



दिल्ली ट्रांसको लिमिटेड DELHI TRANSCO LIMITED

पंजीकृत कार्यालय : शक्ति सदन, कोटला रोड, न्यू दिल्ली-110002

(Regd. Office Shakti Sadan, Kotla Road, New Delhi-110002)

Office of General Manager (SLDC)

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

Ph: 23221091, FAX No.23221012,23221059

No. F/DTL/207/GM(SLDC)/2016-17/136

Date: 30.01.2017

To

1. Executive Director (Planning), DTL
2. G.M. (Electrical), DMRC, 6th Floor, Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi-110001
3. G.M. (O&M)-I, DTL
4. G.M. (O&M)-II, DTL
5. G.M. (CMG), DTL
6. DGM (OS), DTL
7. HoG System Operation, TPDDL
8. HoG System Operation, BRPL
9. HoG System Operation, BYPL
10. Executive Engineer, System operation, NDMC
11. Garrison Engineer, MES
12. G.M., BTPS
13. G.M., Pragati G.T. Stn.
14. G.M., Bawana CCGT Stn.
15. G.M., G.T. Stn, IPGCL
16. Joint Director (Engg), DERC
17. Dy. Secretary (Power), GNCTD
18. Station Incharge (Waste to Energy Plant), Okhla
19. Station Incharge (Waste to Energy Plant), Bawana
20. Station Incharge (Waste to Energy Plant), Gazipur
21. Dy. General Manager (S.O.), SLDC
22. Dy. General Manager (SCADA), SLDC

MEETING NOTICE

Date : 09.02.2017 Time : 15.00 Hrs.

**Venue : Conference Hall, SLDC Building,
33kV Grid S/Stn. Building, Minto Road, New Delhi 110002**

To be Chaired by Director (Operations), DTL – Chairperson of GCC

Sub. : High Voltage Operation of Grid

Dear Sir,

Entire Northern grid along with Delhi Power System is reeling under high voltage problem. Number of Bulk Transmission lines are being opened at various such as 765kV,400kV, 220kV, 132kV, 66kV, 33kV etc during off peak hours to control high voltage problems.

2. In Delhi Power System the following lines are being opened regularly during the period 07.00PM to 07.00A.M. daily to control high voltage.

Opening of feeders at 220kV Level.

The following feeders are being opened during the period 07.00PM to 06.00AM
22.00hrs. to 06.00AM daily

S. N	Name of Stn.	Name of Ckt.	Elements to be opened	Remarks
1	Bamnauli	Dial ckt	Both ckt. at both ends	Load of Dial to be taken on Mehrauli ckt. I & II. (00.00hrs. to 06.00hrs.)
2		Naraina Ckt.	Single ckt. at both ends	Load of Naraina shall be taken on Single ckt.
3		Papankalan óI Ckt.	Single ckt. at both ends	Load of Papankalan óI shall be taken on Single ckt.
4		Papankalan óII Ckt.	Single ckt. at both ends	Load of Papankalan óII shall be taken on Single ckt.
5	Mehrauli	Vasant Kunj Ckt.	Single ckt. at both ends	Load of Vasant Kunj shall be taken on Single ckt.
6	Maharani Bagh	Trauma Centre ckt	Both ckt. at both ends	Load of Trauma centre shall be taken on single ckt. of Ridge valley.
7	Trauma Centre	Ridge Valley Ckt.	Single ckt. at both ends	Load of Trauma centre shall be taken on single ckt. of Ridge valley.
8	Bawana	DSIDC Bawana Ckt.	Both ckt. at both ends	Load of DSIDC Bawana shall be taken on single ckt. of Narela.
9	DSIDC Bawana	Narela ckt.	Single ckt. at both ends	Load of DSIDC Bawana shall be taken on single ckt. of Narela.
10	Bawana	Rohini óII	Both ckt. at both ends	TPDDL will shift the load at Rohini-I
11		Rohini óI	Single ckt. at both ends	Load of Rohini-I shall be taken on Single ckt..
12		Shalimarbagh	Single ckt. at both ends	Load of Shalimarbagh shall be taken on Single ckt..
13	Rohini-I	Shalimarbagh	Both ckt. at both ends	Ckt. remain on no load
14	Mundka	Peeragarhi	Both ckt. at both ends	Load will be fed from Wazirpur single ckt.
15	Peeragarhi	Wazirpur	Single ckt. at both ends	Load of Peeragarhi shall be taken on Single ckt
16	Shalimarbagh	Wazirpur	Single ckt. at both ends	Load of Wazirpur shall be taken on Single ckt
17	Bawana	Khanjawala	Both ckt. at both ends	Load of Khanjawala shall be taken on single ckt. of Mundka
18	Pragati	Park street	Single ckt. at both ends	Load of Park Street shall be taken on Single ckt
19	Maharani Bagh	Masjid moth ckt.	Both ckt. at both ends	BRPL will shift the load at alternate source
20		Electric Lane	Both ckt. at both ends	NDMC will shift the load at alternate source
21		Lodhi Road	Single ckt. at both ends	Load of Lodhi Road shall be taken on Single ckt
22	Wazirabad	Gopalpur	Both ckt. at both ends	Ckt. remain on no load
23		Mandola	Single ckt. at both ends	Load of Wazirabad shall be taken on other ckt.
24		Kashmiri Gate	Single ckt. at both ends	Load of Kashmiri Gate shall be taken on Single ckt
25	Gopalpur	Subzi Mandi	Single ckt. at both ends	Load of Subzi Mandi shall be taken on Single ckt
26	Bamnauli	400kV Ballabgarh	Single ckt. at both ends	Load will met through other ckt.
27	Gazipur	Noida-BTPS ckt	Single ckt. at both ends	Ckt. remain on no load
28	Vasant Kunj	220kV R.K.Puram ckt charged at 66kV	To be made off at Vasant Kunj	Not being allowed by DMRC.
29	Kashmiri Gate	DMRC Ckt.	Ckt. which is on no load to be made off	Kashmiri Gate to do the operation in consultation with DMRC.
30	Shalimarbagh	DMRC Ckt.	To be made off	Shalimarbagh to do the operation in consultation with DMRC.

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1. Switching OFF lines to be initiated by 19.00hrs positively.
 2. While charging the lines during normalization, it should be ensured that line be charged from low voltage end .

In addition to the above the following feeders are also switched off from 220kV Grid S/Stns. to reduce reactive power flow from Discom level to 220kV Level.

BYPL

Sr. No.	Name of Stn.	Name of Ckt.
1.	220kV Park Street	33kV Faiz Road Ckt-I
		33kV Motia Khan Ckt-II
2	220kV Subzi Mandi	33kV BG Road Ckt-II
3	220kV IP	33kV Bay-17 óDelhi Gate
		33kV Bay-18 óDDU
4	220kV RPH	33kV Bay-13 ó GB Pant
		33kV Bay-12 ó IG Stadium
		33kV Bay-5 ó Jama Masjid
		33kV Bay-6 ó Jama Masjid
		33kV Bay-2 ó Lahori Gate
		33kV Bay-17 ó Minto Road
5	220kV Patparganj	33kV Bay-18 ó Town Hall
		66kV GH-I Ckt-II
		66kV Vivek Vihar Ckt-II
		66kV Khichripur Ckt
		66kV Akshardham Ckt.
		33kV Karkardooma Ckt-II
		33kV Geeta Colony Ckt.
33kV Scope Tower Ckt.		
6	220kV Gazipur	33kV Guru Angad Nagar Ckt-II
6	220kV Gazipur	66kV Kondli Ckt-I
		66kV Shastri Park Ckt-I
7	220kV Wazirabad	66kV Yamuna Vihar Ckt-I
		66kV Yamuna Vihar Ckt-I
8	220kV Geeta Colony	33kV Kailash Nagar Ckt-II
		33kV Kanti Nagar CKt-II
		33kV Shakarpur Ckt.
10	400kV Harsh Vihar	66kV Nand Nagari Ckt-II

BRPL

Sr. No.	Name of Stn.	Name of Ckt.
1	220kV Sarita Vihar	66kV Mathura Road Ckt-I
2	220kV Vasant Kunj	66kV Vasant Kunj `CØBlock Ckt-I & II
3	220kV Okhla	66kV Okhla Phase-I Ckt-I
		33kV Okhla Phase-II Ckt-I
		33kV Balaji Ckt-I
		33kV Nehru Place Ckt-II
		33kV Alaknanda Ckt-I
4	220kV DIAL	66kV DIAL (Aerocity) Ckt-I
5	220kV Peera Garhi	33kV Udyog Nagar Ckt
		33kV Paschim Puri Ckt-II
6	220kV Pappankalan-I	66kV Bindapur Ckt-I
		66kV GH-II Ckt-I
7	220kV Pappankalan-II	66kV GGS Ckt-I
		66kV G-15 Ckt-I
		66kV G-6 Ckt-I
8	220kV IP	33kV Bay-7 (Exh Ground-I)
		33kV Bay-37 ó Kilokari
9	220kV Najafgarh	66kV Jafarpur Ckt-I
		66kV Nangloi Ckt.
10	220kV Mehrauli	66kV Malviya Nagar (Two Ckts)

With all the coordinated efforts, the maximum reactive power injection under high voltage condition has been reduced from 500MVAR to 350MVAR from 21.12.2016.

3. Despite all above efforts the voltage remains above the nominal value at all grid sub stations particularly during off peak hours. Several complaints from Discoms/Consumers is pouring in about high voltage problem particularly during winter night time. Huge reactive power injection also takes place during high voltage regime. During this year, particularly during winter season the penalty for huge reactive power injection is also being borne by DTL/Discoms to the tune of about Rupees 7 Crores.
4. The reactive power injection by Metro feeders at various levels also seen very high. The details are as under :

DETAILS OF DMRC SUPPLY AND THEIR LOADING ON 23.01.2017 .

S. NO	NAME OF DMRC FEEDER	FEEDING 220kV SUB STATION	MVAR INJ/ DRAWL BY DISCOM S AT 03.00HRS	MVAR INJ/ DRAWL BY DISCOM S AT 10.00HRS	VOLTAGES PROFILE (KV)				TX TAPS ON 100/160 MVA	LOAD ON DMRC FEEDER AT 03.00Hrs		LOAD ON DMRC FEEDER AT 10.00Hrs	
					220	66	33	11		MW	MVA R	M W	MVAR
1	220 kV DMRC ckt-I	Kashmiri Gate	4	7.2	240	í	35.4	11.7	3	7	-7	12	11
2	220 kV DMRC ckt-II	Kashmiri Gate			240	í	35.4	11.7	3	0	\$	0	\$
3	66kV DMRC-I	Rohini-I	0	25	236	69	í	11.9	5	0.5	\$	1	\$
4	66kV DMRC-II	Rohini-I			236	69	í	11.9	5	0.5	\$	1	\$
5	220kV DMRC-I	Shalimar bagh	8	16	235	í	35.6	11.6	5	5	\$	7	\$
6	66kV DMRC-I	GTPS	-8	-5	238	66	í	í	4	3	-8	33	2
7	66kV DMRC-II	GTPS			238	66	í	í	4	3	-8	16	-7
8	66kV DMRC-I	Mehrauli	1	4.6	240	69	í	11.8	3	2	-6	39	\$
9	66kV DMRC-II	Mehrauli			240	69	í	11.8	3	0	-2	0	\$
10	66kV DMRC-I	PPK-I	-16	-16	232	68	í	11	3	4	\$	6	\$
11	66kV DMRC-II	PPK-I			232	68	í	11	3	3.5	\$	3.4	\$
12	66kV DMRC-I	PPK-II	-19	-11	235	67	í	í	3	0	0	0	0
13	66kV DMRC-II	PPK-II			235	67	í	í	3	4	\$	6	\$
14	66kV DMRC-I	Dial	-4	-8	240	70	í	í	2	0	0	0	0
15	66kV DMRC-II	Dial			240	70	í	í	2	2	-2	3	-4
16	66kV DMRC-I	Sarita Vihar	-19	-8	245	71	í	11.9	3	3.2	-15	5	-16
17	66kV DMRC-II	Sarita Vihar			245	71	í	11.9	3	0	-2	0	-2
18	66Kv DAMPEL	Parkstreet	-15	-15	237	70.6	34.6	í	3	0	\$	0	\$
19	66kV DMRC-II	Parkstreet			237	70.6	34.6		3	4	\$	11	\$
20	220kV R.K.Puram	Vasantkunj	-4	-2	237	69	í	11.6	3	Under Shutdown		Under Shutdown	

S: Data not Available at Substation & in SCADA

TOTAL MVAR INJECTION BY DELHI SYSTEM ON 23.01.17 AT 03.00HRS : (-281MVAR) AND AT 10.00HRS :(-44MVAR)

TOTAL MVAR INJECTION BY DISCOM SYSTEM ON 23.01.17 AT 03.00HRS : (-148MVAR) AND AT 10.00HRS (+94 MVAR)

DELHI DEMAND AT 03.00HRS :1412MW AND AT 10.00HRS :3777MW

5. During the night time DMRC is not allowing to open the DMRC feeders which are running even on no load.
6. A typical Active Load and Reactive drawal profile of Delhi at various power exchange points of Delhi into the Grid of winter day has been as under wherein it is seen that almost all part of the day voltage remains high and having reactive power is injected to the Grid.

**Load profile on the day maximum peak demand met occurred.
4168MW on 20.01.2017 at 10:00:08hrs.**

TIME HRs.	Demand Met IN MW	Reactive Power Drawal In MVAR	VOLTAGE PROFILE AT VARIOUS POWER EXCHANGE POINTS OF DELHI(KV)									
			Mandola		Bannauli		Mundka			Maharani Bagh		
			400kV	220kV	400kV	220kV	400kV	220kV	66kV	400kV	220kV	
01:00	1714	-327	426	240	421	236	424	224	70	NA	234	
02:00	1601	-350	428	241	423	237	426	224	71	NA	235	
03:00	1554	-380	428	241	423	237	427	224	71	NA	235	
04:00	1562	-383	429	242	424	238	428	224	71	NA	236	
05:00	1736	-413	422	238	417	234	420	224	70	NA	232	
06:00	2423	-306	416	234	410	231	414	224	68	NA	228	
07:00	3327	-55	412	231	407	227	412	224	68	NA	226	
08:00	3710	-94	416	232	410	229	415	224	69	NA	227	
09:00	3782	-165	409	229	402	225	409	224	68	NA	223	
10:00	4142	-42	408	226	401	224	407	224	67	NA	222	
11:00	3976	8	407	226	400	224	406	224	67	NA	222	
12:00	3762	-64	409	228	404	226	409	224	67	NA	224	
13:00	3344	-242	410	229	406	228	410	224	68	NA	225	
14:00	3065	-216	410	229	406	228	410	224	68	NA	225	
15:00	3058	-163	410	229	406	228	411	224	68	NA	225	
16:00	2988	-134	412	230	408	229	413	224	68	NA	226	
17:00	3031	-127	412	230	408	229	412	224	68	NA	226	
18:00	3377	-11	414	230	410	229	414	224	68	NA	227	
19:00	3482	15	411	229	408	228	411	224	67	NA	226	
20:00	3350	-84	419	234	416	233	420	224	69	NA	229	
21:00	3029	-214	420	235	416	233	420	224	69	NA	230	
22:00	2811	-283	422	236	419	235	422	224	70	NA	231	
23:00	2382	-282	417	234	414	233	418	224	69	NA	230	
24:00	1977	-310	424	239	421	237	424	224	70	NA	234	

TIME HRs.	Demand Met IN MW	Reactive Power Drawal In MVAR	VOLTAGE PROFILE AT VARIOUS POWER EXCHANGE POINTS OF DELHI(kV)									
			Bawana			Narela			BTPS	GAZIPUR		
			400kV	220kV	66kV	220kV	66kV	11kV	220kV	220kV	66kV	11kV
01:00	1714	-327	424	232	67.6	240	68	11.4	238	242	69	11.9
02:00	1601	-350	426	233	68.1	241	69	11.4	239	242	69	11.9
03:00	1554	-380	427	234	68	243	69	11.3	240	242	69	11.9
04:00	1562	-383	427	234	67.7	244	69	11.3	240	242	69	11.9
05:00	1736	-413	420	230	66.8	239	67	11	236	240	69	11.8
06:00	2423	-306	414	227	66.1	237	67	10.9	227	230	66	11.3
07:00	3327	-55	412	226	65.4	234	66	10.8	222	228	65	11.1
08:00	3710	-94	414	227	65.7	232	66	10.9	214	228	65	11.1
09:00	3782	-165	409	224	64.6	229	65	10.8	212	225	65	11
10:00	4142	-42	408	223	63.3	226	64	10.8	202	220	65	11
11:00	3976	8	406	223	63.2	227	64	10.8	208	217	64	10.9
12:00	3762	-64	408	223	63.6	216	65	10.9	215	220	65	11
13:00	3344	-242	408	224	64.8	231	65	10.9	212	222	65	11.1
14:00	3065	-216	408	224	64.4	229	65	11	206	222	65	11.1
15:00	3058	-163	409	224	64.3	232	65	11	204	222	66	11.1
16:00	2988	-134	411	225	64.3	232	65	11	219	223	66	11.2
17:00	3031	-127	411	225	64.6	230	65	11	221	223	66	11.2
18:00	3377	-11	412	226	64.8	231	65	11	224	223	66	11.2
19:00	3482	15	411	225	64.7	230	65	10.9	222	222	66	11.2
20:00	3350	-84	419	230	65.8	236	66	11.2	229	226	67	11.4
21:00	3029	-214	420	231	66.4	238	67	11	231	227	67	11.4
22:00	2811	-283	422	232	66.7	238	67	11	233	229	68	11.5
23:00	2382	-282	417	229	66.4	237	67	11	230	230	68	11.6
24:00	1977	-310	424	233	67.4	240	68	11.2	234	234	69	11.8

7. To draw out strategy of operation of DMRC feeders particularly during winter nights to control high voltage issues, a meeting is scheduled in SLDC Conference Hall at 03.00PM on 09.02.2017. The meeting would be chaired by Director (Operations), DTL ó the Chairperson of the Grid Coordination Committee (GCC) ó **DMRC is requested to explain the operation/status of capacitors at their Receiving Sub Stations (RSS). It may also give a presentation of capacitive currents during the operation of Metro Trains and also during non operation of the trains.**

The representatives of Discoms and Gencos are also requested to attend the meeting.

Inputs from all utilities are solicited to control high voltage problems being encountered every day causing reliability issues.

All are requested to attend.

Thanking you

Yours faithfully

(V.VENUGOPAL)
General Manager (SLDC)

Copy for favour of kind information to :-

1. Secretary (Power), Govt. of NCT of Delhi,
2. Secretary, DERC, Viniyamak Bhawan, C-Block, Shivalik, New Delhi-110017
3. Chairperson, NDMC
4. Managing Director, DTL
5. Director (Operations), DMRC
6. Director (Operations), DTL