

DELHI TRANSCO LTD.

STATE LOAD DISPATCH CENTER

PROGRESS REPORT

NOV - 2019

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SALIENT FEATURES OF DELHI POWER SYSTEM

Sr. No.	Features	NOV. 2018	NOV 2019
1	Effective Generation Capacity within Delhi in MW		
	Rajghat Power House	135	135
	Gas Turbine	270	270
	Pragati Power Corporation Ltd.	330	330
	Badapur Thermal Power Station	705	0
	Rithala GT	108	0
	Bawana	1372	1372
	TOWMCL (Waste to Energy plant)	16	16
	EDWPCL (Waste to Energy plant)	10	10
	MSW BAWANA (Waste to Energy plant)	24	24
	Total	2970	2157
2	Maximum Unrestricted Demand (MW)	3788	3161
	Date	02.11.2018	15.11.2019
	Time	18.21.11	10.46.00
3	Peak Demand met (MW)	3788	3161
	Date	02.11.2018	15.11.2019
	Time	18.21.11	10.46.00
4	Peak Availability (MW)	3654	3036
5	Shortage (-) / Surplus (+) in MW	(-) 134	(-)125
6	Percentage Shortage (-) / Surplus (+)	(-) 3.54	(-) 3.95
7	Maximum Energy Consume in a day (Mus)	71.267	70.709
8	Energy Consumed during the month	1837.778	1899.301
9	Load Shedding in Mus		
A)	Due to Grid Restrictions		
i)	Under Frequency Relay Operations	0.000	0.000
ii)	Manual Load shedding from DTL S/Stns.	0.000	0.000
iii)	Load Shedding due to low frequency / Low Voltage / TTC/ATC Violation		
	NDPL	0.076	0.000
	BRPL	0.000	0.000
	BYPL	0.000	0.000
	NDMC	0.000	0.000
	MES	0.000	0.000
iv)	Due to transmission Constraints in Central Sector	0.000	0.000
	Total due to Grid Restriction	0.076	0.000
B)	Due to Constraints in System in Mus		
	DTL	0.153	0.558
	NDPL	0.031	0.022
	BRPL	0.164	0.124
	BYPL	0.024	0.004
	NDMC	0.000	0.000
	MES	0.000	0.000
	Other Agencies	0.000	0.002
	Total	0.372	0.710
11	Grand Total in Mus	0.448	0.710

2. PERFORMANCE OF GENERATING STATIONS WITHIN DELHI DURING NOV 2019

A) For the month of Nov 2019

All Figures in MUs

S. No	Stations	Gross Generation	Aux. Consumption	Net Generation	Availability (%)	Backing Down
1.	RPH	0.00	0.117	-0.117	0.00	0.00
2.	GT	29.150	1.368	27.782	87.58	137.42
3.	PPCL	116.179	2.405	113.782	99.67	115.52
4.	BTPS	0.00	0.427	-0.427	0.00	0.00
5.	Rithala	0.00	0.00	0.00	0.00	0.00
6.	Bawana	275.076	10.194	264.882	92.07	618.57
7.	Towmcl	14.206	1.108	12.405	--	--
8.	EDWPCL	3.608	0.786	2.822	--	--
9.	DMSWL	12.559	2.074	10.485	--	--
	TOTAL	450.778	18.479	431.614	--	871.51

B) For the Year 2019-20 (Upto Nov 2019)

Power Station	Effective Capacity (MW)	Net Generation in MUs for Nov 2019	Availability (%) for Nov 2019	PLF (%) for Nov 2019	Cumulative Generation in MUs upto Nov 2019 for the year 2019-20	Cumulative Availability in % upto Nov 2019 for the year 2019-20	Cumulative PLF in % upto Nov 2019 for the year 2019-20
RPH	135	-0.117	0.00	0.00	-1.000	0.00	-0.07
GT	270	27.782	87.58	14.70	363.845	85.47	23.71
PPCL	330	113.782	99.67	49.54	1031.845	94.88	55.14
BTPS	705	-0.427	0.00	0.00	-4.744	0.00	0.00
Rithala	108	0.00	0.00	0.00	0.00	0.00	0.00
Bawana	1372	264.882	92.07	27.57	2759.803	85.85	35.73
Towmcl	16	12.405	--	123.32	100.841	--	--
EDWPCL	--	2.822	--	41.76	19.539	--	--
DMSWL	--	10.485	--	72.68	84.126	--	--
TOTAL	2936	431.614	--	--	4354.255	--	--

3 DETAILS OF OUTAGES OF GENERATING STNS. WITHIN DELHI W.E.F. APRIL 2019

(A) RPH

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	67.5	08.05.15	13.40	Contd.		Not in operation due to not meeting pollution norms.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	67.5	21.05.15	10.20	Contd.		Not in operation due to not meeting pollution norms.

(B) Gas Turbine

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	30	12.06.19	08.28	12.06.19	12.15	unit tripped due to Electrical trouble normal shut down.
		09.08.19	12.47	09.08.19	15.45	Unit tripped due to tripping of 66kV Switch yard.
		27.08.19	15.05	27.08.19	20.20	Unit tripped due to tripping of generator.
		10.09.19	19.55	11.09.19	17.44	Unit tripped due to rotating diode faulty.
		28.09.19	01.35	28.09.19	02.30	Unit tripped due to field failure.
		22.10.19	10.00	08.11.19	19.15	Hot gas path inspection.
		28.11.19	13.30	28.11.19	14.32	Tripped due to failure of I/O Pack.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	30	01.06.19	16.45	01.06.19	20.00	Unit tripped on Electrical trouble Normal shut down alarms.
		01.07.19	22.06	01.07.19	23.40	Electrical trouble normal shutdown
		02.07.19	01.30	02.07.19	22.20	Electrical trouble normal shutdown
		09.08.19	12.47	09.08.19	15.45	Unit tripped due to tripping of 66kV Switch yard.
		30.09.19	06.42	30.09.19	08.05	Unit tripped due to battery under voltage.
		11.10.19	09.00	19.10.19	15.30	Combustion inspection.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
3	30	12.04.19	02.25	12.04.19	04.40	Machine tripped due to fault occurred in high vibration pick up.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
4	30	Nil				

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
5	30	27.05.19	11.08	27.05.19	12.54	Tripped due to Electrical trouble

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
6	30	30.04.19	01.18	30.04.19	02.05	Machine tripped due to malfunctioning of IP pack
		02.05.19	16.08	02.05.19	17.37	Tripped due to failue of communication I/O pack.
		19.06.19	17.58	19.06.19	19.18	Unit tripped on heavy jerk.
		21.07.19	16.16	21.07.19	17.55	Electrical trouble.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG -1	30	09.04.19	08.00	28.05.19	20.32	Major overhauling.
		01.06.19	21.15	02.06.19	19.15	Machine out due ot axial shift problem.
		03.06.19	12.00	12.06.19	17.45	
		09.08.19	12.47	10.08.19	22.30	Unit tripped due to tripping of 66kV Switch yard.
		28.08.19	14.28	28.08.19	15.55	Gen. differential trip.
		29.08.19	10.15	29.08.19	13.15	Tripped on false alarm.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG -2	30	11.05.19	17.55	11.05.19	20.05	Unit tripped due to Class A channel I&2 trip.
		05.06.19	02.14	05.06.19	04.01	Unit tripped due to drum level disturbance.
		20.09.19	09.00	03.10.19	21.20	Minor inspection.

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG -3	30	05.04.19	01.15	05.04.19	02.15	Machine tripped on drum level very high.
		02.05.19	23.45	03.05.19	05.15	Tripped due to faulty relay.
		07.06.19	21.55	08.06.19	02.04	Unit tripped due to Hotwell level very high. Lube oil Press. LOW and Class A trip relay alarm also appeared.
		19.06.19	17.58	19.06.19	20.48	Unit tripped on heavy jerk.
		12.07.19	10.50	12.07.19	12.08	Low vaccume pressure
		15.07.19	16.55	15.07.19	17.29	Tripped due to drum level very high.
		21.07.19	16.16	21.07.19	18.50	Unit tripped with Unit #6
		29.08.19	14.20	29.08.19	15.15	Tripped due to drum level high
		11.09.19	07.01	11.09.19	07.50	Unit tripped due to low vaccume
		19.10.19	19.35	19.10.19	20.25	AVR Fuse failure
		20.10.19	13.50	20.10.19	15.07	VT Fuse fail, Class A relay operation
		26.10.19	07.34	26.10.19	08.02	
		30.10.19	10.23	30.10.19	11.11	
		11.11.19	14.39	11.11.19	15.27	Unit tripped oil pressure very low, VT Fuse failure.

(C) PRAGATI

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	104	01.04.19	00.00	05.04.19	08.04	Stopped due to low demand and high frequency
		24.04.19	00.00	25.04.19	00.14	
		25.04.19	00.47	01.05.19	16.54	Not scheduled due to available in Open cycle.
		03.05.19	04.15	10.05.19	13.52	Stopped due to low demand and high frequency
		17.05.19	22.30	29.05.19	12.32	
		19.06.19	18.02	19.06.19	18.25	Grid disturbance
		21.06.19	10.05	21.06.19	11.15	Stopped to attend hot point by DTL.
		17.07.19	08.08	19.07.19	09.15	Stopped due to low demand and high frequency
		19.07.19	09.15	19.07.19	18.00	Change Air Filters
		19.07.19	18.00	20.07.19	11.11	Stopped due to low demand and high frequency
		06.08.19	11.51	08.08.19	21.02	
		10.08.19	00.00	27.08.19	18.19	
		12.09.19	02.07	21.09.19	12.24	

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	104	05.04.19	17.03	22.04.19	21.19	Stopped due to low demand and high frequency
		10.05.19	15.56	10.05.19	17.00	GT-2 swapped with GT-1
		10.05.19	17.00	10.05.19	18.00	DC reduced for un wrapping inlet air filters.
		10.05.19	18.00	20.05.19	14.39	Stopped due to low demand and high frequency
		18.06.19	00.08	19.06.19	14.37	
		25.07.19	15.30	05.08.19	20.43	
		30.08.19	13.06	10.09.19	20.43	
		21.09.19	12.24	16.10.19	18.00	Unit swapped by GT-#1
		16.10.19	18.00	20.10.19	19.45	Withdraw planned mtc
		20.10.19	19.45	20.11.19	06.39	Stopped due to low demand and high frequency
21.11.19	00.00	30.11.19	23.59			

Unit No	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG	122	01.04.19	00.00	01.04.19	08.15	Unit stopped for MI
		14.04.19	16.50	15.04.19	04.45	Attending governing system.
		03.05.19	01.34	03.05.19	04.02	Internal fault
		17.05.19	22.30	20.05.19	17.57	Stopped due to low demand and high frequency
		19.07.19	04.55	19.07.19	06.27	Tripped due to grid disturbance
		30.07.19	09.10	30.07.19	10.06	Internal fault
		05.09.19	14.40	05.09.19	19.11	
		21.09.19	13.10	21.09.19	14.10	
		26.10.19	09.09	26.10.19	10.17	Tripped due to grid disturbance

(D) BAWANA CCGT POWER STATION

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
1	216	01.05.19	10.00	01.05.19	12.00	Transformer testing by PGCIL
		01.05.19	12.00	02.05.19	18.00	
		26.06.19	10.09	26.06.19	11.22	Machine Tripped on Guillotine damper feedback close .
		07.08.19	07.09	07.08.19	11.37	Fault alarm appeared.
		07.09.19	06.05	07.09.19	12.10	High DP.
		17.11.19	06.15	20.11.19	12.00	

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
2	216	21.06.19	17.30	21.06.19	21.42	Machine stopped for attending oil leakage in trip oil line.
		07.09.19	07.00	08.09.19	06.00	High intake air filter fault.
		12.11.19	13.30	12.11.19	17.32	GT#2 tripped on High exhaust spread due to cold zone in TTX 18-22
		15.11.19	00.18	15.11.19	14.05	Unit unloaded on high DP

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG-1	254	01.05.19	00.00	01.05.19	12.00	Transformer testing by PGCIL
		15.05.19	07.42	18.05.19	12.00	Dislodging of R phase CT of excitation transformer from its base plate and filling on transformer enclosure was cause of tripping.
		11.06.19	13.35	11.06.19	15.41	Machine Tripped on closure of HPMS-39.
		26.06.19	10.09	26.06.19	12.02	Machine Tripped on Guillotine damper feedback close .
		04.08.19	16.25	04.08.19	23.40	Tripped due to control oil leakage.
		07.08.19	12.35	07.08.19	12.35	Unit tripped due to GT Unit f#3 tripped
		11.08.19	00.05	11.08.19	11.39	Oil level very low, oil leakage.
		12.11.19	14.02	12.11.19	18.10	Half of STG taken out of DC due trip of GT#2
		15.11.19	00.18	15.11.19	14.05	Half of STG taken out of DC due unloading of GT#2
17.11.19	06.15	20.11.19	12.00	Half of STG taken out of DC due tripping of GT#1		

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
3	216	29.04.19	20.18	29.04.19	21.37	Malfunctioning of compressor bleed valve brought machine on FSNL.
		02.05.19	12.16	02.05.19	12.54	Machine came on FSNL itself due to problem in excitation.
		27.05.19	11.58	27.05.19	13.41	Gas leakage
		03.08.19	13.31	03.08.19	13.31	Tripped due to high DP
		17.08.19	10.00	17.08.19	18.00	Borosopic inspection by OEM.
		29.08.19	18.00	30.08.19	01.15	Unit tripped due to generator proection.
		21.10.19	00.00	26.10.19	18.00	Attended leakage of Hydrogen from Generator cooler,Seal oil system line modification work done.

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
4	216	01.04.19	00.00	04.04.19	13.00	Unit kept out due to leakage of pressure.
		04.04.19	13.00	08.04.19	20.00	
		19.09.19	11.12	19.09.19	15.00	Loss of flame.
		09.10.19	14.00	20.10.19	23.59	Mastr Trip relay upgradation and diverter damper seal replacement & rectification.

Unit	Capacity in MW	Outage		Synchronization		Reason of Outage
		Date	Time	Date	Time	
STG-2	254	01.04.19	00.00	04.04.19	13.00	Replacement of R phase bushing of STGT Transformer.
		15.05.19	07.44	15.05.19	13.21	Unit tripped on instantaneous high set element of stand by E/F protection of generator transformer
		27.05.19	11.58	27.05.19	14.00	Gas leakage.
		03.07.19	22.30	04.07.19	16.30	Oil leakage in JOP Line.
		26.07.19	12.15	26.07.19	13.33	STG#2 tripped at 12:15 hrs.Fault in B-phase of ICT-2 of 400 KV, DTL led to heavy fault current which led to tripping of STG#2.Settings of overhead differential relays have been reviewd to avoid fault outside the zone of Transformer Protection.
		03.08.19	11.48	03.08.19	13.44	Due tripping of GT-2
		17.08.19	10.00	17.08.19	18.00	Borosopic inspection by OEM.
		29.08.19	18.00	30.08.19	01.15	Unit tripped due to generator proection.
		09.10.19	14.00	14.10.19	06.00	GT#4 under PO so half STG taken out from DC
		14.10.19	06.00	21.10.19	13.30	Planned Outage of condenser cleaning
		21.10.19	13.30	26.10.19	18.00	GT#3 under PO so half STG taken out from DC
16.11.19	09.48	16.11.19	12.15	Unit tripped on Generator stator earth fault protection		

4 ALLOCATION OF POWER TO DELHI

A) Time block 00.00hrs. to 24.00hrs. @ 0% allocation from Unallocated Quota from 01.09.2019

Name of the Stn	Installed capacity	Total Un-allocated	Basic Allocation	Basic Allocation at periphery	Allocation out of Unallocated Quota	Allocation out of Un-allocation Quota at Delhi periphery	Total allocation at Delhi periphery
1	2	3	4	5	6	7	(8)=(5)+(7)
NTPC STATIONS							
Singrauli STPS	2000	300	150	134	0	0	134
Rihand-I	1000	150	100	89	0	0	89
Rihand Stage -II	1000	150	126	115	0	0	115
Rihand Stage -III	1000	150	132	120	0	0	120
ANTA GPS	419	63	44	41	0	0	41
Auriya GPS	663.36	99	72	68	0	0	68
Dadri GPS	829.78	129	91	86	0	0	86
Dadri NCTPS (Th)	840	0	756	668	0	0	668
Dadri NCTPS (Th) Stage-II	980	147	152	139	0	0	139
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
Unchahaar-IV TPS	500	75	0	0	0	0	0
TOTAL	10282	1377	1723	1546	0	0	1546
NHPC							
Baira Suiil HPS	180	0	20	19	0	0	19
Salal HPS	690	0	80	77	0	0	77
Tanakpur HEP	94	0	12	12	0	0	12
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	51	0	0	51
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
Singrauli small hydro	8	0	1.53	1	0	0	1
TOTAL	4073	272	480	458	0	0	458
NPC							
Narora APS	440	64	47	40	0	0	40
RAPP (C)	440	64	56	49	0	0	49
TOTAL	880	128	103	88	0	0	88
SJVNL							
Nathpa Jhakri HEP	1500	149	142	135	0	0	135
THDC							
Tehri Hydro	1000	99	63	60	0	0	60
Koteshwar HEP	400	40	39	38	0	0	38
TOTAL	1400	139	102	98	0	0	98
Total	18135	2065	2550	2326	0	0	2326
Allocation from ER and Tala HEP							
Farakka	1600	0	22	20	0	0	20
Kahalgaon	840	0	51	45	0	0	45
Tala HEP	1020	153	30	29	0	0	29
Kahalgaon-II	1500	0	157	139	0	0	139
Total ER	4960	153	261	232	0	0	232
Joint Venture							
Jhajjar TPS	1500	114	693	634	0	0	634
Ultra Mega Projects							
Sasan	3960	0	446	404	0	0	404
Grand Total	28555	2332	3949	3596	0	0	3596

5 ALLOCATION OF POWER TO DISCOMS

A) ALLOCATION OF POWER TO VARIOUS LICENCEES AS PER ORDER OF DERC AND DECISION OF GNCTD FOR ALLOCATION OF CENTRAL SECTOR STATIONS (DADRI THERMAL & BTPS) AND STATE SECTOR GENERATING STATIONS w.e.f. 06.08.2013.

(Allocation In %)

(A) 10.00hrs. to 17.00hrs.

SOURCES	LICENSEES					
	NDMC	MES	NDPL	BRPL	BYPL	TOTAL
1. Central Sector without Dadri (Th)	0	0	29.18	43.58	27.24	100.00
2. Dadri (Th)	16.63	0	24.22	36.86	22.39	100.00
3. BTPS	17.73	7.09	21.81	33.2	20.17	100.00
4. RPH	0	0	29.025	44.133	26.842	100.00
5. GT	0	0	29.02	44.16	26.82	100.00
6. Pragati	30.3	0	20.22	30.78	18.7	100.00
7. DVC	0	0	29.18	43.58	27.24	100.00
8. BAWANA CCGT*	7.30	1.82	20.688	30.888	19.304	80.00

(B) 00.00hrs. to 10.00hrs. and 17.00hrs. to 24.00hrs.

SOURCES	LICENSEES					
	NDMC	MES	NDPL	BRPL	BYPL	TOTAL
1. Central Sector without Dadri (Th)	0	0	29.18	43.58	27.24	100.00
2. Dadri (Th)	16.53	0	24.22	36.86	22.39	100.00
3. BTPS	17.73	7.09	21.81	33.2	20.17	100.00
4. RPH	0	0	29.025	44.133	26.842	100.00
5. GT	0	0	29.02	44.16	26.82	100.00
6. Pragati	30.3	0	20.22	30.78	18.7	100.00
7. DVC	0	0	29.18	43.58	27.24	100.00
8. BAWANA CCGT*	7.30	1.82	20.688	30.888	19.304	80.00

* 20% POWER OF BAWANA CCGT ALLOCATED TO HARYANA (10%) & PUNJAB (10%)

6 POWER AVAILABILITY-DEMAND POSITION AT THE TIME OF PEAK DEMAND MET DURING NOVEMBER 2019

Date	Time of peak demand	Generation within Delhi									Import from the Grid	Schedule from the Grid	OD(-)/UD(+)	Demand met	Shedding	Un-Restricted Demand
		RP H	GT	PPCL	Bawana	Tow mcl	East Delhi	DMS WL	BTPS	Total						
(1)	(2)	(3)	(4)	(5)	(7)	(8)				(9)= (3) to (8)	(10)	(11)	(12)= (11) - (10)	(13)= (11)+ (12)	(14)	(15)= (13)+ (14)
1	18.11.15	0	40	145	514	18	-1	16	0	732	2781	2924	-143	3513	0	3513
2	11.00.00	0	40	148	472	16	0	16	0	692	2567	2581	-14	3259	0	3259
3	11.30.00	0	39	148	473	19	0	18	0	697	2419	2417	2	3116	5	3121
4	11.24.35	0	39	146	470	17	0	15	0	687	2872	2835	37	3559	1	3560
5	10.56.44	0	40	148	470	9	0	14	0	681	2835	2781	54	3516	21	3537
6	18.10.46	0	39	149	522	14	0	15	0	739	2861	2736	125	3600	0	3600
7	10.15.58	0	41	152	468	19	0	16	0	696	2741	2752	-11	3437	0	3437
8	18.10.46	0	41	148	468	18	9	17	0	701	2777	2649	128	3478	0	3478
9	18.03.31	0	40	149	466	18	4	16	0	693	2495	2442	53	3188	0	3188
10	11.35.52	0	40	150	454	18	7	17	0	686	2442	2406	36	3128	0	3128
11	11.00.00	0	40	151	471	19	6	12	0	699	2536	2590	-54	3235	0	3235
12	10.36.40	0	40	152	503	17	3	7	0	722	2531	2569	-38	3253	0	3253
13	10.41.35	0	41	152	499	20	5	7	0	724	2624	2612	12	3348	0	3348
14	10.49.44	0	41	151	466	16	7	14	0	695	2785	2745	40	3480	0	3480
15	10.46.00	0	40	150	273	15	8	15	0	501	3130	3005	125	3631	0	3631
16	10.55.27	0	40	149	451	17	4	16	0	677	2596	2454	142	3273	0	3273
17	11.35.31	0	41	150	315	16	7	16	0	545	2708	2722	-14	3253	0	3253
18	10.51.30	0	42	153	253	17	8	17	0	490	2865	2875	-10	3355	0	3355
19	09.29.28	0	41	155	306	19	7	17	0	545	2856	2650	206	3401	0	3401
20	10.15.32	0	41	271	274	17	7	16	0	626	2814	2723	91	3440	0	3440
21	10.39.24	0	41	152	261	18	3	9	0	484	2919	2922	-3	3403	0	3403
22	11.01.26	0	41	150	274	18	6	13	0	502	3044	2954	90	3546	0	3546
23	11.30.09	0	41	153	297	17	8	17	0	533	2840	2605	235	3373	0	3373
24	11.00.00	0	40	152	276	18	3	16	0	505	2824	2826	-2	3329	0	3329
25	10.34.37	0	41	152	232	15	6	16	0	462	2943	2800	143	3405	0	3405
26	10.15.49	0	40	154	244	18	7	17	0	480	2936	2910	26	3416	0	3416
27	10.15.44	0	41	153	255	18	5	15	0	487	3012	2888	124	3499	0	3499
28	10.21.27	0	40	156	268	19	-1	8	0	490	2952	2918	34	3442	0	3442
29	10.55.37	0	39	156	286	16	-1	7	0	503	3069	2988	81	3572	0	3572
30	10.38.47	0	39	158	232	12	-1	16	0	456	2949	2818	131	3405	0	3405

POWER AVAILABILITY- DEMAND POSITION AT THE TIME OF MAXIMUM UNRESTRICTED DEMAND DURING NOVEMBER 2019

Date	Time of peak demand	Generation within Delhi									Import from the Grid	Schedule from the Grid	OD(-)/UD(+)	Demand met	Shedding	Un-Restricted Demand
		RP H	GT	PPCL	Bawana	Tow mcl	East Delhi	DMS WL	BTPS	Total						
(1)	(2)	(3)	(4)	(5)	(7)	(8)				(9)= (3) to (8)	(10)	(11)	(12)= (11) - (10)	(13)= (11)+ (12)	(14)	(15)= (13)+ (14)
1	18.11.15	0	40	145	514	18	-1	16	0	732	2781	2924	-143	3513	0	3513
2	11.00.00	0	40	148	472	16	0	16	0	692	2567	2581	-14	3259	0	3259
3	11.30.00	0	39	148	473	19	0	18	0	697	2419	2417	2	3116	5	3121
4	11.24.35	0	39	146	470	17	0	15	0	687	2872	2835	37	3559	1	3560
5	10.56.44	0	40	148	470	9	0	14	0	681	2835	2781	54	3516	21	3537
6	18.10.46	0	39	149	522	14	0	15	0	739	2861	2736	125	3600	0	3600
7	10.15.58	0	41	152	468	19	0	16	0	696	2741	2752	-11	3437	0	3437
8	18.10.46	0	41	148	468	18	9	17	0	701	2777	2649	128	3478	0	3478
9	18.03.31	0	40	149	466	18	4	16	0	693	2495	2442	53	3188	0	3188
10	11.35.52	0	40	150	454	18	7	17	0	686	2442	2406	36	3128	0	3128
11	11.00.00	0	40	151	471	19	6	12	0	699	2536	2590	-54	3235	0	3235
12	10.36.40	0	40	152	503	17	3	7	0	722	2531	2569	-38	3253	0	3253
13	10.41.35	0	41	152	499	20	5	7	0	724	2624	2612	12	3348	0	3348
14	10.49.44	0	41	151	466	16	7	14	0	695	2785	2745	40	3480	0	3480
15	10.46.00	0	40	150	273	15	8	15	0	501	3130	3005	125	3631	0	3631
16	10.55.27	0	40	149	451	17	4	16	0	677	2596	2454	142	3273	0	3273
17	11.35.31	0	41	150	315	16	7	16	0	545	2708	2722	-14	3253	0	3253
18	10.51.30	0	42	153	253	17	8	17	0	490	2865	2875	-10	3355	0	3355
19	09.29.28	0	41	155	306	19	7	17	0	545	2856	2650	206	3401	0	3401
20	10.15.32	0	41	271	274	17	7	16	0	626	2814	2723	91	3440	0	3440
21	10.39.24	0	41	152	261	18	3	9	0	484	2919	2922	-3	3403	0	3403
22	11.01.26	0	41	150	274	18	6	13	0	502	3044	2954	90	3546	0	3546
23	11.30.09	0	41	153	297	17	8	17	0	533	2840	2605	235	3373	0	3373
24	11.00.00	0	40	152	276	18	3	16	0	505	2824	2826	-2	3329	0	3329
25	10.34.37	0	41	152	232	15	6	16	0	462	2943	2800	143	3405	0	3405
26	10.15.49	0	40	154	244	18	7	17	0	480	2936	2910	26	3416	0	3416
27	10.15.44	0	41	153	255	18	5	15	0	487	3012	2888	124	3499	0	3499
28	10.21.27	0	40	156	268	19	-1	8	0	490	2952	2918	34	3442	0	3442
29	10.55.37	0	39	156	286	16	-1	7	0	503	3069	2988	81	3572	0	3572
30	10.38.47	0	39	158	232	12	-1	16	0	456	2949	2818	131	3405	0	3405

SOURCEWISE SCHEDULED DRAWL FROM NORTHERN GRID AS WELL AS AVAILABILITY WITHIN DELHI FOR NOVEMBER 2019

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

A (i) RPH	0.000
(ii) GT+STG	29.150
(iii) PRAGATI	116.179
(iv) RITHALA	0.000
(v) BAWANA CCGT	275.076
(vi) Timarpur – Okhla	14.206
EDWPCL	3.608
DMSWL	12.559
TOTAL	450.778
B) AVAILABILITY FROM BTPS	-0.427
C) AUXILIARY CONSUMPTION OF GENERATING STNs. EXCLUDING BTPS	18.745
D) NET GENERATION AVAILABLE WITHIN DELHI(A+B-C)	431.606

B) SOURCE WISE SCHEDULED DRAWL FROM THE NORTHERN GRID

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT DELHI PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT DELHI PERIPHERY
B/SUIL	2.169	2.088	2.168	2.087
SALAL	18.096	17.493	18.096	17.493
SASAN	298.249	288.392	298.211	288.355
TANKAPUR	4.295	4.145	4.294	4.144
CHAMERA	5.901	5.705	5.901	5.705
CHAMERA -II	6.803	6.577	6.803	6.577
CHAMERA -III	4.202	4.063	4.202	4.063
DHAULIGANGA	6.497	6.266	6.497	6.266
SEWA -2	2.473	2.389	2.473	2.389
URI	27.653	26.782	27.653	26.782
URI-II	18.287	17.716	18.287	17.716
KOLDAM	0.000	0.000	0.000	0.000
KOTESHWAR	6.886	6.639	6.886	6.639
PARBATI3	2.505	2.422	2.505	2.422
RAMPUR	0.000	0.000	0.000	0.000
ANTA (GAS)	3.007	2.887	1.761	1.690
ANTA (RLNG)	26.080	25.089	0.035	0.034
ANTA (LIQUID)	0.009	0.009	0.000	0.000
DADRI (GAS)	14.740	14.346	9.591	9.334
DADRI (RLNG)	50.314	48.858	0.316	0.307
DADRI (LIQUID)	0.000	0.000	0.000	0.000
AURAIYA (GAS)	0.228	0.220	0.000	0.000
AURAIYA (RLNG)	48.884	47.017	0.000	0.000
AURAIYA (LIQUID)	0.000	0.000	0.000	0.000
SINGRAULI	89.915	85.988	84.877	81.162
SINGRAULI_HYDRO	0.000	0.000	0.000	0.000
RIHAND -I	37.343	35.725	34.968	33.449
RIHAND -II	85.012	81.296	82.563	78.952
RIHAND -III	89.010	86.067	87.147	84.264
UNCHAHAAR-I	15.713	15.151	9.907	9.552
UNCHAHAAR-II	30.588	29.494	19.041	18.359
UNCHAHAAR-III	19.001	18.322	12.235	11.797
UNCHAHAAR-IV	0.000	0.000	0.000	0.000
DADRI (TH)	496.295	482.201	92.873	90.296
DADRI (TH) STAGE-II	444.872	432.186	155.165	150.763
TALCHER FOR AUX. OF BTPS	1.112	1.069	1.127	1.084
NAPP	31.456	30.252	31.456	30.252
RAPP 'B'	0.000	0.000	0.000	0.000
RAPP 'C'	36.878	35.106	36.878	35.106
NATHPA JHAKRI	29.016	28.053	29.016	28.053
DULASTI	18.853	18.229	18.853	18.229
TEHRI	13.267	12.791	13.267	12.791
JHAJJAR	461.531	448.408	1.030	1.000

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT DELHI PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT DELHI PERIPHERY
KHELGAON	26.032	25.457	19.892	19.450
KHELGAON-II	99.390	97.175	84.324	82.436
FARAKA	10.131	9.880	7.205	7.026
TALA	5.448	5.301	5.448	5.301
DVC	203.824	202.683	202.683	200.258
TUTICORIN - BRPL	7.684	7.599	7.599	7.505
MADHYA PRADESH	0.000	0.000	0.000	0.000
UTTAR PRADESH	0.000	0.000	0.000	0.000
WEST BENGAL	0.000	0.000	0.000	0.000
SCLTPS (UP)	0.000	0.000	0.000	0.000
HARYANA	0.000	0.000	0.000	0.000
SEIL PROJECT(ANDHRA PRADESH)	0.000	0.000	0.000	0.000
MEGHALAYA	1.839	1.832	1.832	1.810
ANDHRA	0.314	0.311	0.311	0.308
KARNATAKA	3.129	3.078	3.078	3.042
PUNJAB	0.000	0.000	0.000	0.000
METHON POWER(NDPL)LT-06	157.616	156.752	156.752	154.914
DVC MEJIA (LT-08)(BYPL)	57.772	57.451	57.451	56.768
Acme_RUMS	9.357	9.273	9.273	9.164
Arinsun_RUMS	8.511	8.435	8.435	8.337
Mahindra_RUMS	4.362	4.322	4.322	4.269
URS	0.023	0.022	0.023	0.022
JAMMU & KASHMIR	9.222	9.067	9.067	8.960
HIMACHAL PRADESH	6.546	6.403	6.403	6.327
RATNAGIRI GAS AND POWER PVT. LTD. (RGPPL) MAHARASHTRA	0.000	0.000	0.000	0.000
UTTRAKHAD	35.581	34.893	34.893	34.480
JP NIGREE	0.000	0.000	0.000	0.000
KWHEP (HP)	0.000	0.000	0.000	0.000
HIMACHAL PRADESH LT-59 DVC	1.546	1.512	1.512	1.495
HARYANA (LT-05)	15.858	15.617	15.617	15.419
MP(SOLAR RUMS)	2.712	2.686	2.686	2.651
HP TPDDL	1.576	1.542	1.542	1.524
NAGALAND	0.860	0.858	0.858	0.847
ODHISHA	0.000	0.000	0.000	0.000
ORISSA MT-20 JITPL -DVC	5.562	5.504	5.504	5.439
RAJASTHAN	0.000	0.000	0.000	0.000
JHARKHAND	0.050	0.050	0.050	0.049
RAJASTHAN(SOLAR) BRPL-LT36	2.824	2.762	2.762	2.730
RAJASTHAN(SOLAR) BYPL - LT-35	2.811	2.750	2.750	2.718
RAJASTHAN(SOLAR) TPDDL LT-31	2.803	2.742	2.742	2.709
TO JHARKHAND	0.000	0.000	0.000	0.000
TO ANDHRA	-6.615	-6.686	-6.686	-6.809
TO UTTAR PRADESH	-6.977	-7.185	-7.185	-7.316
TO WEST BENGAL	0.000	0.000	0.000	0.000
TO UTTRAKHAND	-12.139	-12.442	-12.442	-12.654
TO VLCP 1800	0.000	0.000	0.000	0.000
TO ODISHA	0.000	0.000	0.000	0.000
TO MAHARASHTRA	-10.854	-11.008	-11.008	-11.194
TO GOA	-4.438	-4.512	-4.512	-4.590
TO CHATTISHGARH	0.000	0.000	0.000	0.000
TO DADAR & NAGAR HAVELI	0.000	0.000	0.000	0.000
BTPS TO MP	0.000	0.000	0.000	0.000
TO HIMACHAL PRADESH	-210.648	-215.384	-215.384	-219.107
TO GUJRAT	0.000	0.000	0.000	0.000
POWER EXCHANGE(IEX)	178.112	175.979	178.112	175.979
TO POWER EXCHANGE (IEX)	-82.228	-83.616	-82.228	-83.616
POWER EXCHANGE(PX)	0.000	0.000	0.000	0.000
TO POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
TO SHARE PROJECT (HARYANA)	-22.699	-23.076	-22.699	-23.076
TO SHARE PROJECT (PUNJAB)	-21.495	-21.850	-21.495	-21.850
TOTAL	2930.540	2835.615	1575.565	1518.838

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

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT DELHI PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT DELHI PERIPHERY
NTPC - NR	1451.011	1404.855	590.478	569.958
NTPC - ER	135.554	132.511	111.420	108.912
NHPC	117.733	113.875	117.731	113.873
NPC	68.333	65.358	68.333	65.358
SASAN	298.249	288.392	298.211	288.355
KOTESHWAR	6.886	6.639	6.886	6.639
NATHPA JHAKRI	29.016	28.053	29.016	28.053
TALCHER FOR AUX. OF BTPS	1.112	1.069	1.127	1.084
TEHRI	13.267	12.791	13.267	12.791
TALA	5.448	5.301	5.448	5.301
JHAJJAR	461.531	448.408	1.030	1.000
RAJASTHAN SOLAR(BRPL)T-36	2.824	2.762	2.762	2.730
RAJASTHAN SOLAR(BYPL)T-35	2.811	2.750	2.750	2.718
RAJASTHAN SOLAR(TPDDL)T-31	2.803	2.742	2.742	2.709
DVC	203.824	202.683	202.683	200.258
TUTICORIN BRPL	7.684	7.599	7.599	7.505
MADHYA PRADESH	0.000	0.000	0.000	0.000
UTTAR PRADESH	0.000	0.000	0.000	0.000
WEST BENGAL	0.000	0.000	0.000	0.000
SCLTPS (UP)	0.000	0.000	0.000	0.000
HARYANA	0.000	0.000	0.000	0.000
SEIL PROJECT(ANDHRA PRADESH)	0.000	0.000	0.000	0.000
MEGHALAYA	1.839	1.832	1.832	1.810
ANDHRA	0.314	0.311	0.311	0.308
KARNATAKA	3.129	3.078	3.078	3.042
PUNJAB	0.000	0.000	0.000	0.000
METHON POWER (NDPL)-LT-06	157.616	156.752	156.752	154.914
DVC MEJIA (LT-08)(BYPL)	57.772	57.451	57.451	56.768
Acme_RUMS	9.357	9.273	9.273	9.164
Arinsun_RUMS	8.511	8.435	8.435	8.337
Mahindra_RUMS	4.362	4.322	4.322	4.269
URS	0.023	0.022	0.023	0.022
JAMMU & KASHMIR	9.222	9.067	9.067	8.960
HIMACHAL PRADESH	6.546	6.403	6.403	6.327
RATNAGIRI GAS AND POWER PVT. LTD. (RGPPL)	0.000	0.000	0.000	0.000
UTTRAKHAND	35.581	34.893	34.893	34.480
JP NIGREE (MP)	0.000	0.000	0.000	0.000
KWHEP (HP)	0.000	0.000	0.000	0.000
HIMACHAL PRADESH LT-59 DVC	1.546	1.512	1.512	1.495
HARYANA (LT -05)	15.858	15.617	15.617	15.419
NAGALAND	0.860	0.858	0.858	0.847
ODISHA	0.000	0.000	0.000	0.000
ORISSA MT-20 JITPL -DVC	5.562	5.504	5.504	5.439
RAJASTHAN	0.000	0.000	0.000	0.000
JHARKHAND	0.050	0.050	0.050	0.049
MP(SOLAR RUMS)	2.712	2.686	2.686	2.651
HP TPDDL	1.576	1.542	1.542	1.524
POWER EXCHANGE(IEX)	178.112	175.979	178.112	175.979
POWER EXCHANGE(PX)	0.000	0.000	0.000	0.000
TOTAL	3308.632	3221.374	1959.204	1909.049

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

NAME OF THE STATION	AVAILABILITY AT POWER PLANT	AVAILABILITY AT PERIPHERY	ALLOCATION MADE BY NRLDC AT POWER PLANT	ALLOCATION MADE BY NRLDC AT POWER PERIPHERY
TO JHARKHAND	0.000	0.000	0.000	0.000
TO ANDHRA	-6.615	-6.686	-6.686	-6.809
TO UTTAR PRADESH	-6.977	-7.185	-7.185	-7.316
TO WEST BENGAL	0.000	0.000	0.000	0.000
TO VLCP 1800 (RJ)	0.000	0.000	0.000	0.000
TO UTTARAKHAND	-12.139	-12.442	-12.442	-12.654
TO ORISSA	0.000	0.000	0.000	0.000
TO MAHARASHTRA	-10.854	-11.008	-11.008	-11.194
TO GOA	-4.438	-4.512	-4.512	-4.590
TO CHHATTISGARH	0.000	0.000	0.000	0.000
TO DADAR & NAGAR HAVELI	0.000	0.000	0.000	0.000
BTPS TO MP	0.000	0.000	0.000	0.000
TO HIMACHAL PRADESH	-210.648	-215.384	-215.384	-219.107
TO GUJRAT	0.000	0.000	0.000	0.000
TO POWER EXCHANGE (IEX)	-82.228	-83.616	-82.228	-83.616
TO POWER EXCHANGE (PX)	0.000	0.000	0.000	0.000
TO SHARE PROJECT (HARYANA)	-22.699	-23.076	-22.699	-23.076
TO SHARE PROJECT (PUNJAB)	-21.495	-21.850	-21.495	-21.850
TOTAL	-378.093	-385.760	-383.640	-390.211
TOTAL SCHEDULED DRAWAL FROM THE GRID	2930.540	2835.615	1575.565	1518.838

TOTAL CONSUMPTION INCLUDING AUX. OF GENERATING STNs. EXCLUDING BTPS	1918.046
NET CONSUMPTION	1899.301
AVAILABILITY WITHIN DELHI	431.606
ACTUAL DRAWAL FROM THE GRID	1467.695
OVER DRAWAL(+)/UNDER DRAWAL(-) FROM THE GRID ON THE BASIS OF SCHEDULED ALLOCATION MADE BY NRLDC TO DELHI AT PERIPHERY	-51.143
LOAD SHEDDING	0.710
UNRESTRICTED DEMAND (GROSS)	1918.756
UNRESTRICTED DEMAND (NET)	1900.011
MAX. NET CONSUMPTION	70.709 ON 01.11.2019
MAX. LOAD SHEDDING	190MW ON 18.11.2019 AT 06.41HRS.
PEAK LOAD	Peak Demand during the month
DAY PEAK	3631MW AT 10.46.00 HRS ON 15.11.2019
EVENING PEAK	3600MW AT 18.10.46HRS ON 06.11..2019
P.L.F. OF GENCO AND PRAGATI STNs.	RPH GT PRAGATI RITHALA BAWANA Timarpur Okhla EDWPCL DMSWL
	0.00% 14.992% 48.90% 0.00% 27.87% 123.32% 41.76% 72.682%

9 SHEDDING DETAILS DURING THE MONTH OF NOVEMBER 2019.

ALL FIGURES IN MUs

DATE	No. of Under Freq. Relay Operated	Shedding due to under frequency relay operation in MUs					Shedding due to Grid Restrictions (Over drawl / low freq.)				
		BSES		NDPL	NDMC	TOTAL	BSES		NDPL	NDMC	MES
		BYPL	BRPL				BYPL	BRPL			
1	2	3	4	5	6	7=3 to 6	8	9	10	11	12
01.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
02.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
03.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
04.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
05.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
06.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
07.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
08.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
09.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30.Nov.19	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ALL FIGURES IN MUs

Date	Shedding due to Transmission/Grid Constraints in Central Sector Stations / TTC / ATC VOILATION				DUE TO NEW GRID CODE REGULATION DEVIATION			Shedding due to Transmission/Grid Constraints in Central sector stations				Total	Total shedding due to grid restrictions
	BSES		NDPL	NDMC	BSES		TPDDL	BSES		TPDDL	NDMC		
	BYPL	BRPL			BYPL	BRPL		BYPL	BRPL				
	13	14	15	16	17	18	19	20	21	22	23	24=8 to 23	25=7+24
01.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
02.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
03.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
04.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
05.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
06.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
07.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
08.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
09.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ALL FIGURES IN MUₛ

Date	DUE TO T&D CONSTRAINTS IN DELHI SYSTEM								
	DTL					DISCOMS			
	BSES		NDPL	NDMC	MES	BSES		NDPL	NDMC
	BYPL	BRPL				BYPL	BRPL		
26	27	28	29	30	31	32	33	34	
01.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
02.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000
03.Nov.19	0.000	0.000	0.002	0.000	0.000	0.000	0.013	0.000	0.000
04.Nov.19	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.003	0.000
05.Nov.19	0.002	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
06.Nov.19	0.008	0.001	0.055	0.000	0.000	0.000	0.0003	0.001	0.000
07.Nov.19	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
08.Nov.19	0.001	0.002	0.000	0.000	0.000	0.000	0.012	0.002	0.000
09.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000
10.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.0002	0.0004	0.000
11.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.001	0.000
13.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000
14.Nov.19	0.000	0.000	0.008	0.000	0.000	0.000	0.007	0.000	0.000
15.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000
16.Nov.19	0.000	0.000	0.007	0.000	0.000	0.001	0.006	0.000	0.000
17.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18.Nov.19	0.001	0.069	0.241	0.000	0.000	0.000	0.017	0.000	0.000
19.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
21.Nov.19	0.000	0.001	0.007	0.000	0.000	0.001	0.014	0.000	0.000
22.Nov.19	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.0001	0.000
23.Nov.19	0.0002	0.005	0.039	0.000	0.000	0.000	0.001	0.0004	0.000
24.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
25.Nov.19	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.001	0.000
26.Nov.19	0.001	0.000	0.000	0.000	0.000	0.000	0.003	0.0001	0.000
27.Nov.19	0.000	0.013	0.030	0.000	0.000	0.000	0.001	0.000	0.000
28.Nov.19	0.000	0.003	0.000	0.000	0.000	0.001	0.009	0.000	0.000
29.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000
30.Nov.19	0.000	0.051	0.0001	0.000	0.000	0.000	0.012	0.007	0.000
TOTAL	0.013	0.148	0.397	0.000	0.000	0.004	0.124	0.022	0.000

ALL FIGURES IN MUs

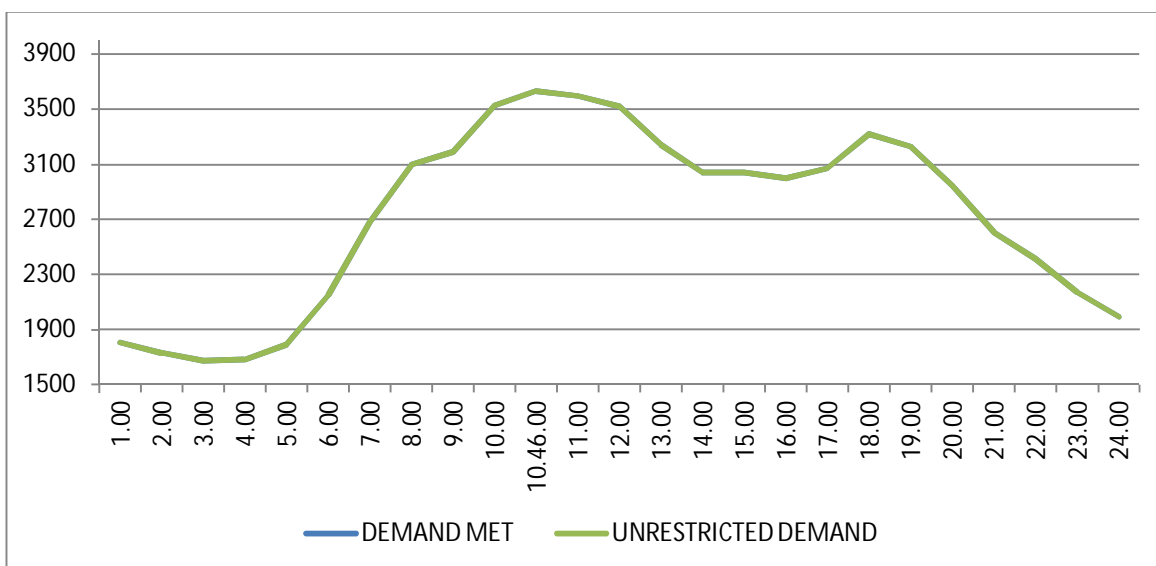
DATE	OTHER AGENCIES LIKE GENCO, BBMB, BTPS ETC.				THEFT PRONE SHEDDING			TOTAL SHEDDING DUE TO T&D CONSTS. & THEFT PRONE	GRAND TOTAL
	BSES		NDPL	NDMC	BSES		NDPL		
	BYPL	BRPL			BYPL	BRPL			
1	35	36	37	38	39	40	41	42= 26 to 41	43 = 25 + 42
01.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
02.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.008
03.Nov.19	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.016	0.0160
04.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0040	0.004
05.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.006
06.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.065
07.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003
08.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.017
09.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
10.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
11.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.009
13.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
14.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.015
15.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
16.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.014
17.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.328	0.328
19.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
21.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.023
22.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.006
23.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.0456
24.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
25.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003
26.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004
27.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.044
28.Nov.19	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.014	0.014
29.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003
30.Nov.19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.070
TOTAL	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.710	0.710

DATE	(NET CONS.)	MAXI. DEMAND MET DURING THE DAY	TIME OF OCCURRENCE OF MAX DEMAND	SHEDDING AT THIS TIME	UN-RESTRICTED DEMAND	MAXIMUM UN-RESTRICTED DEMAND DURING THE DAY	TIME OF MAX. UN-REST. DEMAND	DEMAND AT THAT TIME	SHEDDING AT THAT TIME
	In Mus.	IN MW	IN HRS.	IN MW	IN MW	IN MW	HRS.	IN MW	IN MW
1	32	33	34	35	36=33+35	37=39+40	38	39	40
01.Nov.19	70.709	3513	18:11:15	0	3513	3513	18:11:15	3513	0
02.Nov.19	66.261	3259	11:00:00	0	3259	3259	11:00:00	3259	0
03.Nov.19	61.933	3116	11:30:00	5	3121	3121	11:30:00	3116	5
04.Nov.19	66.732	3559	11:24:35	1	3560	3560	11:24:35	3559	1
05.Nov.19	67.169	3516	10:56:44	21	3537	3537	10:56:44	3516	21
06.Nov.19	67.141	3600	18:10:46	0	3600	3600	18:10:46	3600	0
07.Nov.19	66.044	3437	10:15:58	0	3437	3437	10:15:58	3437	0
08.Nov.19	66.167	3478	18:10:46	0	3478	3478	18:10:46	3478	0
09.Nov.19	61.906	3188	18:03:31	0	3188	3188	18:03:31	3188	0
10.Nov.19	59.010	3128	11:35:52	0	3128	3128	11:35:52	3128	0
11.Nov.19	62.111	3235	11:00:00	0	3235	3235	11:00:00	3235	0
12.Nov.19	59.952	3253	10:36:40	0	3253	3253	10:36:40	3253	0
13.Nov.19	63.763	3348	10:41:35	0	3348	3348	10:41:35	3348	0
14.Nov.19	64.285	3480	10:49:44	0	3480	3480	10:49:44	3480	0
15.Nov.19	65.536	3631	10:46:00	0	3631	3631	10:46:00	3631	0
16.Nov.19	60.926	3273	10:55:27	0	3273	3273	10:55:27	3273	0
17.Nov.19	59.323	3253	11:35:31	0	3253	3253	11:35:31	3253	0
18.Nov.19	61.052	3355	10:51:30	0	3355	3355	10:51:30	3355	0
19.Nov.19	63.106	3410	9:29:28	0	3410	3410	9:29:28	3410	0
20.Nov.19	63.920	3440	10:15:32	0	3440	3440	10:15:32	3440	0
21.Nov.19	62.939	3403	10:39:24	0	3403	3403	10:39:24	3403	0
22.Nov.19	63.953	3546	11:01:26	0	3546	3546	11:01:26	3546	0
23.Nov.19	61.254	3373	11:30:09	0	3373	3373	11:30:09	3373	0
24.Nov.19	58.960	3329	11:00:00	0	3329	3329	11:00:00	3329	0
25.Nov.19	62.416	3405	10:34:37	0	3405	3405	10:34:37	3405	0
26.Nov.19	63.225	3416	10:15:49	0	3416	3416	10:15:49	3416	0
27.Nov.19	63.742	3499	10:15:44	0	3499	3499	10:15:44	3499	0
28.Nov.19	62.154	3442	10:21:27	0	3442	3442	10:21:27	3442	0
29.Nov.19	63.203	3572	10:55:37	0	3572	3572	10:55:37	3572	0
30.Nov.19	60.409	3405	10:38:47	0	3405	3405	10:38:47	3405	0
TOTAL	1899.301	3631 15.11.19	10:46	0	3631 15.11.19	3631	10:46:00	3631	0

10 LOAD PATTERN OF DELHI ON THE DAY OF PEAK DEMAND MET DURING NOVEMBER 2019 ON 15.11.2019- 3631MW AT 10.46.00HRS.

All figures in MW

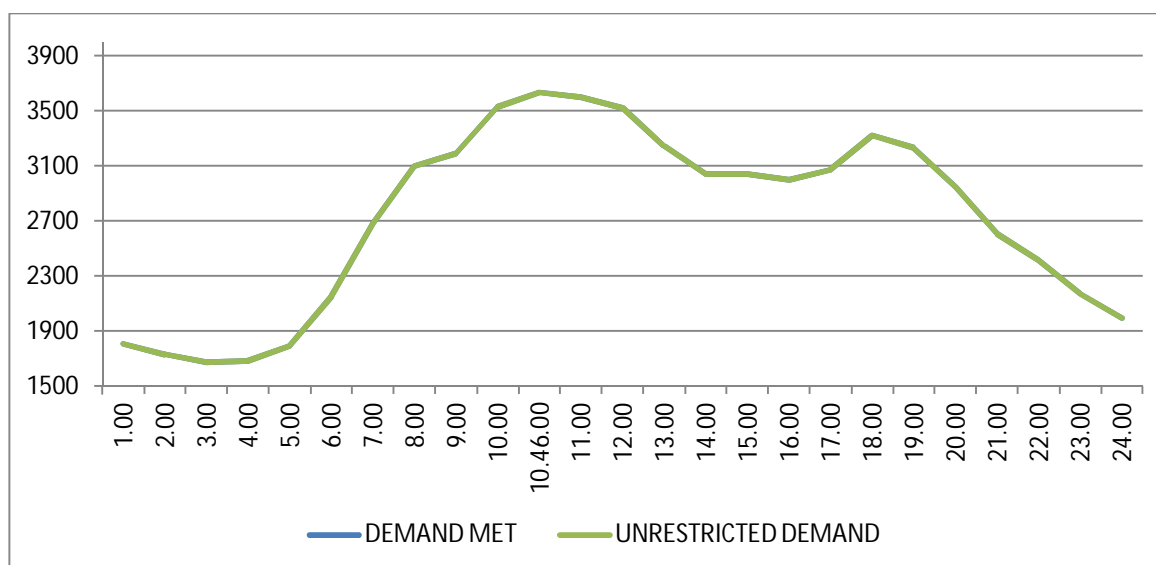
Hrs.	Demand	Load Shedding	Un-Restricted Demand
1.00	1804	0	1804
2.00	1728	0	1728
3.00	1672	0	1672
4.00	1680	0	1680
5.00	1790	0	1790
6.00	2145	0	2145
7.00	2681	0	2681
8.00	3100	0	3100
9.00	3190	0	3190
10.00	3526	0	3526
10.46.00	3631	0	3631
11.00	3595	0	3595
12.00	3517	0	3517
13.00	3243	0	3243
14.00	3037	0	3037
15.00	3037	0	3037
16.00	2996	0	2996
17.00	3069	0	3069
18.00	3320	0	3320
19.00	3230	0	3230
20.00	2946	0	2946
21.00	2606	0	2606
22.00	2414	0	2414
23.00	2168	0	2168
24.00	1995	0	1995
Total (IN MUS)	65.536	0.002	65.538



11 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UN-RESTRICTED DEMAND DURING NOVEMBER 2019 ON 15.11.2019- 3631MW AT 10.46.00HRS.

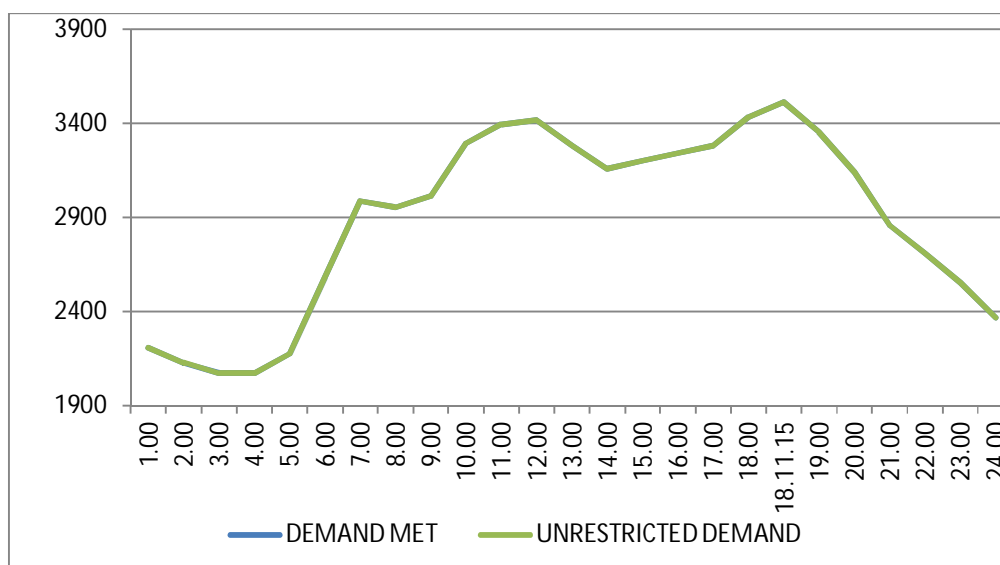
All figures in MW

Hrs.	Demand	Load Shedding	Un-Restricted Demand
1.00	1804	0	1804
2.00	1728	0	1728
3.00	1672	0	1672
4.00	1680	0	1680
5.00	1790	0	1790
6.00	2145	0	2145
7.00	2681	0	2681
8.00	3100	0	3100
9.00	3190	0	3190
10.00	3526	0	3526
10.46.00	3631	0	3631
11.00	3595	0	3595
12.00	3517	0	3517
13.00	3243	0	3243
14.00	3037	0	3037
15.00	3037	0	3037
16.00	2996	0	2996
17.00	3069	0	3069
18.00	3320	0	3320
19.00	3230	0	3230
20.00	2946	0	2946
21.00	2606	0	2606
22.00	2414	0	2414
23.00	2168	0	2168
24.00	1995	0	1995
Total (IN MUS)	65.536	0.002	65.538



12 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM ENERGY CONSUMED DURING NOVEMBER 2019 – 01.11.2019 – 70.709Mus All figures in MW

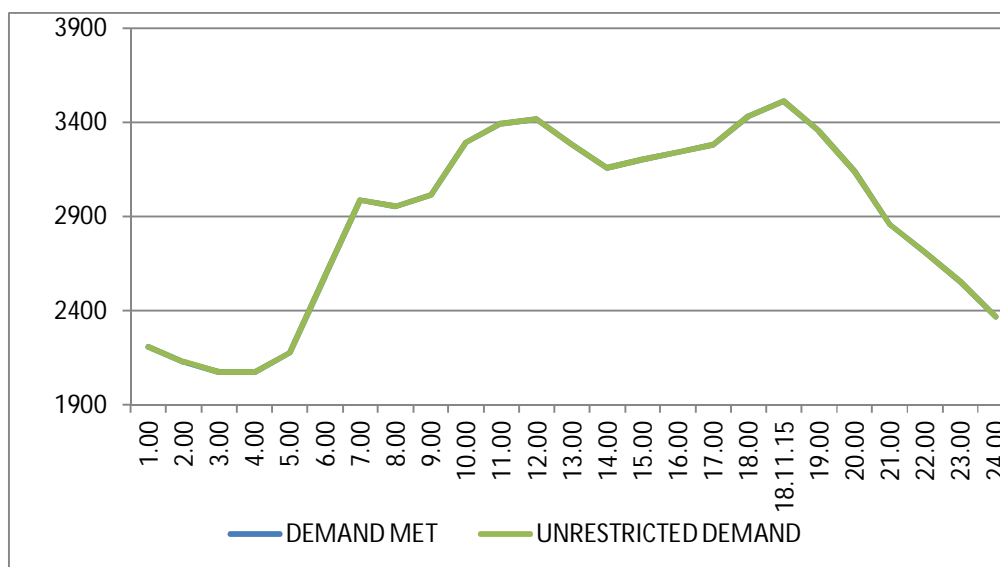
Hrs.	Demand	Load Shedding	Un-Restricted Demand
1.00	2206	0	2206
2.00	2127	1	2128
3.00	2073	0	2073
4.00	2072	0	2072
5.00	2176	0	2176
6.00	2584	0	2584
7.00	2986	0	2986
8.00	2952	0	2952
9.00	3014	0	3014
10.00	3295	0	3295
11.00	3394	0	3394
12.00	3417	0	3417
13.00	3281	0	3281
14.00	3158	0	3158
15.00	3200	0	3200
16.00	3240	0	3240
17.00	3280	0	3280
18.00	3434	0	3434
18.11.15	3513	0	3513
19.00	3352	0	3352
20.00	3139	0	3139
21.00	2856	0	2856
22.00	2708	0	2708
23.00	2551	0	2551
24.00	2368	0	2368
Total (IN MUS)	70.709	0.002	70.711



13 LOAD PATTERN OF DELHI ON THE DAY OF MAXIMUM UNRESTRICTED ENERGY DEMAND DURING NOVEMBER 2019 – 01.11.2019 – 70.711Mus

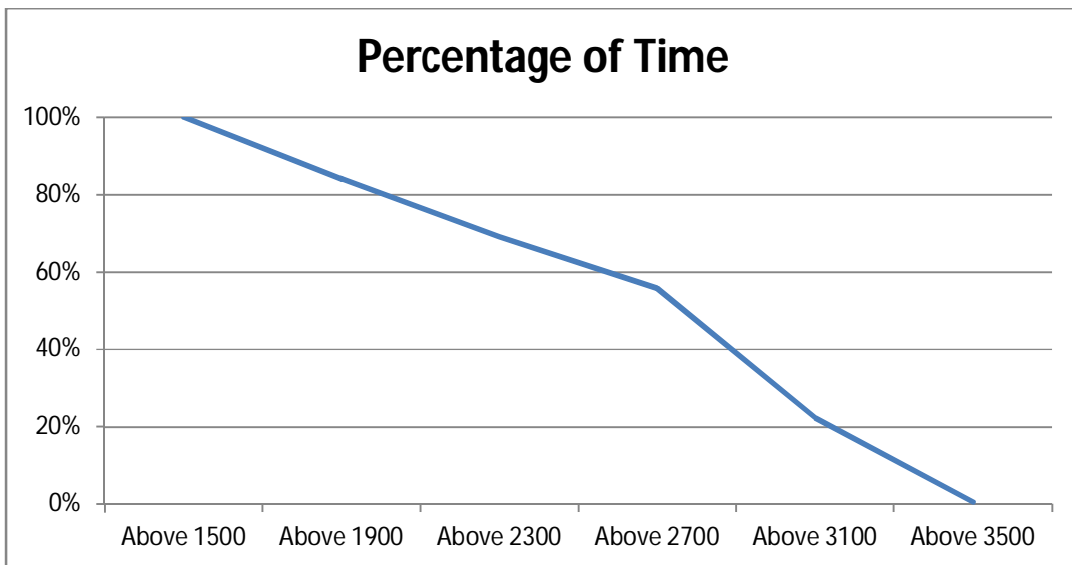
All figures in MW

Hrs.	Demand	Load Shedding	Un-Restricted Demand
1.00	2206	0	2206
2.00	2127	1	2128
3.00	2073	0	2073
4.00	2072	0	2072
5.00	2176	0	2176
6.00	2584	0	2584
7.00	2986	0	2986
8.00	2952	0	2952
9.00	3014	0	3014
10.00	3295	0	3295
11.00	3394	0	3394
12.00	3417	0	3417
13.00	3281	0	3281
14.00	3158	0	3158
15.00	3200	0	3200
16.00	3240	0	3240
17.00	3280	0	3280
18.00	3434	0	3434
18.11.15	3513	0	3513
19.00	3352	0	3352
20.00	3139	0	3139
21.00	2856	0	2856
22.00	2708	0	2708
23.00	2551	0	2551
24.00	2368	0	2368
Total (IN MUS)	70.709	0.002	70.711



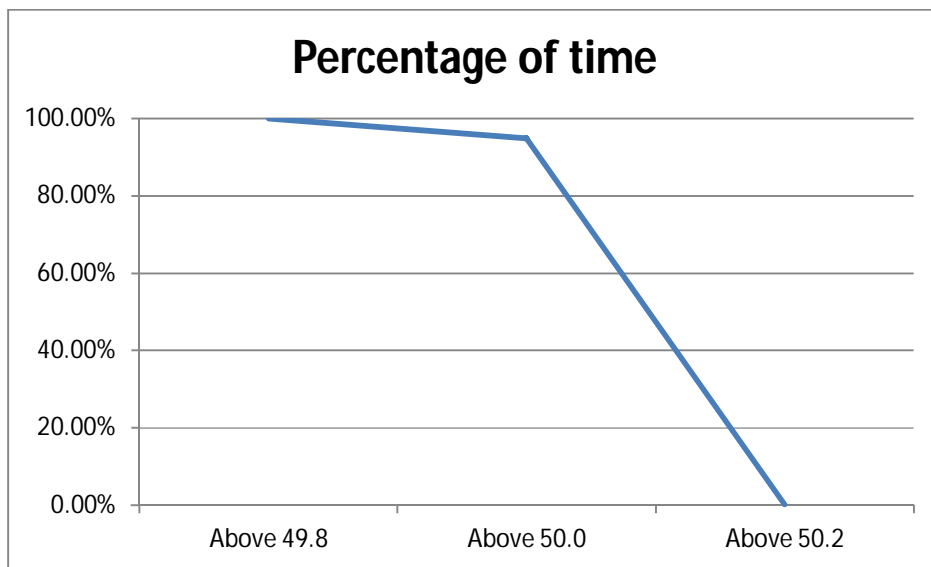
14 LOAD DURATION CURVE FOR NOVEMBER 2019

Load in MW	Percentage of Time
Above 1500	100%
Above 1900	84.16%
Above 2300	69.20%
Above 2700	55.86%
Above 3100	22.29%
Above 3500	0.55%



FREQUENCY ANALYSIS FOR THE MONTH OF NOVEMBER 2019

Frequency Range in Hz.	Percentage of time
Above 49.8	100.00%
Above 50.0	94.96%
Above 50.2	0.06%



16 VOLTAGE PROFILE OF 220 KV SUB-STATIONS IN DELHI DURING NOVEMBER 2019

All figures in kV

Date	NARELA		GAZIPUR	
	Max	Min	Max	Min
01.Nov.19	237.94	228.01	240.26	228.53
02.Nov.19	238.97	227.37	240.91	228.66
03.Nov.19	238.59	228.53	239.62	228.53
04.Nov.19	238.85	228.14	240.14	227.24
05.Nov.19	238.97	225.69	240.14	224.92
06.Nov.19	237.94	226.34	240.14	227.37
07.Nov.19	239.23	228.27	240.78	230.21
08.Nov.19	239.75	223.11	241.04	222.85
09.Nov.19	239.23	224.66	239.75	224.27
10.Nov.19	240.14	228.92	240.78	230.21
11.Nov.19	239.88	225.05	240.91	224.66
12.Nov.19	239.49	223.11	240.14	222.08
13.Nov.19	239.75	225.3	239.88	225.05
14.Nov.19	240.14	224.66	240.78	224.92
15.Nov.19	242.33	223.11	243.1	224.27
16.Nov.19	240.39	226.59	240.91	226.34
17.Nov.19	240.78	228.79	240.52	230.72
18.Nov.19	240.14	224.4	241.43	226.72
19.Nov.19	234.72	221.18	241.68	226.21
20.Nov.19	236.91	223.37	240.91	227.63
21.Nov.19	235.11	220.53	241.17	225.95
22.Nov.19	233.43	217.82	240.26	223.63
23.Nov.19	234.72	225.95	240.91	227.5
24.Nov.19	234.59	221.56	240.52	228.27
25.Nov.19	235.23	219.89	241.68	225.3
26.Nov.19	234.33	223.11	241.68	228.27
27.Nov.19	235.11	218.6	241.68	224.66
28.Nov.19	235.62	223.63	242.33	230.21
29.Nov.19	235.23	220.4	241.81	227.5
30.Nov.19	235.36	222.08	242.07	228.14

17 VOLTAGE PROFILE OF 400 KV SUB-STATIONS IN DELHI DURING NOVEMBER 2019

All figures in kV

Date	400kV Bamnauli Grid Sub-Station				
	Max KV	Max Time	Min KV	Min Time	Average KV
01.Nov.19	419.5	3:05:31	399.1	10:08:12	410.31
02.Nov.19	420.9	3:31:45	398.63	9:13:56	412.29
03.Nov.19	419.73	4:00:08	400.74	9:29:59	413.19
04.Nov.19	420.43	2:39:32	400.27	9:45:53	412.25
05.Nov.19	418.32	20:33:59	401.91	18:24:09	411.07
06.Nov.19	420.2	20:31:53	397.92	9:51:21	410.1
07.Nov.19	420.67	3:58:14	402.85	9:48:24	411.65
08.Nov.19	420.67	4:00:57	389.25	9:21:18	409.44
09.Nov.19	418.32	3:23:00	393.7	9:50:26	410.13
10.Nov.19	421.37	3:02:14	402.85	9:46:34	413.12
11.Nov.19	421.61	2:18:17	393.47	9:19:38	410.53
12.Nov.19	418.32	3:38:20	387.37	9:42:11	410.56
13.Nov.19	419.73	20:44:36	395.11	9:37:54	410.68
14.Nov.19	419.73	3:18:37	394.41	9:22:38	410.74
15.Nov.19	423.01	3:58:40	391.59	9:40:01	411.61
16.Nov.19	419.73	0:39:33	397.92	9:39:34	411.2
17.Nov.19	419.73	1:26:56	403.08	9:17:58	413.45
18.Nov.19	420.67	3:02:30	397.22	9:41:01	411.6
19.Nov.19	420.43	3:59:44	396.99	9:12:04	412.16
20.Nov.19	421.37	3:59:57	399.1	9:11:58	411.56
21.Nov.19	419.5	1:58:30	394.64	9:08:51	410.37
22.Nov.19	417.15	2:00:03	391.59	9:16:14	407.14
23.Nov.19	418.56	4:01:47	396.99	9:46:08	409.98
24.Nov.19	418.09	3:50:25	396.99	9:05:11	410.38
25.Nov.19	419.26	3:03:03	393.23	9:30:54	409.5
26.Nov.19	419.03	4:00:38	398.63	9:14:28	410.35
27.Nov.19	419.26	3:40:40	391.36	9:38:31	409.79
28.Nov.19	420.43	3:58:54	401.68	9:39:44	412.01
29.Nov.19	419.03	1:00:56	396.05	9:38:17	411.07
30.Nov.19	419.73	0:59:41	397.92	9:31:21	411.11

All figures in kV

Date	400kV Bawana Grid Sub-Station				
	Max KV	Max Time	Min KV	Min Time	Average KV
01.Nov.19	424.89	3:03:03	406.6	10:08:09	416.93
02.Nov.19	426.53	3:30:32	406.83	9:12:57	419.57
03.Nov.19	425.36	3:41:21	409.65	9:24:36	419.99
04.Nov.19	425.12	2:40:22	408.71	9:50:05	419.09
05.Nov.19	425.36	1:55:48	403.32	9:30:22	417.73
06.Nov.19	423.95	20:32:21	405.43	9:51:52	416.52
07.Nov.19	426.53	3:58:47	409.88	18:42:59	418.46
08.Nov.19	425.36	4:00:56	399.57	9:30:50	416.56
09.Nov.19	424.19	3:23:14	402.14	9:48:09	417.2
10.Nov.19	427.23	3:03:43	410.12	9:35:28	419.41
11.Nov.19	426.77	2:19:01	401.91	9:17:27	417.02
12.Nov.19	425.12	3:39:21	399.1	9:39:46	417.52
13.Nov.19	425.36	3:32:00	406.13	9:37:54	418.03
14.Nov.19	425.36	2:38:58	401.91	9:21:13	417.42
15.Nov.19	427.7	3:03:17	397.22	9:32:22	415.73
16.Nov.19	424.19	0:37:04	404.02	9:14:31	415.81
17.Nov.19	425.12	1:33:03	408.01	9:16:50	417.42
18.Nov.19	424.89	3:05:43	401.68	9:39:39	415.07
19.Nov.19	423.25	3:58:03	401.68	9:11:57	415.67
20.Nov.19	424.89	4:01:02	404.25	9:31:26	416.17
21.Nov.19	423.95	1:57:19	403.08	9:09:04	416.27
22.Nov.19	423.25	1:53:47	399.57	9:16:03	412.44
23.Nov.19	423.95	2:29:36	403.79	9:46:33	415.24
24.Nov.19	422.55	21:00:22	404.49	8:48:32	415.52
25.Nov.19	423.95	2:59:45	400.5	9:39:10	414.79
26.Nov.19	423.01	19:58:57	407.3	9:17:59	416.66
27.Nov.19	423.95	2:42:42	401.91	9:41:38	416.43
28.Nov.19	425.36	3:59:12	409.65	12:09:58	418.22
29.Nov.19	427.94	4:02:41	408.48	9:47:25	421.04
30.Nov.19	429.11	2:41:18	410.82	9:26:13	422

20 DETAILS OF BREAK-DOWNS DURING THE MONTH OF NOVEMBER 2019

SL NO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
1	3.11.19	06:05	220KV BAWANA-SHALIMARBAGH CKT-II	3.11.19	10:15	AT SHALIMARBAGH : 186B, LINE DIFFERENTIAL. AT BAWANA : 86A, R PHASE, DIST PROT, DIST 2.63KM.
2	3.11.19	13:23	GOPALPUR 220/33kV 100MVA Tx-III	3.11.19	19:07	O/C.
3	3.11.19	13:34	220KV SHALIMARBAGH-WAZIRPUR CKT-I	3.11.19	15:51	AT WAZIRPUR : 86.
4	5.11.19	06:45	GEETA COLONY 220/33kV 100MVA Tx-I	5.11.19	12:14	I/C TRIPPED ON 86.
5	6.11.19	02:17	GEETA COLONY 220/33kV 100MVA Tx-I	6.11.19	15:37	AUTO TRIP, 30CA.
6	6.11.19	03:13	BAWANA 400/220kV 315MVA ICT-I	6.11.19	04:20	At Bawana: Bus bar protection operated, 96
7	6.11.19	03:13	BAWANA 400/220kV 315MVA ICT-IV	6.11.19	04:31	At Bawana: Bus bar protection operated, 96
8	6.11.19	03:13	BAWANA 220/66kV 100MVA Tx	6.11.19	04:30	At Bawana: Bus bar protection operated, 96
9	6.11.19	03:13	BAWANA 220/66kV 100MVA Tx	6.11.19	04:30	At Bawana: Bus bar protection operated, 96
10	6.11.19	03:13	220KV BAWANA-SHALIMARBAGH CKT-II	5.11.19	04:33	At Bawana: Bus bar protection operated, 96 At Shalimar Bagh: Ckt. did not trip
11	6.11.19	03:13	220KV BAWANA-SHALIMARBAGH CKT-I	6.11.19	04:33	At Bawana: Bus bar protection operated, 96 At Shalimar Bagh: Ckt. did not trip.
12	6.11.19	17:20	INDRAPRASTHA POWER 220/33kV 100MVA Tx-II	6.11.19	17:35	86, E/F.
13	6.11.19	20:30	220kV GAZIPUR- PATPARGANJ CKT	7.11.19	06:58	AT GAZIPUR : AUTO RECLOSE.
14	7.11.19	03:58	220KV PEERAGARHI-WAZIRPUR CKT-I	7.11.19	06:27	86A&B.
15	7.11.19	04:16	R K PURAM 220/33kV 100MVA Tx-I	7.11.19	05:58	O/C, 86.
16	7.11.19	08:45	220KV MUNDKA-KANJHAWALA CKT	7.11.19	09:52	86A&B
17	7.11.19	20:44	SUBZI MANDI 33/11kV, 16MVA Tx-I	8.11.19	00:35	86
18	8.11.19	03:22	GAZIPUR 66/11kV, 20MVA Tx-I	8.11.19	08:15	86, PRV.
19	8.11.19	03:37	ROHINI-II 220/66kV 160MVA Tx-I	8.11.19	05:30	OVERFLUX
20	8.11.19	04:00	ROHINI-II 220/66kV 160MVA Tx-II	8.11.19	21:12	SMOKE IN RELAY PANEL.
21	8.11.19	05:30	GEETA COLONY 220/33kV 100MVA Tx-I	8.11.19	20:37	I/C TRIPPED ON 30CB, AUTO TRIP.
22	8.11.19	16:18	MUNDKA 220/66kV 160MVA Tx-III	8.11.19	16:52	TRIPPED WITHOUT INDICATION
23	8.11.19	21:45	SARITA VIHAR 220/66kV 100MVA Tx-II	8.11.19	22:40	86
24	12.11.19	13:25	400kV Mandola-Bawana Ckt-II	12.11.19	14:37	AT BAWANA : 186A&B.
25	13.11.19	09:25	220kV GOPALPUR- MANDOLACKT-I	13.11.19	09:30	AT GOPALPUR : 186.
26	13.11.19	16:45	220kV GAZIPUR - NOIDA SEC.-62 CKT	13.11.19	22:56	AT NOIDA SEC. 62 : FLASH OCCURRED IN PANEL.
27	14.11.19	06:45	220kV DIAL- MEHRAULI CKT-I			AT MEHRAULI E/F, 86 ABC.
28	14.11.19	06:48	220kV ROHINI-SHALIMARBAGH CKT-I	14.11.19	07:34	AT SHALIMARBAGH : DIST PROT, ZONE-I, DIST 4.82KM.
29	14.11.19	07:46	GOPALPUR 220/33kV 100MVA Tx-I	14.11.19	18:05	86
30	15.11.19	03:58	400kV Bamnauli-Jhatikara Ckt-I	15.11.19	05:17	AT BAMNAULI : 186AB.
31	15.11.19	08:24	PAPPANKALAN-I 220/66kV 100MVA Tx-IV	15.11.19	11:27	86
32	15.11.19	08:24	PAPPANKALAN-I 220/66kV 100MVA Tx-IV	15.11.19	11:27	86

SL NO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
33	16.11.19	14:17	220kV ROHINI-SHALIMARBAGH CKT-I	16.11.19	16:13	AT ROHINI : DIST PROT, 86ABC AT SHALIMARBAGH : DIST PROT, ZONE-I, DIST 1.355KM.
34	16.11.19	14:17	220KV BAWANA-SHALIMARBAGH CKT-II	16.11.19	14:31	AT SHALIMARBAGH : 186.
35	17.11.19	08:44	PATPARGANJ 220/66kV 100MVA Tx-I	17.11.19	20:08	86
36	18.11.19	06:40	220KV BAWANA-SHALIMARBAGH CKT-I	18.11.19	21:35	At Bawana : A Ph, B Phase, Zone-I, 86. At Shalimarbagh : B&C Phase
37	18.11.19	06:40	220KV BAWANA-SHALIMARBAGH CKT-II	18.11.19	09:31	At Bawana :C Ph, Differential trip, Fault location-3.996 km. At Shalimarbagh : B Phase, 86, 186, Dist prot, Dist 6.715Km.
38	18.11.19	06:51	MUNDKA 400/220kV 315MVA ICT-IV	18.11.19	07:07	At Mundka:86 Group A & B.
39	18.11.19	07:23	MUNDKA 400/220kV 315MVA ICT-IV	18.11.19	07:42	At Mundka:86 Group A & B.
40	18.11.19	09:45	INDRAPRASTHA POWER 220/33kV 100MVA Tx-I	18.11.19	10:13	86
41	18.11.19	16:50	BAWANA 400/220kV 315MVA ICT-II	25.11.19	17:51	TRIPPED WITHOUT INDICATION.
42	21.11.19	03:36	220KV BAWANA-SHALIMARBAGH CKT-II	21.11.19	05:49	AT SHALIMARBAGH : 86, DIFFERENTIAL, DIST PROT, DIST 1.423KM.
43	21.11.19	05:50	SUBZI MANDI 33/11kV, 16MVA Tx-I			R&Y PHASE, 87.
44	23.11.19	11:40	220KV WAZIRABAD - MANDOLA CKT-III	23.11.19	13:27	AT WAZIRABAD : LBB PROTECTION.
45	23.11.19	17:55	NARAINA 220/33kV 100MVA Tx-II	23.11.19	19:10	O/C, E/F
46	23.11.19	18:08	220KV BAWANA-SHALIMARBAGH CKT-II	23.11.19	20:56	At Bawana: Ckt. did not trip. At Shalimar Bagh: Line differential, 86ABC, BU Trip.
47	23.11.19	18:08	220KV BAWANA-SHALIMARBAGH CKT-I	23.11.19	21:00	At Bawana : Ckt. did not trip. At Shalimar Bagh: Line differential, 86ABC, BU Trip.
48	24.11.19	03:52	SUBZI MANDI 33/11kV, 16MVA Tx-II	24.11.19	08:05	SPR.
49	24.11.19	05:05	400kV Mandola-Bawana Ckt-II	24.11.19	14:11	AT BAWANA : DIST PROT, ZONE-I, DIST 159.5MTS.
50	24.11.19	08:12	KANJHAWALA 220/66kV 160MVA Tx-I	24.11.19	08:32	86
51	24.11.19	08:55	LODHI RD 220/33kV 100MVA TR. -III	24.11.19	14:22	86
52	25.11.19	03:52	SUBZI MANDI 33/11kV, 16MVA Tx-II	25.11.19	08:05	SPR, PRV
53	25.11.19	08:13	KANJHAWALA 220/66kV 160MVA Tx-I	25.11.19	08:32	86
54	25.11.19	08:55	LODHI RD 220/33kV 100MVA TR. -III	25.11.19	14:22	DIFFERENTIAL, 86.
55	27.11.19	19:54	BAWANA 400/220kV 315MVA ICT-V	28.11.19	00:53	WITHOUT INDICATION.
56	27.11.19	19:54	BAWANA 400/220kV 315MVA ICT-V	28.11.19	00:53	WITHOUT INDICATION.
57	27.11.19	20:05	220 KV GOPALPUR-WAZIRABAD CKT-2	27.11.19	20:18	At Gopalpur : E/F,86. At Wazirabad: ckt did not trip.
58	27.11.19	20:05	220kV GOPALPUR- MANDOLACKT-II	28.11.19	10:47	AT GOPALPUR : R PHASE INDICATION, SUPPLY FAILED FROM MANDOLA.
59	27.11.19	23:42	220KV SHALIMARBAGH-WAZIRPUR CKT-II	28.11.19	00:10	AT SHALIMARBAGH : OV, 86.
60	28.11.19	12:50	OKHLA 220/33kV 100MVA Tx-IV	28.11.19	00:00	86
61	28.11.19	12:50	OKHLA 220/33kV 100MVA Tx-III	28.11.19	00:00	I/C TRIPPED ON 86.
62	28.11.19	13:15	220KV MUNDKA-PEERAGARHI CKT-II	28.11.19	13:36	86
63	30.11.19	06:12	220kV PAPPANKALAN-III-PAPPANKALAN-I CKT-I	30.11.19	10:23	At Papankalan-I : Dist prot, R Phase, 86A,295 A &C. At Papankalan-III : Ckt. did not trip.

SL NO	OCCURRENCE OF BREAK-DOWN		DETAILS OF THE BREAKDOWN	TIME OF RESTORATION		REMARKS
	DATE	TIME		DATE	TIME	
64	30.11.19	06:20	220kV PAPPANKALAN-I-NARAINA CKT-I	30.11.19	12:28	At Papankalan-I : Dist prot, B Phase A, 186 A&B. At Naraina : Dist prot, 86, Dist 6.729Km, Zone-II
65	30.11.19	06:31	220kV BAMNAULI-PAPPANKALAN-I CKT-II	30.11.19	09:19	At Bamnauli : Dist prot, Dist 10.78km, 86. At Papankalan-I : Ckt. did not trip.
66	30.11.19	06:55	220kV BAMNAULI - DIAL CKT-II	30.11.19	09:13	AT BAMNAULI : DISCREPANCY RELAY APPEAR.
67	30.11.19	10:47	KASHMIRI GATE 33/11kV, 20MVA Tx	30.11.19	13:02	86

20 DETAILS OF UNDER FREQUENCY RELAY OPERATIONS IN DELHI POWER SYSTEM DURING THE MONTH OF NOVEMBER 2019

DATE	S. N.	TIME		Name of Grid	NAME OF AFFECTED FEEDERS	MODE	LOAD RELIEF IN MW
		OUT	IN				
				NIL			