



DELHI TRANSCO LIMITED
(A Govt. of NCT of Delhi Undertaking)
An ISO 9001:2008 certified company
Office of DGM(T) OS, Convener-OCC
1st Floor, 220 kV Sub-Stn Park Street, Opp. Talkatora Stadium,
Near R.M.L. Hospital, New Delhi-110001
Web:-www.dtl.gov.in, E-mail :- dgm.os@dtl.gov.in

No. F.DTL/831/F.4/2017-18/DGM (OS)/81

Date:-02.01.2018

To,
All Members of Operation Co-ordination committee

DTL	General Manager (O&M)-I, Chairman OCC General Manager (O&M)-II General Manager (Planning) General Manager (P/M & DM) DGM (O&M) - North, East, West, South DGM (M/P) DGM (Plg.)	Fax no. 011-23366160 Fax No.011-23622707
SLDC	ED (SLDC) DGM (SO)	Fax no. 011-23221069 Fax no. 011-23221059/12,
TPDDL	DGM	Fax no. 011-66050602
BRPL	Vice President (SO) Asstt. Vice President	Fax no. 011-39996549 Fax no. 011-39996549
BYPL	Asstt. Vice President (SO)	Fax no. 011-39996549
NDMC	Executive Engineer (M/F)	Fax no. 011-23235754
IPGCL	AGM (T) COS AGM (T) Opr. GTPS	Fax no. 011-23284797 Fax no. 011-23370884
PPCL	DGM (T) Opr. PPS-I DGM (T) Opr. PPS-III	Fax no. 011-23378947 Fax no. 011-27791175
MES	AEE/M.SLDC Officer	
BTPS	AGM (EEMG)	Fax no. 011-26944348
BBMB	Sr. Executive Engineer, O&M	Fax no. 011-28315542
DMRC	Addl. GM (Elect.) General Manager (Elect.)	Special Invitee Special Invitee
GMR(DIAL)	GM(DIAL)	Special Invitee
N. Railways	Sr. DEE (TRD)	Special Invitee
EDWPCL	Director(EDWPCL)	Special Invitee
Delhi MSWSL	Station Incharge	Special Invitee

Sub :- MOM of Delhi OCC Meeting (09/17-18) held on 22.12.2017 at DTL, 220kV Sub-stn Park Street Building.

Dear sir/madam,

Delhi OCC meeting (No.-09/17-18) for Dec-2017 was held on **22.12.2017 at O/o :- GM(O&M)-I, Delhi Transco Ltd., 220kV Sub-stn Park Street Building, Opp. Talkatora Stadium, Near R.M.L. Hospital, New Delhi-110001.**

The minutes of meeting is enclosed herewith for your kind perusal and further necessary action please. The same has also been uploaded on DTL website, www.dtl.gov.in under the Tab "News and Information – OCC Meeting".

Thanking You.

Yours Sincerely,
sd/-
(Hitesh Kumar)
DGM(OS),DTL
Convener-OCC

Copy for favour of kind information to:

1. Member Secretary, NRPC, 18-A, SJS Marg, Katwaria Sarai, New Delhi-110016.
2. Secretary, DERC, Viniyamak Bhawan, C-Block, Shivalik, New Delhi-17.
3. Chairperson & Managing Director, DTL.
4. Director (Operations), DTL
5. General Manager (Project)-I, DTL
6. General Manager (Project)-II, DTL

**DGM(OS),DTL
Convener-OCC**

DELHI TRANSCO LIMITED

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

MOM OF DELHI OCC MEETING HELD ON 22.12.2017

GM (O&M)-I, DTL, Chairman-OCC welcomed the members of OCC. List of participants are enclosed herewith as Annexure-1. The meeting was started with the presentation on review of grid operation for Nov 2017. It was informed that Delhi peak demand of 3695 MW for Nov-2017 was met on 01.11.2017 at 18:22:59 hrs. Discom wise load as well as generation within Delhi during the peak and load curve for all the Discoms during the Nov month was depicted. Planning of Grid operation for Jan 2018 was also discussed, wherein it was explained that the anticipated peak demand for Jan 2018 would be around 4250 MW.

The point-wise deliberations made during the OCC meeting are as under:

1. Confirmation of minutes of previous Delhi OCC meeting held on dated 20.11.2017.

The previous Delhi OCC meeting was held on 20.11.2017 in accordance with the agenda circulated vide letter dt: 16.11.2017. Minutes of the aforesaid OCC meeting were issued vide letter dt.23.11.2017. The same was also uploaded on DTL website.

No comments have been received from any of the OCC participating members regarding the contents of MOM. As such the minutes of Delhi OCC meeting held on dated 20.11.2017 were confirmed. Members confirmed the receipt of MOM on their respective e-mail ids.

2. DTL/SLDC AGENDA POINTS:

2.1 Shutdown of 220kV BTPS-Okhla Ckts for 03 days

DMRC have requested DTL for urgent shutdown of 220kV BTPS-Okhla Transmission line.

1. DMRC is constructing lift & escalator at Sarita Vihar metro station. 220kV D/C BTPS-Okhla ckts is infringing the construction of lift and Escalator. To remove infringement DMRC is raising the height of the line by providing monopole tower in the land owned by Sarvodya School.
2. This matter was also discussed and agreed in the meeting in the office of MD, DTL on 13.01.17. The matter was also raised by DMRC officials in Delhi OCC meeting held on 20.11.17.

Since shutdown comprise of both ckts. of BTPS-Okhla for three days whereas Okhla S/Stn is radially fed from BTPS. All load of Okhla needs to be shifted by BRPL.

The backfeed arrangement as discussed with BRPL control room is as under :

Name of S/Stn.	Feeders / Bays	Remarks
220kV OKHLA S/Stn	66kV MALVIYA NAGAR CKT-I	Entire Load shall be shifted to 66kV Malviya Nagar I&II from 220kV Mehrauli S/Stn.
	66kV MALVIYA NAGAR CKT-II	
	66kV MALVIYA NAGAR CKT-III	

66kV OKHLA PHASE-I CKT-I	Entire Load shall be shifted to 66kV Mathura Road I&II from 220kV Sarita Vihar S/Stn.
66kV OKHLA PHASE-I CKT-II	
33kV NEHRU PLACE CKT-I	Entire Load shall be shifted to 33kV Nehru Place Ckt. from 220kV Masjid Moth S/Stn.
33kV NEHRU PLACE CKT-II	
33kV NEHRU PLACE CKT-IV	
33kV BALAJI CKT-I	Entire Load shall be shifted to 33kV Masjid Moth Ckt. from 220kV Masjid Moth S/Stn.
33kV BALAJI CKT-II	
33kV EAST OF KAILASH CKT	Entire Load shall be shifted to 33kV Lajpat Nagar ckt-II from 220kV Lodhi Road S/Stn (as per margin available at Lodhi Road Stn, 100MVA Tr.-1 is under shutdown since 06.11.2017).
33kV ALAKNANDA CKT-I	Entire Load shall be shifted to 33kV Alakhnanda Ckt. from 220kV Masjid Moth S/Stn.
33kV ALAKNANDA CKT-II	
33kV OKHLA Ph-II CKT-I	No direct source to the Okhla Ph-II grid and back feed arrangement required.
33kV OKHLA Ph-II CKT-II	
33kV TUGLAKABAD CKT	Part load shall be shifted to 66kV Malviya Nagar I&II from 220kV Mehrauli S/Stn & part load requires back feed arrangement.
33kV MASJID MOTH CKT	Entire Load shall be shifted to 33kV Masjid Moth Ckt. from 220kV Masjid Moth S/Stn.
66/11kV, 20MVA Tx-I	11kV Part load may be back feeded & part load requires back feed arrangement through 33kV (BRPL) via 33kV Okhla Stn.
66/11kV, 20MVA Tx-II	

In addition to above, there is a T-Off arrangement between 220kV BTPS-Mehrauli Ckt.-I and 220kV BTPS-Okhla Ckt.-II which can be used during the outage of 220kV 220kV BTPS-Okhla Ckt.-I&II to meet load of Okhla S/stn.

The following was deliberated and mutually agreed upon by all:-

(i)The Shutdown of 220kV BTPS-Okhla Ckts for 03 days were approved subject to healthiness/revival of T-Off connection between Mehrauli and Okhla Sub-stn. DTL requested that the required tree trimming work and conductor jumpering work should be done by DMRC in coordination with their O&M deptt. If the revival of T-Off connection is not found feasible, then shutdown will be granted after commissioning of 400kV Tughlakabad Sub-stn for maintaining uninterrupted supply in south Delhi areas.

(ii)It was ensured by BRPL that reliability of power will be maintained and load will be shifted to other sources.

2.2 Shutdown of 400kV BUS-I & BUS-II at 400kV Maharaniabagh from 09.01.2018 to 18.01.2018 (NRPC 142nd OCC Meeting Agenda).

PGCIL requested Shutdown of 400kV BUS-I & BUS-II at 400kV Maharani Bagh from 09.01.2018 to 18.01.2018 in 142nd NRPC OCC meeting held on 14.12.2017 to carry out the following works.

- (i) Rectification of Y and B Phase, B3 Module at 400 kV GIS of 315 MVA ICT 2 bay (Bay no 404)
- (ii) For above rectification work, SF₆ gas shall be evacuated from 400 kV Bus I & II adjoining to Y & B phase B -3 module. So, 400 kV BUS I & II shall remain out of service till reassembling.
- (iii) During shutdown, power evacuation from 400kV Bus-I & II from Maharani Bagh S/Stn shall be fully interrupted

The Shutdown of 400kV BUS-I & BUS-II at 400kV Maharani Bagh was taken earlier also during 24.11.2017 to 30.11.2017 as approved in Delhi OCC Meeting held on 20.11.017.

In view of India-Asean Special Commemorative Summit, scheduled to be held on 25-26 January 2018 in New Delhi and due to anticipation of fog in January month, SLDC Delhi requested NRPC to postpone the aforesaid shutdown for February-2018.

The matter was deliberated and it was informed that India-Asean Special Commemorative Summit is scheduled to be held on 25-26 January 2018 in New Delhi, for which uninterrupted power supply is to be maintained. In view of this and in anticipation of fog in January month, the shutdown were deferred till end of Feb month and will be reviewed in upcoming Delhi OCC meeting for the month of Feb-2018. Moreover 220kV Gazipur-M.Bagh ckt. is already under shutdown for PWD work w.e.f. 26.12.2017 to 23.01.2018. As such 220kV back feed arrangement through this ckt. is not possible.

2.3 Shutdown of 220kV Double ckt. Maharani Bagh – Gazipur T/L for the construction of Barapullah Phase-III Project.

SLDC received a letter vide refer no 23(54)/CPM(Flyover)/PWD/2017/664(H) from Chief Project Manager (Flyover) in which PWD have requested for shutdown of Single ckt. of 220kV Maharani Bagh – Gazipur to start the work.

The following was deliberated and mutually agreed upon by all:-

- (i) OCC took serious note about the delay in project for which shutdown of 220kV Double ckt. Maharani Bagh – Gazipur T/L at multiple occasions have been granted to PWD.**
- (ii) The shutdown of single ckt. of Maharani Bagh – Gazipur T/L have been tentatively approved w.e.f. 26.12.2017 to 23.01.2018 subject to revival of ckt. within two hrs. of intimation. Further shutdown will be reviewed in the next OCC meeting.**
- (iii) PWD will apply for shutdown and necessary coordination in this regard be done with Sh.M.P. Singh, Mgr.(T)O&M, Mob.No.-9999533800.**
- (iv) All the safety precautions and mandatory electrical clearances have to be maintained by PWD while executing the work as per the statutory guidelines/safety rules.**
- (v) PWD needs to complete the project in time bound manner, as repeated shutdown of 220kV Double ckt. Maharani Bagh – Gazipur T/L is not possible as this ckt. is very important link for catering the load of East Delhi areas.**

2.4 Reactive power compensation at 400kV & 220kV Level

Standing Committee of CEA has approved Bus Reactors during its 39th Meeting held on 29-30th May 2017. Delhi has to install Bus Reactors at 19 locations at 220kV Levels and 1 at 400kV Level. Sub station wise details are as under :

Sr. No.	Bus Name	Reactor proposed (in MVAR)
1	400kV Mundka	125
2	220kV Narela	25
3	220kV R.K.Puram	25
4	220kV Patparganj	2 x 25
5	220kV Maharani Bagh	2 x 25
6	220kV Bamnauli	25
7	220kV Subzi Mandi	2 x 25
8	220kV Gopalpur	2 x 25
9	220kV I.P.Stn.	2 x 25
10	220kV Geeta Colony	2 x 25
11	220kV Harsh Vihar	2 x 25
12	220kV Wazirabad	2 x 25
13	220kV Electric Lane	2 x 25
14	220kV Mandola	25
15	220kV AIIMS Trauma Centre	2 x 25
16	220kV Sarita Vihar	25
17	220kV Bawana	25
18	220kV Preet Vihar	25
19	220kV Mundka	25
20	220kV Masjid Moth	25

During 142nd OCC Meeting of NRPC, Delhi SLDC was asked to update the action taken by DTL.

The matter was deliberated and it was confirmed by DTL Planning deptt. that the scheme will be prepared and put up for approval within one month time frame. Further, it was directed that progress of the same will be updated by DTL Planning Deptt. on monthly basis in Delhi OCC meeting.

2.5 Revision of the document “system restoration procedure for Northern Region”.

NRLDC has requested all stake holders to update / comments on the system restoration procedure documents as detailed hereunder:

1. DG set capacity at IPGCL (GT) at the power station having Black start facility.
2. Traction (Indian railways / Delhi metro) supply details.
3. Start up power requirement details and start power path for generating stations.
4. Bus reactor details.
5. Synchronizing facilities in DTL system / Genco system.
6. List of captive power plants in delhi control area.
7. Discom Wise critical load.
8. Contact details (mobile/landline no./ email-Id) of the nodal officers identified for crisis management during Grid disturbance.
9. Any other relevant information for further improving the ‘system restoration Procedure.

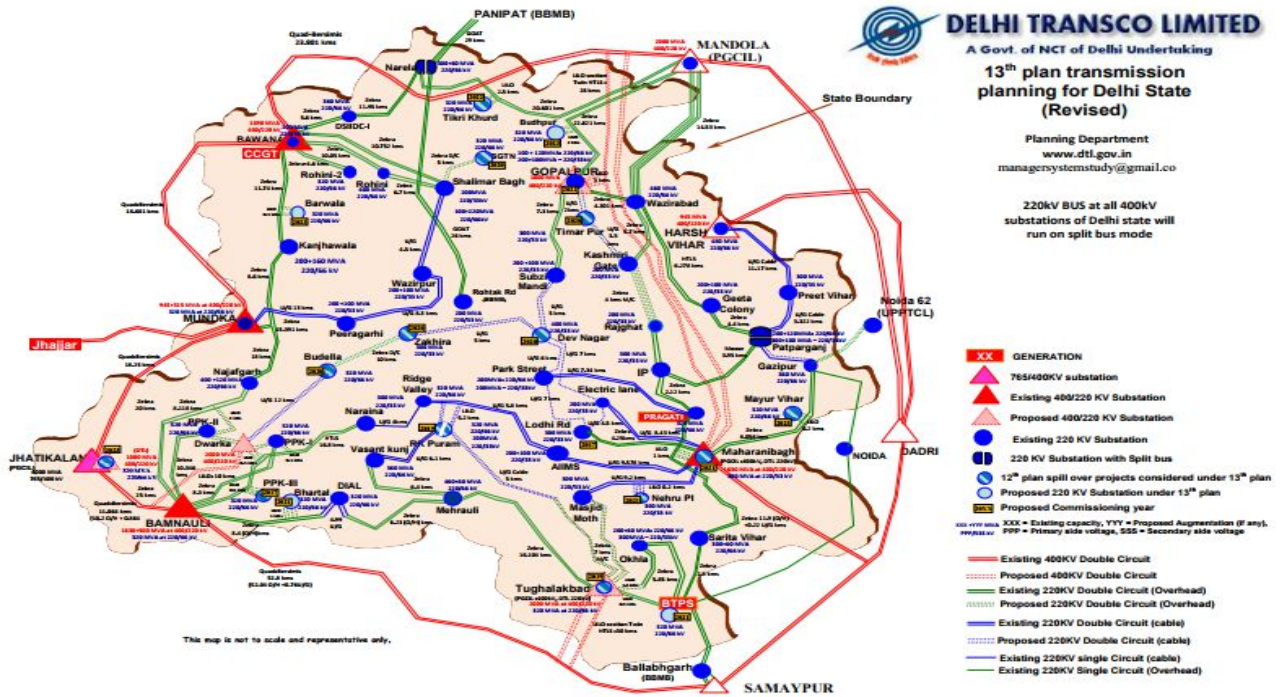
Accordingly, Delhi SLDC has compiled the point wise reply are as under :

- 1.Details of Black start capability of Gas power stations in Delhi

S. no	Name of G.stn	Fuel type	Whether station has black start capability (yes/no)	Whether Generating station is expected to self start as per the system Restoration procedure of Northern region	Installed capacity (in MW)	Black start source	Capacity of DG set /small Generator /Battery	Compliance to 5.8 (b) of IEGC for mock trial runs(last date mock drill carried out)	Whether self started on 30/07/12	Whether self starts on 31/07/12
1	I.P.Gas turbine (IPGCL G.T)	Gas	Yes	Yes	270	DG set	500KVA	No	Yes

The other Generating stations in Delhi do not have Black start facilities.

2. Power map of Delhi state is as under:



3. Network changes since December 2016.

(a) 220kV Harsh Vihar- Preet vihar (double UG cables) and Preet Vihar –Patparganj (double UG cables) added in Delhi system in Dec-2016.

The same changes done in power map .

4. Existing Recovery procedure for the respective states being published by SLDCs.

The updation work is in process, the draft of recovery procedure will be submitted in Delhi OCC meeting of Dec-17 and finalized accordingly.

5. Traction supply details (As per formats enclosed)

DMRC-

S. No.	Name of RSS	NAME OF DMRC FEEDER	FEEDING 220kV SUB STATION
1	Kashmiri gate	220 kV DMRC ckt-I	Kashmiri Gate
2	Kashmiri gate	220 kV DMRC ckt-II	Kashmiri gate
3	Rithala	66kV DMRC-I	Rohini-I

4	Rithala	66kV DMRC-II	Rohini-I
5	Jahangirpuri	220kV DMRC-I	Shalimar bagh
6	New delhi	66kV DMRC-I	Gtps. Gen.station
7	New delhi	66kV DMRC-II	Gtps. Gen.station
8	Chattarpur	66kV DMRC-I	Mehrauli
9	Chattarpur	66kV DMRC-II	Mehrauli
10	Subash nagar	66kV DMRC-I	Papankalan-I
11	Subash nagar	66kV DMRC-II	Papankalan-I
12	Dwarka	66kV DMRC-I	Papankalan-II
13	Dwarka	66kV DMRC-II	Papankalan-II
14	Airport	66kV DMRC-I	Dial
15	Airport	66kV DMRC-II	Dial
16	Sarita vihar	66kV DMRC-I	Sarita Vihar
17	Sarita vihar	66kV DMRC-II	Sarita Vihar
18	Airport	66kV DAMPEL	Parkstreet
19	Airport	66kV DMRC-II	Parkstreet
20	R.k.puram	220kV R.K.Puram ckt-I (Charged at 66kV)	Vasantkunj
21	R.k.puram	220kV R.K.Puram ckt-II (Charged at 66kV)	Vasantkunj

Indian Railways-

S.No.	Feeding Source	Remarks
1	220kV Narela	66kV A-7 Ckt-I & II
2	220kV DSIDC Bawana	66kV DSIDC-II Ckt. I&II
3	220kV Ridge Valley	66kV Ckts.

6. Start-up path for major Generating stations in respective control area.

S.No.	Name of Generating station	Start-up path details
1	BTPS	<p>In case of survival of Delhi inner ring, The supply shall immediately extend start-up power to Badarpur. In order to strengthen the survived network, it shall be synchronized, at the earliest, with the supply from Faridabad (Gas) on 220 kV Ballabgarh-BTPS Ckt. at BTPS.</p> <p>In case of collapse / non-survival of Delhi inner ring, IPGCL GT station having 30MW capacity units shall self start and supply to be extended for meeting the emergency loads, to Badarpur as start-up power and to Park Street for railway traction. The built-up system would be synchronized with the supply available from Faridabad (gas) at the first opportunity</p>

2	GTPS	(i) In case of survival of Delhi inner ring, The supply shall immediately extend start-up power to GTPS From (Maharanibagh/mandola/harsh viahr). (ii)In case of collapse / non-survival of Delhi inner ring, IPGCL GT station having 30MW capacity units shall self start .
3	PPCL-I	(i) In case of survival of Delhi inner ring, The supply shall immediately extend start-up power to PPCL-I from (Maharanibagh/mandola/harsh viahr). (ii) In case of collapse / non-survival of Delhi inner ring, IPGCL GT station having 30MW capacity units shall self start and supply to be extended for meeting the emergency loads, to PPCL-I as start-up power and to Park Street for railway traction.
4	PPCL-III (Bawana)	In case of survival of Delhi inner ring, The supply shall immediately extend start-up power to PPCL-III (Bawana) in coordination with NRLDC .

7. Shunt reactive resources (Line reactors /Bus reactors):

Line Reactors:

S.No.	Utility	Name of Line	Ckt.	Rating of Reactor (MVAR)	Installed at Station	Switchable	Provision to use as reactor	Healthiness
--		Nil	--	--	--	--	--	--

Bus Reactors:

S.No.	Utility	Name of Substation	Rating MVar	Configuration	Remarks
--		Nil	--	--	--

8. Synchronizing facilities at 132 kV /220kV /400kV & 765kV sub stations.

Yes synchronizing facilities is available in DTL system.

9. List of captive power plants in delhi control area.

Nil

10. Contact details (Mobile /landline number /email ID) of the nodal officers identified for crisis management during grid disturbance.

S.No.	Name	Designation	Phone No.	Email-ID
1	Shri H.Vyas	ED (T)	9999533631	harjiwan.vyas@gmail.com
2	Shri S.K.Sinha	DGM(SO)	9999533673	sinha.surendra@yahoo.com
3	Shri Pradeep katiyar	DGM(SLDC)	9999533676	pradeepkatiyar03@yahoo.co.in
4	Sh. Naveen Goel	Manager (T) SO	9999533950	naveengoel06@gmail.com

5	SLDC Control Room	Shift Incharge	011-23221046 23221098/99	dtldata@gmail.com dtldata@yahoo.co.in
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11. Any other relevant information for further improving the 'system restoration Procedure.
NIL

The compiled details were discussed in the meeting, wherein OCC advised that Discoms/DMRC to update details to SLDC within one week time frame. All the Discoms as well as DMRC shall update their network chart upto 66/33kV level and submit the same to SLDC/OCC in proper colour coding.

Representative of DTL Planning deptt. confirmed that Delhi power map will be updated within two weeks.

SLDC to follow up for the same.

2.6 Uninterrupted power supply at all venues during India-Asean Special Commemorative Summit-2018 in New Delhi

SLDC have received a copy of letter from Department of Power, Government of NCT of Delhi to ensure uninterrupted power supply at all venues during India-Asean Special Commemorative Summit-2018 in New Delhi (Annex-III) during the period 25-26 January 2018. NDMC & Discoms are requested to share the action plan for the power supply arrangement as well as contingency plan for the summit.

OCC noted the above and consensus was made that no planned shutdown be availed during 25-26 Jan 2018.

2.7 Agriculture Load of Delhi (Format – 29)

SLDC is submitting Format 29 to NRPC on monthly basis. One of the point of Format 29 is Agriculture load. SLDC is submitting the agriculture load data as nil in its report. During 142nd OCC Meeting of NRPC, Delhi SLDC was specifically told to provide the details regarding the agriculture load of Delhi.

After deliberation, OCC advised that the identified agricultural load be submitted by Discoms to SLDC. SLDC to follow up for the same.

2.8 System restoration Procedure for Delhi state

A) Recovery procedure for restoration of grid

Reform in power sector was carried out in July 2002 and power demand of Delhi has grown. To cater the growing demand new power system elements have added. After the grid incidence of 30-31 July 2012 Islanding scheme was implemented in Delhi. Indian Electricity Grid Code also state that each state has to maintain their own system restoration procedure to deal with contingencies. Relevant portion of IEGC is reproduced hereunder:

As per IEGC Clause 5.8

- a. Detailed plans and procedures for restoration of the regional grid under partial/total blackout shall be developed by RLDC in consultation with NLDC, all Users, STU, SLDC, CTU and RPC Secretariat and shall be reviewed / updated annually.*

- b. *Detailed plans and procedures for restoration after partial/total blackout of each User's/STU/CTU system within a Region will be finalized by the concerned User's/STU/CTU in coordination with the RLDC. The procedure will be reviewed, confirmed and/or revised once every subsequent year. Mock trial runs of the procedure for different subsystems shall be carried out by the Users/CTU/STU at least once every six months under intimation to the RLDC. Diesel Generator sets for black start would be tested on weekly basis and test report shall be sent to RLDC on quarterly basis.*

Following information may please be updated:

1. DG set capacity at IPGCL (GT) at the power station having Black start facility.
2. Traction (Indian railways / Delhi metro) supply details.
3. Start up power requirement details and start power path for generating stations.
4. Bus reactor details.
5. Synchronizing facilities in DTL system / Genco system.
6. List of captive power plants in delhi control area.
7. Discom Wise critical load.
8. Contact details (mobile/landline no./ email-Id) of the nodal officers identified for crisis management during Grid disturbance.
9. Any other relevant information for further improving the 'system restoration Procedure.

The information has been received from GTPS and PPCL Bawana. It is requested to other utilities to furnish the details before finalization of draft on system restoration procedure.

SLDC has prepared a draft system restoration procedure for Delhi and it was presented in OCC Meeting.

It is requested to all the utilities to give their valuable comments to finalize the draft procedure which was circulated to all utilities through e.mail on 27.12.2017.

B) Mock trial of Black-start Exercise of GT (IPGCL):

IPGCL (GT) may please give schedule to SLDC and OS Department of DTL so that a mock start exercise can be done accordingly.

A presentation shall be given by IPGCL (G.T.) representatives on Black-start Exercise of GT and finalize a tentative date for Mock Trial.

It was deliberated that SLDC will update the date for mock trial of GTPS in next OCC meeting.

2.9 RGMO/FGMO compliance by generators in the region (Agenda based on letter by CERC).

CERC (IEGC) 5th amendment of IEGC dated 12.04.2017 provides that all Coal/lignite based thermal generating units of 200 MW and above, Open Cycle Gas Turbine/Combined Cycle generating stations having gas turbines of capacity more than 50 MW each and all hydro units of 25 MW and above should provide RGMO/FGMO response. Further, it has been provided at Regulation 5.2(h) that 'RLDCs/SLDCs should not schedule the generating station or unit(s) thereof beyond ex-bus generation corresponding to 100% of the installed capacity of the generating station or unit(s) thereof and that the generating station shall not resort to Valve Wide Open operation of units" so that primary response is ensured. CERC in its letter dated

05.06.2017 has directed to obtain the status of availability of RGMO/FGMO response from the generators (ISGS as well as intra-state generators) in the region.

The latest status of RGMO/FGMO available with NRPC is given below in Table -1. All the Utilities are requested to check and update this status.

Table -1

S.No.	Power Station	Unit size	No of units	Installed Capacity	Status of RGMO/FGMO					Reason for seeking exemption/ extension	Status not available	Remarks
					Units required to operate under RGMO/ FGMO as per IEGC	Units operating under RGMO	Units operating under FGMO with manual control to achieve RGMO	Units operating with inoperative governor /locked governor	Units exempted from RGMO/ FGMO by CERC			
CENTRAL SECTOR												
NTPC (Thermal)												
1	Badarpur TPS	3x95 + 2x210	5	705	2	0	0	2	0	2	Mechanical governors	
Delhi												
4	Indra Prastha Gas station	6x30+3x34	9	282.00	0	0	0	0	0			
5	Pragati Gas Turbines	2x104+1x122	3	330	3	0	0	0	0			
6	Bawana	4x216+2x253	6	1370	6	0	0	0	0			
7	Rajghat TPS	2x67.5	2	135	0	0	0	0	0			
8	Rithala GPS	3x36	3	108	0							

BTPS representative intimated that as per CERC order, Nashik scheme has been implemented in Unit#4 & Unit#5 in Feb'17 & Dec'16 respectively for RGMO. But As Units were not in service till 31.3.2017, as per DPCC order, RGMO couldn't put into service in Unit#4&5. Subsequently when it was tried in Unit#4, severe load hunting was observed with very little change in frequency. So, Units were kept in "FGMO with Manual Intervention". As both Unit no#4&5 are taken under shutdown from 17.10.2017 as per DPCC order this problem is being sorted out.

PPCL representative intimated that they are pursuing the matter with their OEM regarding details of RGMO / FGMO of PPCL-I & PPCL –III. The same is likely to be implemented by Dec 2017 end.

Representative of GTPS informed that RGMO/FGMO is not applicable for their plant as each of the gas turbine unit is of 30 MW capacity.

Representative of PPCL updated that the scheme is likely to be implemented by Jan 2018.

2.10 SCADA mapping of RGMO/FGMO signal by the respective utilities of Northern Region.

The matter was discussed and decided in 138th NRPC- OCC Meeting for SCADA Mapping of RGMO/FGMO signals in respective control area.

The matter was deliberated and OCC advised PPCL (Pragati and Bawana) to provide the relevant signal in coordination with DTL SCADA Deptt.

During the discussion, it was deliberated that the SCADA mapping of RGMO/FGMO signal will be done after implementation of RGMO/FGMO scheme by PPCL.

2.11 High Voltage in the Grid:

High Voltage in the Grid is continuously prevailing for the major part of the day and further escalates during night hours due to light load condition. The matter was also discussed in the OCC meeting held on 30.10.17. OCC took serious view on this and decided to take all necessary actions to curb reactive injections in grid including the following:-

- A. Switching off the capacitors at all the Substations of Delhi, but during winter season proper monitoring of the same is yet to be put in place.
- B. Transformer taps optimization by DTL and DISCOM. DTL has changed Taps positions of most of the transformers at 220kV S/Stns. (list of Tx. taps details of DTL as on 15.12.17 is enclosed in Annexure-IV).
- C. Monitoring of all 400/220 kV ICTs and taking actions wherein VAR flows are observed from 220 kV to 400 kV side. In this respect reactive energy accounts could also be monitored.
- D. Opening of lightly loaded transmission cables/ transmission lines keeping reliability in focus.
- E. Absorption of reactive power by generating units.

As decided in the last OCC Meeting no. of steps have been taken by SLDC, Delhi and Discoms to control the high voltage conditions and reactive power injection by Delhi system to the grid particularly during off peak time.

Opening of feeders at 220kV Level by SLDC .

The following feeders have been identified and being opened during the period 22.00hrs. to 06.00hrs.

Sr. No.	Name of Stn.	Name of Ckt.	Elements to be opened
1	Maharani Bagh	Trauma Centre	Single Ckt. at both ends
2	Trauma Centre	Ridge Valley	Single ckt. at both ends
3	Mundka	Peeragarhi	Single Ckt. at both ends
4	Peeragarhi	Wazirpur	Single ckt. at both ends
5	Shalimarbagh	Wazirpur	Both ckt. at both ends
6	Pragati	Park street	Single ckt. at both ends
7	Maharani Bagh	Masjid moth	Single Ckt. at both ends
8		Electric Lane	Both Ckt. at both ends
9	Harsh Vihar	Preet Vihar	Single Ckt. at both ends
10	Preet Vihar	Patparganj	Single Ckt. at both ends
11	Patparganj	Gazipur	Single Ckt. at both ends
12	Bawana	Khanjawala	Single Ckt. at both ends
13		Shalimarbagh	Single Ckt. at both ends
14	Rohini - I	Shalimarbagh	Both Ckt. at both ends

Following 66kV /33kV feeders are also being opened during night hours on request of BYPL

Sr. No.	Name of Stn.	Name of Ckt.	Elements to be opened
1	Parkstreet	33kV Faiz Rd	Single Ckt. at both ends
2		33kV Motia khan	Single ckt. at both ends
3	IP	33kV Bay-18 ,DDU	Single Ckt. at both ends

4		33kV G.B.Pant	Single ckt. at both ends
5		33kV Delhi gate	Single ckt. at both ends
6		33kV Minto Road	Single ckt. at both ends
7	Rajghat	33kV Jama masjid	Single Ckt. at both ends
8		33kV Town hall	Single Ckt. at both ends
9	Patparganj	66kV GH-I	Single Ckt. at both ends
10		66kV Khichripur	Single Ckt. at both ends
11		33kV Guru-Angad Nagar	Single Ckt. at both ends
12	Gazipur	66kV PPG-Industrial Area	Single Ckt. at both ends
14	Wazirabad	66kV Yamuna vihar	Single Ckt. at both ends
15		66kV Shastri park	Single Ckt. at both ends
16	Geeta colony	33kV Shakarpur	Single Ckt. at both ends
17		33kV Geeta colony	Single Ckt. at both ends

In spite of taking all the above action, situation has not improved. There were multiple tripping on 12.11.2017 at 400kV Maharani Bagh S/stn. due to high voltage. Delhi is injecting reactive power to grid during high voltage condition.

Reactive power flow in the grid for 18.12.2017 at 02.59.59 hrs. is as under :

REACTIVE POWER FLOW 18 12 17 2 :59:59					
SL NO	DRAWAL POINTS	MW	MVAR	VOLTAGE	
				400 KV	220 KV
1	BTPS BBMB	-38	-8		239
2	NARELA BBMB	23	-2		243
3	NARELA DTL-PANIPAT CKTS	61	-42		242
4	ROHTAK ROAD BBMB	38	-10		243
5	BAMNAULI	246	-204	423	
6	BAWANA	322	-130	428	
7	MAHARANIBAGH	R 188	S -174	431	
8	MANDAULA	236	S 279	S 416	
9	MUNDKA	61	-31	422	
10	HARSH VIHAR	30	-3	430	
TOTAL MVAR INJECTION AT HIGH VOLTAGE(PENALTY)		S -604	MVAR		
TOTAL MVAR DRAWAL AT LOW VOLTAGE(PENALTY)			MVAR		

[BACK TO SUMMARY](#)

Discom system were also injecting reactive power in Delhi system. Details as on 18.12.2017 at 02.59.59hrs. are given below :

Name of S/Stn.	Load in MW	MVAR
GOPALPUR	33.21	-9.68
Rohini-2	17	-9
DSIDC	73.87	-27.11
Mundka	21	-16
Through Rohtak Road grid of BBMB	38.2	-10.5
Papankalan-2	60.31	-36.34
Okhla	49.92	-15.23
Sarita Vihar	22.78	-40.2
Vasant Kunj	31.72	-27.85
Parkstreet	53.3	-19.36
PRAGATI	-8.94	-19.88
IPStation	51	-9.28

Financially also Delhi is payable to NRPC reactive pool account. Penalty amount has increased with the progress of winter. The details of NRPC reactive account bill for last seven weeks i.e. from 16.10.17 to 03.12.17 is as under:

Sr. No.	Weeks	Delhi payable (in Lakhs)	Delhi receivable (in Lakhs)
1	16.10.17 to 22.10.17	--	0.76038
2	23.10.17 to 29.10.17	2.21401	--
3	30.10.17 to 05.11.17	7.36426	--
4	06.11.17 to 12.11.17	19.35212	--
5	13.11.17 to 19.11.17	21.28275	--
6	20.11.17 to 26.11.17	29.15394	--
7	27.11.17 to 03.12.17	29.81707	--

The matter was deliberated and OCC took serious note on MVAR injection in the grid by the utilities leading to financial loss. The following was mutually agreed to be executed:-

(i) The Tap position of all the transformers are to be submitted by all the Discoms to SLDC. SLDC to follow up for the same.

(ii) TPDDL, BRPL, DMRC and NDMC should submit the details of under-loaded U/G cables to SLDC for switching off during night hours on daily basis latest by 18:00 hrs.

(iii) SLDC to ensure switching off the cables (on no load or under load) at both ends in coordination with Discoms control room.

3. Planned Shutdowns

3.1 Proposed planned shutdowns of O&M, DTL

DTL O&M deptt. has proposed the planned shutdowns for the month of Jan-2018 as per enclosed Annexure.

After deliberation, the shutdowns were approved subject to real time loading conditions. Regarding the shutdowns for transformer overhauling, DTL O&M deptt. has to submit the parameters of test results prior to overhauling and post overhauling to DTL OS deptt. in soft copy as well as hard copy for comparison/improvement purpose.

4. PPCL Agenda

4.1 Request for UI waiver due to change in Past SG data in Injection Schedules.

Regarding abrupt scheduling by SLDC & manipulation in past SG data since the starting of Web Based Scheduling (WBS) which are still unresolved. PPCL have raised their concerns which are as under:

1. **Abrupt scheduling** wherein the Injection Schedules (IS) are issued very frequently **defying the 4th time block rule** for SG implementation which creates confusion regarding the running schedule on real time basis.
2. **Past data of Schedule Generation (SG) gets changed** in the upcoming revisions and the scenario is totally changed in the final revision which makes the reconciliation of the SG very difficult. Whereas Generators gets only 4th block to punch its DC on the portal while SLDC has full rights to change the SG of past time slots as well, which is not justified. Some Instances with huge commercial implications are as tabulated below:

Date	Disputed Time Slot	Reference	Remarks	UI/DSM (MUs)
12/11/2017	11:45 – 13:15	Injection Schedule (IS) revisions 11,12 & 17.	In IS revision no. 17 issued at 12:57 SG on CCNG component is revised from 120 MW to 230 MW in back time wef 11:45 hrs.	- 0.165 MUs
15/11/2017	10:45 – 12:00	Injection Schedule (IS) revisions 13,14 & 20.	In IS revision no. 20 issued at 15:17 hrs. CCNG component is revised from 125 MW to 220MW in back time wef 10:45 hrs.	- 0.119 MUs
15/11/2017	14:00– 16:00	Injection Schedule (IS) revisions 19 & 20.	In IS revision no. 20 issued at 15:17 hrs CCNG component is revised from 230 MW to 290 MW in back time wef 14.00 Hrs	- 0.120 MUs

3. **Abnormal scheduling:** Injection Schedules (IS) are issued without considering the operating condition (**Ramp Up/ Ramp Down Rate/ Minimum Technical Limit**) of the running units.

09/12/2017	18:30– 24:00	Injection Schedule (IS) revision no. 18, 19, 20,21 & 23	<p>IS changed very abruptly on OCSPOT on this day as :</p> <ul style="list-style-type: none"> a) In IS 18 issued at 20:33 asking to increase generation by 80MW at 19:00 hrs. and 90 to 470 MW on OCSPOT at 21:00 hrs., in one time block. b) In IS 19 issued at 21:45, SG changed from 470 to 170 MW in one time block on OCSPOT wef 21:30 hrs. c) In IS 20 issued at 22:24, SG changed from 170 to 470 MW in one time block on OCSPOT wef 22:30 hrs. d) In IS 21 issued at 22:45, SG changed from 470 to 265 MW in one time block on OCSPOT wef 23:00 hrs. e) In IS 23 issued at 23:27, SG changed from 265 to 130 MW in one time block on OCSPOT wef 23:00 hrs. <p>While granting SG, proper Ramp rate must be considered to ensure smooth transition.</p>
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PPCL have requested that SLDC to waive off any UI/DSM arising out of this manipulation in past SG data and abnormal scheduling and take necessary action in this matter.

The matter was deliberated and OCC advised that PPCL should take up the matter with SLDC separately to resolve the issue.

5. BRPL Agenda

5.1. BRPL have informed that at 220kV Sub-stations 11KV feeders voltage is still on higher side. They have requested for the desired corrective action.

The rise in voltage issue have already been discussed at Agenda S.No.-2.11. Further, it was informed by DTL that tap position of almost all the transformers have already been lowered.

5.2. BRPL have requested that ILBS being sensitive and critical hospital, the 66kV Vasant Kunj C-1, C-2 feeder from 220kV Mehrauli and Vasant Kunj should be on different 66kV Bus where outgoing feeder DMRC is charged.

The matter was deliberated and OCC advised that DTL should explore the possibility to switch on the 66kV Bus coupler after studying the fault level.

5.3. At 220kV Masjid moth Sub-stn, due to frequent interruptions VIP consumers and HT consumers get agitated.

The matter was deliberated and OCC advised that changeover of 33kV feeders, especially 33kV Okhla-Nehru place ckt.-I & II be done with prior information to Discom control room.

6. Long/Recent Outage/Breakdown of Elements in Delhi power system.

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

S.N	Element's Name	Discom/DTL	Date and Time of outage	Latest updated status of Outage
1.	33kV BAY -3 (IP – KILOKARI)	BRPL	22.02.2011	Clearance from Railways for laying of Underground cables near Bhairon Road is pending. OCC advised BRPL to inform DTL after awarding of the said work. During the OCC meeting dt.-28.11.2016, It was deliberated that the above work shall be started after joint inspection with Railways.
2.	33kV RIDGE VALLEY - KHEBAR LINE CKT.-II	BRPL	31.01.2016	R-PHASE SINGLE CABLE FAULTY. Permission awaited from NH.
3.	66kV VASANT KUNJ INSTL.AREA-RIDGE VALLEY CKT.-I	BRPL	26.03.2017	UNDER SHUTDOWN.
4.	16MVA PR.TR.-IV AT D.C. SAKET	BRPL	14.12.2017	UNDER SHUTDOWN. Expected by 22.12.2017.
5.	5MVA PR.TR.-I AT BIJWASAN	BRPL	18.12.2017	UNDER SHUTDOWN. Ckt energized on 20.12.2017.
6.	66kV MUNDKA - NANGLOI CKT.	BRPL	08.05.2017	B & Y-PH CABLE FAULTY. Expected by 15.01.2018.
7.	20MVA PR.TR.-II AT VISHAL	BRPL	05.12.2017	UNDER SHUTDOWN. Ckt energized on 21.12.2017.
8.	50MVA PR.TR.-II AT PASCHIM VIHAR	BRPL	07.12.2017	UNDER SHUTDOWN. Ckt energized on 21.12.2017.
9.	66kV BODELLA -II PASCHIM VIHAR CKT.-I & II	BRPL	14.12.2017	UNDER SHUTDOWN. Ckt energized on 20.12.2017.
10.	66kV PPG - AKSHARDHAM CKT	BYPL	06.08.2017	CABLE FAULTY. Expected by 20.01.2018.
11.	66kV KHICHRIPUR - PPG INDL. AREA CKT.-I	BYPL	05.09.2017	R, Y & B-PHASE CABLE FAULTY. Ckt energized on 19.12.2017.
12.	66kV KHICHRIPUR - PPG INDL. AREA CKT.-II	BYPL	05.09.2017	R, Y & B-PHASE CABLE FAULTY. Ckt energized on 18.12.2017.
13.	66kV BHAGIRATHI - KARAWAL NAGAR CKT.-I	BYPL	18.12.2017	SINGLE CABLE FAULTY. Ckt energized on 21.12.2017.
14.	33kV SUBZI MANDI - SHAHZADA BAGH CKT-II	TPDDL		CABLE FAULTY. Expected by 15.01.2018.
15.	33kV TRAUMA CENTRE - RAJIV GANDHI BHAWAN CKT.	NDMC		R-PHASE CABLE FAULTY. Revival under process.
16.	400kV BAWANA - MUNDKA CKT.-I&II	DTL	14.05.2017	Legs of tower no.-116 twisted due to fire beneath the line. Ckt.- I & II energized upto tower no. 115 from Bawana end. Jumper opened at tower no. 115.Order placed and completion of work expected by 31.12.2017.
17.	315MVA ICT-II AT 400kV BAWANA	DTL	30.11.2017	400kV SIDE R-PH. BUSHING DAMAGED AND Y-PH. BUSHING ON 220kV SIDE (LV SIDE) DAMAGED. Under process for repair works.
18.	220/33kV 100MVA PR.TR.-I AT 220kV NARAINA	DTL	26.07.2017	Transformer damaged due to fire. Another Transformer to be supplied by PGCIL against MOU-II.
19.	220kV BAMNAULI - NARAINA CKT.-I	DTL	05.12.2017	SHUT DOWN FOR LILO WORK AT 220kV PAPANKALAN –III. This ckt

				LILOed at PPK-III and energized on 27.12.2017.
20.	220kV LODHI ROAD - MAHARANI BAGH CKT.-I	DTL	10.12.2017	SHUT DOWN FOR CONNECTING CABLE END TERMINATION BUSHING OF 100MVA PR.TR.-I FOR SAFETY PURPOSE. Expected by 28.12.2017.
21.	220kV PATPARGANJ - GAZIPUR CKT.	DTL	16.12.2017	SHUT DOWN FOR TK REPLACEMENT. Energized on 20.12.2017.

Additional Agenda for discussion in the OCC meeting

6. DTL Agenda

6.1 Status of Hot Reserve of transformers at all levels.

The representative of DTL Planning Deptt. informed that the matter regarding Hot Reserve of Transformers was discussed in details in the last Steering Committee meeting held on 30.10.2017 wherein it was agreed for the provision of Hot Reserve as listed in the table given below. The latest updated hot reserve capacity along with the details is given here under:

S. No.	Transformation Capacity	Population in no.	Hot Reserve (No.) Decided	Status as on present date
1.	400/220kV, 500MVA ICT	2	1x500MVA	One of the 315MVA transformers damaged at 400kV Bawana was to be treated as Hot Reserve after its repair. However, it has now been informed that the same may not be possible for repair.
2.	400/220kV, 315MVA ICT	14		In view of the above, the matter was deliberated in the Steering Committee Meeting wherein it was decided that in case of damage of 315 MVA transformer in future, the same would also be replaced with 500 MVA transformer as the future upcoming transformers are of 500MVA capacity. Thus, one transformer of 500MVA capacity would serve as Hot Reserve for both 500MVA and 315 MVA Power Transformers and the same would be placed at Bamnauli in 2019-20. By the time 2000MVA (4x500 MVA) Tughlakabad and 2000MVA (4x500 MVA) Dwarka sub-station would also be commissioned easing the loading condition of the existing 400kV sub-stations and creating further redundancy in the 400kV transmission system.
3.	220/66kV, 160MVA	22	2x160MVA +1x100 MVA	1 No. 160 MVA Hot Reserve transformer is to be kept at Mundka as approved in last SCM held on 29.06.17.
4.	220/66kV, 100MVA	42		Considering the population and ageing of 100 MVA, 220/66kV Transformers, it was decided that 1 more 160 MVA, 220/66kV transformer is to be kept as Hot reserve which will serve as Hot reserve for both 220/66kV, 100 MVA and 160 MVA transformers. Thus, there will be 2 No. 220/66kV, 160 MVA transformers as Hot Reserve . The 2nd 160 MVA Hot Reserve transformer will be placed at 220kV Rohini-II.

				<p>The hot reserve would be provided by the year 2019-20.</p> <p>The 100MVA, 220/66kV Transformer damaged at Pappankalan-I would also be placed as Hot Reserve at PPK-I after its repair.</p>																																													
5	220/33kV, 100MVA	37	2	<p>1 No. 220/33kV, 100MVA transformer as hot reserve has already been approved for 220kV Patparganj. Considering the population and ageing of 100 MVA, 220/33kV Transformers, it was decided in the SCM held on 30.10.17 that 1 more 100 MVA, 220/33kV transformer is to be kept as Hot reserve. Thus, there will be 2 No. 220/33kV, 100 MVA transformers as Hot Reserve. The second Hot reserve will be placed at 220kV Kashmiri Gate. The second hot reserve would be provided by 2019-20.</p>																																													
6	66/11kV 20MVA	24	NIL	<p>Steering Committee in its meeting held on 15.03.2017 has decided that in case of exigency, the Discoms may provide these transformer on returnable basis.</p> <p>As per the Business Plan 2017-22, the outlived transformers would be replaced in a phased manner as below:-</p> <table border="1"> <thead> <tr> <th>S. N</th> <th>Sub Station</th> <th>Details of existing Tx.</th> <th>Augmentation Plan</th> <th>Year as per Business Plan</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Lodhi Road</td> <td>2 no 33/11kV 16MVA</td> <td>2 no 33/11kV 25MVA</td> <td>2018-19</td> </tr> <tr> <td>2</td> <td>Najafgarh</td> <td>2 no 66/11kV 20MVA</td> <td>2 no 33/11kV 31.5MVA</td> <td>2019-20</td> </tr> <tr> <td>3</td> <td>Okhla</td> <td>2 no 66/11kV 20MVA</td> <td>2 no 66/11kV 31.5MVA</td> <td>2019-20</td> </tr> <tr> <td>4</td> <td>Sarita Vihar</td> <td>2 no 66/11kV 20MVA</td> <td>2 no 66/11kV 31.5MVA</td> <td>2019-20</td> </tr> <tr> <td>5</td> <td>Gopalpur</td> <td>2 no 33/11kV 16MVA</td> <td>2 no 33/11kV 25MVA</td> <td>2018-19</td> </tr> <tr> <td>6</td> <td>Subzi Mandi</td> <td>2 no 33/11kV 16MVA</td> <td>2 no 33/11kV 25MVA</td> <td>2019-20</td> </tr> <tr> <td>7</td> <td>Pappankalan-I</td> <td>2 no 66/11kV 20MVA</td> <td>2 no 66/11kV 31.5MVA</td> <td>2020-21</td> </tr> <tr> <td>8</td> <td>Mehrauli</td> <td>2 no 66/11kV 20MVA</td> <td>2 no 66/11kV 31.5MVA</td> <td>2021-22</td> </tr> </tbody> </table> <p>In the Steering Committee Meeting held on 30.10.17 it was decided that since the entire load of 11kV at 220kV Gopalpur has been shifted to Dheerpur sub-station by TPDDL, the 33/11 kV transformer will not be replaced at 220kV Gopalpur.</p> <p>It was also decided not to replace the 33/11kV transformers at 220kV Subzi Mandi also as TPDDL has plan to shift the entire load of 11kV system in near future.</p>	S. N	Sub Station	Details of existing Tx.	Augmentation Plan	Year as per Business Plan	1	Lodhi Road	2 no 33/11kV 16MVA	2 no 33/11kV 25MVA	2018-19	2	Najafgarh	2 no 66/11kV 20MVA	2 no 33/11kV 31.5MVA	2019-20	3	Okhla	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2019-20	4	Sarita Vihar	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2019-20	5	Gopalpur	2 no 33/11kV 16MVA	2 no 33/11kV 25MVA	2018-19	6	Subzi Mandi	2 no 33/11kV 16MVA	2 no 33/11kV 25MVA	2019-20	7	Pappankalan-I	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2020-21	8	Mehrauli	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2021-22
S. N	Sub Station	Details of existing Tx.	Augmentation Plan	Year as per Business Plan																																													
1	Lodhi Road	2 no 33/11kV 16MVA	2 no 33/11kV 25MVA	2018-19																																													
2	Najafgarh	2 no 66/11kV 20MVA	2 no 33/11kV 31.5MVA	2019-20																																													
3	Okhla	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2019-20																																													
4	Sarita Vihar	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2019-20																																													
5	Gopalpur	2 no 33/11kV 16MVA	2 no 33/11kV 25MVA	2018-19																																													
6	Subzi Mandi	2 no 33/11kV 16MVA	2 no 33/11kV 25MVA	2019-20																																													
7	Pappankalan-I	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2020-21																																													
8	Mehrauli	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2021-22																																													
7	33/11kV 16MVA	16																																															

Note: Further, it was also noted that the O&M Department of DTL has proposed for replacement of outlived transformers at various locations as per the details given below:

1. Augmentation of 100MVA, 220/66kV Transformer with 160MVA, 220/66kV Transformer:

S. No.	Transformer Details	Qty.	Reason
1.	100MVA Transformer at 220kV S/Stn. Sarita Vihar	1 No.	Outlived
2.	100MVA Transformer at 220kV S/Stn. Narela	1 No.	Outlived
3.	100MVA Transformer at 220kV S/Stn. Najafgarh	2 No.	Outlived
4.	100MVA Transformer at 220kV S/Stn. Okhla	2 No.	Outlived
5.	100MVA Transformer at 220kV S/Stn. Mehrauli	1 No.	Outlived
6.	100MVA Transformer at 220kV S/Stn. Patparganj	2 No.	Outlived
7.	100MVA Transformer at 220kV S/Stn. Mehrauli commissioned in 1984	1 No.	Outlived
8.	100MVA Transformer at 220kV S/Stn. Rohini-I commissioned in 1993	1 No.	Approaching end of useful life of 25 years.
Total		11 Nos.	

2. Replacement of 100MVA, 220/33kV Transformers:

Sr. No.	Transformer Details	Qty.	Reason
1.	100MVA Transformer at 220kV S/Stn. Rajghat commissioned in 1986	1 No.	Outlived
2.	100MVA Transformer at 220kV S/Stn. Subzi Mandi commissioned in 1992	1 No.	Outlived
3.	100MVA Transformer at 220kV S/Stn. Lodhi Road commissioned in 1994	1 No.	Approaching end of useful life of 25 years (damaged)
4.	100MVA Transformer at 220kV S/Stn. Shalimar Bagh commissioned in 1989	1 No.	Outlived
Total		4 Nos.	

However, the Steering Committee has noted the proposals incorporated in Business Plan of DTL for the period 2017-22 as under:

Augmentation of 100MVA, 220/66kV Transformer with 160MVA as per Business Plan

Sr. No.	Name of the Sub Station	Qty. (No.)	Year	Scheme status as on date
1.	Sarita Vihar	1	2018-19	Under tendering stage
2.	Narela	1	2018-19	Under Preparation
3.	Najafgarh	2	2018-19	Under tendering stage
4.	Okhla	1	2018-19	Under Preparation
5.	Mehrauli	1	2019-20	To be prepared
6.	Patparganj	2	2019-20	To be prepared
	Total	8		

From the above, it was observed that most of the transformers proposed for replacement on account of outlived transformers have already been covered in the Business Plan. Further, the No. of hot reserve transformers for 220/66kV, 160/100MVA and 220/33kV, 100MVA has been increased from 3 to 5. In case the transformer results of any of the out lived transformer go beyond the permissible limit, the same shall be replaced/ augmented with the Hot Reserve transformers.

The Steering Committee was also of the view that ageing of the transformer should not be the only criterion for replacement but other health assessment factors should also be considered before taking the decision of replacement to optimize the Asset utilization.

Similarly, it was observed that most of the transformers proposed for replacement at 66/11kV and 33/11kV level on account of outlived transformers have also been covered in the Business Plan. Further, it was decided that the 33/11kV transformers at 220kV Gopalpur and Subzi Mandi will not be replaced since the entire load of 11kV at 220kV Gopalpur has been shifted to Dheerpur sub-station by TPDDL and the entire load of 11kV at 220kV Subzi Mandi is planned to be shifted in near future. Thereafter, these 33/11kV transformers of 220kV Gopalpur and Subzi Mandi may be utilized in future for replacement of the 33/11kV transformers whose results go beyond the permissible limit.

Further, the scheme for augmentation of 33/11kV, 16 MVA transformers with 25 MVA at Gopalpur shall now be utilized to replace the 2 No. 16 MVA transformers at Lodhi Road. The scheme for augmentation of other 2 No. 33/11kV, 20 MVA with 25 MVA transformers at Lodhi Road has already been approved earlier in the Steering Committee. Thus all the 4 No. 33/11kV transformers at Lodhi Road will be augmented.

OCC directed that the details of augmentation/replacement/hot reserve of each type of Tr. and status of preparation of their scheme / procurement be put up by Plg. Deptt. in next OCC meeting for appraisal.

6.2 Status of Supply of 3 nos. 100 MVA, 220/33kV BHEL make Transformers against MOU-II project.

Three nos. 220/33kV, 100 MVA BHEL make Transformers are to be supplied against MOU-II project. Status of supply was updated as under:-

- (i) The first transformer is expected to reach at site by 22nd Jan 2018.**
- (ii) Second transformer is expected by 29th Jan 2018.**
- (iii) The third transformer is expected by 13th Feb 2018.**

6.3 Status of Procurement of O&M min. inventory/spares as well as equipments to be procured against PSDF schemes.

DTL C&MM deptt. to update the status of procurement of O&M min. inventory/spares as well as equipments to be procured against PSDF schemes. C&MM deptt. to depute their representative to update the status.

The following was deliberated in the meeting:-

- 1. Representative of DTL C&MM deptt. informed that w.r.t procurement of hot reserve transformer, one such request has been received in the C&MM department on 21.12.2017 for transformer package including one no. hot reserve 160 MVA transformer for Kanjhawala. The order is expected to be placed in the month of May 2018 and its procurement will be in the month of Oct/Nov 2018 (i.e after 06 month after date of order)**
- 2. Representative of DTL C&MM deptt. further informed that PR w.r.t availability of minimum inventory in Material Management Department is pending with finance department.**
- 3. The status of PSDF is enclosed as Annexure.**
- 4. OCC directed that the hot reserve Tr. is essentially required for maintaining summer season loading in case of failure of any Tr. Therefore hot reserve of each category of transformer be procured immediately.**

5. Min. inventory as discussed and finalized between O&M and C&MM deptt. be procured immediately.

6. Procurement/Execution against PSDF scheme is time bound activity.As such every effort be made to complete the PSDF scheme in time bound manner.

7. DTL C&MM deptt. to update the monthwise progress in every DELHI OCC meeting.

6.4 Proposed planned Shut-down of various 220 KV Lines for work of "Replacement of Porcelain disc Insulators with long road Polymer Insulators".

DTL has proposed planned Shut-down of various 220 KV Lines for work of "Replacement of Porcelain disc Insulators with long road Polymer Insulators". The shutdown list is enclosed as Annexure.

After deliberation, the shutdowns for insulator replacement were approved. The progress of work be updated in monthly OCC meeting by Sh. Subhash Chandra Jha, Mgr.(S-V),DTL,Nodal officer.

7. EDWPCL Agenda

7.1 M/s EDWPCL have informed that in reference to MOM of OCC meeting held on dt.28.08.2017, Point no. 4.2, Synchronizing relay and line CVT in three phases was to be installed by DTL in 66 kV feeders at Ghazipur substation for successful synchronization of two different sources at Ghazipur Sub-stn. They have requested to update the current status. **It was updated by Mgr.(O&M)-Ghazipur that 66kV CVTs are not available in DTL store and the same will be commissioned after its availability.**

The meeting ended with vote of thanks to the Chair.

NOTE:-The MOM of OCC meeting can also be seen on DTL website (www.dtl.gov.in) under the Tab "News and Information – OCC Meeting".
