DELHI TRANSCO LIMITED
(A Govt. of NCT of Delhi Undertaking)
An ISO 9001:2015 certified company
{Office of DGM(T)-OS}
Ist Floor, Park Street Building, New Delhi-110001
Website:-www.dtl.gov.in

No.F.DTL/201-F.4/2021-22/DGM-(OS)/OCC/183 **Date:- 02.02.2022**

Subject: 10th Meeting of Delhi Operation Coordination Committee (2021-22) - Minutes of Meeting.

The 10th meeting of Delhi Operation Coordination Committee (OCC) was held on 28.01.2022 (Friday), 11:00 A.M and conducted through online mode.

The Minutes of Meeting are enclosed for confirmation and necessary action.

Minutes of Meeting are also available on DTL website, www.dtl.gov.in under the tab "News and Information"-OCC Meeting. (http://dtl.gov.in/content/344_1_OCC-Meeting2021.aspx).

Thanking You.

Sincerely yours,

---Sd/--
(Hitesh Kumar)
Dy. General Manager (OS)
Delhi Transco Limited

Copy for favor of kind information to:

(i) Secretary, DERC, Viniyamak Bhawan, C-Block, Shivalik, New Delhi-17
(ii) OSD to CMD, DTL
(iii) Director (Operation), DTL

02/02/2022
Dy. General Manager (OS)

To all members - - *As per list enclosed* - -

10th Meeting of Delhi Operation Coordination Committee (2021-22)- Minutes of Meeting

Distribution List:

DTL	1. General Manager (O&M)-I
	2. General Manager (O&M)-II
	3. General Manager (P&M, DM&S)
	4. General Manager (Planning)
	5. DGM (O&M) - North, East, West, South
	6. DGM (Metering/Protection)
	7. DGM (Planning)
SLDC	1. General Manager (SLDC)
	2**.** DGM (SO)
TPDDL	HOD (PSC &AM), Sr. Manager (PSC)
BRPL	VP, AVP (SO)
BYPL	VP, AVP (SO)
NDMC	Superintending Engineer, E-1
IPGCL	AGM (T) Opr. GTPS
PPCL	1. AGM (T) Opr.PPS-I
	2. AGM (T) Opr. PPS-III
MES	AEE/M.SLDC Officer
BBMB	Sr. Executive Engineer, O&M
DMRC	GM (Traction), Sr.DGM (Traction)
GMR(DIAL)	GM(DIAL)
N. Railways	Sr. DEE (TRD)

MINUTES OF 10TH DELHI OCC MEETING

Date :	**28.01.2022**
Time:	**11:00 AM**
Venue:	**Online Via Video conferencing** **O/o-GM(O&M)-I, Delhi Transco Ltd., 220 kV S/stn Park Street, New Delhi-01**
	List of participants is enclosed as Annexure-I.

The Chairman, Delhi OCC welcomed the members/participants and requested all to submit the Agenda before the timeline provided in the Agenda invitation letter. It came under notice that members are sending their planned agenda/shutdown after the timeline. As we are going through Covid pandemic situation & conducting meeting through online mode, so it is requested to provide agenda/shutdown in requested timeline for healthy discussion. Now onwards, no additional agenda will be entertained after the deadline. Chairman requested to start the meeting as per circulated agenda.

It was informed that the peak demand for December'21 was 4685 MW against peak demand of 4671 MW in December'20. Total energy consumed in December'21 was 2090.057 MUs against 2024.811 MUs in December'2020. SLDC Delhi informed that, anticipated peak demand for the month of February'22 is 4600MW and expected availability is 5062 MW (Surplus-462MW). The anticipated maximum energy requirement for one day is 69.642MUs and expected availability is 112.441MUs (Surplus +42.799MUs).

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1. **Confirmation of minutes of 9th Delhi OCC meeting (2021-22) held on dated 28.12.2021.**

The 9th Delhi OCC meeting (2021-22) was held on 28.12.2021 through video conferencing. Minutes of the OCC meeting were issued on 31.12.2021 and uploaded on DTL website (http://dtl.gov.in/content/344_1_OCC-Meeting2021.aspx).

Members confirmed the Minutes of 09th Delhi OCC meeting.

2. **DTL Agenda:-Proposed planned shutdowns of DTL for the month of February-2022.**
   After detailed discussion with the members, OCC approved shutdowns subject to real time condition & consent from respective DISCOMs.

   - **OCC directed all DISCOMs to provide their consent to OS department/SLDC in advance of respective shutdowns for fruitful discussion during the meeting as the planned list of shutdown is shared 4-5 days before the meeting. Any observation raised by DISCOMs regarding any shutdown will be discussed in the meeting and all other shutdowns shall presumed as deemed approved.**

- **OCC advised O&M/DTL to utilize shutdown window alongwith many shutdowns proposed by DTL Protection Deptt. by clubbing their Operation and Maintenance activities as also per PMS to minimize the outage period. Every shutdown must be availed upto maximum optimization.**
- **SLDC requested O&M/Gazipur to coordinate with EDWPCL at their end for the proposed shutdown of 66kV EDWPCL feeder to complete the work on the Ckt.**
- **NDMC requested to avail the shutdowns in NDMC related feeders preferably on Saturday/Sunday after commencement of parliament budget session from 31.01.2022 to 11.02.2022.**

3. <u>DTL Agenda</u>:-Frequent tripping of 66 kV Feeders at 220 kV Substation SOW , DTL

It has been observed that 66 kV Feeders are tripped very frequently from SOW end. It is related with those feeders which are connected with underground cable system. However, it was observed that these circuits are being tripped with heavy fault current on the distance protection relay and other protective relays, and within 2-3 hours there were energized.

Now, it is matter of concern, if these circuits are underground cables and fault incepted then how they can be energized in such a small time span. Either these circuits are not fully underground cables or these trippings are due to some external faults in the system, which are outside the domain of the protective relays. Tripping details of recent incidents are as below:-

S.No	Name of Element	Tripping date/time	Energization date/time	Relay indication
1	66kV Yamuna Vihar Ckt-II	16.01.22 at 08:43 hrs	16.01.22 at 10:45 hrs	R-Ph Trip Zone-I, dist.-2 KM
2	66kV Ghonda Ckt-I	16.01.22 at 22:52 hrs	17.01.22 at 00:43 hrs	CN phase trip, E/F trip dist- 32.38 km
3	66kV Ghonda Ckt-II	16.01.22 at 22:52 hrs	Under B/D	distance 0.4 Km, Zone-I, L3 E

Therefore, from the above details , it is very much evident that tripping of Yamuna Vihar Ckt-II and Ghonda Ckt-I are not accepted, keeping in view that these are underground cable system. Such tripping, which could be avoided, affects the healthiness of our power transformers.

OCC may deliberate.

<u>OCC Deliberation</u>:- OCC expressed its concern about the repetitive tripping incidences & advised to conduct a Protection audit by DTL/O&M, DTL/Protection with protection team of BYPL to analyse the relay settings and protection scheme at the site to avoid such

trippings. A schedule of audit shall be communicated by BYPL for the protection audit, same will be conducted before the next OCC.

4. <u>SLDC Agenda</u>:- High voltages and reactive power issues in Delhi power system

With onset of winter, High Voltages conditions have been faced in Delhi System. This is happening because of decrease in power demand in Delhi area. High voltage also causes stress on Transmission system equipments. It has been observed that during high voltage conditions Delhi injects reactive power to the grid resulting payment of heavy penalty to NRPC reactive account by Delhi.

In 190th NRPC OCC Meeting held on 21.12.2021, it has been observed that generators are not absorbing reactive power as per their capability curve.

Following steps are in practice and discussed in previous OCC meetings to control the high voltage/ injection of reactive power .

(i) Switching off the capacitors at all the Substations of Delhi.

(ii) Transformer taps optimization by DTL and DISCOM.

(iii) Monitoring of all 400/220kV ICTs and taking actions wherein VAR flows are observed from 220kV to 400kV side. In this respect reactive energy changes could also be monitored.

(iv) Opening of lightly loaded transmission cables/transmission lines keeping reliability in focus.

(v) Absorption of reactive power by all generating units as per its capability curve.

In 9th Delhi OCC, December-2021, high voltage & reactive power injection issue was deliberated and following corrective actions were advised:-

i. Switching off the capacitors at all the Substations of Delhi.
ii. Transformer tap optimization by DTL and DISCOM.
iii. Monitoring of all 400/220kV ICTs and taking actions wherein VAR flows are observed from 220kV to 400kV side. In this respect reactive energy changes could also be monitored.
iv. Opening of lightly loaded transmission cables/transmission lines keeping reliability in focus.
v. All the generators are advised not to inject MVAr in grid and should absorb MVAr particularly during high voltage condition above 400kV to improve voltage profile of the grid as per their capability curve. The detail of MVAR generated /absorbed by each machine be intimated to SLDC for proper analysis.
vi. DISCOMs/DMRC were requested to select the list of feeders for switching exercise to control reactive power injection. List of selected feeders to be shared with SLDC.

vii. For switching of 220kV level double ckt U/G cables, OCC advised switching of U/G cable circuits on alternate basis to ensure the healthiness of both the ckts. DTL/O&M shall inform the SLDC if any U/G cable ckt switched off for more than a week.

OCC also advised DMRC, DTL & DISCOMs to explore all possibilities to control system voltage profile and reactive power injection in system from their respective ends.

Action should be taken by Generators (IPGCL,PPCL, Bawana) to absorb reactive power at high voltages.

OCC Deliberation:- As deliberated in last OCC meeting, all the utilities has taken corrective actions as desired to control reactive power injection in the system. CCGT Bawana also submitted its action report regarding reactive power absorption by generators (attached as annexure-II).

OCC further advised all members to explore all possibilities to control system voltage profile and reactive power injection in system from their respective end.

5. Long/recent Outage/breakdown of elements in Delhi power system.

Members may update the latest status of following Long/Recent Outage/Breakdowns of elements in the Delhi Power system as under:

S. no.	Element's Name	Utility	Date of outage	Status of outage as on 28.01.2022
1.	220kV PEERAGARHI - 33kV A-4 PASCHIM VIHAR CKT.	BRPL	10.07.21	'Y' PH. SINGLE CABLE CONNECTOR FAULTY. **Expected by Feb-22.**
2.	220kV OKHLA - 33kV EAST OF KAILASH CKT.	BRPL	25.08.21	'R' PH. SINGLE CABLE FAULTY. **Expected by Feb-22.**
3.	220kV PPK-II - 66kV HASTAL CKT.-I	BRPL	18.10.21	'B' PH. SINGLE CABLE FAULTY. **Expected by 05.02.22.**
4.	220kV IP -BAY 24 IP-NEHRU STADIUM	BRPL	12.01.22	B' & Y' PH. SINGLE CABLE FAULTY. **Expected by 05.02.22.**
5.	33kV SCOPE MINAR - MOTHER DAIRY CKT.	BYPL	27.12.22	'Y' PH. CABLE FAULTY. **Energized on 18.01.22.**
6.	220kV PATPARGANJ -33kV GURU ANGAD NAGAR-II	BYPL	16.01.22	'R' PH.CABLE FAULTY. **Energized on 22.01.22.**
7.	220kV S.O. WAZIRABAD - 66kV GONDA CKT.-II	BYPL	16.01.22	'B'PH. CABLE FAULTY. **Energized on 20.01.22.**
8.	33kV SHASHTRI PARK - SEELAMPUR CKT.	BYPL	16.01.22	'R' PH. SINGLE CABLE FAULTY. **Energized on 19.01.22.**
9.	220kV PARK STREET - 66kV DMRC CKT.-I&-II	DMRC	19.10.21	SHUT DOWN FOR GRID SHIFTING WORK AT DMRC END. **Expected by March-22.**

S. no.	Element's Name	Utility	Date of outage	Status of outage as on 28.01.2022
10.	400kV BAWANA, 315MVA ICT-II	DTL	30.03.21	315MVA ICT-II CAUGHT FIRE AND DAMAGED. **Expected by Feb-2022.**
11.	AT PEERAGARHI: - 220/33kV 100MVA TRF.-I	DTL	10.07.21	TRIPPED ON DIFFERENTIAL. TX FAULTY. **Expected by March-2022.**
12.	220kV LODHI ROAD - 33 kV VIDYUT BHAWAN, JLN STADIUM FEEDERS	DTL	29.11.21	AFFECTED DUE TO BOTH 33kV BUSES DEAD BECAUSE OF FIRE IN 33kV GIS. **The replacement of damaged panels with new panels is under progress.**
13.	AT MUNDKA: 315MVA ICT – IV	DTL	13.11.21	TRIPPED ON BUCHLOZ RELAY. 'R' PH. WINDING DAMAGED. **Expected by Feb-22.**
14.	AT ROHINI I:- 220/66KV 100MVA TR.-I	DTL	28.12.21	SHUT DOWN FOR OVERHAULING OF TRANSFORMER. **Expected by 08.02.22.**
15.	AT MEHRAULI: 20MVA PR.TR.-II	DTL	01.01.22	SHUT DOWN FOR OVERHAULING OF TRANSFORMER. **Expected by 15.02.22.**
16.	AT MEHRAULI: 220KV DIAL CKT-I&II, 20MVA PR. TR.-I, ALL 11KV FEEDERS	DTL	08.01.22	CONTROL PANEL DAMAGED. DUE TO FIRE IN 11KV SWITCHGEAR. **220kV Ckts are in operation. 160MVA Tx-IV alongwith 66kV bus is energized on 01.02.2022.**

ADDITIONAL AGENDA

1. DTL Agenda:- Back up/Alternate source 11 kV load/Supply management by BYPL for the 11kV load being fed through 220 kV Patparganj.

220 KV Substation Patparganj is one of the oldest and critical sub-station installations of DTL which feeds power to the almost entire East Delhi including VIP load and water treatment plants at 66kV, 33kV & 11 KV levels. It is prudent to mention here that there are very old 11 KV transformers (20 MVA Mfg Yr 1993 and Repaired in 2005) and 16 MVA, Mfg Yr 1978 & 11 KV switchgear panels (Mfg Yr 1980, retro fitted with VCB's in 2010) in which frequent tripping occurred throughout year. Also due to old and outdated switchgear almost every year there is a major outage of 11kV system at Patparganj especially during Summer peak season loadings.

Owing to critical condition of the 11kV switchgear panel board, repeated faults, 11kV break-downs at Patparganj were reported and taken up on high priority and as a result a scheme for "Supply, Erection, Testing and Commissioning of 11 kV VCB Panel Board was prepared by DTL Planning department and a consolidated scheme for augmentation of entire 11kV System

including 20MVA and 16MVA power transformers with associated C&R panels etc was finalised and approved by DTL board.

However, there have been some inadvertent processing delays in award and finalization of said scheme due to which it might take another year (by end of 2022) before final implementation. Also, whenever the said scheme will be implemented, at least One Transformer / Half 11 Kv Bus Bar shall remain out of service for at least 2-3 months.

The details of monthly peak loading for last 2 years for 20MVA and 16MVA Power Tr. are as under:-

Month/Year	**20MVA Tr (LV Side Load)**	**16MVA Tr (LV Side Load)**	**Month/Year**	**20MVA Tr (LV Side Load)**	**16MVA Tr (LV Side Load)**
May-2020	740A	550A	May-2021	423A	492A
June-2020	803A	609A	June-2021	590A	725A
July-2020	787A	618A	July-2021	515A	640A
Aug-2020	665A	585A	Aug-2021	656A	645A
Sep-2020	662A	652A	Sep-2021	415A	470A

In view of above submissions and old & vulnerable condition of 33kV/11kV Power Transformer, OCC is requested to deliberate the issue regarding 11kV load management at 220kV Patparganj by BYPL at their end in case of any unwanted and unforeseen long outage of any 11kV system element i.e, 20/16 MVA Tx, 11kV cables, 11kV switchgear etc at 220 kV Patparganj by BYPL till execution of said augmentation scheme.

<u>OCC Deliberation</u>:- OCC acknowledged the concern of O&M/Patparganj regarding the 11kV load management & advised DTL/O&M and BYPL to work on the issue cooperatively and come out with solution. O&M/DTL shall share a list of inventory to BYPL, same may be arranged by BYPL as the spare items.

OCC further advised BYPL & O&M/DTL to conduct a joint visit at site and explore the alternate solution for the issue before the upcoming summer season and take-up the challenge to maintain the reliability.

2. <u>DTL Agenda</u>:- Shutdown requested by Project Department for stringing of jack bus at 400kV Bamnauli.

This is to state that a project of construction of 8 nos 400kV & 220kV bays at various s/stn. of DTL i.e. Bamnauli, Tikrikalan and IP has been awarded to M/s Ethos Power (P) Ltd.

In the same project, for stringing of Jack Bus in Upcoming 220kV bay No. 209, shut down is needed on 220kV Bus A, C & E at 400kV Bamanuli. This Shutdown was initially proposed in Oct-2021 and was approved for 02.12.2021, but could not be availed as 220kV Maharani Bagh-Trauma Centre cable was under S/D. Now since this cable is charged, Our already approved S/D may please be allowed at the earliest.

<u>OCC Deliberation</u>:- O&M/DTL apprised OCC that for the shutdown on 220kV Bus-A, C & E at Bamnauli, 220kV Dial Ckt-I&II, 20kV PPK-III Ckt.-I &II and Incomer of 500MVA ICT- II & III are required to be put off. Also, 220kV Mehrauli is still under revival stage.

OCC deferred the above shutdown till 220kV Mehrauli properly revived to maintain the reliability at Dial.

3. <u>NDMC Agenda</u>:- Regarding energization of 33KV Supply from 220KV DTL Lodhi Road to NDMC 33KV ESS Shahjahan Road & Vidyut Bhawan (Old).

It is for your kind information the 33KV supply from 220KV DTL Lodhi Road to 33KV ESS Shahjahan Road & 33KV ESS Vidyut Bhawan is not available since 30/11/2021 due to flash over occurred in grid as informed by DTL System Control.

Since then the supply has not been energized till date whereas per direction of DTL System Control the HT Switch were isolated and earthing was done but till date no positive responses has been seen for energizing this feeder. Further there is no alternate source of 33KV supply at both the ESS's at ESS Shahjahan Road & Vidyut Bhawan to feed the VVIP Area and Republic day Parade and other VVIP functions are going to be celebrated from 23.01.2022, 26.01.2022, 29.01.2022 onward.

You are therefore requested to kindly look into the matter and get the 33KV supply restored energized from 220KV Lodhi Road before 25.01.2022, to avoid any unwarranted situation in case of failure of GT Supply.

Kindly take action for early energization of this feeder on top priority.

<u>OCC Deliberation</u>:- O&M/DTL apprised OCC that after deliberation among the members of OCC including NDMC, it was concluded in MOM of 9th Delhi OCC held on 28.12.2021 that BRPL will get 5 feeders from the revived panels. O&M/DTL also state that cables of NDMC are in damaged condition since the fire incident at 220kV Lodhi Road. OCC advised NDMC to visit the site and check the cable termination & start the work for revival of cable at their end. After the revival of cables, NDMC may approach OCC to check the feasibility to provide panels for NDMC feeders.

ON TABLE AGENDA

1. **DTL Agenda:- Shutdown requirement for Bamanuli- PPK1 and Bamnuli- PPK3 lines for erection of new gantry, tower & stringing of 400kV conductor at PGCIL tower Loc# AP14 and AP15.**

PGCIL has submitted revised shutdown schedule of Bamanuli- PPK1 and Bamnuli-PPK3 lines for stringing of 400kV conductor at Loc# AP14 and AP15. As per OCC the last OCC meeting held on 28.12.2021, the following shutdown was approved in line with requirement of PGCIL for stringing of 400 kV conductor between Loc# AP 14 and AP 15.

As per PGCIL request , BML-PPK1 line shutdown was given on 19.01.2022 and Gantry erection work has been completed. Line may be charged on 28.01.2022 as per PGCIL mail. The minor observations are being attended by the PGCIL.

Moreover, PGCIL has submitted revised schedule for shutdown of BML-PPK1 and BML-PPK3 , given as under:-

S.No	Name of Lines	Shutdown dates
1.	220 KV BML- PPK 1	BML-PPK1 (D/C) is under Shutdown from 19.01.2022 and presently work is in progress.
2.	220kV BML- PPK3	29.01.2022 to 02.02.2022
3.	220kV BML- PPK1 and BML-PPK 3	29.01.2022

OCC Deliberation:- SLDC apprised OCC that for the shutdown of Bamnauli-PPK-I & Bamnauli-PPK-III, Nariana-Ridge Valley single cable will be the alternate source for that link and some load has to be shifted/managed by DISCOMs.

During deliberation, BRPL & TPDDL agreed to shift some of their load.

DTL/Protection deptt. apprised OCC that SPS scheme is available at Naraina Sub-station & feeders will be tripped in case of overloading.

After detailed deliberation among members of DTL, DISCOMs, SLDC & considering the importance of the work for energization of 400kV Dwarka, the OCC approved above shutdowns subject to real time condition in following manner:-

(1) 220kV Bamnauli-PPK-III CktI & II from 29.01.2022 to 02.02.2022 subject to revival of 220kV Bamnauli-PPK-I Ckt-I & II.
(2) 220kV Bamnauli-PPK-I Ckt-I & II & Bamnauli-PPK-III Ckt-I & II on 06.02.2022 after the peak hours i.e, 11:00 AM.
(3) TPDDL, BRPL & MES shall shift their load after the peak hours of morning on 06.02.2022 (Sunday).

(4) DTL/Protection deptt. shall share the list of feeders which has SPS scheme with DISCOMs.

2. <u>BRPL Agenda</u>:- High 11kV bus-bar voltage at 220kV Sub-stations.

In last OCC meeting, chairman OCC advised DTL to reduce tap position of 66/11kv or 33/11kv PTR's at 220KV stations, but we are still receiving very high voltage at 11KV. Tap reduction at following stations are required to control very high 11KV voltage.

1. 220kv PPK-1
2. 220kv Lodhi Road
3. 220KV Saritavihar
4. 220KV VKJ
5. 220KV Okhla
6. 220KV NJF

Also 66KV voltage is almost close 70KV at most of the stations.

<u>OCC Deliberation</u>:- OCC direct DTL grids to reduce the PTR's tap position from 5 to 3 to maintain the voltage profile near 11kV.

The meeting ended with thanks to the Chair.

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