIPPED ON OVER FLUX, 86A, 86B.
80	30.12.16	8:27	PARKSTREET 220/66KV 100MVA TX-II	30.12.16	9:44	66KV I/C-II TRIPPED ON E/F.
81	30.12.16	17:00	220KV HARSH VIHAR - PREET VIHAR CKT-II	30.12.16	17:17	CKT. DID NOT TRIPPED AT PREET VIHAR.
82	30.12.16	17:00	220KV HARSH VIHAR - PREET VIHAR CKT-I	30.12.16	17:20	CKT. DID NOT TRIPPED AT PREET VIHAR.
83	31.12.16	3:47	ROHINI 220/66KV 100MVA TX-II	31.12.16	15:39	TR. TRIPPED ON 30E, 30G, 86.
84	31.12.16	6:35	SARITA VIHAR 220/66KV 100MVA TX-II	31.12.16	14:40	TR. TRIPPED ON DIFFERENTIAL, B PHASE, 87T.
85	31.12.16	8:09	220 KV PATPARGANJ - I.P. CKT-I	31.12.16	8:50	AT PATPARGANJ CKT. TRIPPED ON E/F, ACTIVE GROUP-I, DIST PROT, ZONE-I, 86, 186. AT I.P. CKT. TRIPPED ON DIST PROT, ZONE-I, 86, 186.
86	31.12.16	8:37	220 KV PATPARGANJ - I.P. CKT-II	31.12.16	8:50	AT PATPARGANJ CKT. TRIPPED ON TRIP PHASE ABC, DIST PROT, ZONE-II, ACTIVE GROUP -I, 186. AT I.P. CK. TRIPPED ON 86, 186.
87	31.12.16	8:43	PRAGATI 220/66KV 160MVA TX-II	31.12.16	8:54	TR. TRIPPED ON REF, 86, WHILE CLOSING BUS COUPLER.
88	31.12.16	9:07	220KV DSIIDC BAWANA-NARELA CKT-II	31.12.16	12:25	AT NARELA CKT. TRIPPED ON 64DS WHILE ENERGIZING THE CKT.
89	31.12.16	9:10	DSIIDC BAWANA 220/66KV 100MVA TX-II	31.12.16	9:30	TR. TRIPPED ON O/C, E/F.
90	31.12.16	9:10	DSIIDC BAWANA 220/66KV 100MVA TX-III	31.12.16	9:28	TR. TRIPPED ON O/C, E/F.
89	31.12.16	9:10	DSIIDC BAWANA 220/66KV 100MVA TX-II	31.12.16	9:30	TR. TRIPPED ON O/C, E/F.
90	31.12.16	9:10	DSIIDC BAWANA 220/66KV 100MVA TX-III	31.12.16	9:28	TR. TRIPPED ON O/C, E/F.

19.10 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH JANUARY 2017

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
7	3.1.17	7:01	220KV GAZIPUR-PATPARGANJ CKT	16.1.17	14:30	CKT. TRIPPED ON 86.
8	3.1.17	7:23	220KV DSIIDC BAWANA-NARELA CKT-II	3.1.17	10:51	AT DSIDC BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.231KM, 86. AT NARELA CKT DID NOT TRIP.
9	3.1.17	7:29	220KV MAHARANIBAGH-MASJID MOTH CKT-I	3.1.17	7:35	AT MASJID MOTH CKT. TRIPPED ON DIST PROT, O/C. AT MAHARANI BAGH CKT. DID NOT TRIPED.
10	3.1.17	7:29	MASJID MOTH 33KV ALAKANANDA CKT.	3.1.17	22:55	CKT. TRIPPED WITHOUT INDICATION.
11	3.1.17	8:05	220KV BAWANA - KANJHAWALA CKT-2	3.1.17	11:15	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 3.40KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
12	3.1.17	8:05	BAWANA 400/220kV 315MVA ICT-VI	3.1.17	8:54	ICT TRIPPED ON 86.
13	4.1.17	0:23	220kV MAHARANI BAGH - LODHI ROAD CKT-I	04.02.17	14:30	AT MAHARANI BAGH CKT. TRIPPED DUE TO END BOX DAMAGED. AT LODHI ROAD CKT. DID NOT TRIP.
14	7.1.17	4:53	KANJHAWALA 66/11kV, 20MVA Tx-I	7.1.17	10:05	TR. TRIPPED ON 86, BUCHOLZ.
15	8.1.17	6:25	MUNDKA 220/66kV 160MVA Tx-II	8.1.17	18:20	TR. TRIPPED ON 86, B & C PHASE.
16	9.1.17	7:53	220kV WAZIRABAD - MANDOLA CKT-III	9.1.17	17:13	AT WAZIRABAD CKT. TRIPPED ON RYB PHASE, DIST PROT, ZONE-I, DIST 1.97KM, JUMPER OF THE CKT. REPORTED TO BE BROKEN NEAR CRPF CAMP.
17	11.1.17	7:30	220kV BAMNAULI-PAPPANKALAN-II CKT-II	11.1.17	14:04	AT PAPPANKALAN-II CKT. TRIPPED WITHOUT INDICATION.
18	12.1.17	10:37	220kV GAZIPUR - BTPS CKT	12.1.17	13:35	AT BTPS CKT. TRIPPED ON DIST PROT, DIST 9.5KM. CKT. DID NOT TRIPPED AT GAZIPUR.
19	12.1.17	16:00	220kV MEHRAULI - VASANT KUNJ CKT.- II	12.1.17	17:20	AT MEHRAULI CKT. TRIPPED WITHOUT INDICATION AT VASANT KUNJ CKT. DID NOT TRIP.
20	19.1.17	10:42	KANJHAWALA 66/11kV, 20MVA Tx-I	19.1.17	12:52	TR. TRIPPED ON 86.
21	20.1.17	10:39	PAPPANKALAN-I 66kV G-6 PPK CKT-II	20.1.17	14:30	R PHASE LINE ISOLATOR GOT BURNT.
22	21.1.17	12:33	220kV Harsh Vihar - Preet Vihar Ckt-II	21.1.17	12:37	WHILE ARRANGING SHUTDOWN OF 220KV HARSH VIHAR - PREET VIHAR CKT. -I CKT. TRIPPED AT PREET VIHAR END.
23	21.1.17	15:10	220kV Harsh Vihar - Preet Vihar Ckt-II	21.1.17	19:42	AT PREET VIHAR CKT. TRIPPED ON 86A, 86B, CVT AVAILABLE.
24	22.1.17	8:03	NARELA 220/66kV 100MVA Tx-I	22.1.17	8:25	TR. TRIPPED ON 186.
25	23.1.17	4:42	220kV KANJHAWALA-NAJAFGARH CKT	23.1.17	10:51	AT KHANJAWALA CKT .TRIPPED ON DIST PROT, ZONE-I, CVT AVAILABLE AT NAJAFGARH.
26	25.1.17	3:25	220kV GAZIPUR-PATPARGANJ CKT	25.1.17	3:32	AT GAZIPUR CKT. TRIPPED ON GEN TRIP. AUX RELAY.
27	25.1.17	3:58	220kV GAZIPUR-PATPARGANJ CKT	25.1.17	4:08	AT GAZIPUR CKT. TRIPPED ON DIST RELAY, AUXILLARY RELAY.
28	25.1.17	8:32	WAZIRABAD 220/66kV 100MVA Tx-I	25.1.17	8:47	66KV I/C-I TRIPPED ON O/C, R PHASE, E/F, 86
29	25.1.17	8:33	WAZIRABAD 220/66kV 100MVA Tx-III	25.1.17	8:47	66KV I/C-III TRIPPED ON R PHASE, E/F
30	25.1.17	8:33	WAZIRABAD 220/66kV 100MVA Tx-II	25.1.17	8:47	I/C -II TRIPPED ON E/F, 86
31	25.1.17	13:03	220kV GAZIPUR-PATPARGANJ CKT	26.1.17	14:32	AT GAZIPUR CKT. TRIPPED ON 86. AUTO RECLOSE, GEN TRIP.
32	26.1.17	0:29	220kV GAZIPUR-PATPARGANJ CKT	26.1.17	0:32	AT GAZIPUR CKT. TRIPPED ON 86, GENERAL TRIP.
33	26.1.17	1:30	400kV Bawana-Mundka Ckt-I	26.1.17	3:09	AT BAWANA CKT. TRIPPED ON CB OPERATION LOCKOUT, 86.
34	26.1.17	1:30	400kV Bawana-Mundka Ckt-II	26.1.17	3:09	AT BAWANA CKT. TRIPPED ON CB OPERATION LOCKOUT, 86.
35	26.1.17	9:57	KANJHAWALA 220/66kV 100MVA Tx-II	26.1.17	10:00	TR. TRIPPED ON LOW PRESSURE.
36	26.1.17	12:35	220kV GEETA COLONY-PATPARGANJ CKT -II	26.1.17	13:16	AT PATPARGANJ CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.586KM, B PHASE. AT GEETA COLONY CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 2.8KM.
37	26.1.17	12:51	220kV Harsh Vihar - Preet Vihar Ckt-I	26.1.17	13:02	AT HARSH VIHAR CKT. TRIPPED ON 86-1, 86-2, GEN TRIP, VT FUSE FAIL ALARM. AT PREET VIHAR CKT. TRIPPED ON 86A&B.
38	26.1.17	13:02	400kV Ballabgarh-Bamnauli Ckt-II	27.1.17	8:31	AT BAMNAULI CKT. TRIPPED ON 85LD, O/ LOADING RELAY, 30G.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
39	26.1.17	13:02	220kV Preet Vihar - Patparganj Ckt-II	26.1.17	13:10	AT PREET VIHAR CKT. TRIPPED ON 86A&B. AT PATPARGANJ CKT. TRIPPED ON OVER VOLTAGE.
40	26.1.17	13:02	220kV Harsh Vihar - Preet Vihar Ckt-I	26.1.17	13:10	AT PREET VIHAR CKT. TRIPPED ON 86&B. AT HARSH VIHAR CKT. TRIPPED ON 86-1&2, GENERAL TRIP.
41	26.1.17	13:02	220kV Preet Vihar - Patparganj Ckt-I	26.1.17	13:10	AT PREET VIHAR CKT. TRIPPED ON 86A&B. AT PATPARGANJ CKT. TRIPPED ON OVER VOLTAGE.
42	26.1.17	18:48	MASJID MOTH 220/33kV 100MVA Tx-I	26.1.17	18:34	TR. TRIPPED ON DIFFERENTIAL, O/C, E/F.
43	26.1.17	18:55	HARSH VIHAR 400/220kV 315MVA ICT-I	26.1.17	19:34	ICT TRIPPED ON E/F, 86 A, I/C TRIPPED ON 86.
44	26.1.17	19:58	NARELA 220/66kV 100MVA Tx-II	26.1.17	21:16	TR. TRIPPED ON WITHOUT INDICATION.
45	27.1.17	1:57	400kV Dadri-Harsh Vihar Ckt-I	27.1.17	9:24	AT HARSH VIHAR CKT. TRIPPED ON GEN TRIP, RYB PHASE, CB TROUBLE ALARM, 86, AUTO RECLOSE.
46	27.1.17	9:59	220kV Harsh Vihar - Preet Vihar Ckt-I	27.1.17	18:12	AT PREET VIHAR CKT. TRIPPED ON DIST PROT, B PHASE.
47	27.1.17	9:59	220kV Harsh Vihar - Preet Vihar Ckt-II	31.1.17	18:12	AT PREET VIHAR CKT. TRIPPED ON DIST PROT, B PHASE.
48	27.1.17	10:01	HARSH VIHAR 400/220kV 315MVA ICT-I	28.1.17	4:49	ICT TRIPPED ON 86.
49	27.1.17	18:32	220kV BAMNAULI - PAPPANKALAN-II CKT-I	27.1.17	1:17	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 9.482KM, B PHASE.
50	28.1.17	10:25	MASJID MOTH 220/33kV 100MVA Tx-II	28.1.17	14:45	I/C-II TRIPPED ON DIFFERENTIAL, 86, O/C.
51	28.1.17	17:09	220kV BAWANA-DSIIDC BAWANA CKT-II	28.1.17	17:34	AT BAWANA CKT. TRIPPED WITHOUT INDICATION.
52	29.1.17	0:15	220kV GAZIPUR - PATPARGANJ CKT	29.1.17	0:22	AT GAZIPUR CKT. TRIPPED ON GEN TRIP.
53	29.1.17	0:45	220kV GAZIPUR - PATPARGANJ CKT	29.1.17	9:35	AT GAZIPUR CKT. TRIPPED ON GEN TRIP.
54	30.1.17	12:55	220kV Harsh Vihar - Preet Vihar Ckt-I	30.1.17	15:45	AT PREET VIHAR CKT. TRIPPED ON B PHASE, 86, A&B, O/V. AT PARTPARGANJ CKT. TRIPPED ON O/V.
55	30.1.17	12:55	220kV Preet Vihar - Patparganj Ckt-I	30.1.17	13:10	AT PATPARGANJ CKT. TRIPPED ON 86.
56	30.1.17	13:45	220kV MEHRAULI - VASANT KUNJ CKT.-I	30.1.17	13:58	AT MEHRAULI CKT. TRIPPED WITHOUT INDICATION.
57	30.1.17	13:45	220kV MEHRAULI - VASANT KUNJ CKT.- II	30.1.17	13:58	AT MEHRAULI CKT. TRIPPED WITHOUT INDICATION.
58	30.1.17	16:00	220kV Harsh Vihar - Preet Vihar Ckt-I	30.1.17	18:01	AT HARSH VIHAR CKT. TRIPPED ON GEN TRIP, Y PHASE TRIP, OVER VOLTAGE, 86.
59	31.1.17	8:22	220kV PRAGATI - SARITA VIHAR CKT-II	31.1.17	9:10	AT PRAGATI CKT. TRIPPED ON 86, POLE DISCREPANCY.
60	31.1.17	13:07	220kV Harsh Vihar - Preet Vihar Ckt-I	01.02.17	08.41	AT HARSH VIHAR CKT. TRIPPED ON 86, AUTO RECLOSE.

19.11 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH FEBRUARY 2017

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
9	1.2.17	12:33	220 KV PATPARGANJ - I.P. CKT-I	1.2.17	14:58	AT PATPARGANJ CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 368MTS.. AT AT I.P. CKT. TRIPPED ON 186.
10	1.2.17	14:23	OKHLA 220/66KV 100MVA TX-I	1.2.17	14:33	66KV I/C-I TRIPPED ON O/C, R PHASE.
11	3.2.17	6:10	220KV GEETA COLONY - PATPARGANJ CKT -II	3.2.17	12:13	AT GEETA COLONY CKT. TRIPPED ON DIST PROT, DIST 2.893KM. AT PATPARGANJ CKT .TRIPPED ON 186, DIST PROT, ZONE-I, DIST 1.537KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
12	3.2.17	7:52	220KV PREET VIHAR-PATPARGANJ CKT-I	3.2.17	10:58	AT PATPARGANJ CKT. TRIPPED ON WITHOUT INDICATION.
13	3.2.17	10:53	OKHLA 220/33KV 100MVA TX-III	3.2.17	11:07	TR. TRIPPED ON AIR PRESSURE LOW.
14	4.2.17	7:52	220KV PREET VIHAR-PATPARGANJ CKT-I	4.2.17	10:58	AT PATPARGANJ CKT. TRIPPED WITHOUT INDICATIOTN.
15	4.2.17	7:58	220KV PRAGATI - SARITA VIHAR CKT-II	4.2.17	10:59	AT PRAGATI CKT. TRIPPED ON POLE DISCREPANCY.
16	5.2.17	8:15	220KV MUNDKA-NAJAFGARH CKT	5.2.17	8:37	AT MUNDKA CKT. TRIPPED ON DIST PROT.
17	5.2.17	10:15	220KV MUNDKA-NAJAFGARH CKT	5.2.17	14:11	AT MUNDKA CKT. TRIPPED ON GROUP A&B PROTECTION RELAY. AT NAJAFGARH CKT. DID NOT TRIP.
18	5.2.17	13:04	220KV PREET VIHAR-PATPARGANJ CKT-II	5.2.17	18:38	AT PATPARGANJ CKT. TRIPPED ON ACTIVE GROUP -I. AT PREET VIHAR CKT. TRIPPED ON ACTIVE GROUP -I.
19	5.2.17	15:07	220KV HARSH VIHAR - PREET VIHAR CKT-II	5.2.17	18:38	AT PREET VIHAR CKT. TRIP ON F-87, F-211, F-79, F-59. AT HARSH VIHAR CKT. TRIPPED ON MAIN -I, 86. AUTO RECLOSE, RYB PHASE.
20	8.2.17	7:10	220KV MAHARANIBAGH-MASJID MOTH CKT-I	8.2.17	15:14	CB TROUBLE ALARM APPEARED.
21	11.2.17	2:35	LODHI RD 220/33KV 100MVA TX-II	11.2.17	11:40	TR. TRIPPED ON LBB PROTECTION & AUTO RECLOSE.
22	11.2.17	5:44	INDRAPRASTHA POWER 220/33KV 100MVA TX-III	11.2.17	6:28	TR. TRIPPED ON O/C, 86.
23	11.2.17	7:55	OKHLA 33KV ALAKNANDA CKT-I	11.2.17	18:26	CKT. TRIPPED ON DIST PROT, ZONE-I, II, B PHASE. CB JUMPER SNAPPED.
24	11.2.17	7:55	OKHLA 220/33KV 100MVA TX-IV	11.2.17	12:15	33KV I/C-IV TRIPPED ON 86LV, O/C.
25	11.2.17	7:55	OKHLA 220/33KV 100MVA TX-III	11.2.17	12:15	33KV I/C-III ON 51C.
26	11.2.17	16:26	220KV OKHLA - BTPS CKT. - I	11.2.17	19:10	AT OKHLA CKT. TRIPPED ON 86T, RYB PHASE, DIST PROT, DIST 2.024KM. AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, B PHASE.
27	11.2.17	16:26	220KV GAZIPUR - NOIDA SEC.-62 CKT	11.2.17	17:07	AT GAZIPUR CKT. TRIPPED ON DIST PROT, ZONE-I, B PHASE.
28	12.2.17	8:55	INDRAPRASTHA POWER 220/33KV 100MVA TX-III	12.2.17	9:20	TR. TRIPPED ON 86.
29	13.2.17	7:46	220KV HARSH VIHAR - PREET VIHAR CKT-II	13.2.17	14:15	AT HARSH VIHAR CKT. TRIPPED ON 86.
30	13.2.17	12:14	220KV BAWANA-SHALIMARBAGH CKT-II	13.2.17	13:20	AT BAWANA CKT. TRIPPED ON O/C, 86, ACTIVE GROUP-I.
31	13.2.17	18:20	INDRAPRASTHA POWER 220/33KV 100MVA TX-III	14.2.17	11:40	TR. TRIPPED ON 86, 186, I/C-III TRIPPED WITHOUT INDICATION.
32	14.2.17	8:10	220KV MEHRAULI - BTPS CKT. - I	14.2.17	8:32	AT MEHRAULI CKT. TRIPPED ON DIST PROT, DIST 34.1KM. AT BTPS CKT. DID NOT TRIPPED.
33	14.2.17	8:10	220KV SARITA VIHAR - BTPS CKT. -I	14.2.17	20:44	AT SARITA VIHAR CKT. TRIPPED ON DIST PROT, DIST 2.43KM. AT BTPS CKT. TRIPPED ON DIST PROT, DIST 0.3KM., E/F.
34	14.2.17	8:10	220KV PRAGATI - SARITA VIHAR CKT-II	14.2.17	11:40	AT PRAGATI CKT. TRIPPED ON DIST PROT, ZONE-II.
35	14.2.17	9:31	220KV PRAGATI - SARITA VIHAR CKT - I	14.2.17	9:43	AT PRAGATI CKT. TRIPPED ON DIST PROT. ZONE-I, TRIP PHASE ABC. DIST 391.9MTS.
36	14.2.17	18:15	220KV PREET VIHAR-PATPARGANJ CKT-II	14.2.17	19:37	AT PREET VIHAR CKT. TRIPPED ON DIST PROT. AT PATPARGANJ CKT. TRIPPED ON 86.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
37	14.2.17	18:15	220KV HARSH VIHAR - PREET VIHAR CKT-I	14.2.17	19:31	AT PREET VIHAR CKT. TRIPPED ON F87.
38	14.2.17	18:15	220KV PREET VIHAR-PATPARGANJ CKT-I	14.2.17	19:37	AT PREET VIHAR CKT. TRIPPED ON F-87. AT PATPARGANJ CKT. TRIPPED ON DIFFERENTIAL, 86.
39	14.2.17	23:46	LODHI RD 220/33KV 100MVA TX-II	15.2.17	11:08	TR. TRIPPED ON DIST PROT, AUTO RECLOSE LOCKOUT, LLB PROT.
40	15.2.17	17:45	KANJHAWALA 220/66KV 100MVA TX-I	16.2.17	12:15	TR. TRIPPED ON RYB PHASE, DIFFERENTIAL 86B, R PHASE LA DAMAGED.
41	15.2.17	21:37	400KV BALLABHGARH-BAMNAULI CKT-I	16.2.17	7:22	AT BAMNAULI CKT. TRIPPED ON 195BC, 30E LOCKOUT, R PHASE POLE DAMAGED ON CB NO. 152. FIRE OBSERVED AT BAMNAUL YARD.
42	18.2.17	13:05	220KV KANJHAWALA-NAJAFGARH CKT	18.2.17	16:58	AT KHANJAWALA CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.79KM.
43	18.2.17	14:54	220KV WAZIRABAD - MANDOLA CKT-II	18.2.17	15:01	CKT. TRIPPED WITHOUT INDICATION.
44	18.2.17	16:02	PATPARGANJ 220/66KV 100MVA TX-II	18.2.17	23:48	TR. TRIPPED ON 64RLB, 86.
45	19.2.17	12:57	220KV GAZIPUR - BTPS CKT	20.2.17	17:49	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I, B PHASE. AT GAZIPUR CKT. DID NOT TRIP.
46	21.2.17	12:35	PAPPANKALAN-I 66/11KV, 20MVA TX-III	21.2.17	20:18	TR. TRIPPED ON E/F, 86.
47	23.2.17	13:45	220KV BAMNAULI-PAPPANKALAN-II CKT-I	23.2.17	13:58	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 9.58KM. AT PAPPANKALAN-II CKT .TRIPPED ON DIST PROT, ZONE-I, DIST 18.55KM.
48	25.2.17	3:22	KANJHAWALA 66/11KV, 20MVA TX-I	25.2.17	16:01	TR. TRIPPED ON DIFFERENTIAL.
49	26.2.17	7:15	NARAINA 33KV SHEKHAWATI CKT	26.2.17	10:00	TR. TRIPPED ON LOW GAS PRESSURE.
50	27.2.17	5:22	220KV DIAL-MEHRAULI CKT-I	27.2.17	16:27	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.431KM. AT DIAL CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.35KM.
50	27.2.17	5:22	220KV DIAL-MEHRAULI CKT-I	27.2.17	16:27	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 8.431KM. AT DIAL CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 1.35KM.

19.12 DETAILS OF 400/220KV BREAKDOWN/TRIPPINGS OCCURRED IN DTL SYSTEM DURING THE MONTH MARCH 2017

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
7	1.3.17	11:19	220kv BAMNAULI - DIAL CKT-I	1.3.17	18:42	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 29MTS.
8	3.3.17	18:33	220kv BAMNAULI-NARAINA CKT-I	3.3.17	19:00	AT BAMNAULI CKT. TRIPPED ON 186AB. AT NARAINA CKT. DID NOT TRIP.
9	3.3.17	18:33	220kv BAMNAULI-NARAINA CKT-II	3.3.17	19:00	AT BAMNAULI CKT. TRIPPED ON 186AB. AT NARAINA CKT. DID NOT TRIP.
10	3.3.17	18:33	220kv BAMNAULI-NAJAFGARH CKT-I	3.3.17	19:00	AT BAMNAULI CKT. TRIPPED ON 186AB. AT NAJAFGARH CKT. DID NOT TRIP.
11	4.3.17	11:31	220KV WAZIRABAD - MANDOLA CKT-II	4.3.17	12:34	AT WAZIRBAD CKT TRIPPED ON DIST PROT, ZONE-I, DIST 754.5M AT MANDOLA DIST RPT, ZONE -II, DIST 12.87KM.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
12	7.3.17	2:20	220kV GAZIPUR-PATPARGANJ CKT	29.3.17	17:10	AT GAZIPUR CKT. TRIPPED ON 86, DIST PROT, ZONE-I. CABLE DAMAGED.
13	7.3.17	23:00	GAZIPUR 66/11kV, 20MVA Tx-II	8.3.17	19:55	TR. TRIPPE DON DIFFERENTIAL.
14	8.3.17	14:10	MUNDKA 400/220kV 315MVA ICT-IV	8.3.17	16:23	ICT TRIPPED ON 86A&B, I/C TRIPPED ON E/F.
15	8.3.17	14:10	MUNDKA 220/66kV 160MVA Tx-III	8.3.17	16:53	TR. TRIPPED ON E/F.
16	8.3.17	14:10	400kV Mundka-Jhatikara Ckt-II	8.3.17	15:15	AT MUNDKA CKT. TRIPPED ON 86A&B, DT RECEIVED.
17	8.3.17	14:10	400kV Bawana-Mundka Ckt-II	8.3.17	14:37	AT BAWANA CKT. TRIPPED WITHOUT INDICATION. AT MUNDKA CKT. DID NOT TRIPPED.
18	8.3.17	14:10	220kV MUNDKA-NAJAFGARH CKT	8.3.17	14:20	AT NAJAFGARH CKT. TRIPPED ON 186, 86, ABC. AT MUNDKA CKT. DID NOT TRIPPED.
19	8.3.17	14:10	400kV Mundka-Jhatikara Ckt-I	8.3.17	15:15	AT MUNDKA CKT. TRIPPED ON 86A&B, DT RECEIVED.
20	9.3.17	23:52	OKHLA 220/33kV 100MVA Tx-IV	10.3.17	0:10	33KV I/C-IV TRIPPED ON 51B, 86.
21	9.3.17	23:52	OKHLA 220/33kV 100MVA Tx-III	10.3.17	0:10	33KV I/C-III TRIPPED ON 51B, 86.
22	10.3.17	3:05	400kV Bawana-Mundka Ckt-I	10.3.17	6:41	AT BAWANA CKT. TRIPPED ON DIST PROT, RYB PHASE, OVER VOLTAGE, 186A&B. CKT. DID NOT TRIPPED AT MUNDKA.
23	10.3.17	16:45	DSIIDC Bawana 220/66kV 100MVA Tx-III	10.3.17	18:25	TR. TRIPPED ON 86. HIGH WINDING TEMPERATURE.
24	12.3.17	12:35	RIDGE VALLEY 220/66kV 160MVA Tx-II	12.3.17	17:40	TR. TRIPPED ON E/F.
25	12.3.17	16:50	MASJID MOTH 220/33kV 100MVA Tx-II	12.3.17	20:50	TR. TRIPPED ON MASTER TRIP.
26	12.3.17	16:50	PAPPANKALAN-I 220/66kV 100MVA Tx-IV	12.3.17	19:15	TR. TRIPPED WITHOUT INDICATION.
27	13.3.17	8:04	SUBZI MANDI 33/11kV, 16MVA Tx-I	13.3.17	8:34	TR. TRIPPED ON DIFFERENTIAL.
28	14.3.17	10:10	ROHINI 220/66kV 100MVA Tx-III	14.3.17	17:49	TR. TRIPPED ON 30CH.
29	17.3.17	16:50	RIDGE VALLEY 220/66kV 160MVA Tx-II	17.3.17	21:02	TR. TRIPPED ON GEN TRIP, BUCHOLZ.
30	17.3.17	16:50	220 KV TRAUMA CENTER-RIDGE VALLEY CKT-2	17.3.17	17:43	AT TRAUMA CENTER CKT. TRIPPED ON 86. AT RIDGE VALLEY CKT. DID NO TRIP.
31	17.3.17	16:50	220kV MAHARANIBAGH - TRAUMA CENTER CKT-II	17.3.17	17:43	AT TRAUMA CENTER CKT. TRIPPED ON 86. AT MAHARANI BAGH CKT. DID NO TRIP.
32	18.3.17	13:55	VASANT KUNJ 66/11kV, 20MVA Tx-II	18.3.17	16:40	TR. TRIPPED ON 86.
33	20.3.17	10:20	MEHRAULI 66kV MALVIYA NAGAR CKT-I	20.3.17	13:30	CKT. TRIPPED ON 86, SPS OPERATED.
34	20.3.17	10:20	MEHRAULI 66kV MALVIYA NAGAR CKT-II	20.3.17	13:30	CKT. TRIPPED ON 86, SPS OPERATED.
35	20.3.17	10:20	MEHRAULI 66kV CDOT CKT-II	20.3.17	13:30	CKT. TRIPPED ON 86, SPS OPERATED.
36	20.3.17	10:20	MEHRAULI 66kV CDOT CKT-I	20.3.17	13:30	CKT. TRIPPED ON 86, SPS OPERATED.
37	21.3.17	0:07	WAZIRPUR 220/33kV 100MVA Tx-II	21.3.17	1:23	TR. TRIPPED ON 86.
38	21.3.17	10:22	220kV GOPALPUR-MANDOLACKT-I	21.3.17	10:38	AT GOPALPUR CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 9.91KM.
39	22.3.17	10:42	220kV WAZIRABAD - KASHMERE GATE CKT-II	22.3.17	12:25	AT WAZIRABAD CKT. TRIPPED ON DIST PROT, ZONE-3, DIST 1.801KM.
40	22.3.17	13:10	PAPPANKALAN-I 220/66kV 160MVA Tx-I	22.3.17	14:43	TR. TRIPPED ON O/C, 86 ALONGWITH I/C-V TRIPPED ON INTER TRIPPING.

S. N.	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME (HRS)		DATE	TIME (HRS)	
41	22.3.17	14:34	GAZIPUR 66/11kV, 20MVA Tx-II	22.3.17	16:05	TR. TRIPPED ON DIFFERENTIAL PROT ALONGWITH I/C TRIPPED ON INTER TRIP.
42	22.3.17	22:30	220kV MAHARANI BAGH - LODHI ROAD CKT-II	24.3.17	13:01	AT MAHARANI BAGH CKT. TRIPPED ON DIST PROT, ZONE-II, III, DIST 4.8KM.
43	22.3.17	22:30	220/66kV 100MVA TR. -II AT LODHI ROAD	Still	out	TR. TRIPPED ON DIFFERENTIAL & BUCHLOZ RELAY AND GOT DAMAGED. INTERNAL FAULT IN R PHASE WINDING.
44	23.3.17	13:00	220kV MEHRAULI - BTPS CKT. - II	23.3.17	15:07	AT MEHRAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 10.68KM AT BTPS CKT WAS IN OFF POSITION.
45	23.3.17	14:09	220kV MUNDKA-NAJAFGARH CKT	23.3.17	16:07	AT MUNDKA CKT. TRIPPED ON 86LO, RYB PHASE.
46	23.3.17	14:51	220KV WAZIRABAD - MANDOLA CKT-III	23.3.17	15:05	AT MANDOLA CKT. TRIPPED WITHOUT INDICATION. AT WAZIRABAD CKT. CKT. DID NOT TRIPPED.
47	23.3.17	16:10	220kV MUNDKA-KANJHAWALA CKT	23.3.17	16:15	AT MUNDKA CKT. TRIPPED WITHOUT INDICATION. AT KHANJAWALA CKT. DID NOT TRIP.
48	26.3.17	9:31	SUBZI MANDI 220/33kV 100MVA Tx-I	26.3.17	9:38	TR. TRIPPED WHILE NORMALIZING THE 220KV GOPALPUR CKT. -I
49	26.3.17	9:31	SUBZI MANDI 220/33kV 100MVA Tx-II	26.3.17	10:20	TR. TRIPPED WHILE NORMALIZING THE 220KV GOPALPUR CKT. -I
50	26.3.17	15:50	220kV SHALIMAR BAGH - DMRC CKT	26.3.17	16:11	AT SHALIMAR BAGH CKT. TRIPPED ON PNC.
51	26.3.17	22:25	PARKSTREET 220/33kV 100MVA Tx-I	26.3.17	22:48	TR. TRIPPED ON BUCHOLZ.
52	27.3.17	7:46	PARKSTREET 220/33kV 100MVA Tx-I	27.3.17	8:37	TR. TRIPPED ON 86, 186.
53	27.3.17	8:25	PARKSTREET 66/33kV, 30MVA Tx-I	27.3.17	8:37	TR. TRIPPED ON 86.
54	27.3.17	8:25	PARKSTREET 66/33kV, 30MVA Tx-II	27.3.17	8:37	TR. TRIPPED ON 86.
55	27.3.17	13:54	220kV GAZIPUR - BTPS CKT	27.3.17	18:10	AT BTPS CKT. TRIPPED ON DIST PROT, ZONE-I
56	28.3.17	14:00	220kV MAHARANI BAGH - SARITA VIHAR CKT	28.3.17	15:20	AT MAHARANI BAGH CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 8.8KM. AT SARITA VIHAR CKT. TRIPPED ON DIST PROT. ZONE-I, DIST 4.79KM.
57	28.3.17	16:23	220kV GAZIPUR - BTPS CKT	28.3.17	18:05	AT BTPS CKT TRIPPED ON DIST PROT, ZONE-I, R PHASE. AT GAZIPUR SUPPLY FAILED.
58	28.3.17	17:11	220kV BAMNAULI-PAPPANKALAN-I CKT-II	28.3.17	17:16	AT PAPPANKALAN-I CKT. TRIPPED ON 86ABC.
59	28.3.17	18:30	MEHRAULI 66/11kV, 20MVA Tx-I	28.3.17	19:15	TR. TRIPPED ON O/C, R PHASE, 86.
60	30.3.17	4:02	NAJAFGARH 220/66kV 100MVA Tx-II	30.3.17	4:55	66KV I/C-2 OF TR. TRIPPED ON E/F.
61	30.3.17	4:02	NAJAFGARH 220/66kV 100MVA Tx-IV	30.3.17	4:55	66KV I/C-4 OF TR. TRIPPED WITHOUT INDICATION.
62	30.3.17	14:25	PAPPANKALAN-I 220/66kV 100MVA Tx-IV	30.3.17	15:06	I/C-IV TRIPPED ON E/F, 86.
63	30.3.17	14:25	PAPPANKALAN-I 220/66kV 100MVA Tx-II	30.3.17	15:06	I/C-II TRIPPED ON E/F, 86.
64	30.3.17	14:25	PAPPANKALAN-I 220/66kV 160MVA Tx-I	30.3.17	15:06	I/C-V TRIPPED ON O/C, 86.
65	30.3.17	19:16	220kV BAMNAULI-NARAINA CKT-I	30.3.17	19:33	AT NARAINA CKT. TRIPPED ON DIST PROT, E/F, R&Y PHASE. AT BAMNAULI CKT. DID NOT TRIP.
66	31.3.17	23:20	PARKSTREET 220/66kV 100MVA Tx-I	31.3.17	23:42	66KV I/C -1 TRIPPED ON E/F, 51N.

20 DETAILS OF MAJOR GRID DISTURBANCES OCCURRED DURING 2016-17.

20.1 The details of tripping occurred in Delhi System on 02.05.2016 are as under:

Sl No	Sub-Station/Line	Outage Time	Revival Time	Reason	Remarks
1	220kV GEETA COLONY- PATPARGANJ CKT-I	10:50	16:13	AT GEETA COLONY CKT. TRIPPED ON ABC PHASE, ACTIVE GROUP-I, DIST O/C, E/F, ZONE-I, DISTANCE 1.99KM AT PATPARGANJ DIST PROT, DIST 3.186KM, GROU -I,	ERECTION OF SOLAR POWERED STREET LIGHT POLE UNDER THE LINE BY PWD CAUSED ADVERSE EFFECT ON GROUND CLEARANCE OF THE LINE. LOAD COULD NOT BE TRANSFERRED TO GHAZIPUR DUE TO SHUTDOWN OF 220KV MAHARANIBAGH – GAZIPUR CKT. –I FOR BARAPULA WORK BY PWD.
2	220kV BAMNAULI- PAPPANKALAN- II CKT-I	11:00	14:26	AT BAMNAULI CKT. TRIPPED ON DIST PROT, ZONE-I, DIST 9.396KM. AT PAPANALAN-II DIST PROT, ZONE-I, 86.	LOAD SHARED ON OTHER CKT. CKT CHARGED AFTER PATROLLING.
3	400kV BAWANA – MUNDKA CKT. -II	11:39	19:20	AT MUNDKA AUTO LOCKOUT, ZONE-I, DIST 13.34KM AT BAWANA CKT. TRIPPED ON A PHASE, ZONE-I	CONDUCTOR SNAPPED NEAR DSIDC INDUSTRIAL AREA. LOAD SHARE ON OTHER CKT.
4	220kV NARELA - MANDOLA CKT-I	12:10	20:26	AT MANDOLA CKT. TRIPPED ON R PHASE, E/F, ZONE-II, DIST 25KM. AT NARELA CKT DID NOT TRIP.	LOAD SHARED ON OTHER CKT.
5	220kV MEHRAULI - BTPS CKT. - II	12:53	15:49	AT BTPS CKT. TRIPPED ON ZONE-I, R PHASE, DIST 9.7KM AT MEHRAULI CKT. TRIPPED ON 186, 186, 86X, DIST PROT, TRIP PHASE ABC, ZONE-I	CKT TRIPPED DUE TO WIRE THROWN BY LOCAL RESIDENT B/W TOWER NO- No 33 & 34.
6	220kV DIAL- MEHRAULI CKT- II	12:56	14:57	AT MEHRAULI CKT. TRIPPED ON 186, 186, DIFFERENTIAL. AT DIAL MAIN-II, B PHASE, B PHASE FAULTY, ZONE-I.	CKT CHARGED AFTER PATROLLING.
7	220kV DIAL- MEHRAULI CKT-I	13:12	15:47	AT MEHRAULI CKT TRIPPED ON DIST PROT, DIST 3.402KM, ZONE-I, A PHASE, DIFFERENTIAL TRIP AT DIAL CKT. TRIPPED ON B PHASE, DIFFERENTIAL TRIP, R PHASE FAULTY.	CKT CHARGED AFTER PATROLLING.
8	220kV GOPALPUR- MANDOLACKT-I	15:05	16:19	AT GOPALPUR CKT. TRIPPED ON ZONE-I, R&B PHASE DIST PROT, AT MANDOLA R AND B PHASE FAULTY, DIST PROT, DIST 18KM.	CKT CHARGED AFTER PATROLLING.
9	220kV BAWANA - KANJHAWALA CKT-2	15:53	17:30	AT BAWANA CKT. TRIPPED ON DIST PROT, ZONE-II, DIST 10.19KM AT KHANJAWALA NO TRIPPING	LOAD COULD NOT BE TRANSFERRED TO OTHER SOURCE I.E. 400kV MUNDKA & 220kV NAJAFGARH S/STN. AS 220kV KHANJAWALA – MUNDKA CKT. AND 220kV MUNDKA – NAJAFGARH CKT. WERE UNDER SHUTDOWN FOR DMRC WORK SINCE 30.04.2016.
10	220kV BAWANA - KANJHAWALA CKT - 1	15:53	17:30	AT BAWANA CKT. TRIPPED ON ZONE-I, DIST PROT, DIST 5.91KM, A PHASE AT KHANJAWALA NO TRIPPING	

Sl No	Sub-Station/Line	Outage Time	Revival Time	Reason	Remarks
11	220KV WAZIRABAD - MANDOLA CKT-III	16:10	18:25	AT MANDOLA CKT. TRIPPED ON ZONE-I, DIST 11.51KM AT WAZIRABAD CKT. TRIPPED ON ZONE-II, TRIP PHASE -II	LOAD COULD NOT BE TRANSFERRED TO GHAZIPUR DUE TO SHUTDOWN OF 220KV MAHARANIBAGH - GAZIPUR CKT. -I FOR BARAPULA WORK BY PWD.
12	BAWANA 400/220kV 315MVA ICT-VI	16:00	20:00	ICT MADE OFF DUE TO HEAVY OIL LEAKAGE ON Y PHASE 220KV BUSHING	LOAD SHARED ON OTHER ICTs
13	400kV MUNDKA – JHAJJAR CKT. -I	16.54	18.57	AT MUNDKA CKT. TRIPPED ON DIST PROT ZONE-I, ZONE-II, SOTF B PHASE 86A&B, DIST 563.57KM.	LOAD WAS NOT AFFECTED
14	400kV MUNDKA – JHAJJAR CKT. -II	16.54	18.02	AT MUNDKA CKT. TRIPPED ON DIST PROT ZONE-I, B PHASE	
15	INDRAPRASTHA POWER 220/33kV 100MVA Tx-II	18:50	21:00	CONTROL CABLE OF TR. CAUGHT FIRE.	
16	220/66KV 100MVA PR. TR. AT PAPANKALAN -II	17.05	21.17	TR. TRIPPED ON LBB PROT, DIFF. PROT, HV REF AND LV REF.	LOAD SHARED ON OTHER TRS.
17	INDRAPRASTHA POWER 220/33kV 100MVA Tx-I	18:52	22:42	TR. -I TRIPPED ON E/F, O/C.	CONTROL CABLE OF 220/33kV 100MVA TR-1 CAUGHT FIRE.

The detail of Outage of Generating units is as under:

STATION / UNIT	OUTAGE TIME	REVIVAL TIME	GENERATION AFFECTED	REASON
PRAGATI				
STG	15.57	16.54	113	Machine tripped on internal fault
TOTAL			113	

The details of load shedding due to above trippings are as under:

OUTAGE TIME	REVIVAL TIME	LOAD AFFECTED	AREA	REASON
BYPL AREAS				
11:06	11:10	15	PREET VIHAR	DUE TO TRIPPING OF 220kV PATPARGANJ - GEETA COLONY CKT.
11:06	11:16	15	CBD SHAHDRA-I	
11:06	11:07	13	KARKARDOOMA	
14:21	15:01	30	MOTIA KHAN	DUE TO OVER LOADING OF 220kV BTPS - BALLABHGARH CKT. -I&II
15:06	15:17	12	B.G.ROAD GRID	DUE TO TRIPPING OF 220kV MANDOLA(400kV) - GOPALPUR CKT.

OUTAGE TIME	REVIVAL TIME	LOAD AFFECTED	AREA	REASON
15:14	16:25	24	GURU ANGAD NAGAR	OVERLOADING OF PATPARGANJ - GEETA COLONY CKT.-II AS CKT.-I WAS UNDER BREAK DOWN
16:00	16:25	9	CBD SHAHDRA-I	
16:00	16:57	18	CBD SHAHDRA-I	
16:00	16:24	18	PREET VIHAR	
16:00	16:40	9	KARKARDOOMA	
16:14	16:35	23	SEELAMPUR	
16:14	16:35	9	G.T. ROAD	
16:14	16:35	7	KAILASH NAGAR	
16:14	16:35	13	SHASTRI PARK EAST	
16:14	16:34	31	GHONDA	
16:17	17:06	10	220KV WAZIRABAD (11kV LOAD)	
16:18	17:30	25	YAMUNA VIHAR	
16:18	17:15	25	BHAGIRATHI	
16:18	17:38	16	KARAWAL NAGAR	
16:18	17:28	12	DWARKAPURI	SUPPLY FAIL FROM 220kV I.P.STATION DUE TO FIRE ON CONTROL CABLE
18:57	19:08	20	MINTO ROAD	
18:57	19:12	24	KAMLA MARKET	
18:57	19:20	5	I.G. STADIUM	
18:57	19:13	4	DMS GRID	
18:57	19:13	4	DDU MARG GRID	
18:57	19:10	1	I.P. ESTATE	
19:24	19:38	5	I.G. STADIUM	BRPL AREAS
13:10	13:13	45	MALVIYA NAGAR	
13:10	13:13	27	BIJWASAN	
13:15	14:25	34	C- DOT	
13:15	13:52	78	VASANT KUNJ C BLOCK	
13:52	14:15	60	VASANT KUNJ C BLOCK	
13:15	13:20	27	BIJWASAN	
14:23	14:58	29	11kV LOAD MEHRAULI	
14:40	15:13	14	ALL 11KV LOAD OKHLA	
16:00	16:29	22	KILOKRI	DUE TO TRIPPING OF PRAGATI STG UNIT
19:07	19:10	1	EXHIBITION 1	DUE TO FIRE IN CONTROL CABLE AT IP

OUTAGE TIME	REVIVAL TIME	LOAD AFFECTED	AREA	REASON
TPDDL AREAS				
15:04	15:07	71	AZAD PUR,HUDSON LINE, INDIRA VIHAR, JAHANGIR PURII,MODEL TOWN, PITAM PURA - III	DUE TO TRIPPING OF 220kV MANDOLA(400kV) - GOPALPUR CKT.-I
15:04	15:11	10	SHAKTI NAGAR	
15:04	15:20	6	HUDSON LINE	
15:04	15:17	36	220 KV SUBZI MANDI,DELHI UNIVERSITY,TRIPOLIA	
15:53	15:58	8	BAWANA CW	DUE TO TRIPPING OF 220kV BAWANA(400kV) - KANJHAWALA CKT. I&II
15:53	16:00	36	POOTH KHURD,ROHINI - II	
15:53	16:50	1	220kV KANJHAWLA (11kV LOAD)	
15:53	17:30	9	220kV KANJHAWLA (11kV LOAD)	

20.2. **Sub : Preliminary report on trippings occurred in Delhi system on 06.05.16 at 11.28hrs.**

The following tripping occurred in Delhi system on 06.05.2016 at 11:28hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV BTPS-Mehrauli Ckt-II	At Mehrauli: D/P,Z-1,Dist-5.239Kms,186. At BTPS: D/P,Z-1,Dist.-13Kms	11:28	22.25	220kV Mehrauli - BTPS Ckt-I was under Shut down . Y Ph jumper snapped at tower no. 5
2	220kV BTPS-Sarita Vihar Ckt-I	At Sarita Vihar: D/P, Z-1, B-C-Ph Dist-2.7Kms. At BTPS: D/P, Z-1,Y-B-Ph, Dist.-13Kms	11:28	11.55	
3	220kV BTPS-Sarita Vihar Ckt-II	At BTPS: D/P, Z-1, Y-B-Ph, Dist.-2.64Kms At Sarita Vihar: No tripping	11:28	12.03	
4	220/66kV 100MVA Tr. -I at Park Street	Tr. Tripped on over flux, 86. 66kV I/C-I tripped on inter tripping.	11:28	11:37	

System configuration during the incident

Prior to the incident, Pragati Station (Unit-2 & STG) was connected to BTPS side through 220kV Sarita Vihar - BTPS Ckts. 220kV Bus coupler was open at Pragati S/Stn. Tripping of 220kV BTPS-Sarita Vihar Ckt-I at BTPS & Sarita Vihar and 220kV BTPS – Sarita Vihar Ckt.-II at BTPS caused Islanding of Pragati Unit-2 and STG from the Grid and collapsed. 220kV Bus coupler closed Pragati Stn at 11.34hrs.

Generation Loss during disturbance:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Time	
			Tripping	Restoration
Pragati Stn.	Unit-2	104	11:28	16:00
	STG	122	11:28	11.22
Total		207		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
Pragati	#2	105	--
STG	STG	102	--
Park Street	--	--	208
Total		207	208

Details of Under frequency relay operation :-

Name of the Grid	Time		Load in MW
	From	To	
220kV Park Street			
66kV Ridge Vally Ckt.	11.28	11.41	No load
33kV Prashad Nagar Ckt.	11.28	11.38	19
33kV Shankar Road Ckt.	11.28	11.38	16
33kV Motia Khan Ckt.-I	11.28	11.38	10
33kV Motia Khan Ckt. - II	11.28	11.40	6
Total MW			51

Details of load shedding carried out to control the loading of 220kV Patparganj – Geeta Colony Ckt. I &II.

Name of the Grid	Time		Load in MW	Remarks
	From	To		
220kV Patparganj				
66kV Khichripur Ckt.	11.30	11.41	18	Load shedding at Patparganj S/Stn. was carried out to control the loading of 220kV Patparganj – Geeta Colony Ckt. I &II.
66kV Akshardham Ckt.	11.30	11.41	2	
66kV Group Housing Ckt. –II	11.30	11.41	11	
66kV Group Housing Ckt. –I	11.30	11.41	11	
33kV Karkardooma Ckt.-I	11.30	11.50	11	
33kV Karkardoom Ckt.-II	11.30	11.50	11	
33kV Shakarpur Ckt.	11.30	11.50	7	
33kV Mother Dairy Ckt.	11.30	11.50	6	
33kV CBD Shahdra Ckt.	11.30	11.50	7	
33kV Preet Vihar Ckt.	11.30	11.50	14	
33kV Geeta Colony Ckt.	11.30	11.52	14	
33/11kV 16MVA Tr.	11.30	11.50	5	
33/11kV 20MVA Tr.	11.30	11.50	6	
33kV Guru Angand Nagar Ckt. –I	11.30	11.52	15	
33kV Guru Angand Nagar Ckt. –II	11.30	11.52	8	
Total MW			146	

20.3. Preliminary report on trippings occurred in Delhi system on 22.05.2016.

The following tripping occurred in Delhi system on 22.05.2016 at 20.30hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV BAMNAULI – JHATIKRA CKT. –I	AT BAMNAULI : AB PHASE, Z-I, Z-5, DT SENT, LBB, DIST 438.4METERS AT JHATIKRA : NOT AVAILABLE	20.30	14.10.2017	At Bamnauli : Dead end tower (Tower-169) along with gantry collapsed
2	400kV BAMNAULI – JHATIKRA CKT. –II	AT BAMNAULI : M-I, A PHASE, Z-1, Z-5, DT SENT, LBB, DIST 766.4METERS, FAULT CURRENT 18.5kAmps AT JHATIKRA : NOT AVAILABLE	20.30	08.06.16 at 19.19hrs	
3	220kV BAMNAULI – PAPANKALAN-II CKT.-II	AT BAMNAULI : Z-I, C PHASE, CN, 186, DIST 489.6METERS, FAULT CURRENT 27.23kAmps. AT PAPANKALAN –II : DIST PROT, M-I, M-II, DIST 10.0KMs., 86	20.30	22.05	
4	220kV BUS COUPLER AT PAPANKALAN-II	TRIPPED ON O/C, 86	20.30	20.35	

Details of Load shedding :-

Name of the Grid	Time		Load in MW	Remarks
	From	To		
220kV Papankalan-II				DUE TO OVERLOADING OF 220KV BAMNAULI-PAPANKALAN-II CKT-I ON ACCOUNT OF TRIPPING OF 220KV BAMNAULI-PAPANKALAN-II CKT. -II .
<i>G-6 PPK</i>	20:30	20:32	50	
<i>G-15 DWARKA</i>	20:30	20:35	30	
<i>PANKHA ROAD</i>	20:30	20:35	80	
<i>G-15 DWARKA</i>	21:32	22:31	42	
<i>11kV LOAD</i>	21:44	22:04	12	
220kV Papankalan-I				
<i>11kV LOAD</i>	21:18	21:50	37	

20.4 Preliminary report on trippings occurred in Delhi system on 23.05.2016.

The following tripping occurred in Delhi system on 23.05.2016 at 15:47 hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	220kV Mandola- South of Wazirabad Ckt- IV	At Mandola: Dist. prot, zone-1, Dist-10.43Km. Y-N Phase & E/F. At Wazirabad: Dist prot, Zone-1, Y-Phase, Dist-3.393 KMs	15.32	17.27
2	220kV South of Wazirabad-Geeta Colony Ckt- I	At Wazirabad: Dist prot, zone 1, 2 & 3, RYB Phase. Dist. 0KMs. At Geeta Colony: Dist prot, zone-2 ,E/F.	15.47	16.32
3	220kV South of Wazirabad-Geeta Colony Ckt- II	At Wazirabad : Dist prot, zone 1, Dist. 0.21KMs. At Geeta Colony: Dist prot, zone-2,E/F.	15.47	16.32
4	220/66kV 100MVA Tr. –I at Wazirabad	Tr. Tripped on E/F. 66kV I/C –I tripped on inter tripping	15.47	16.25
5	220/66kV 100MVA Tr. –III at Wazirabad	Tr. Tripped on E/F. 66kV I/C –I tripped on inter tripping	15.47	16.38

System configuration during the incident

Prior to the incident, GT Station was connected to Grid through 220kV IP Ext (Pragati) -IP - Patparganj - Geeta Colony- Wazirabad - Mandola Ckts. Due to tripping of 220kV Wazirabad- Geeta Colony ckt.-I&II at Wazirabad and Geeta Colony, GT got islanded from the Grid and subsequently it collapsed. 220 KV supply to GT Stn. was extended by closing bus coupler at Pragati at 15.47hrs.

Generation loss

Sr No	Name of Unit	Generation in MW	Tripping time	Synchronising time	
1	G.T. # 2	27	15.47	15.58	
2	GT STG-#1	19	15.47	17.25	
3	G.T. # 1	22	15.47	G.T. Units & its STGs were not synchronized due to less demand	
4	G.T. # 4	24	15.47		
5	G.T. # 5	18	15.47		
6	G.T. # 6	24	15.47		
7	GT STG-#2	6	15.47		
8	GT STG-#3	19	15.47		
	Total	159			

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
G.T. Stn.	1, 2, 4, 5, 6, STG-1,2&3	159	132
Geeta colony	--	--	53
I.P.Stn.	--	--	171
RPH	--	--	65
Total	--	159	421

Details of Under frequency relay operation :-

Name of the Grid	Time		Load in MW
	From	To	
220kV Geeta Colony			
33kV Shakarpur Ckt.	15.47	16.43	ON
33kV Kailash Nagar Ckt. I&II	15.47	16.43	9
33kV Kanti Nagar Ckt. I&II	15.47	16.43	15
33kV Geeta Colony Ckt. I&II	15.47	16.43	27
I.P.STN.			
33kV Bay No. 7 (Exhib. Gr.-I)	15.47	16.45	3
33kV Bay No.9 (Exhib. Gr.-II)	15.47	16.45	ON
33kV Bay No. 24 (Defence Colony)	15.47	16.44	11
RPH			
33kV Bay No. 5 (Exhib. Gr.-I)	15.47	16.35	ON
33kV Bay No.6 (Exhib. Gr.-II)	15.47	16.35	ON
33kV Bay No. 13 (Defence Colony)	15.47	16.35	14
33kV Bay No. 16 (Exhib. Gr.-I)	15.47	16.35	6
Total (in MW)			85

Detail of load shedding:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
15:47	16:33	17	LAJPAT NAGAR
15:47	16:33	6	NIZAMUDDIN
15:47	16:33	11	DEFENCE COLONY
15:47	16:33	3	EXHIBITION GROUND-1
NDMC			GT STATION
15:47	16:02	16	GT - SCHOOL LANE CKT.-I
15:47	16:02	25	GT - VIDYUT BHAWAN CKT.-I
15:47	16:02	17	GT - VIDYUT BHAWAN CKT.-II
			220kV IP STATION
15:47	15:51	12	BAY -2 (IP - NIRMAN BHAWAN)
15:47	15:49	9	BAY - 4 (IP - ELECTRIC LANE)
15:47	16:42	5	BAY - 6 (IP - TILAK MARG)
15:47	16:45	7	BAY - 42 (IP - CONNAUGHT PLACE)
BYPL			
15:47	15:57	10	MOTIA KHAN
15:47	15:58	7	MAYUR VIHAR PH-I
15:47	16:00	25	KAMLA MARKET
15:47	16:00	13	I.G. STADIUM, IP ESTATE
15:47	16:00	6	FOUNTAIN
15:47	16:00	6	DEEN DYAL UPADHAYA MARG
From	To		
15:47	16:03	11	VIVEK VIHAR
15:47	16:03	20	JHILMIL DSIDC
15:47	16:03	14	KARKARDOOMA
15:47	16:05	14	GROUP HOUSING -I GRID
15:47	16:05	16	KHICHIRIPUR
15:47	16:10	5	DWARKAPURI
15:47	16:10	17	SEELAMPUR (33/11KV) GRID S.STN
15:47	16:13	3	AKSHARDHAM
15:47	16:19	4	KAILASH NAGAR
15:47	16:19	11	SHASTRI PARK EAST
15:47	16:21	14	MINTO ROAD
15:47	16:22	3	DELHI GATE
15:47	16:37	15	G.B. PANT
15:47	16:42	7	KAILASH NAGAR
15:47	16:42	10	DELHI GATE
15:47	16:42	11	KANTI NAGAR
15:47	16:42	23	GEETA COLONY

20.5 Preliminary report on trippings occurred in Delhi system on 28.05.2016 at 21.34hrs.

The following tripping occurred in Delhi system on 28.05.2016 at 21.34hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	315MVA ICT-II at 400kV Bawana	186 A&B, Trip relay Group-A, 86A, O/C, C Phase, 67C.	21.34	23.47	There was widespread thunder storm and rain. At 400kV Bawana S/Stn.-'B' Phase jumper snapped on dead end tower of 220kV Bawana - DSIDC Bawana Ckt.-I
2	315MVA ICT-IV at 400kV Bawana	86, Group A trip, Group B trip	21.34	00.01	
3	315MVA ICT-VI at 400kV Bawana	86 Trip, 96, OSR Buchholz, R phase trip.	21.34	11.47 (29.05.16)	
4	220kV Bawana – DSIDC Bawana Ckt. –I	At Bawana: No tripping At DSIDC Bawana : Dist prot, Auto reclose, Z-2, ABC Phase, Dist. 8.168KMs.	21.34	22.58 (29.05.16)	

System configuration during the incident

Prior to the incident, 400/220kV, 315 MVA ICT –II, IV & VI were connected to 220kV Bus-II and 315 MVA ICT –I, III & V were connected to 220kV Bus-I at 400kV Bawana. 220kV Bus couplers were in open position. Due to tripping of 400/220kV, 315 MVA ICT –II, IV & VI, 220kV Bus-II became dead and load of 220kV DSIDC Bawana Stn and 220kV Khanjawala Stn. were affected.

Details of load shedding

Name of the Grid	Time		Load in MW	Remarks
	From	To		
Bawana Clear water, Bawana-I	21.34	21.42	46	Due to tripping of 400/220kV 315MVA ICT-II, IV & VI at Bawana alongwith 220kV Bawana -DSIDC Bawana Ckt.-I
Poothkhurd	21.34	21.47	18	
Rohini-II , Rohini Sec.22	21.34	21.45	43	
Bawana Clear Water	21.34	21.50	14	
Khanjawala	21.34	21.50	22	
Jaffarpur	21.34	22.07	44	
Bodella –II	21.34	22.07	82	
Total MW			269	

20.6. Preliminary report on trippings occurred in Delhi system on 29.05.2016.

The following tripping occurred in Delhi system on 29.05.2016 at 22.12hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV South of Wazirabad-Geeta Colony Ckt- II	At Geeta Colony : Active Group-I, B Phase, Dist prot, zone-2,Dist 5.555 Kms.E/F. At Wazirabad :RYB Phase, Z-I, L-N, Dist. 0.3Km.	22.12	22.30	Due to thunderstorm and rain
2	220kV South of Wazirabad-Geeta Colony Ckt- I	At Wazirabad : Z-1, Dist. Prot, RYB Phsae. Dist. 0.1Km. At Geeta Colony : No tripping	22.12	22.30	
3	220kV Bus Coupler	Tripped on O/C	22.12	23.01	
4	220/66kV 100MVA Tr. –III at Wazirabad	Non directional E/F	22.12	23.28	

System configuration during the incident

Prior to the incident, GT Station was connected to Grid through 220kV IP Ext (Pragati) -IP - Patparganj - Geeta Colony- Wazirabad - Mandola Ckts. Due to tripping of 220kV Wazirabad- Geeta Colony ckt.-I&II at Wazirabad. GT got islanded from the Grid and subsequently it collapsed. 220 KV supply to GT Stn. was extended by closing bus coupler at Pragati at 22.18hrs.

Generation loss

Sr No	Name of Unit	Generation	Tripping time	Synchronising time
1	G.T. # 5	24	22.12	22.22
2	GT STG-#3	8	22.12	23.45
	Total	32		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
G.T. Stn.	#5, STG-3	32	63
Geeta colony	--	--	65
Patparganj	--	--	17
I.P.Stn.	--	--	79
RPH	--	--	44
Total		32	268

Details of Under frequency relay operation :-

Name of the Grid	Time		Load in MW
	From	To	
220kV Geeta Colony			
33kV Geeta Colony Ckt. I	22.12	22.34	15
33kV Geeta Colony Ckt. II	22.12	22.34	No load
33kV Kailash Nagar Ckt. I	22.12	22.34	No load
33kV Kailash Nagar Ckt. II	22.12	22.34	9
33kV Kanti Nagar Ckt. I&II	22.12	22.34	18
33kV Shakarpur Ckt.	22.12	22.34	16
I.P.STN.			
33kV Bay No. 7 (Exhib. Gr.-I)	22.12	22.35	2
33kV Bay No.9 (Exhib. Gr.-II)	22.12	22.35	1
33kV Bay No. 24 (Defence Colony)	22.12	22.35	No load
Total (in MW)			61

Detail of load shedding:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BYPL			
22.12	22.28	4	DEEN DAYAL UPADYA MARG
22.12	22.28	20	KAMLA MARKET, CIVIC CENTER
22.12	22.28	3	I.G.STADIUM, I.P.ESTATE
22.12	22.22	10	MOTIA KHAN
22.12	22.50	10	G.B.PANT
22.12	22.28	10	MINTO ROAD
22.12	22.28	6	DELHI GATE , I.P.ESTATE
22.12	22.22	16	SHAKARPUR
22.12	22.34	15	GEETA COLONY
22.12	22.34	17	KANTI NAGAR
22.12	22.34	9	KAILASH NAGAR
BRPL			
22.12	22.30	2	EXHIBITION GROUND-1
22.12	22.30	15	KILOKARI
22.12	22.30	6	NIZAMUDDIN
22.12	22.30	6	LAJPAT NAGAR

20.7. Preliminary report on Disturbance occurred in Delhi system on 09.06.2016 at 14:27Hrs due to trippings at 220kVSamaypur S/Stn of BBMB.

Incident : At 220kV Samaypur S/Stn. of BBMB, Y-Ph CT of 220kV Samaypur -Palwal Ckt. blasted at 14.27hrs. This led to tripping of 220kV BTPS – Ballabgarh Ckt. I&II at Ballabgarh end & 220kV BTPS – Alwar Ckt. at Alwar end. The above incident caused the tripping of Unit No. #4 & #5 at BTPS and Pragati Unit #1 & its STG.

System configuration during the incident

Prior to the incident, Pragati Station (Unit-1 & STG) was connected to BTPS side through 220kV Sarita Vihar - BTPS Ckts. 220kV Bus coupler was open at Pragati S/Stn.

BTPS Units #4 & #5 were connected to grid through 220kV BTPS – Ballabgarh Ckts, 220kV BTPS – Alwar Ckt. & 220kV BTPS – Mehrauli -Dial-Bamnauli Ckts. 220kV Bus Coupler was closed at Mehrauli.

Restoration

220kV Bus Coupler at Pragati closed at 14.42hrs. and 220kV supply extended to Park Street & Sarita Vihar S/Stn. At 14.47hrs. 66kV DMRC Ckt. charged from Park Street and also from Sarita Vihar.

220kV Bus Coupler closed at Mehrauli at 14.48hrs. and startup power extended to BTPS and supply was also extended to Vasant Kunj S/Stn. At 15.07hrs. supply was extended to 220kV Okhla S/Stn and partial load was normalized. All load shedding lifted at 17.35hrs.

Generation Loss during disturbance:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Time	
			Tripping	Restoration
Pragati	#1	90	14.33	15.10
	STG	112	14.32	16.22
BTPS	#4	170	14.27	18.22
	#5	189	14.30	17.11
Total (MW)		561		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
Pragati	#1	90	--
	STG	112	--
BTPS	#4	170	--
	#5	189	--
Sarita Vihar	--	--	118
Park Street	--	--	244
Okhla	--	--	276
Mehrauli	--	--	207
Vasant Kunj	--	--	103
Total		561	948

Details of Under frequency relay operation :-

Name of the Grid	Time		Load in MW	Remarks
	From	To		
220kV Sarita Vihar				
66kV Mathura Road Ckt.-II	14.25	15.23	42	
11kV 5Nos. feeders	14.25	15.42	14	
220kV Park Street				
66kV Ridge Vally Ckt. -I	14.33	14.54	0	Ckt. was on no load
33kV Parshad Nagar Ckt.	14.33	15.20	14	
33kV Shankar Road Ckt.	14.33	15.20	18	
33kV Motia Khan Ckt. I	14.33	15.20	25	
33kV Motia Khan Ckt. II	14.33	15.22	12	
220kV Vasant Kunj				
11kV 6Nos. feeders	14.30	14.50	09	
66kV Vasant Kunj C-1 & C-2 Ckts.	14.30	14.50	95	
220kV Mehrauli				
66kV Vasant Kunj C-1 & C-2 Ckts.	14.30	14.58	0	Ckt. was on no load
66kV Vasant Kunj D-1 & D-2 Ckts.	14.30	14.58	0	Ckt. was on no load
66kV Malviya Nagar Ckt. I & II	14.30	15.33	91	
220kV Okhla				
66kV Okhla Ph-I Ckt. I&II	14.33	15.34	66	
66kV Malviya Nagar Ckt. I & II	14.33	15.34	19	
33kV Okhla Ph-II Ckt. I&II	14.33	15.35	24	
33kV Balaji Ckt. I&II	14.33	15.10	18	
33kV Masjid Moth Ckt.	14.33	15.10	14	
33kV Tuglakabad Ckt.	14.33	15.10	18	
Total Load in MW			479	

Details of Load Shedding :-

Duration		Quantum In MW	Grid / Areas Affected
From	To		
<u>BRPL</u>			
14:28	16:02	20	D C SAKET
14:28	14:37	22	PALAM
14:28	16:02	14	ADCHINI
14:28	16:02	10	ANDHERIA BAGH
14:28	14:37	19	BIJWASAN
14:28	15:00	38	C-DOT
14:28	17:00	16	VASANT VIHAR
14:28	16:02	4	SHIVALIK
14:28	15:00	20	VASANT KUNJ C-BLK
14:28	15:00	17	VASANT KUNJ B-BLK
14:28	16:02	90	220 KV MEHRAULI
14:28	15:00	15	JNU
14:33	16:56	20	EAST OF KAILASH
14:33	15:10	14	MASJID MOTH
14:33	15:50	35	NEHRU PALACE
14:33	17:07	24	OKHLA PH-2
14:33	17:32	32	TUGLAKABAD
14:33	15:30	16	JASOLA
14:33	17:25	14	JAMIA
14:33	17:25	25	MATHURA ROAD
14:33	15:30	31	OKHLA PH-1
14:33	17:25	37	MCIE
14:33	17:32	19	220 KV OKHLA
14:33	15:30	18	SARAI JULLENA
15:50	17:08	10	NEHRU PALACE
16:02	17:28	90	VASANT KUNJ 'C' BLOCK
<u>BYPL</u>			
14:33	15:14	26	SHASTRI PARK (c)
14:33	16:12	22	PRASAD NAGAR
14:33	16:12	18	ANAND PARBAT
14:33	16:00	12	MOTIA KHAN
14:33	14:52	11	MOTIA KHAN
14:33	15:34	11	MOTIA KHAN
14:33	15:50	16	FAIZ ROAD
14:33	15:40	16	SHANKAR ROAD
16:12	16:36	26	SHASTRI PARK (CENTRAL)
<u>TPDDL</u>			
14:27	14:55	13	PUSA
15:12	15:16	13	PUSA

20.8. Preliminary report on trippings occurred in Delhi system on 10.06.2016.

The following tripping occurred due to heavy thunderstorm in Delhi system on 10.06.2016 at 16.48hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	220kV South of Wazirabad-Geeta Colony Ckt- I	At Geeta Colony : Dist prot, zone-2,Dist 7.354Kms.E/F. At Wazirabad :RBY Phase, Z-I, Dist prot, Dist. 6.3Km.	16.48	17.09
2	220kV South of Wazirabad-Geeta Colony Ckt- II	At Wazirabad : Gen. trip, Z-1, Dist. Prot, RYB Phsae. Dist. 0.0Km. At Geeta Colony : Dist prot, Z-2, Dist 5.758Kms, E/F	16.48	17.06
3	220/66kV 100MVA Tr. -I at Wazirabad	Tr. Tripped on E/F	16.48	17.03
4	220/66kV 100MVA Tr. -III at Wazirabad	Tr. Tripped on E/F	16.48	17.03

System configuration during the incident

Prior to the incident, GT Station and PPCL Unit #2 were connected through 220kV IP Ext (Pragati) - IP -Patparganj - Geeta Colony- Wazirabad - Mandola Ckts and 220kV Bus Coupler of Pragati was in off position. PPCL- STG was connected through 220kV IP Ext(Pragati)-Sarita Vihar-BTPS ckts. Due to tripping of 220kV Wazirabad- Geeta Colony ckt.-I&II at both ends. Generating units of GT Station and PPCL Unit #2 got islanded from the Grid and subsequently it collapsed. Whereas PPCL- STG though connected to BTPS side it tripped on jerk.

At 16.57hrs. 220kV Supply was extended to G.T. & Pragati Stn. by closing 220kV Bus Coupler at Pragati.

Generation loss

Sr No	Name of Unit	Generation	Tripping time	Synchronizing time
1	G.T. # 1	21	16.48	17.08
2	G.T. # 2	23	16.48	17.08
3	G.T. # 4	23	16.48	17.08
4	G.T. # 5	22	16.48	17.08
5	G.T. # 6	24	16.48	17.08
6	STG – 1	19	16.48	17.53
7	STG – 2	10	16.48	18:06 13.06.2016
8	STG – 3	19	16.48	17.38
9	Pragati #2	96	16.48	17.38
10	Pragati STG	114	16.48	18.00
	Total	371		

* G.T. Unit #3 was under backdown.

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
G.T. Stn.	Unit # 1	21	116
	Unit # 2	23	--
	Unit # 4	23	--
	Unit # 5	22	--
	Unit # 6	24	--
	STG – 1	19	--
	STG – 2	10	--
	STG – 3	19	--
Pragati	Unit #2	96	--
Geeta colony	--	--	104
Patparganj	--	--	57
I.P.Stn.	--	--	224
Wazirabad	--	--	34
RPH	-	--	57
Total		257	592

Details of Under frequency relay operation :-

Name of the Grid	Time		Load in MW
	From	To	
220kV Geeta Colony			
33kV Geeta Colony Ckt. I	16.48	17.25	18
33kV Geeta Colony Ckt. II	16.48	17.25	19
33kV Kailash Nagar Ckt. I	16.48	17.25	10
33kV Kailash Nagar Ckt. II	16.48	17.25	19
33kV Kanti Nagar Ckt. I&II	16.48	17.25	28
33kV Shakarpur Ckt.	16.48	17.25	14
I.P.STN.			
33kV Bay No. 7 (Exhib. Gr.-I)	16.48	17.48	2
33kV Bay No.9 (Exhib. Gr.-II)	16.48	17.48	No load
33kV Bay No. 24 (Defence Colony)	16.48	17.48	11
Total (in MW)			121

Detail of load shedding:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
16:48	16:53	2	EXHIBITION-1
16:48	17:48	40	KILOKARI
16:48	17:48	26	NIZAMUDDIN (PTR-2)
16:48	16:57	11	LAJPAT NAGAR

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BYPL			
16:48	17:28	17	MAYUR VIHAR -1
16:48	17:24	10	GROUP HOUSING-1
16:48	16:58	11	SHAKAR PUR
16:48	17:24	17	KHICHRI PUR
16:48	17:24	4	AKSHARDHAM
16:48	17:31	8	DDU MARG
16:48	17:31	16	MINTO ROAD
16:48	17:31	30	KAMLA MKT
16:48	17:31	11	I G STADIUM + IPESTATE GRID
16:48	17:02	10	JAMA MASJID
16:48	17:00	8	TOWN HALL
16:48	16:52	6	FOUNTAIN
16:48	17:31	19	G B PANT
16:48	17:31	13	DELHI GATE
16:48	17:31	11	MOTIA KHAN
16:48	17:10	10	SHASTRI PARK (E)
16:48	17:10	8	SEELAMPUR

20.9. **Preliminary report on supply failure at 400/220kV Maharani Bagh S/Stnon 10.06.2016 at 17.04hrs. .**

At 17.04HRS. on account of heavy thunderstorm there was tripping of 400kV Dadri – Maharani Bagh Ckt. and 400kV Ballabgarh – Maharani Bagh Ckt. of PGCIL. Due to which 400kV feed to Maharani bagh S/Stn. failed. There was no tripping in 220kV Lines emanating from 400/220kV Maharani Bagh S/Stn.

Prior to the supply failure the Load running on Maharani Bagh was as under:

The load of Trauma Center, Ridge Valley and Naraina was immediately changed over to Bamnauli. At 17.26hrs. 400kV supply to Maharani Bagh S/Stn. was restored through 400kV Ballabgarh S/Stn.

Detail of load affected

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BYPL			
17:04	17:44	10	PATPARGANJ INDUSTRIAL AREA
17:04	17:24	13	KARKARDOOMA
17:04	17:40	22	CBD SHAHDRA-1
17:04	17:46	12	CBD SHAHDRA-2
17:04	17:44	12	DALLUPURA
17:04	17:41	23	GURU ANGAD NAGAR

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
17:04	17:44	9	MAYUR VIHAR -2
17:04	17:31	14	GROUP HOUSING -2
17:04	17:44	9	KONDLI
17:04	17:44	6	220KV GAZIPUR
17:04	17:44	5	NEW KONDLI
17:04	17:40	11	220KV PATPARGANJ
17:04	17:44	1	MOTHER DAIRY
17:04	17:44	2	SCOPE MINAR
17:04	17:15	18	JHILMIL
17:04	17:44	16	PREET VIHAR
17:04	17:31	16	SHAKAR PUR
17:04	17:24	6	GEETA COLONY
17:04	17:52	13	FAIZ ROAD
17:04	17:37	10	FAIZ ROAD
17:04	17:14	13	DMS
17:04	17:19	9	SHANKAR ROAD
17:04	17:14	8	SHASTRI PARK (c)
BRPL			
17:04	18:15	15	DEFENCE COLONY
17:04	18:15	12	LAJPAT NAGAR
17:04	17:30	10	HUDCO
17:04	17:12	125	RIDGE VALLEY
17:04	17:48	20	BHIKAJI KAMA
17:04	17:40	5	PUSHP VIHAR
17:04	17:42	7	EAST OF KAILASH
17:04	18:15	7	NDSE-2
17:04	17:40	20	MASJID MOTH
17:04	17:40	25	SHIVALIK
17:04	17:40	20	SIRIFORT
17:04	17:40	14	ALAKHNANDA
17:04	17:40	13	D C SAKET
17:04	18:10	23	LODHI ROAD
17:04	17:40	15	VSNL
17:04	17:30	9	NEHRU PLACE

20.10. Preliminary report on trippings occurred in Delhi system on 13.06.2016.

The following tripping occurred in Delhi system on 13.06.2016 at 07.09hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220/66kV 160MVA Pr. Tr. - I at Pragati Stn.	51AX, O/C, E/F, 86	07:09	07:50	Monkey found electrocuted on 66kV Bus section-III in GPTS Yard and B phase Jumper and Y Phase insulator damaged. 66kV I/C-I closed at 07.37hrs. but made off at 07.38hrs. due to sparking observed on Bus isolator of G.T.-#6
2	220/66kV 160MVA Pr. Tr. - II at Pragati Stn.	51AX, O/C, E/F, 86	07:09	08:10	

System configuration during the incident

Prior to the incident, GT Station was connected to the grid through 2 x 160MVA (220/66kV) Pr. Trs. - 220kV IP Ext (Pragati) -IP -Patparganj - Geeta Colony- Wazirabad - Mandola Ckts and 220kV Bus Coupler of Pragati was in off position.

Load affected

S./Stn.	Time Duration		Load in MW
	From	To	
66kV GT - School Ckt.I	07:09	07:50	6
66kV GT - School Ckt.II	07:09	07:50	5
66kV GT - Vidyut Bhn. Ckt.I	07:09	07:50	8
66kV GT - Vidyut Bhn. Ckt.II	07:09	07:50	8
66kV DMRC Ckt. -I	07:09	07.50	16
66kV DMRC Ckt. -II	07:09	07.50	16
66kV Akshardham Ckt.	07:09	07.50	0
Total			59

Generation loss

Sr No	Name of Unit	Generation	Tripping time	Synchronizing time
1	G.T. # 1	23	07.09	09.00
2	G.T. # 2	13	07.09	13.40
3	STG - 1	20	07.09	10.45
	Total	56		

20.11. Preliminary report on trippings occurred in Delhi system on 13.06.2016.

The following trippings occurred due to thunderstorm in Delhi system on 13.06.2016 at 19.47hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Pragati – Sarita Vihar Ckt. –I	At Pragati : Dist Prot., Zone-II, B Phase , Dist. 11.06Kms. At Sarita Vihar : ABC Phase, Zone-I, 186 A&B, Auto reclose.	19.47	20.20	Due to thunderstorm
2	220kV Pragati – Sarita Vihar Ckt. –II	At Pragati : Dist Prot., ABC Phase , Dist. 0 Meter. At Sarita Vihar : Dist Prot,ABC Ph, Zone-I, Dist. 2.77Kms., 186 A&B	19.47	20.21	

System configuration during the incident

Prior to the incident, Pragati Unit 2 & STG was connected to Grid through 220kV IP Ext (Pragati) – Sarita Vihar-BTPS – Ballabgarh Ckts. Due to tripping of 220kV Pragati – Sarita Vihar Ckt.-I&II at both ends . Pragati Unit-II & STG got islanded from the Grid and subsequently it collapsed. This caused total failure of supply to 220kV Park Street S/Stn. 220 kV supply to Pragati Generating Stn. was extended by closing 220kV Bus coupler at 220kV IP Ext (Pragati) at 20.07hrs.

Generation loss

Sr No	Name of Unit	Generation (in MW)	Tripping Time (Hrs.)	Synchronizing Time (Hrs.)
1	Pragati # 2	79	19.47	20.54
2	STG	104	19.47	21.34
	Total	183		

Details of load shedding:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BYPL			
19:47	20:15	11	B.G. ROAD
19:47	20:18	13	FAIZ ROAD
19:47	20:33	8	MOTIA KHAN
19:47	20:33	6	SHANKAR ROAD
19:47	20:33	11	PRASAD NAGAR
19:47	20:33	8	ANAND PARBAT
NDMC			
19:47	20:15	2	PARK STREET - NIRMAN BHAWAN.
19:47	20:09	4	PARK STREET – BAIRD LANE
19:47	19:58	4	PARK STREET - B.D. MARG
19:47	20:32	6	PARK STREET - B.D. MARG

20.12. Preliminary report on trippings occurred in Delhi system on 18.06.2016.

The following trippings occurred in Delhi system on 18.06.2016 at 06.40hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV BTPS – Sarita Vihar Ckt. –I	At BTPS-R Phase,Fault current IR-10.4 K Amp, I Y 0.89K Amp, I B 1.19K Amp At Sarita Vihar -186 A&B, B Phase, Zone-I, Dist 5.682Kms.	06.40	08.05	At 220kV Sarita Vihar - R phase CVT of 220kV Bus-I blasted and Bus -Bar protection operated.
2	220kV Pragati – Sarita Vihar Ckt. –I	At Sarita Vihar-Bus bar protection, 96 At Pragati – No tripping	06.40	07.11	
3	220kV Pragati – Sarita Vihar Ckt. –II	At Sarita Vihar-Bus bar protection, 96 At Pragati – No tripping	06.40	07.11	
4	220kV Bus coupler at Sarita Vihar	Tripped on Dist Prot, Auto reclose, SF6 Pressure low, 295AC, 87A, 87B & 87C, 96 Bus bar protection	06.40	19.15	
5	220/66kV 100MVA Tr.-I at Sarita Vihar	Bus bar protection	06.40	07.20	
6	220/66kV 100MVA Tr. –II at Sarita Vihar	Bus bar protection	06.40	07.20	
7	220/66kV 100MVA Tr.-III at Sarita Vihar	General Trip, Over flux, 96, 96	06.40	08.35	

System configuration during the incident

Prior to the incident, Pragati Unit 1 & 2 was connected to Grid through 220kV Pragati (Bus-I) –Sarita Vihar-BTPS – Ballabgarh Ckts. Pragati STG Unit was connected to 220kV Pragati (Bus-II) through Mandola Link. At Pragati 220kV Bus coupler was in off position.

Due to tripping of 220kV Pragati – Sarita Vihar Ckt.-I&II at Sarita Vihar end . Pragati Unit-I & II got islanded from the Grid and survived for 26 minutes with radial load of 220kV Park Street S/Stn and later Pragati Unit-I,II & STG collapsed while synchronizing with grid.

220 kV supply to Pragati Generating Stn. was extended by closing 220kV Bus coupler at 220kV IP Ext (Pragati) at 07.11hrs.

Generation loss

Sr No	Name of Unit	Generation (in MW)	Tripping Time (Hrs.)	Synchronizing Time (Hrs.)
1	Pragati # 1	79	07.03	10.38
2	Pragati # 2	79	07.06	09.54
3	STG	105	07.06	10.57
	Total	263		

Details of load shedding:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
06.40	07.30	72	66kV MATHURA ROAD CKT.-I&II
BYPL			
06:51	06:59	10	FAIZ ROAD
06:51	07:03	16	PRASAD NAGAR, SHANKAR ROAD
06:51	07:03	6	ANAND PARVAT
06:51	07:01	18	MOTIA KHAN
06:57	07:03	16	PRASAD NAGAR, ANAND PARVAT
06:57	07:03	12	SHASTRI PARK (C)
07:06	07:11	25	MOTIA KHAN, PARSHAD NAGAR
TPDDL			
07.00	07.02	6	PUSA
NDMC			
07.06	07.11	19	BRAID ROAD, NIRMAN BHAWAN, B.D.MARG CKT. I & II, DMRC

20.13. Preliminary report on Disturbance occurred in Delhi system on 04.08.16 at 12.24.45 Hrs due to trippings at 400KV Bamnauli S/stn.

Following trippings occurred in Delhi system at 12.24.45hrs. at 400kV Bamnauli Grid S/Stn.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400/220kV, 315MVA ICT-I at Bamnauli	ICT tripped on 186 A&B Group – II alongwith I/C.	12.24	13.07	All three phase CT of 220kV TBC –II got damaged at Bamnauli 400kV.
2	400/220kV, 500MVA ICT-II at Bamnauli	ICT tripped on 186 A&B Group – II alongwith I/C.	12.24	13.07	
3	400/220kV, 500MVA ICT-III at Bamnauli	ICT tripped on 186 A&B Group – II alongwith I/C.	12.24	13.07	
4	400/220kV, 315MVA ICT-IV at Bamnauli	ICT tripped on 186 A&B Group – II. alongwith I/C.	12.24	13.07	
5	220kV Bamnauli – DIAL Ckt. I	At Bamnauli –No tripping. At DIAL – Zone-II, Dist Prot, RYB Phase, REL Main –II.	12.24	13.09	
6	220kV Bamnauli –DIAL Ckt. II	At Bamnauli –No tripping. At DIAL – Zone-II, Dist Prot, RYB Phase, REL Main –II.	12.24	13.27	
7	220/66kV 100MVA Pr. Tr. –I at Papankalan –I	Tr. Tripped on 51NF, E/F, 86B. I/C tripped on 86.	12.24	13.23	
8	220/66kV 100MVA Pr. Tr. –II at Papankalan –I	Tr. Tripped on 67N, 186 A&B. I/C tripped on 86.	12.24	13.23	
9	220/66kV 100MVA Pr. Tr. –IV at Najafgarh	Tr. Tripped on E/F, 86	12.24	12.32	
10	220kV Bamnauli – Papankalan –II Ckt. –I	At Bamnauli –No tripping. At Papankalan –II - Zone-I&II, Dist Prot, 86.	12.24	13.10	
11	220kV BTPS – Mehrauli Ckt. –II	At BTPS – Zone-I, Dist. Prot, Dist 4.5KM, R phase, E/F. At Mehrauli – No Tripping.	12.26	00.33 on 05.08.2016	

System configuration during the incident

Prior to the incident , 400kV Bus - I&II were connected to 400kV Bamnauli - Ballabgarh Ckt. I & II, due to shutdown of 220kV Bus –D at Bamnauli to attend hot point. 400kV Bamnauli – Jhatikra Ckt. – II (on ERS) was kept in open Position at Bamnauli S/stn and all the ICTs were made parallel and fed through 400kV Ballabgarh Double ckts. 400kV Bamnauli – Jhatikra Ckt-1 is under breakdown since 22.05.2016 at 20.30hrs.

At the time of occurrence of incident at 400kV Bamnauli s/stn. was feeding supply to following 220kV Ckts.

S. No	Name of the elements tripped	Load on ckt. prior to incident in MW
1	220kV Bamnauli – DIAL Ckt. I & II	280
2	220kV Bamnauli – Papankalan –I Ckt. –I & II	260
3	220kV Bamnauli – Papankalan –II Ckt. –I & II	150
4	220kV Bamnauli – Najafgarh Ckt. –I & II	115
5	220kV Bamnauli – Naraina Ckt. I & II	On
	Total	805

BTPS was connected to Bamnauli via 220kV BTPS – Mehrauli – DIAL – Bamnauli Links. 220kV BTPS- Mehrauli ckt.–I was in off position to attend Circuit Breaker at Mehrauli. 220kV Bus coupler was closed at 220kV Mehrauli. Due to multiple tripping at Bamnauli at 12.24.45hrs., 220kV BTPS – Mehrauli ckt. –II which was the only available source tripped at BTPS due to overloading. ‘R’ phase PG Clamp of 220kV BTPS – Mehrauli ckt. –II damaged at Mehrauli yard and at Tower no. 5.

Incident :

There was shutdown of 220kV Bus D to attend hot point at Bamnauli. After completing the work, while normalizing shutdown of 220kV Bus D, 220kV Papankalan –II Ckt. I& II which was running through Transfer Bus was being change over to 220kV Bus-D, due to miss communication the Transfer Bus Isolator of Papankalan –II was opened before closing the Main Circuit Breaker. Due to this heavy sparking at TBC-II occurred and consequently all the 220kV CTs of TBC-II got damaged. This caused tripping of all the four 400/220kV ICTs at Bamnauli.

Restoration :

All the four 400/220kV ICTs were charged at 13.07hrs. at Bamnauli and the supply was extended to the affected 220kV Sub stations.

Details of load affected during the incident :-

Name of the Grid	Time		Load in MW	Remarks
	From	To		
220kV Mehrauli	12.26	13.24	195	
220kV Vasant Kunj	12.25	13.28	135	
220kV Papankalan-I	12.24	13.12	260	
220kV Papankalan-II	12.24	13.12	150	
220kV Najafgarh (part load)	12.24	12.32	115	
220kV DIAL	12.26	13.32	37	
Total Load in MW			892	

20.14. Preliminary report on trippings occurred in Delhi system on 15.08.2016.

The following tripping occurred in Delhi system on 15.08.2016 at 16.31hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	220kV Geeta Colony – Patparganj Ckt- I	At Geeta Colony : Active Group-I, Trip Phase ABC, Dist Prot, Zone-II, Dist 4.882kms. At Patparganj : Ckt. did not trip.	16.31	16.50
2	220kV Geeta Colony – Patparganj Ckt- II	At Geeta Colony : Active Group-I, Trip Phase ABC, Dist Prot, Zone-II, Dist 4.882kms. At Patparganj : Ckt. did not trip.	16.31	16.50
3	220kV I.P.- Patparganj Ckt- I	At I.P.: 86, 186, Dist Prot, Zone-I, Trip Phase ABC. At Patparganj : Ckt. did not trip.	16.31	16.50

System configuration during the incident

Prior to the incident, GT Station and PPCL Unit #1 (under reserve shutdown) were connected to Grid through 220kV IP Ext (Pragati) -IP -Patparganj - Geeta Colony- Wazirabad - Mandola and 220kV Bus Coupler of Pragati was in off position.

PPCL- STG & Unit-2 were connected to grid through 220kV IP Ext(Pragati)-Sarita Vihar-BTPS. Due to tripping of 220kV Patparganj - Geeta Colony ckt.-I & II at Geeta Colony end. Generating units of GT Station got islanded from the Grid and subsequently it collapsed.

At 16.40hrs , 220kV Supply was extended to G.T. by closing 220kV Bus Coupler at Pragati.

Generation loss

Sr No	Name of Unit	Generation	Tripping time	Synchronizing time
1	G.T. # 5	27	16.31	17.37
2	G.T. # 6	23	16.31	16.40
3	STG – 3	16	16.31	17.28
	Total	66		

* PPCL Unit #1 was under reserve shutdown.

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
G.T. Stn.	Unit # 5	27	49
	Unit # 6	23	
	STG – 3	16	
Patparganj	--	--	27
I.P.Stn.	--	--	139
RPH	-	--	10
Total		66	225

Detail of load shedding:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
16:31	16:39	13	KILOKARI
16:31	16:39	10	SARAI JULLENA
16:31	16:39	6	LAJPAT NAGAR
16:31	16:39	2	EXHIBITION-1
BYPL			
16:31	16:41	10	MINTO ROAD
16:31	16:41	3	I G STADIUM
16:31	16:41	10	G B PANT
16:31	16:37	3	LAHORI GATE
16:31	16:41	7	DELHI GATE
16:31	16:41	18	KAMLA MARKET
16:31	16:41	4	DDU MARG
16:31	16:39	1	FOUNTAIN
16:31	16:38	15	GH-1
16:31	16:35	10	MAYUR VIHAR-1
16:31	16:41	2	AKSHARDHAM

20.15. Preliminary report on trippings occurred in Delhi system on 15.08.2016.

The following tripping occurred in Delhi system on 15.08.2016 at 16.31hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	220kV Geeta Colony – Patparganj Ckt- I	At Geeta Colony : Active Group-I, Trip Phase ABC, Dist Prot, Zone-II, Dist 4.882kms. At Patparganj : Ckt. did not trip.	16.31	16.50
2	220kV Geeta Colony – Patparganj Ckt- I	At Geeta Colony : Active Group-I, Trip Phase ABC, Dist Prot, Zone-II, Dist 4.882kms. At Patparganj : Ckt. did not trip.	16.31	16.50
3	220kV I.P.- Patparganj Ckt- I	At I.P.: 86, 186, Dist Prot, Zone-I, Trip Phase ABC. At Patparganj : Ckt. did not trip.	16.31	16.50

System configuration during the incident

Prior to the incident, GT Station and PPCL Unit #1 (under reserved shutdown) were connected through 220kV IP Ext (Pragati) -IP -Patparganj - Geeta Colony- Wazirabad - Mandola Ckts and 220kV Bus Coupler of Pragati was in off position.

PPCL- STG & Unit 2 was connected through 220kV IP Ext(Pragati)-Sarita Vihar-BTPS ckts. Due to tripping of 220kV Patparganj - Geeta Colony ckt.-I&II at Geeta Colony end. Generating units of GT Station got islanded from the Grid and subsequently it collapsed. At 16.31hrs. 220kV Supply was extended to G.T.. by closing 220kV Bus Coupler at Pragati.

Generation loss

Sr No	Name of Unit	Generation	Tripping time	Synchronizing time
1	G.T. # 5	27	16.31	17.37
2	G.T. # 6	23	16.31	16.40
3	STG – 3	16	16.31	17.28
	Total	66		

* PPCL Unit #1 was under backdown.

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
G.T. Stn.	Unit # 5	27	--
	Unit # 6	23	--
	STG – 3	16	--
Patparganj	--	--	27
I.P.Stn.	--	--	139
RPH	-	--	10
G.T.P.Stn. (load)	--	--	49
Total		66	225

Detail of load shedding:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
16:48	16:53	2	EXHIBITION-1
16:48	17:48	40	KILOKARI
16:48	17:48	26	NIZAMUDDIN (PTR-2)
16:48	16:57	11	LAJPAT NAGAR
BYPL			
16:48	17:28	17	MAYUR VIHAR -1
16:48	17:24	10	GROUP HOUSING-1
16:48	16:58	11	SHAKAR PUR
16:48	17:24	17	KHICHRIPUR
16:48	17:24	4	AKSHARDHAM
16:48	17:31	8	DDU MARG
16:48	17:31	16	MINTO ROAD
16:48	17:31	30	KAMLA MKT
16:48	17:31	11	I G STADIUM + IP ESTATE GRID
16:48	17:02	10	JAMA MASJID
16:48	17:00	8	TOWN HALL
16:48	16:52	6	FOUNTAIN
16:48	17:31	19	G B PANT
16:48	17:31	13	DELHI GATE
16:48	17:31	11	MOTIA KHAN
16:48	17:10	10	SHASTRI PARK (E)
16:48	17:10	8	SEELAMPUR

20.16. **Preliminary report on trippings occurred in Delhi system on 15.09.16 at 11.08hrs.**

The following tripping occurred in Delhi system on 15.09.16 at 11.08hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	400kV Bamnauli – Ballabgarh ckt-II	At Bamnauli: Dist prot, RYB Phase, Zone-I, 186, 186. At Ballabgarh : Ckt. did not trip.	11.08	12.13
2	220kV Bamnauli – Dial ckt-I	At Bamnauli: Dist prot, A Phase, Zone-I, Dist 5.2Km. Zone-I, Fault current 10.95kA At Dial : Dist Prot, Zone-I, Dist 9.5KM, R ph, Line differential, Fault current 7.95kA	11.08	11.41
3	220kV Bus coupler at Mehrauli	Tripped on O/C.	11.08	11.22

System configuration at Bamnauli

400kV system at Bamnauli is currently in radial mode with 400/220kV 500MVA ICT-II connected to 400kV Bamnauli – Jhatikra Ckt. –II (through ERS) catering the load of 220kV Papankalan –II S/stn only. Other ICTs i.e. I, III & IV are connected to 400kV supply from 400kV Ballabgarh ckts. I&II catering the load of 220kV Naraina, Papankalan-I, Dial, Najafgarh and Mehrauli.

400kV Bamnauli – Ballabgarh ckt. –I was under emergency shutdown for replacement of B Phase dropper conductor at cable gantry, and removal of Traction machine trapped in earth wire between tower no. 205-206.

Incident

At 11.08hrs 400kV Bamnauli – Ballabgarh ckt. –II and 220kV Bamnauli – Dial ckt. –I tripped simultaneously resulting in failure of 400kV supply to Bamnauli ICTs no. I, III & IV. This also caused failure of 220kV Supply to 220kV Bamnauli – Dial ckt. –II and caused drawal of total load of Naraina, Papankalan-I, Dial, and Mehrauli from BTPS. Due to this 220kV Bus coupler tripped on O/C at Mehrauli leading to failure of supply to Dial, Papankalan-I, Naraina and Mehrauli S/Stn.

Details of load affected :

TIME		LOAD IN MW	NAME OF GRID	FEEDER / S/STN. AFFECTED
OUT	IN			
BRPL				
11:08	11:18	18	220kV PAPAN KALAN-I	BINDAPUR
11:08	11:18	22		BODELLA-1
11:08	11:18	30		G-6 PAPAN KALAN
11:08	11:24	21	220kV NARAINA	MAYAPURI
11:08	11:18	13	220kV MEHRAULI	VASANT KUNJ C BLOCK
11:08	11:16	25		BIJWASAN
11:08	11:21	11		AERO CITY
11:08	11:18	40		C-DOT
11:08	11:18	23		66KV PALAM
BYPL				
11:08	11:23	10	220kV NARAINA	DMS

TIME		LOAD IN MW	NAME OF GRID	FEEDER / S/STN. AFFECTED
OUT	IN			
TPDDL				
11:08	11:34	56	220kV NARAINA	11kV LOAD, PANDAV NAGAR, PAYAL GRID, SARASWATI GARDEN
11:08	11:25	20		A-21 NARAINA, INDERPURI
11:38	11:42	70		11kV LOAD, A-21 NARAINA, INDERPURI, PAYAL, SARASWATI GDN.
11:08	11:15	3		REWARI LINE

20.17 Preliminary report on trippings occurred in Delhi system on 15.09.16 at 11.08hrs.

The following tripping occurred in Delhi system on 15.09.16 at 11.08hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	400kV Bamnauli – Ballabgarh ckt-II	At Bamnauli: Dist prot, RYB Ph, Zone-I, 186 At Ballabgarh : Ckt. did not trip.	11.08	12.13
2	220kV Bamnauli – Dial ckt-I	At Bamnauli: Dist prot, A Phase, Zone-I, Dist 5.2Km. Zone-I, Fault current 10.95kA At Dial : Dist Prot, Zone-I, Dist 9.5KM, R ph, Line differential, Fault current 7.95Ka	11.08	11.41
3	220kV Bus coupler at Mehrauli	Tripped on O/C.	11.08	11.22

System configuration at Bamnauli

400kV system at Bamnauli is currently in radial mode with 400/220kV 500MVA ICT-II connected to 400kV Bamnauli – Jhatikra Ckt. –II (through ERS) catering the load of 220kV Papankalan –II S/stn only. Other ICTs i.e. I, III & IV are connected to 400kV supply from 400kV Ballabgarh ckt. I&II catering the load of 220kV Naraina, Papankalan-I, Dial, Najafgarh and Mehrauli. 400kV Bamnauli – Ballabgarh ckt. –I was under emergency shutdown for replacement of B Phase dropper conductor at cable gantry, and removal of Traction machine trapped in earth wire between tower no. 205-206.

Incident

At 11.08hrs 400kV Bamnauli – Ballabgarh ckt. –II and 220kV Bamnauli – Dial ckt. –I tripped simultaneously resulting in failure of 400kV supply to Bamnauli ICTs no. I, III & IV. This also caused failure of 220kV Supply to 220kV Bamnauli – Dial ckt. –II and caused drawal of total load of Naraina, Papankalan-I, Dial, and Mehrauli from BTPS. Due to this 220kV Bus coupler tripped on O/C at Mehrauli leading to failure of supply to Dial, Papankalan-I, Naraina and Mehrauli S/Stn.

Details of load affected :

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
11.08	11.16	178	Papankalan-I
11.08	11.21	186	Mehrauli
11.08	11.21	40	DIAL
11.08	11.16	155	Naraina
Total		559	

20.18 Preliminary report on trippings occurred in Delhi system on 16.09.16 at 04.52hrs.

The following tripping occurred in Delhi system on 16.09.16 at 04.52hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	400kV Bamnauli –Ballabgarh ckt-II	At Bamnauli: Dist prot, RYB Ph, Z-1, 186, A&B. At Ballabgarh : Ckt. did not trip.	04.52	05.07
2	400kV Bamnauli –Ballabgarh ckt-I	At Bamnauli: Dist prot, RYB Ph, Z-I, 186, A &B. At Ballabgarh : Dist.Prot.,Zone-II Main-I-53Km. Main-II-54.8Km,Bph to Ground fault,Fault Current=7.5kA	04.52	07.29
3	220kV Bus coupler at Mehrauli	Tripped on O/C.	04.52	05.10

System configuration at Bamnauli

400kV system at Bamnauli is currently in radial mode with 400/220kV 500MVA ICT-II connected to 400kV Bamnauli – Jhatikra Ckt. –II (through ERS) catering the load of 220kV Papankalan –II S/stn only. Other ICTs i.e. I, III & IV are connected to 400kV supply from 400kV Ballabgarh ckts. I&II catering the load of 220kV Naraina, Papankalan-I, Dial, Najafgarh and Mehrauli.

Incident

At 04.52 hrs 400kV Bamnauli – Ballabgarh ckt. –I tripped on both ends and 400kV Bamnauli-Ballabgarh-II tripped at Bamnauli end resulting in failure of 400kV supply to Bamnauli ICTs no. I, III & IV. This also results in increasing the drawal from the BTPS side to meet the total load of Naraina, Papankalan-I, Dial, and Mehrauli . Due to this 220kV Bus coupler tripped on O/C at Mehrauli leading to failure of supply to Dial, Papankalan-I, Naraina and Mehrauli S/Stn. At 04.55Hrs important load was normalized through 400kV Bamnauli –Jhatikara ckt-II(on ERS) and rest of system normalized through 400kV Bamnauli-Ballabgarh ckt-II at 05.07 Hrs.

Details of load affected :

TIME		LOAD IN MW	NAME OF GRID FEEDER / S/STN. AFFECTED
OUT	IN		
BRPL			
04:55	05:09	20	BINDAPUR
04:55	05:09	58	BODELLA-1
04:55	05:09	76	G-2 PAPANKALAN
04:55	05:09	8	G-4 PAPANKALAN
04:55	05:09	41	G-5 MATIYALA
04:55	05:09	15	PAPANKALAN-2
TPDDL			
04:52	04:55	45	NARAINA, A-21 NARAINA, INDERPURI, PANDAV NAGAR,PAYAL, SARASWATI GARDEN INDER PURI,PANDAV NAGAR, PAYAL, SARASWATI GARDEN
04:52	05:03	8	REWARI LINE

20.19 Preliminary report on trippings occurred in Delhi system on 17.09.16 at 18.13hrs.

The following tripping occurred in Delhi system on 17.09.16 at 18.13hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remark
1	400kV Bamnauli – Ballabgarh ckt-I	At Bamnauli: Dist prot, RYB Phase, Zone-I, Zone-IV, 186, A&B. At Ballabgarh : Dist. Prot., Zone-II & III, Dist 100%.	18.13	02.13 on 18.09.16	B –Ph LA found damaged in 400kV Bamnauli yard.
2	400kV Bamnauli – Ballabgarh ckt-II	At Bamnauli: Dist prot, RYB Phase, 186, A&B. At Ballabgarh : Ckt. did not trip.	18.13	18.23	
3	220kV Bus coupler at Mehrauli	Tripped on O/C.	18.13	18.18	
4	220kV Btps-Mehrauli ckt-II	At BTPS : E/F, R- Ph, Dist prot, Zone-I, 4.2Km. At Mehrauli : Dist prot, Zone-I, 11.28 km,	18.13	22.12	Bottom Phase jumper snapped at Tower No.19.

System configuration at Bamnauli

At present 400kV Bus at Bamnauli has been kept in split mode due to outage of 400kV Bamnauli-Jhatikra ckt.-I, which is under breakdown since 22.05.2016. 400kV Bamnauli-Jhatikra ckt.-II (on ERS) and 400/220kV 500MVA ICT-II are kept on 400kV Bus-I which is catering the load of 220kV Papankalan-II S/stn. 400kV Bamnauli-Ballabgarh ckt. I &II, 400/220kV 315MVA ICT-I & IV and 400/220kV 500MVA ICT-III are kept on 400kV Bus-II which is catering the load of 220kV Papankalan-I, DIAL, Naraina & Mehrauli S/stn.

Incident

At 18.13 hrs 400kV Bamnauli – Ballabgarh ckt. –I tripped on both ends and 400kV Bamnauli-Ballabgarh-II tripped at Bamnauli end resulting in failure of supply at 400kV Bus-II which was feeding supply to 400/220kV ICTs no. I, III & IV. This resulted in increase of drawal from BTPS side to meet the total load of Naraina, Papankalan-I, Dial, and Mehrauli s/stns. Due to this 220kV Bus coupler tripped on O/C at Mehrauli leading to failure of supply to Dial, Papankalan-I, Naraina and Mehrauli S/Stn.

Details of load affected :

TIME		LOAD IN MW	NAME OF GRID
OUT	IN		
TPDDL			
18:13	18:23	9	REWARI LINE
18:13	18:25	61	NARAINA,A-21 NARAINA GRID, INDER PURI, PANDAV NGR, PAYAL ,SARASWATI GARDEN
BYPL			
18:13	18:24	11	DMS

TIME		LOAD IN MW	NAME OF GRID
OUT	IN		
BRPL			
18:13	18:18	60	BODELLA-1
18:13	18:18	80	G-2PAPANKALAN
18:13	18:18	28	BINDAPUR
18:13	18:18	9	VISHAL
18:13	18:21	30	MAYAPURI
18:13	18:21	30	BIJWASAN
18:13	18:37	36	MALVIYA NAGAR
18:13	18:37	27	IGNOU
18:13	18:37	40	C DOT
18:13	18:37	9	VASANT KUNJ C BLK
18:13	18:21	9	AERO CITY
18:13	18:21	9	KHYBER LINE

20.20. **Preliminary report on disturbance occurred in Delhi system on 01.10.2016 at 15:12hrs.**

Incident

On 01.10.2016 at 14:38hrs Y-ph CB of 400/220kV ICT-4 blasted leading to tripping of ICT-4 at 400kV Ballabgarh S/Stn of PGCIL. At 15:12 hrs 400/220kV ICT-2 was made off by PGCIL as a precautionary measure. This led to following trippings.

- i) 220kV BTPS – Ballabgarh Ckt-I & II
- ii) 400kV Ballabgarh – Dadri Ckt
- iii) 220kV Ballabgarh – Samaypur Ckt-I, II & III
- iv) 220kV Samaypur – Faridabad GPP Ckt-I & II

Tripping of 220kV Ballabgarh (BBMB) – Samaypur Ckt-I, II & III and 220kV BTPS – Ballabgarh (BBMB) Ckt-I & II and caused islanding of BTPS and Pragati Generating stations from the Grid. Island survived on house load of up to 15:40hrs although Pragati#2 & STG tripped at 15:13hrs. However, Island collapsed at 15:40hrs

System configuration during the incident

Prior to the incident, Pragati Station (Unit-2) was connected to Grid through 220kV Pragati - Sarita Vihar - BTPS Ckts. 220kV Bus coupler was open at Pragati S/Stn. BTPS Station (Unit-4 & 5) was connected to Grid through 220kV BTPS - Ballabgarh Ckts and 220kV BTPS – Alwar Ckt. 220kV Bus coupler was open at Mehrauli.

Normalization

System was normalized by closing 220kV Bus coupler at 220kV Pragati S/Stn at 15:46hrs. Supply was extended to Pragati generating Station, Badarpur Thermal Power Station, Park Street and Sarita Vihar S/stn.

Generation Loss during disturbance:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Time		Remarks
			Tripping	Restoration	
Pragati	Unit-2	80	15:13	16:00	Unit#1 is under s/d since 19.09.16 for combustion inspection and STG was synchronized towards Mandola.
	STG	100	15:13	16:52	
BTPS	4	158	15:40	19:57	Unit#12&3 are closed by DPCC due to not meeting the pollution norms.
	5	167	15:40	19:20	
Total (MW)		505			

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
Pragati	#1	92	--
BTPS	#4	158	--
	#5	167	--
Park Street	--	--	198
Sarita Vihar	--	--	52
Okhla		--	237
Vasant Kunj		--	101
Total		417	588

Details of under frequency relay operation:-

Name of the Grid	Time		Load in MW	Remarks
	From	To		
220kV Park Street				
33kV Prashad Nagar Ckt.	15:12	16:13	11	
33kV Shankar Road Ckt.	15:12	16:13	13	
33kV Motia Khan Ckt.-I	15:12	16:13	7	
33kV Motia Khan Ckt. - II	15:12	16:16	ON	
66kV Ridge Valley Ckt-I	15:12	17:06	ON	
Total MW			31	
220kV Sarita Vihar				
66kV Mathura Road Ckt-II	15:12	16:20	21	
11kV feeders	15:12	16:20	11	
Total			32	

Name of the Grid	Time		Load in MW	Remarks
	From	To		
220kV Okhla				
66kV Okhla Phase-I Ckt-I	15:12	17:30	41	
66kV Okhla Phase-I Ckt-II	15:12	17:30	41	
66kV Malviya Nagar Ckt-I	15:12	19:52	15	
66kV Malviya Nagar Ckt-II	15:12	19:52	16	
33kV Okhla Phase-II Ckt-I	15:12	17:48	21	
33kV Okhla Phase-II Ckt-II	15:12	17:48	13	
33kV Nehru Place Ckt-I	15:12	17:38	08	
33kV Nehru Place Ckt-II	15:12	17:38	10	
33kV Nehru Place Ckt-IV	15:12	17:38	10	
33kV Balaji Ckt-I	15:12	17:38	ON	
33kV Balaji Ckt-II	15:12	17:38	ON	
33kV Tuglakabad Ckt.	15:12	17:38	17	
Total			192	
220kV Mehrauli				
66kV Malviya Nagar Ckt-I	15:12	16:25	28	Operation of UFR occurred at 220kV Mehrauli Stn but its load was fed from 400kV Bamnauli Stn. 220kV bus coupler was open at Mehrauli.
66kV Vasant Kunj D Block Ckt-I & II	15:12	16:25	ON	
66kV Vasant Kunj C Block Ckt-I & II	15:12	16:25	ON	
11kV Feeders	15:12	16:25	11	
Total			39	
220kV Vasant Kunj				
66kV Vasant Kunj C Block Ckt-I & II	15:12	15:56	80	
66kV Ridge Valley Ckt-II	15:12	15:56	ON	
11kV Feeders	15:12	15:56	5	
Total			85	

Details of load affected:

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
15:17	16:44	9	EAST OF KAILASH
15:17	16:22	18	JAMIA
16:20	17:00	21	MATHURA ROAD
16:20	17:26	32	MOHAN CO OPERATIVE
15:17	16:22	17	SARAI JULLENA

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
15:17	17:16	10	ALAKNANDA
15:17	17:08	44	BATRA
15:17	16:31	13	IGNOU
15:17	17:35	24	OKHLA PH-1
15:17	17:40	23	OKHLA PH-2
15:17	15:50	5	VASANT KUNJ
16:25	16:45	7	NEHRU PLACE
16:25	17:20	11	NEHRU PLACE
17:00	17:35	12	ADCHINI
17:08	17:35	15	JAMIA
17:20	17:35	9	NEHRU PLACE
17:28	18:02	18	SHIVALIK
17:28	17:40	6	MALVIYA NGR
17:30	18:10	13	CDOT
17:30	18:10	10	CDOT
BYPL			
15:40	16:53	23	SHASTRI PARK (C)
15:40	16:13	25	ANAND PARBAT
15:40	16:28	13	PRASAD NAGAR
15:40	15:47	9	FAIZ ROAD
16:09	16:25	2	MOTIA KHAN
16:10	16:24	5	PRASAD NAGAR
16:13	16:43	14	ANAND PARBAT
16:25	16:51	2	MOTIA KHAN
16:28	16:34	7	PRASAD NAGAR
16:34	16:57	10	PRASAD NAGAR
16:43	17:00	10	ANAND PARBAT
17:00	17:07	13	SEELAMPUR

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
17:00	17:15	20	KAILASH NAGAR
17:00	17:22	7	KAILASH NAGAR
TPDDL			
15:42	15:43	6	PUSA

20.21 Preliminary report on trippings occurred in Delhi system on 08.10.2016 at 13.26hrs.

The following tripping occurred in Delhi system on 08.10.16 at 13.26hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping (Hrs.)	Time of Restoration (Hrs.)	Remarks
1	220kV BTPS - Sarita Vihar Ckt-I	At Sarita Vihar : Tripped on 186 A &B. At BTPS : B-Ph ,E/F ,Dist.Prot. ,Dist-6 Km .	13.25	14.02	
2	220kV BTPS - Sarita Vihar Ckt-II	At Sarita Vihar : Ckt did not trip. At BTPS : Ckt manually made Off .	13.26	19.15	Male-female contacts of B-Ph Line Isolator got melted and damaged at BTPS End.
3	220kV Bus Coupler at Sarita Vihar.	At Sarita Vihar : 86.	13.25	16.50	

System configuration during the incident

Prior to the incident, Pragati Station (Unit-2 & STG) were connected to Grid through 220kV Pragati - Sarita Vihar - BTPS Ckts. 220kV Bus coupler was open at Pragati S/Stn. Tripping of 220kV BTPS -Sarita Vihar Ckt-I&II at BTPS end caused islanding of Pragati Unit-2 and STG from the Grid and subsequently collapsed.

At 13.31Hrs , System was normalized by closing 220kV Bus coupler at 220kV Pragati S/Stn thereby extending 220kV supply to Park Street S/Stn , 220kV Sarita Vihar and Pragati Units-2 & STG.

Generation Loss during disturbance:

Name of Stn.	Unit No.	Generation prior to the incident (MW)	Time	
			Tripping (Hrs)	Restoration (Hrs)
Pragati Stn.	Unit-2	92	13.26	14.15
	STG	51	13.28	14.59
Total (MW)		143		

Details of Under frequency relay operation :-

Name of the Grid	Time		Load in MW	Remarks
	From (Hrs)	To (Hrs)		
220kV Park Street				
33kV Prashad Nagar Ckt.	13.26	13.45	10	
33kV Shankar Road Ckt.	13.26	13.45	11	
33kV Motia Khan Ckt.-II	13.26	13.45	7	
66kV Ridge Valley Ckt. - I	13.26	13.45	0	No-load
Total MW			28	

Name of the Grid	Time		Load in MW	Remarks
	From	To		
220kV Sarita Vihar	<i>(Hrs)</i>	<i>(Hrs)</i>		
66kV Mathura road Ckt. - II	13.26	13.40	16	
11KV - 05 no. Feeders	13.26	13.40	11	
Total MW			27	

Details of load affected :

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
13.28	14.07	16	66KV SARITA VIHAR
13.28	14.07	15	JASOLA
13.28	13.58	29	SARAI JULLENA
13.28	14.07	15	MATHURA ROAD
13.28	13.58	12	220KV SARITA VIHAR
BYPL			
13.27	13.31	20	FAIZ ROAD
13.27	13.34	10	SHANKAR ROAD
13.27	13.43	06	MOTIA KHAN
13.27	13.43	25	ANAND PARVAT
13.27	13.43	15	SHASTRI PARK (C)
13.27	13.43	12	PRASAD NAGAR
14.01	14.09	18	KANTI NAGAR
14.01	14.09	24	KAILASH NAGAR
TOTAL	MW	217	

20.22. Preliminary report on trippings occurred in Delhi system on 29.10.16 at 12.06hrs.

The following tripping occurred in Delhi system on 29.10.16 at 12.06 hrs.

S. No	Name of the Elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remark
1	400kV Bamnauli –Ballabgarh ckt-I	At Bamnauli: No tripping (CB 252 is in Lock Out position). At Ballabgarh : Manually made off to arrange shutdown.	12.06	14.03	While arranging Shutdown of CB-252 (under lock out position) controlling 400kV Bamnauli-Ballabgarh ckt-I
2	400kV Bamnauli –Ballabgarh ckt-II	At Bamnauli: 85LO , 186 A , 186 B and ckt Inter-tripped. At Ballabgarh :LBB ,O/c and E/f.	12.06	12.48	,400KV Bamnauli-Ballabgarh ckt-II tripped at Ballabgarh end.
3	220kV Bus coupler at Mehrauli	Tripped without indication	12.06	12.12	

System configuration at Bamnauli

At present 400kV Bus at Bamnauli has been kept in split mode due to outage of 400kV Bamnauli-Jhatikra ckt.-I, which is under breakdown since 22.05.2016. 400kV Bamnauli-Jhatikra ckt.-II (on ERS) and 400/220kV 500MVA ICT-II are kept on 400kV Bus-I which is catering the load of 220kV Papankalan-II S/stn.

400kV Bamnauli-Ballabgarh ckt. I (on ERS) &II, 400/220kV 315MVA ICT-I & IV and 400/220kV 500MVA ICT-III are kept on 400kV Bus-II which is catering the load of 220kV Papankalan-I, DIAL, Naraina & Mehrauli S/stn.

Incident

At Bamnauli s/stn CB -252 controlling 400kV Bamnauli – Ballabgarh ckt. –I was in lockout position hence a shutdown was being arranged to attend this CB. However during the operations at Ballabgarh end at 12.06 hrs while switching off main CB of 400kV Ballabgarh – Bamnauli ckt. –I its only one pole tripped which caused operation of LBB, O/C, and E/F relay and subsequently led to tripping of 400kV Bamnauli-Ballabgarh ckt-II also at Ballabgarh end.

Due to Shutdown of 400kV Bamnauli-Ballabgarh ckt-I and tripping of 400kV Bamnauli-Ballabgarh-II, 400kV supply to ICT-I, III & IV failed and the load of 220kV Papankalan-I, Najafgarh ,Dial and Mehrauli was affected.

At 12.14hrs , the important load was normalized through 400kV Bamnauli –Jhatikara ckt-II(on ERS) and 400kV Bamnauli-Ballabgarh ckt-II normalized at 12.48hrs.

Details of load affected :

Time (Hrs)		Load(MW)	Name of Substation
Out	In		
12:06	12:17	113	<u>220kV PPK-I:</u> 1. G-2 Grid. 2. Bodella-I. 3. Bindapur Grid. 4. 11kV feeders at PPK-I.
12:06	12:15	160	<u>220kV NAJAFGARH:</u> 1. DJB grid. 2. G-5 Matiyala Grid 3. Jaffarpur Grid 4. Nangloi Grid. 5. Nangloi Water Works . 6. Bodella-2. 7. 11kV feeders at Najafgarh.
12:06	12:15	95	<u>220kV MEHRAULI</u> 1. MALVIYA NAGAR, 2. PALAM 3. AEROCITY 4. IGNOU 5. C-DOT
12:06	12:25	10	
12:06	12:33	26	
12.06	12.14	25	<u>220kV DIAL</u>
Total		429 MW	

20.23 Preliminary report on trippings occurred in Delhi system on 26.11.2016.

The following tripping occurred in Delhi system on 26.11.2016 at 15.40hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Geeta Colony – Patparganj Ckt- II	At Geeta Colony : Active Group-I, O/C, B-N Ph. At Patparganj : Ckt. did not trip.	15.40	15.44	220kV Geeta Colony- Patparganj Ckt- I was under shutdown for tree trimming.
2	220/66kV 160MVA Tr.-I At Pragati	Tr. tripped on 186	15.40	15.55	
3	220/66kV 160MVA Tr.-II At Pragati	Tr. tripped on 186	15.40	15.59	
4	220kV I.P.- Patparganj Ckt- I	At Patparganj : Ckt. tripped on E/F, ABC Phase, 186.. At I.P. : Ckt. did not trip.	16.10	18.46	220kV Bus coupler closed at 16.15hrs. and supply extended to Park Street.
5	220kV I.P.- Patparganj Ckt- II	At Patparganj : Ckt. tripped on E/F, ABC Phase, 186.. At I.P. : Ckt. did not trip.	16.10	19.18	
6	220/66kV 160MVA Tr.-II At Pragati	Tr. Tripped on 86	16.10	16.17	

System configuration during the incident

Prior to the incident, GT Stn and PPCL Unit #1 were connected to Grid through 220kV Pragati-IP - Patparganj - Geeta Colony- Wazirabad - Mandola Ckts and 220kV Bus Coupler of Pragati was in off position. PPCL Unit-2 & STG were connected to grid through 220kV IP Ext(Pragati)-Sarita Vihar-BTPS ckts. Due to tripping of 220kV Patparganj - Geeta Colony ckt.-II at Geeta Colony caused islanding of Generating units of GT Sn and Pragati (PPCL) Unit -1 from the Grid and subsequently it collapsed. 220kV Geeta Colony- Patparganj Ckt- I was under shutdown for tree trimming.

Generation loss

Sr No	Name of Unit	Generation	Tripping time	Synchronizing time
1	Pragati Unit -I	82	15.40	16.29
2	G.T. # 1	25	15.40	16.36
3	G.T. # 2	30	15.40	16.28
4	STG – 1	20	15.40	18.20
	Total	157		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
Pragati	Unit # 1	82	--
G.T. Stn.	Unit # 1	25	--
	Unit # 2	30	--
	STG – 1	20	--
Patparganj	--	--	22
I.P.Stn.	--	--	41
RPH	-	--	49
G.T.P.Stn. (load)	--	--	51
Total		157	163

Detail of load shedding:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BYPL			
16:10	16:12	3	FOUNTAIN
16:10	16:24	1	IG STADIUM
16:10	16:24	6	DELHI GATE
16:10	16:24	1	IP ESTATE
16:10	16:24	13	KAMLA MKT, MCD CIVIC CENTRE
16:10	16:24	5	MINTO ROAD
16:10	16:24	3	DDU MARG
16:10	16:24	5	GB PANT
BRPL			
16:10	16:15	3	EXHIBITION-1
16:10	16:15	10	LAJPAT NAGAR
16:10	16:15	6	NEHRU STADIUM
NDMC			
16:10	16:18	22	GT-SCHOOL LANE -I&II AND VIDYUT BHAWAN -I&II
16:10	16:18	12	IP-BAY-42 CONNAUGHT PLACE, BAY-6 TILAK MARG, BAY-2&16 NIRMAL BHAWAN

20.24 Preliminary report on trippings occurred in Delhi system on 29.11.2016.

The following tripping occurred in Delhi system on 29.11.2016 at 10:52hrs.

S. N	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Geeta Colony – Patparganj Ckt- II	At Geeta Colony : 27, 64, RYB Phase, 30E, 86. At Patparganj : Ckt. did not trip.	10:52	11:00	220kV Geeta Colony- Patpar Ganj Ckt- I was under shutdown for wet cleaning & tree trimming.

System configuration during the incident

Prior to the incident, GT Station and PPCL Unit #1 were connected to Grid through 220kV IP Ext (Pragati) -IP -Patparganj - Geeta Colony- Wazirabad - Mandola Ckts and 220kV Bus Coupler of Pragati was in off position. PPCL Unit-1 was under shutdown due to internal fault since 9:29hrs of 28.12.2016. PPCL Unit-2 & STG were connected to grid through 220kV IP Ext(Pragati)-Sarita Vihar- BTPS ckts.

Due to tripping of 220kV Patparganj - Geeta Colony ckt.-II at Geeta Colony caused islanding of Generating units of GT Station from the Grid and subsequently it collapsed. 220kV Geeta Colony- Patparganj Ckt- I was under shutdown for wet cleaning & tree trimming.

Generation loss

Sr No	Name of Unit	Generation	Tripping time	Synchronizing time
1	G.T. # 1	30	10.52	10.57
2	G.T. # 2	28	10.52	10.58
3	STG – 1	23	10.52	12.02
	Total	81		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
G.T. Stn.	Unit # 1	30	--
	Unit # 2	28	--
	STG – 1	23	--
Patparganj	--	--	31
I.P.Stn.	--	--	40
RPH	-	--	58
G.T.P.Stn. (load)	--	--	49
Total		81	178

20.25. Preliminary report on trippings occurred in Delhi system on 29.11.2016.

The following tripping occurred in Delhi system on 29.11.2016 at 13:10hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Geeta Colony – Patparganj Ckt-II	At Geeta Colony : 27, RYB Ph, 30, 86, DRC trip., Auto reclose. At Patparganj : Ckt. did not trip.	13.10	16.52	220kV Geeta Colony- Patpar Ganj Ckt- I was under shutdown for wet cleaning & tree trimming.

System configuration during the incident

Prior to the incident, GT Station and PPCL Unit #1 were connected to Grid through 220kV IP Ext (Pragati) -IP -Patparganj - Geeta Colony- Wazirabad - Mandola Ckts and 220kV Bus Coupler of Pragati was in off position. PPCL Unit-1 was under shutdown due to internal fault since 9:29hrs of 28.12.2016.

PPCL Unit-2 & STG were connected to grid through 220kV IP Ext(Pragati)-Sarita Vihar-BTPS ckts. Due to tripping of 220kV Patparganj - Geeta Colony ckt.-II at Geeta Colony caused islanding of Generating units of GT Station from the Grid and subsequently it collapsed. 220kV Geeta Colony- Patparganj Ckt- I was under shutdown for wet cleaning & tree trimming.

Generation loss

Sr No	Name of Unit	Generation	Tripping time	Synchronizing time
1	G.T. # 1	30	13.10	13.13
2	G.T. # 2	28	13.10	13.17
3	STG – 1	23	13.10	13.55
	Total	81		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
G.T. Stn.	Unit # 1	30	--
	Unit # 2	28	--
	STG – 1	23	--
Patparganj	--	--	25
I.P.Stn.	--	--	81
RPH	-	--	58
G.T.P.Stn. (load)	--	--	62
Total		81	226

20.26. Preliminary report on trippings occurred in Delhi system on 30.11.2016.

The following tripping occurred in Delhi system early morning on 30.11.2016 at 01.25hrs & onwards due to fog. Numbers of 400kV & 220kV transmission lines also tripped in Central sector Transmission system and in other states also.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Narela – Panipat Ckt. –II	At Narela :Ckt. 86D At Panipat : Ckt did not trip.	01.25	01.29	
2	220kV Narela – Panipat Ckt. –III	At Narela :Ckt. tripped on Dist prot, ABC Phase, Zone-I, Dist 17.461Kms, At Panipat : Ckt did not trip.	04.30	13.45	Disc insulator damaged at Panipat end.
3	220kV Narela – Panipat Ckt. –I	At Narela :Ckt. tripped on Dist prot, ABC Phase, Zone-I, Dist 21.92Kms, At Panipat : Ckt did not trip.	05.10	11.12	
4	220kV Narela – Rohtak Road Ckt. –II	At Narela ckt. tripped on Dist prot, ABC Phase, Zone-I, Dist 4.69Kms. At Rohtak Road ckt. tripped, relay indications not available.	05.18	12.18	
5	220kV Narela – Mandola Ckt. –I	At Narela : Ckt. tripped on 86X, 186, E/F. At Mandola ckt. tripped, relay indications not available.	06.52	10.12	
6	220kV Narela – Mandola Ckt. –II	At Narela : Ckt. tripped on Dist prot, Zone-I, Dist 8.59Kms., B Phase. At Mandola ckt. tripped, relay indications not available.	07.10	10.14	
7	220kV Narela – Bawana Ckt. –II	At Narela ckt. did not trip. Bawana : ckt. tripped on Dist prot, dist 7.8Kms. B Phase.	07.10	11.03	Load of Narela was running at Mandola.
8	220kV Geeta Colony – Patparganj Ckt- II	At Patparganj : Ckt. tripped on Dist prot, zone-I, Dist 1.051Kms, 186, 186, 86X At Geeta Colony : Ckt. tripped on Dist prot, Zone-I, Dist 3.162Kms.	04.23	04.50	
9	220kV Geeta Colony – Patparganj Ckt- I	At Patparganj : did not trip. At Geeta Colony : Ckt. tripped on Active Group-I, Dist prot, Zone-II, Dist 5.343Kms.	04.23	17.06	220kV Geeta Colony – Patparganj Ckt- I at 04.49hrs. tried but did not hold.
10	220/66kV I/C –I at Patparganj	I/C-I tripped on E/F.	07.08	07.38	

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
11	220kV Geeta Colony – Patparganj Ckt- II	At Patparganj : Ckt. tripped without indication At Geeta Colony : Ckt. tripped on Dist prot, 0.196kMs	06.01	06.10	
12	220kV Bus coupler at Geeta Colony	Bus coupler tripped on O/C, 86	05.11	06.03	
13	220kV Geeta Colony – Wazirabad Ckt- II	At Geeta Colony : Ckt. tripped on Dist prot, Zone-I, Dist 2.776Kms. At Wazirabad : Ckt. did not trip	05.58	06.10	
14	220kV Geeta Colony – Wazirabad Ckt- II	At Geeta Colony : Ckt. tripped on Dist prot, Zone-I, Dist 0.948Kms. At Wazirabad : Ckt. did not trip.	06.58	07.00	
15	220kV Wazirabad – Mandola Ckt. –II	At Wazirbad ckt. tripped on Dist prot, zone-II, Dist 16.85Km. Y ph., Trip supervision relay, Trip ph. BN At Mandola: Not available	08.06	17.06	Y Phase conductor hanging.
16	220kV Wazirabad – Mandola Ckt. – IV	At Wazirbad :Dist prot, zone-I, Dist 1.354Km. Y phase, Trip phase BCN At Mandola : Not available	06.13	17.06	Strand cut between tower no. 48-49.
17	220kV Gopalpur – Mandola Ckt. –I	At Gopalpur : Ckt. tripped on Dist prot, Zone-I, Dist 0.210Kms. R phase At Mandola : Not available	05.15	10.32	
18	220kV Gopalpur – Mandola Ckt. –II	At Gopalpur : Ckt. did not trip. At Mandola : Not available	06.00	19.03	B Phase conductor snapped at tower no. 25 & 26.
19	220kV Gopalpur – Subzi Mandi Ckt. – I	At Gopalpur : Ckt. tripped on Dist prot, Zone-I, R phase At Subzi Mandi : Ckt. did not trip.	06.03	06.51	
20	220kV Naraina – Bamnauli Ckt. –II	At Naraina Ckt. tripped on Dist prot, Zone-I, ABC Phase At Bamnauli Ckt. tripped on Dist prot, zone-II, B phase, 186A&B, Dist 14.08Km.	06.28	06.50	
21	220kV Naraina – Bamnauli Ckt. –I	At Naraina Ckt. tripped on Dist prot, Zone-I, ABC Phase At Bamnauli Ckt. tripped on Dist prot, zone-I, Dist 12.30Km	06.38	06.50	
22	220kV Naraina – Bamnauli Ckt. –II	At Naraina Ckt. tripped on Dist prot, Zone –I, ABC Phase At Bamnauli Ckt. tripped on Dist prot, zone-I, Dist, 12.70Km	07.28	10.17	
23	220kV Bamnauli – Papankalan –I Ckt. –II	At Papankalan-I : Ckt. did not trip. At Bamnauli : Ckt. tripped on Dist prot, Zone-II, Dist. 7.78Kms. R phase.	07.18	14.24	

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
24	220kV DSIDC Bawana – Narela Ckt.- II	At DSIDC Bawana : Ckt. tripped on 21 M-I & M-II, B phase, Dist prot, dist 7.8Kms. At Narela : Ckt. did not trip.	07.18	07.45	
25	220kV DSIDC Bawana – Narela Ckt.- II	At DSIDC Bawana : Ckt. tripped on 21 M-I & M-II, AB phase, Dist prot, dist 1.27Kms. At Narela : Ckt. did not trip.	07.58	11.03	
26	220kV DSIDC Bawana – Narela Ckt.- I	At DSIDC Bawana : Ckt. tripped on 21 M-I & M-II, C phase, Dist prot, dist 7.699Kms. At Narela : Ckt. did not trip.	08.09	11.03	
27	220kV BTPS – Sarita Vihar Ckt-I	At BTPS : ckt. tripped on dist prot, Dist. 1.5Km, Zone –I, R phase. At Sarita Vihar : 186A, 186B, Auto Reclose 67NA	02.35	11.34	220kV Bus Coupler at Sarita Vihar tripped on 86, 86 and 51N, E/F
28	220kV BTPS – Sarita Vihar Ckt-II	At BTPS : ckt. tripped on Dist prot, dist 2.29Km. At Sarita Vihar : Ckt. did not trip.	03.15	11:38	
29	220kV Sarita Vihar – Pragati Ckt-I	At Sarita Vihar : Ckt. did not trip. At Pragati : supply failed	03.15	03.22	
30	220kV Sarita Vihar – Pragati Ckt-II	At Sarita Vihar : Ckt. did not trip. At Pragati : supply failed	03.15	03.22	
31	220kV Sarita Vihar – Pragati Ckt-I	At Sarita Vihar : Auto Reclose, Dist Prot, ABC Phase Zone-I, 180X, 180A&B At Pragati : Bus bar protection operated	03.56	10.52	
32	220kV Sarita Vihar – Pragati Ckt-II	At Sarita Vihar : Ckt. did not trip. At Pragati : Ckt. tripped on Trip Phase ABC, Dist prot, /Zone-II, 86X, 186, 186.	03.44	12.13	
33	220kV Pragati – Park Street Ckt. –I	At Pragati Ckt. tripped due to bus bar prot. Operated At Park Street Ckt. did not trip.	03.56	04.18	
34	220kV Pragati – Park Street Ckt. –II	At Pragati Ckt. tripped due to bus bar prot. Operated At Park Street Ckt. did not trip.	03.56	04.17	
35	220kV Bus coupler at Pragati	Bus coupler tripped on 96BCA, 87AB	03.56	04.15	
36	220/66kV 100MVA Pr. Tx-II at Sarita Vihar	Tr. Tripped on 87DB, 87TC, 86, 86	03.53	11.45	

System configuration during the incident

Prior to the incident, GT Station and PPCL Unit #1 were connected to Grid through 220kV IP Ext (Pragati) -IP -Patparganj - Geeta Colony- Wazirabad - Mandola Ckts and 220kV Bus Coupler of Pragati was in off position.

PPCL Unit-2 & STG were connected to grid through 220kV IP Ext(Pragati)-Sarita Vihar-BTPS ckts. Due to tripping of 220kV Patparganj - Geeta Colony Ckt.-I&II at Geeta Colony caused islanding of Generating units of GT Station & Pragati Unit #1 from the Grid and subsequently it collapsed. The tripping of 220kV BTPS – Sarita Vihar – Pragati ckt. –I & II also caused the islanding of PPCL unit #2 and STG (Unit#3) leading to its tripping.

The details of load affected due to these trippings are being compiled by Discoms and would be provided alongwith daily reports pertaining to 30.11.2016 on 01.12.2016.

Details of operation of under frequency relay operation :

<i>TIME</i>		<i>LOAD IN MW</i>	<i>NAME OF GRID</i>
<i>OUT</i>	<i>IN</i>		
<i>TPDDL</i>			
11.13	11.16	20	66kV Narela – Baldli Ckt. I&II (No load) 66kV Narela – Bhalaswa Ckt. I&II (No load) All 11kV feeders at Narela

Generation loss

Name of Unit	Generation	Tripping time	Synchronizing time
G.T. # 1	26	04.39	04.56
		04.59	05.39
		06.00	06.25
G.T. # 2	20	04.38	05.12
		06.00	06.56
STG – 1	20	04.30	09.50
Pragati # 1	83	04.45	09.41
Pragati # 2	78	03.15	03.52
		03.56	05.54
		06.00	07.40
STG	105	03.15	08.40
Total	332		

20.27 Preliminary report on trippings occurred in Delhi system on 01.12.2016.

The following tripping occurred in Delhi system early morning on 01.12.2016 at 05.22hrs & onwards due to fog. Numbers of 400kV & 220kV transmission lines also tripped in Central sector Transmission system and in other states also.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	220kV Bawana – Khanjawala ckt. –I	At Bawana : Ckt. tripped on Dist prot, zone-2, Dist 17.32Kms., 86. At Khanjawala : Ckt. did not trip.	05.22	13.02
2	220kV Bawana – Khanjawala ckt. –II	At Bawana : Ckt. tripped on Dist prot, zone-1, Dist 2.47Kms. . At Khanjawala : Ckt. did not trip.	05.22	13.02
3	220kV Sarita Vihar – Pragati Ckt-II	At Sarita Vihar : Ckt. tripped on Dist prot, zone-I, Dist 5.912Kms.186AB. At Pragati : Ckt. tripped on Dist prot, Trip phase ABC, 186, 186	07.11	10.24
4	220kV Bawana – Narela ckt. –II	At Bawana : Ckt. Master relay, Dist prot, Dist 1.315Kms. At Narela : Ckt. did not trip.	07.31	14.42hrs. on 02.12.16
5	220kV Geeta Colony – Patparganj Ckt- I	At Patparganj : Ckt. tripped on 186, 186, Dist prot, Zone-I,2,333, Active group –I. At Geeta Colony : Ckt. tripped on Active Group-I, Dist prot, Zone-1,2,3, Dist 56Mts.	08.09	09.43
6	220kV Bamnauli – Naraina Ckt. -II	At Bamnauli Ckt. tripped on Dist prot, Zone-I, Dist 12.47Kms. 186 ABC. At Naraina Ckt. did not trip.	08.42	13.40
7	220kV Wazirbad – Geeta Colony Ckt. –II	At Geeta Colony Ckt. tripped on Dist prot, Dist 7.17Kms. At Wazirabad ckt. did not trip.	08.48	09.08
8	220/33kV 100MVA Tr.-II at Geeta Colony	Tr. Tripped on Bucholz, Differential relay, SPR.	08.38	13.37hrs on 27.04.2017

System configuration during the incident

Prior to the incident, GT Station and PPCL Unit #1 were connected to Grid through 220kV IP Ext (Pragati) -IP -Patparganj - Geeta Colony- Wazirabad - Mandola Ckts and 220kV Bus Coupler of Pragati was in off position. PPCL Unit-2 & STG were connected to grid through 220kV IP Ext(Pragati)-Sarita Vihar-BTPS ckts.

Due to tripping of 220kV Patparganj - Geeta Colony Ckt.-I&II at Geeta Colony caused islanding of Generating units of GT Station & Pragati Unit #1 from the Grid and subsequently it collapsed. The tripping of 220kV BTPS – Sarita Vihar – Pragati ckt. –I & II also caused the islanding of PPCL unit #2 and STG (Unit#3) leading to its tripping.

20.28 Preliminary report on disturbance occurred in Delhi system on 10.12.2016 at 08.40Hrs.

Incident

On 10.12.2016 at 08.40hrs, Bus Bar Protection operated at 220kV Sarita Vihar S/Stn while facilitating the shut-down on 220kV BTPS – Sarita Vihar Ckt-II along with 220kV Bus-I due to which the following trippings occurred :-

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV BTPS – Sarita Vihar Ckt-I	At BTPS : No tripping. At Sarita Vihar : Bus Bar Prot. 96, 186A, 186B	08.40	08.50	
3	220kV Pragati – Sarita Vihar Ckt-I	At Pragati : No tripping. At Sarita Vihar : Bus Bar Prot. 96, 186A, 186B	08.40	08.55	CB closed at Pragati end at 10.24 hrs. Load of Sarita Vihar was taken on BTPS 08.50hrs.
4	220kV Pragati – Sarita Vihar Ckt-II	At Pragati : No tripping. At Sarita Vihar : Bus Bar Prot. 96, 186A, 186B	08.40	08.55	
5	220/66kV 100MVA Pr. Tx-I & II at Sarita Vihar	Bus bar protection operated at Sarita Vihar	08.40	09.05	100MVA Tx-I & II Charged at 08.45 hrs. and 09.05hrs. respectively.
6	220kV Bus Coupler at Sarita Vihar	Bus bar protection operated at Sarita Vihar	08.40	08.45	

System configuration during the incident

Prior to the incident, Pragati Station (Unit-2 and STG) was connected to Grid through 220kV Pragati - Sarita Vihar - BTPS Ckts. 220kV Bus coupler was open at Pragati S/Stn. Due to above trippings, Pragati Unit-II and STG got islanded from the Grid and collapsed.

Normalization

System was normalized by closing 220kV Bus coupler at 220kV Pragati S/Stn at 08.44hrs and 220kV supply was extended Pragati generating Station and 220kV Park Street S/Stn.

Generation Loss during disturbance:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Time	
			Tripping	Restoration
Pragati Stn.	Unit-2	86	08.40	09.39
	STG	106	08.40	10.02
Total (MW)		192		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
Pragati	#II & STG	192	--
Park Street	--	--	84
Sarita Vihar	--	--	39
Total		192	123

Details of load affected:

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BYPL			
08:40	08:44	9	SHASTRI PARK (C)
08:40	08:44	3	ANAND PARBAT
08:40	08:44	13	MOTIA KHAN
08:40	08:44	13	PRASAD NAGAR
08:40	08:44	11	SHANKAR ROAD
08:40	08:44	9	FAIZ ROAD
08:49	08:52	9	PRASAD NAGAR
TPDDL			
08:40	08:41	5	PUSA
BRPL			
08:40	08:50	39	MATHURA ROAD

20.29. Preliminary report on disturbance occurred in Delhi system on 10.12.2016 at 15:15Hrs.

On 10.12.2016 at 15:15hrs, Bus Bar Protection operated at 220kV Sarita Vihar S/Stn while facilitating the shut-down on 220kV BTPS – Sarita Vihar Ckt-I along with 220kV Bus-I for replacing the `R`Phase jack bus common jumper due to which 220kV BTPS – Sarita Vihar Ckt-II tripped on bus bar protection. This led the islanding of Pragati Unit-II and STG from the Grid. The island survived upto 15.23hrs and subsequently collapsed.

System configuration during the incident

Prior to the incident, Pragati Station (Unit-2 and STG) was connected to Grid through 220kV Pragati - Sarita Vihar - BTPS Ckts. 220kV Bus coupler was open at Pragati S/Stn.

Normalization

System was normalized by closing 220kV Bus coupler at 220kV Pragati S/Stn at 15:27hrs and 220kV supply was extended Pragati generating Station and 220kV Park Street and Sarita Vihar S/Stns. 220kV BTPS – Sarita Vihar Ckt-II normalized at 20.22hrs.

Generation Loss during disturbance:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Time	
			Tripping	Restoration
Pragati Stn.	Unit-2	78	15:23	16:40
	STG	105	15:23	16:18
Total (MW)		183		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
Pragati	#II & STG	183	--
Park Street	--	--	77
Sarita Vihar	--	--	51
Total		183	128

Details of load affected:

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BYPL			
15:23	15:27	4	MOTIA KHAN
15:23	15:30	5	SHANKAR ROAD
15:23	15:27	10	FAIZ ROAD
15:23	15:27	12	SHASTRI PARK (C)
15:23	15:27	12	PRASAD NAGAR
15:23	15:27	11	ANAND PARBAT
BRPL			
15:23	15:27	51	MATHURA ROAD

20.30. Report on Tripping occurred at 400kV Bawana S.Stn. in Delhi system on 11.12.2016 at 08.37Hrs.

The following trippings occurred at 400kV Bawana S/Stn. on 11.12.16 at 08.37hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	220kV Bawana – Rohini-I Ckt-II	At Bawana : Dist prot, Zone-I, Y phase, Dist. 1.17Km., E/F, 186 A&B, 195 A&B. At Rohini –I : Supply failed.	08.37	21.48	Load of 220kV Rohini-I S/stn. change over to 220kV Rohini – Shalimarbagh Ckt.-I & II at 09.33hrs.
2	400/220kV 315MVA ICT-I at Bawana	ICT main CB 420-52 & Tie CB 421-52 tripped on O/C, E/F, Differential prot., R&Y Phase, OTI trip, WTI/PRV Trip, Bucholz. Alarm operated. 220kV I/C of ICT tripped on CB auto trip, 195AC, 195 BC, 195CC, 295AC, 295 BC, 295CC.	08.37	18.00 31.03.2017	ICT caught fire and burnt. This ICT is BHEL make and year of Mfg is 1994. Tan delta and Capacitance test on Winding and Bushing, Magnetic Voltage Balance, DC Resistance & IR were conducted on 17.02.2016. The test result were normal.
3	400/220kV 315MVA ICT-III at Bawana	ICT tripped on CB auto trip, Trip ckt supervision TC-1, 167, 195, 295 & 86B.	08.37	19.35	
4	400/220kV 315MVA ICT-IV at Bawana	ICT tripped on Bucholz Alarm, 86A&B. 220kV I/C IV tripped on 86.	08.37	22.31	
5	400/220kV 315MVA ICT-V at Bawana	220kV I/C V tripped on 86 A&B, LBB Prot.	08.37	13.37	

The two 400kV Buses are kept in split mode with 400/220kV ICT I, III & V on one Bus and 400/220kV ICT-II, IV & VI were on the other Bus. During the time of incident 400/220kV ICT-II & VI did not trip and kept catering the load of 220kV Khanjawala and DSIDC Bawana.

Details of load affected:

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
<i>TPDDL</i>			
08:37	09:33	28	220 KV ROHINI, PRASHANT VIHAR GRID, ROHINI-3 & ROHINI-5
08:37	09:33	20	ROHINI DC 1, ROHINI-4
08:37	09:15	5	PITAMPURA-1
08:37	08:47	7	P.P.-3
08:37	08:53	21	ROHINI - 22
08:37	09:30	10	ROHINI-24
08:37	09:45	21	ROHINI-1
08:37	08:55	15	AIR KHAM PUR, TIGI PUR
08:37	08:55	26	MANGOL PURI - 2, P. P. - 2
<u>220kV SHALIMARBAGH</u>			
08:37	09:14	14	11kV LOAD, SGTN NAGAR
<u>WAZIRPUR -III</u>			
08:37	09:06	23	AZADPUR, WAZIRPUR-1, WAZIRPUR-2
08:37	08:50	10	G.T.K. ROAD
<u>220kV SHALIMARBAGH</u>			
08:37	09:00	10	RANI BAGH
08:37	09:14	15	HAIDER PUR, SMB - KHOSLA, SMB FACILITY CENTER
08:37	09:02	20	ASHOK VIHAR

20.31. Report on disturbance occurred at 400kV Bawana S.Stn. in Delhi system on 21.12.2016 at 10:55Hrs.

System condition prior to incident :

At 400kV Bawana 400/220kV 315MVA ICT -III & V are kept on one 400kV Bus and ICT II, IV & VI on other 400kV Bus. The ICT III & V feeds the load of 220kV Shalimarbagh, Rohini -I & 220/66kV 100MVA Pr. Tr. at Bawana. ICT -II, IV & VI feeds the load of Khanjawala, Rohini -II & DSIDC Bawana.

Planned shutdown was availed on CB No. 752 of 400/220kV 315MVA ICT-III for annual maintenance & testing as per OS manual at 10.44hrs. of 21.12.2016. Fire observed on control cable of Y-Phase CT no-652 towards ICT side. In order to extinguish fire and to safe guard the 400/220kV 315MVA ICT-III, CB No. 652 was made off at 10.55hrs. This resulted in over loading of 400/220kV 315MVA ICT-V, which tripped on overloading at 10.55hrs. Load of 220/66kV 100MVA Transformer at Bawana, 220kV Rohini & Shalimarbagh S/Stn. were affected due to outage of 400/220kV 315MVA ICT-III & V. The detail of operations carried out at Bawana is as under:

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400/220kV 315MVA ICT-III at Bawana	ICT made off manually due to fire observed by grid staff.	10.44	12.18	At 12.20hrs. 220kV I/C-III closed and load was taken.
2	400/220kV 315MVA ICT-V at Bawana	ICT tripped on overloading.	10.55	11.49	At 11.52hrs. 220kV I/C-V closed and load was taken.
3	220kV Bawana – Rohini-I Ckt-I	At Bawana: supply failed due to tripping of ICT. At Rohini –I : supply failed	10.55	11.15	
4	220kV Bawana – Rohini-I Ckt-II	At Bawana: supply failed due to tripping of ICT. At Rohini –I : supply failed	10.55	11.15	
5	220kV Bawana – Shalimarbagh Ckt-I	At Bawana: supply failed due to tripping of ICT. At Shalimarbagh : supply failed	10.55	11.14	
6	220kV Bawana – Shalimarbagh Ckt-II	At Bawana: supply failed due to tripping of ICT. At Shalimarbagh : supply failed	10.55	11.14	
7	220/66kV 100MVA Tr. at Bawana 400kV	Supply failed due to tripping of ICT.	10:55	11.12	

Details of load affected:

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
TPDDL			
11:00	11:15	37	400kV BAWANA (BAWANA-6,BAWANA-7)
11:00	11:15	7	220kV PEERAGARHI (RANI BAGH)
11:00	11:15	96	220kV ROHINI(11kV LOAD, MANGOL PURI - 2,P. P. - 2,P.P.-3,PITAMPURA-1,PRASHANT VHR ,ROHINI DC 1, ROHINI-1&IV)
11:00	11:15	78	220 KV ROHINI,AIR KHAM PUR,ROHINI - 22,ROHINI - 23,ROHINI-24,ROHINI-3,ROHINI-5
11:00	11:15	75	220kV SHALIMARBAGH11kV LOAD,ASHOK VIHAR,AZADPUR,SGTN NAGAR,SMB-KHOSLA,SMB FACILITY CENTER, TIGI PUR, WAZIPUR-I, WAZIRPUR-II
11:00	11:13	10	HAIDER PUR
11:00	11:15	14	SGTN NAGAR

20.32. Preliminary report on disturbance occurred in Delhi system on 14.02.2017 at 08.10Hrs.

The following trippings occurred in Delhi system on 14.02.2017 at 08.10hrs.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	220kV BTPS – Sarita Vihar Ckt. –I	At BTPS-Dist prot, Y Phase, Dist 0.3KM, E/F. At Sarita Vihar –Dist prot, Zone-4, Y Phase, Dist 2.43Kms. Jumper snapped at tower no. 3.	08.10	20.44
2	220kV Pragati – Sarita Vihar Ckt. –II	At Sarita Vihar-Bus bar protection, 96 At Pragati – Dist Prot, Zone-2	08.10	11:40
3	220kV BTPS – Mehrauli Ckt. –I	At Mehrauli – Dist. Prot, dist. 34.1Kms. At BTPS – No tripping.	08.10	08.32
4	220kV Bus coupler at Sarita Vihar	Tripped on O/C, E/F.	08.10	08.26

System configuration during the incident

Prior to the incident, Pragati Unit 2 & STG was connected to Grid through 220kV Pragati (Bus-I) – Sarita Vihar-BTPS – Ballabgarh Ckts. Pragati Unit-1 was connected to 220kV Pragati (Bus-II) through Mandola Link. At Pragati 220kV Bus coupler was in off position.

220kV Sarita Vihar – BTPS Ckt. -II was already under shutdown to attend hot point on Y phase at tower no. 3. Due to tripping of 220kV Pragati – Sarita Vihar Ckt.-I at both end, Pragati Unit- II & STG got islanded from the Grid and survived with radial load of 220kV Park Street S/Stn and later Pragati Unit-II & STG collapsed at 08.26hrs.

220 kV supply to Pragati Generating Station , Park Street & Sarita Vihar Sub station was extended by closing 220kV Bus coupler at 220kV IP Ext (Pragati) at 08.28hrs.

Generation loss

Sr No	Name of Unit	Generation (in MW)	Tripping Time (Hrs.)	Synchronizing Time (Hrs.)
1	Pragati # 2	107	08.26	10.03
2	STG	56	08.26	11.39
	Total	163		

Load Generation Balance prior to incidence:

Name of Stn.	Unit No.	Generation prior to the incident in MW	Connected load prior to incident in MW
Pragati	#II & STG	163	--
Park Street	--	--	115
Sarita Vihar	--	--	69
Total	--	163	184

Details of Under Frequency Trippings:-

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
SARITA VIHAR			
08.10	08.50	41	66kV Mathura Road ckt. –II
08.10	09.22	10	11kV Ali Village, Saurav Vihar ckt. I&II, Jaitpur , S/Stn. Sarita Vihar no. 22
PARK STREET			
08.10	08.30	28	33kV Shankar Road Ckt., 33kV Parshad Nagar ckt, 33kV Motia Khan ckt. –I
08.10	08.32	05	33kV Motia Khan ckt. –II
Total		84	

20.33. Report on supply failure at Shalimarbagh Substation on 13.02.17 at 12.14 hrs.

The following tripping occurred:

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.
1	220kV Bawana – Shalimarbagh ckt-II	At Bawana: Tripped on Directional over current, 86, Master relay. At Shalimarbagh: Ckt. did not trip.	12.14	13.20

Prior to the above tripping 220kV Bawana –Shalimarbagh ckt-I was under shutdown to attend Hot point on tower no. -1, 24 & 38. Due to tripping of 220kV Bawana –Shalimarbagh ckt-II at Bawana end caused total failure of supply to 220kV Shalimarbagh S/Stn which led to interruption of 220kV feed to DMRC feeder.

Restoration

At 12.17hrs. 220kV Wazirpur ckt. –II was closed at Shalimarbagh end and 220kV supply was normalized and 220kV feed to DMRC was restored. 220kV feed to DMRC remained affected from 12.14hrs. to 12.17hrs.

Load Affected

TIME		LOAD IN MW	AREAS / CKTS/GRID AFFECTED
OUT	IN		
12:14	12:16	26	ASHOK VIHAR, SMB - KHOSLA, SMB FACILITY CENTER, TIGIPUR
12:14	12:15	9	HAIDERPUR
12:14	12:20	39	220 KV SHALIMAR BAGH, RANI BAGH, SGT NAGAR, WAZIRPUR-2
12:14	12:17	8	DMRC

Details of DMRC supply feeding from DTL Substations:

S.NO	NAME OF DMRC FEEDER	FEEDING 220kV SUBSTATION	STATUS AT THE TIME 12.14HRS. ON 13.02.2017.
1	220 kV DMRC ckt-I	Kashmiri Gate	OK
2	220 kV DMRC ckt-II	Kashmiri Gate	OK
3	66kV DMRC-I	Rohini-I	OK
4	66kV DMRC-II	Rohini-I	OK
5	220kV DMRC-I	Shalimarbagh	Supply failed from Shalimar Bagh.
6	66kV DMRC-I	GTPS	66kV Cable of DMRC out since 10.02.2017 due to fault.
7	66kV DMRC-II	GTPS	OK
8	66kV DMRC-I	Mehrauli	OK
9	66kV DMRC-II	Mehrauli	OK
10	66kV DMRC-I	PPK-I	OK
11	66kV DMRC-II	PPK-I	OK
12	66kV DMRC-I	PPK-II	OK
13	66kV DMRC-II	PPK-II	OK
14	66kV DMRC-I	Dial	OK
15	66kV DMRC-II	Dial	OK
16	66kV DMRC-I	Sarita Vihar	OK
17	66kV DMRC-II	Sarita Vihar	OK
18	66kV DAMPEL	Parkstreet	OK
19	66kV DMRC-II	Parkstreet	OK
20	220kV R.K.Puram	Vasant kunj	OK

There was option with DMRC to shift the Traction load on other available sources from DTL as detailed above. However 220kV feed to DMRC Sub station at Jahangirpuri was restored within 3 minutes from 220kV Shalimarabagh S/Stn.

20.34. Report on disturbance occurred at 400kV Mundka S.Stn. in Delhi system on 08.03.2017 at 14.10Hrs.

Following elements tripped at 400kV Mundka.

S. No	Name of the elements tripped	Relay indications	Time of tripping in Hrs.	Time of Restoration in Hrs.	Remarks
1	400kV Mundka – Jhatikra Ckt-I	At Mundka : Ckt. tripped on 86A & 86B, DT received	14.10	15.15	'R' Phase jumper of 400kV Bawana – Mundka ckt. – I connected to wave trap got burnt and snapped at 400kV Mundka. However ckt. did not trip.
2	400kV Mundka – Jhatikra Ckt-II	At Mundka : Ckt. tripped on 86A & 86B, DT received	14.10	15.15	
3	400kV Mundka – Bawana Ckt-II	At Mundka : Ckt. did not trip. At Bawana : Ckt. tripped without indication.	14.10	14.37	
4	220kV Mundka – Najafgarh Ckt.	At Mundka : ckt did not trip. At Najafgarh : ckt. tripped on 186, 86, ABC.	14.10	14.20	
5	400/220kV 315MVA ICT-IV at Mundka	Tripped on 86 A & 86B, 220kV I/C tripped on E/F, IDMT, R phase	14.10	16.43	
6	220/66kV 160MVA Tr. –III at Mundka	Tripped on E/F, IDMT, R phase, Over flux alarm.	14.10	16.53	

Generation loss

Following units at CCGT Bawana tripped due to jerk.

Sr No	Name of Unit	Generation (in MW)	Tripping Time (Hrs.)	Synchronizing Time (Hrs.)
1	CCGT Bawana #4	152	14.10	15.35
2	CCGT Bawana STG-2	98	14.10	17.04
	Total	250		

Details of load affected:

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
14:10	14:17	9	NANGLOI
14:10	14:17	7	NANGLOI WATER WORKS
14:10	14:17	5	G-5 MATIALA
TOTAL (IN MW)		21	

Details of load affected due to Under Frequency/ df/dt Relay Operation :

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
BRPL			
14:10	14:20	3	66/11kV 20MVA TR. –III & 2NOS. OF 11kV FEEDERS AT NAJAFGARH.

20.35. Preliminary report on disturbance occurred in Delhi system on 20.03.2017 at 10.20hrs.

Incident

On 20.03..2017 at 10.20hrs 220kV Bus Bar protection operated at 220kV Samaypur S/Stn. of BBMB. This led the following trippings .

- i) 220kV Ballabgarh – Samaypur Ckt-I, II & III
- ii) 220kV BTPS – Ballabgarh Ckt-I & II
- iii) 400/220kV 315MVA ICT-II & IV at Ballabgarh (PGCIL)

Tripping of 220kV BTPS - Ballabgarh Ckt-I & II caused the overloading of 220kV BTPS – Alwar ckt and supply failed at BTPS end at 10.30hrs. 220kV Bus coupler at Mehrauli tripped on over current.

The above tripping caused complete supply failure at 220kV Okhla, 220kV Gazipur & 220kV Vasant Kunj S/Stn.

Normalization

System was normalized by closing 220kV Bus coupler at 220kV Mehrauli S/Stn. at 10.31hrs and supply extended to BTPS.

Details of ckt. tripped due to operation of SPS

Name of the Grid	Time		Load in MW
	From	To	
220kV Mehrauli			
66kV Malviya Nagar Ckt-I&II	10.22	10.28	34
66kV C-Dot Ckt-I & II	10.22	10.29	28
Total (in MW)			62

Details of load affected:

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
<i>BRPL</i>			<i>220kV MEHRAULI</i>
10:20	10:25	21	MALVIYA NAGAR CKT-2
10:20	10:30	10	IGNOU
10:20	10:25	7	IGNOU TO MALVIYA NAGAR CKT
10:20	10:30	28	CDOT CKT-1 & 2
			<i>220kV VASANT KUNJ</i>
10:32	10:35	9	66KV PALAM
10:32	10:36	38	VKJ C BLK CKT-1 & 2
			<i>220kV OKHLA</i>
10:28	10:30	27	MALVIYANAGAR
10:28	10:50	21	BATRA
10:28	10:48	19	OKHLA PH-1
10:28	11:05	10	PTR NO-1 & 2

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
10:28	10:46	5	MCIE(PTR NO-1)
10:28	10:44	10	BALAJI ESTATE
10:28	11:06	6	EAST OF KAILASH (PTR NO-3)
10:28	11:05	10	EAST OF KAILASH (PTR NO-1&2)
10:28	10:40	10	NEHRU PLACE(PTR NO-1&2)
10:28	10:55	7	NEHRU PLACE(PTR NO-3)
10:28	11:05	13	NEHRU PLACE(PTR NO-4)+VSNL
10:28	11:10	4	ALAKHNANDA(PTR NO-2)
10:28	10:42	6	ALAKHNANDA(PTR NO-1&3)
10:28	11:05	17	TUGHALKABAD
<u>BYPL</u>			<u>220kV GAZIPUR</u>
10:30	10:36	9	DALLUPURA
10:30	10:36	9	MAYUR VIHAR-2
10:30	10:36	4	NEW KONDLI
10:30	10:36	9	MAYUR VIHAR-1
10:30	10:36	8	KONDLI
10:30	10:34	7	PPG IND AREA
10:30	10:35	10	CBD-2
10:30	10:35	24	G T ROAD
10:30	10:45	5	11kV LOAD