

	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, Shakti Sadan, Kotla Road, New Delhi-110002 Web:-www.dtl.gov.in, E-mail :- dgm.os@dtl.gov.in, Phone No.- (011)-23238882
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No. F.DTL/831/F.4/2017-18/DGM (OS)/2

Date: 07.04.2017

To,
All Members of Operation Co-ordination committee

DTL	General Manager (O&M)-I, Chairman OCC	Fax no. 011-23366160
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	Executive Director (Planning)	Fax No.011-23622707
	DGM (O&M) - North, East, West, South	
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BRPL	Asstt. Vice President (SO)	Fax no. 011-39996549
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IPGCL	AGM (T) COS	Fax no. 011-23284797
	AGM (T) Opr. GTPS	Fax no. 011-23370884
PPCL	DGM (T) Opr. PPS-I	Fax no. 011-23378947
	DGM (T) Opr. PPS-III	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.)	Special Invitee
DMRC	General Manager (Elect.)	Special Invitee
N. Railways	Sr. DEE (TRD)	Special Invitee
EDWPCL	Director(EDWPCL)	Special Invitee
Delhi MSWSL	Station Incharge	Special Invitee

Sub:MOM of OCC Meeting held on 28.03.2017 (Tuesday) at SLDC Minto Road.

Dear sir/madam,

The OCC meeting was held on **28.03.2017 (Tuesday) at SLDC Building, Minto Road, Opp. MCD Civic Centre, New Delhi-110002.**

The minutes of meeting are 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.

Enclosure: MOM of OCC meeting dt. 28.03.2017 (Tuesday)

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. Chairman & Managing Director, DTL.
4. Chairperson, New Delhi Municipal Council, Palika Kendra, Sansad Marg, New Delhi.
5. Managing Director, Indraprastha Power Generation Company Ltd (Genco)/Pragati Power Corporation Ltd (PPCL), Himadri, Rajghat Power House, New Delhi-110002.
6. Director (Operations), DTL
7. Executive Director (Planning), DTL
8. General Manager, NRLDC, SJS Marg, Katwaria Sarai, New Delhi-16
9. CEO, BSES Rajdhani Power Ltd, BSES Bhawan, Nehru Place, New Delhi-110019.
10. CEO, BSES Yamuna Power Ltd, Shakti Kiran Building, Karkardooma, New Delhi-110092.
11. CEO, North Delhi Power Ltd, 33kV Grid S/Stn, Hudson Lane, Kingsway Camp, Delhi-110009.
12. CWE (Utilities), MES, Kotwali Road, Near Gopi Nath Bazar, Delhi Cantt. New Delhi-110010.
13. General Manager, Badarpur Thermal Power Station, Badarpur, New Delhi-44.
14. General Manager (Project)-I, DTL
15. General Manager (Project)-II, DTL

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

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

MOM OF OCC MEETING DT. 28.03.2017

GM (O&M)-I, DTL, Chairman-OCC welcomed the members of OCC. List of participants are enclosed herewith as Annexure.

The meeting was started with the presentation on review of grid operation for Feb 2017. It was informed that peak demand of 3882 MW for Feb-2017 was met on 01.02.2017 at 10.15.52 hrs. Discom wise load as well as generation within Delhi during the peak and load curve for all the Discoms during the Feb month was depicted. It was pointed out that total energy consumed during Feb month (in MUs) has decreased in comparison to last year, However the maximum energy consumed in a day (in MUs) has increased compared to last year data of Feb month. Planning of Grid operation for April 2017 was also discussed, wherein it was explained that the anticipated peak demand for April 2017 would be around 5050 MW against expected availability of 5520 MW.

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

1.0 Confirmation of minutes of OCC meeting dated 28.02.2017.

Last OCC meeting was held on 28.02.17. Minutes of the aforesaid OCC meeting were issued vide letter dt. 09.03.17. No comments were received regarding the contents of MOM . **As such the minutes of the meeting of the OCC held on 28.02.2017 were confirmed.**

2.0 Issue referred by Protection sub committee.

2.1 Implementation of Special Protection Scheme

It was apprised that in the meeting taken by Secretary(Power) GNCTD for drawing out strategies to meet the expected Summer demand of 6600MW it was decided that to avoid cascading effect on outage of any transmission element in the System Special Protection Schemes be devised to obviate complete blackout of sub-stations during peak time, where severe constraints are in existence. SLDC has identified crucial transmission system including 220KV transmission lines and 220/66 & 220/33KV Transformers which are likely to be over loaded during the peak time this Summer. In this regard Delhi Protection Sub-Committee in its meeting held on 15.03.2017 has decided the following:-

- i. The operation of Special Protection Scheme has to be activated when the loading of 220KV transmission Lines consisting of Zebra Conductors reaches to 700Amp. It was decided that scheme to be worked out so that the tripping command of 66KV, 33KV feeders and 11KV incomers can be given in stages so as to disconnect the load before the parallel over loaded upstream feeder/transformer Over current Relay initiate trip command on Over current protection. The feeders identified by the DISCOMs for disconnection, in such scenario for the following specific transmission lines/transformers as under:

TRANSMISSION LINES

S. No	Name of the Circuit	66/33 kV Feeders which can be switched off during the exigencies.
1	220kV Bamnauli-Papankalan-I ckt-I & ckt-II	66kV Bindapur Ckt-I & II 66kV Budhela Ckt-I & II
2	220kV Bamnauli-Papankalan-II ckt-I & ckt-II	66 kV Hastsal and Local Transformers.
3	220kV Bawana-Rohini-I ckt-I & ckt-II	66kV RG-24 Ckt.-I & II 66kV DC-I & II
4	220kV Ballabgarh-BTPS –I & II	The committee has decided during the exigency at Ballabgarh-BTPS –I & –II. The 66 kV Batra ,66 kV Tuglakabad and local transformers shall be switched off from 220 kV Okhla grid.
5	220kV Mandola-Gopalpur Ckt –I & II	33kV Model Town-I & II 33kV Indira Vihar-I
6	220kV BTPS-Mehrauli-I & II	Scheme is already commissioned. Tripping of 66kV Malviya Nagar –I & II and 66kV C dot-I & II for reliability of DIAL supply and to avoid isolation of BTPS from Bamnauli when the system is interconnected.
7	220kV Mundka-Peeragarhi-I & II	The committee has decided to take load on the U/G cable up to maximum capacity.
8	220kV Mundka-Najafgarh	2 nos Local Transformers, 66kV Nangloi, 66 kV Jafarpur
9	220kV BTPS-Okhla-I & II	The committee has decided during the exigency at Ballabgarh-BTPS –I & –II. The 66 kV Batra ,66 kV Tuglakabad and local transformers shall be switched off from 220 kV Okhla grid.
11	220kV Pragati-Park street-I & II	33 kV Motia khan, 33 kV Faiz Road, 33 kV Prasad Nagar and 66 kV School Lane. In case of the emergency the NDMC shall shift the load.
12	220 kV Manduala-SOW-I,II,III and IV running parallel	66 kV Shastri Park at SOW and all 33kV feeders at Geeta colony.
13	220kV Ridge valley- Naraina	Scheme is already commissioned. Tripping of 33kV Inderpuri –I and II in Stage -1 and 220kV Bus Coupler in Stage –2 to avoid overloading of Ridge-Valley cable when Maharani Bagh and Bamnauli supply are interconnected through this link.

TRANSFORMERS

	Name of the GRID	Remarks
1	Bamnauli(2*315 & 2*500)	Manual Load management by SLDC.
2	Maharanibagh(2*100 & 2*500)	Manual Load management by SLDC.

3	Mundka(3*315)	Manual Load management by SLDC.
4	Narela (3*100MVA)	Manual Load management by SLDC.
5	Rohini-I(4*100MVA)	Manual Load management by SLDC.
6	Wazirpur(2*100MVA)	Manual Load management by SLDC.
7	Kanjhawala	Manual Load management by SLDC.
8	Najafgarh(4*100MVA)	Manual Load management by SLDC.
9	Papankalan-I(2*100MVA & 2*160MVA)	Manual Load management by SLDC.
10	Papankalan-II(2*100MVA & 2*160MVA)	Manual Load management by SLDC.
11	Okhla(2*100MVA & 2*100MVA)	66 kV Batra Feeder
12	Geeta colony(2*100MVA)	Manual Load management by SLDC.
13	Parkstreet(2*100MVA & 2*100MVA)	Manual Load management by SLDC.
14	Sabjimandi (2*100MVA)	33 kV Bus Coupler to be kept open
15	IP station(3*100MVA)	Manual Load management by SLDC.

It was decided that Special Protection (SPS) for immediate load relief is to be implemented by 30th April, 2017. The scheme will be configured in respective Numerical Relays by the Protection Deptt. It was also decided that the work of laying and termination of 4Cx2.5sq.mm Control Cable from 220KV Feeder Relay panel to 66/33KV panel in respect of 220KV transmission lines as mentioned above is to be done by the respective Sub-Station In-charge in consultation with the Protection Deptt., where the scheme are to be implemented. The work of the laying and termination of Control Cables be completed by 15th April, 2017.

OCC advised Protection deptt. for follow up with O&M deptt. regarding the same for timely implementation of the scheme.

2.2 Disturbance occurred in Delhi system on 20.03.2017 at 10.22 hrs.

Incident:

On 20.03.2017 at 10.22 hrs 220kV Bus Bar protection operated at 220 kV Samaypur S/Stn. of BBMB. This led to the following disturbances:-

- i) Tripping of 220kV Ballabgarh – Samaypur Ckt-I, II & III on Busbar prot.
- ii) Tripping of 400/220kV 315MVA ICT-II & IV at Samaypur (PGCIL)

At Ballabgarh end, after tripping of 220 KV Ballabgarh- Samaypur Ckt-I, II & III from Samaypur end as reported above, all the load of 220 KV BTPS Ckt.-I & II and 3 Nos. 220/66 kV, 100 MVA Transformers came on 220KV Ballabgarh - Ch. Dadri single circuit and the load on this line rose upto 750 amps. Due to sustained overloading, the conductor of this line got snapped. The (220kV Samaypur – Ballabgarh D/C and 220kV Chakri Dadri – Ballabgarh are Goat conductors). As a result, the line tripped at 10:30:05 hrs. leading to total supply failure at Ballabgarh Sub-Station.

Supply failure at BTPS end for 220kV BTPS – Ballabgarh Ckt-I & II caused the overloading and thereafter tripping of 220kV BTPS – Alwar ckt. 220kV Bus coupler at Mehrauli also tripped on over current. This resulted into complete supply failure at BTPS.

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

Normalization-

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

Sr. No.	Name of Element	Time	
		Out	Restoration
1	220kV BTPS-Noida-Gazipur Ckt.	10.20	10.49
2	220kV BTPS-Okhla ckt. I & II	10.20	10.59
3	220kV BTPS-Ballabgarh ckt. I	10.20	11.02
4	220kV BTPS-Ballabgarh ckt. II	10.20	11.39
5	220kV BTPS-Alwar ckt.	10.24	13.44
6	220kV Bus coupler at Mehrauli	10.22	10.31
7	220kV BTPS-Mehrauli ckt. I & II	10.20	10.31

Details of ckt. tripped due to operation of SPS-

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

Details of load affected:

Time (Hrs)		Load affected in MW	Name of the Grid
From	To		
<u>BRPL</u>			<u>220kV MEHRAULI</u>
10:20	10:25	21	MALVIYA NAGAR CKT-2
10:20	10:30	10	IGNOU
10:20	10:25	7	IGNOU TO MALVIYA NAGAR CKT
10:20	10:30	28	CDOT CKT-1 & 2
			<u>220kV VASANT KUNJ</u>
10:32	10:35	9	66KV PALAM
10:32	10:36	38	VKJ C BLK CKT-1 & 2
			<u>220kV OKHLA</u>
10:28	10:30	27	MALVIYANAGAR
10:28	10:50	21	BATRA
10:28	10:48	19	OKHLA PH-1
10:28	11:05	10	PTR NO-1 & 2
10:28	10:46	5	MCIE(PTR NO-1)
10:28	10:44	10	BALAJI ESTATE
10:28	11:06	6	EAST OF KAILASH (PTR NO-3)
10:28	11:05	10	EAST OF KAILASH (PTR NO-1&2)
10:28	10:40	10	NEHRU PLACE(PTR NO-1&2)
10:28	10:55	7	NEHRU PLACE(PTR NO-3)

10:28	11:05	13	NEHRU PLACE(PTR NO-4)+VSNL
10:28	11:10	4	ALAKHNANDA (PTR NO-2)
10:28	10:42	6	ALAKHNANDA(PTR NO-1&3)
10:28	11:05	17	TUGHALKABAD
BYPL			220kV GAZIPUR
10:30	10:36	9	DALLUPURA
10:30	10:36	9	MAYUR VIHAR-2
10:30	10:36	4	NEW KONDLI
10:30	10:36	9	MAYUR VIHAR-1
10:30	10:36	8	KONDLI
10:30	10:34	7	PPG IND AREA
10:30	10:35	10	CBD-2
10:30	10:35	24	G T ROAD
10:30	10:45	5	11kV LOAD

It was informed by BBMB that at Samaypur station, 220kV Bus 2A was under shut down since 09:50 Hrs. Therefore all the feeders of 220kV Bus 2A were shifted to 220kV Bus 1.

During investigation it was found that auxiliary contacts of isolator of Bus-1 of 220 kV Badshapur Ckt 1 were in deteriorated condition (might be due to pollution from nearby sewage nallah). Spurious DC from deteriorated Aux Contacts of Bus-I isolator of 220KV Badshapur Ckt -1 might have been extended to Zone-1 of 220kV Bus bar protection (Zone-1 Trip Bus- 96 trip relays ckt), resulting into tripping of all the feeders connected to 220 kV Bus-1 through 96 tripping relay of Bus bar protection except 220kV ICT-3 & FGPP-1. However, there was no actual Busbar / LBB fault at Samaypur station.

The reason for non-operation of the 96 bus bar trip relays of 220 KV FGPP 1 and ICT-3 was found that the related auxiliary contacts of the bus 1 isolators of these ckts were not making proper contact. BBMB confirmed that the same has now been set right by them using other spare / healthy auxiliary contacts of isolators of these two circuits.

It was informed by BBMB that following remedial measures have been taken to avoid the reoccurrence of such event:-

1. Bus-1 auxiliary switch of Isolator of 220KV Badshapur -1 at Samaypur has been replaced with new auxiliary switch.
2. Bus-2 auxiliary switch of Isolator of Badshapur -1 and Bus-1 auxiliary switch of Isolator of Badshapur-2 at Samaypur have been repaired by inserting insulated/plastic strips in between Bakelite base of the aux. contacts for the time being. However, the same are being replaced with new auxiliary switches.

BTPS representative opined that the supply failure could have been obviated had there been atleast one generating unit of 210MW capacity were on bars. He wondered why permission was not granted to start generation of atleast one 210MW unit of BTPS as decided in the meeting held on 14.10.2016, wherein scheduling strategy was discussed and decided under the Chairmanship of Director(Opr.)DTL, particularly when Delhi Pollution Control Committee (DPCC) had cleared operation of BTPS Plant during the period 15.03.2017 to

15.10.2017. SLDC clarified that considering the commissioning of 220KV Harsh Vihar-Preet Vihar-Patparganj D/C 1200sq.mm Cable link and LILO of one circuit between Pragati and Sarita Vihar Sub-Station at 400KV Maharani Bagh had in fact reduced transmission constraints around the BTPS network due to which the Generation at BTPS was not required. But due to the load concentration, BTPS is not capable to meet such contingencies like tripping of both circuits between BTPS and Balabgarh as that occurred on 20.03.2017. It was also clarified that within 13 minutes the load was normalized even without 220KV BTPS-Balabgarh D/C Line. However, considering the spurt in demand due to unprecedented temperature rise in the last week of March 2017, it would be appropriate to synchronize atleast one unit of 210MW machines immediately as these machines were out since long and considerable time likely be taken to stabilize the machines so that the machines are available at the time of need

BRPL, BYPL and TPDDL were of the view that as Merit Order Despatch Principal, they do not require any power from BTPS but they are bound to abide the decision of SLDC to run the machines at BTPS to ensure system stability.

The representative of NDMC and MES informed that they required power from BTPS to meet the demand during Summer season.

SLDC informed that it would be better to have both the machines of 210MW capacity by 15th April, 2015 to ensure their continuous operation during the time of need though the requirement is from May to September 2017.

OCC advised that keeping in view the vital role of 220KV BBMB Samaypur and Balabgarh sub-stations to Delhi power supply system, extensive maintenance work be carried out at these sub-stations to avoid repetition of such events. It was also noticed that there were three incidents since June 2016 (One on 09.06.2016 at 14.27 hrs. the other on 01.10.2016 at 15.12hrs. and now on 20.03.2017 at 10.30hrs.) occurred at Samaypur sub-station causing the supply interruption in the areas fed from BTPS namely Mehrauli, Okhla and Vasant Kunj areas.

OCC also authorized SLDC to run 210MW machine at BTPS depending upon the system requirement. Further, OCC had requested Delhi Protection Sub-Committee to further deliberate the incident and takes steps to avoid reoccurrence. Further, Planning Department of DTL was requested to vigorously take the matter with CEA for carrying out the re-conductoring of 220kV Samaypur – Ballabgarh-BTPS D/C link with HTLS re-conductoring to cope up with load requirement of Ballabgarh and BTPS 220kV systems.

Concluding the discussions, OCC referred the matter to Protection sub-committee for suggesting/implementation of remedial measures if any.

2.3 Tripping of 220/33kV100MVA Tr.-II at 220kV Sub-stn Wazirpur on 21.03.2017 at 00:07 hrs.

It has been noted that 220/33kV 100MVA Tr.-II at 220kV Sub-stn Wazirpur tripped on 21.03.2017 at 00:07 hrs. resulting load shedding.

It was informed by DTL (O&M) that there was no fault in the transformer as revealed by the DR of numerical relay. The tripping occurred due to LV to HV inter-tripping. The Transformer LV side switchgear and its control is within the premises of TPDDL and DTL has no control over it.

The representatives of TPDDL informed that they are unaware of the event and will update in the next OCC meeting.

OCC advised that DTL O&M depts. in consultation with Planning depts. should raise the requisition for having Transformer LV side switchgear and its control within DTL premises.

2.4 Storage of scrap material by BRPL Najafgarh at the common road at 220kV DTL Substation Najafgarh

It was informed by Mgr(O&M), DTL (N-3&5) that BRPL Najafgarh is using the common road from Main Security Gate (at Main Road) to Security Gate at DTL 220kV Najafgarh Substation Security Gate which is creating the hindrance to men and material of DTL and common public at large too. The problem enhances and get gruesome when general public park their vehicles while visiting the BRPL Office encroaching the corridor. It can also not be ruled out that in case of major chaos, if any fire breaks out at DTL installation at Najafgarh or similar exigency, fire tenders/emergency vehicles may not be able to enter the premise due to space crunch created by storage of damaged & old scraps in the form of LT transformers, electrical poles and also due to parking of vehicles by general public. It was further informed that the matter was also followed up with the then BRPL officers but no action in this regard have been taken so far. An urgent and favourable action is required for vacating the common road by removing the old scraps in the form of LT transformers and Electrical Poles.

In the OCC meeting held on 28.11.2016, OCC advised BRPL that matter be looked into and resolve the issue raised by DTL in the interest of Grid O&M activities and safety of public.

In the OCC meeting held on 29.12.2016, it was informed by DTL that nothing remarkable has been done by BRPL. OCC advised that the matter be looked into by BRPL on priority basis in the interest of Grid O&M activities and safety of public. BRPL assured for the same.

During the OCC meeting held on 30.01.2017, it was informed by BRPL that 13 nos. Transformers will be removed within one week and rest will be removed in near future. OCC advised that the matter be expedited. BRPL assured for the same.

During the OCC meeting held on 28.02.2017, it was informed by DTL that despite of several assurances, nothing has been done by BRPL regarding shifting of transformers. BRPL again assured that 20 nos. Transformers will be removed within one week and rest will be removed

in near future. OCC advised that the matter be expedited in the interest of Grid O&M activities and safety of public. BRPL assured for the same.

During the OCC meeting held on 28.03.2017, it was informed by DTL that some transformers have been removed from the site. BRPL assured for removing of the rest transformers by this May end. OCC advised BRPL for expediting the same.

3.0 SLDC Agenda

1. While reviewing the Transmission constraints in BRPL area on 12.01.2017 by Secretary(Power), GNCTD, the issue of augmentation of 20MVA Transformers at Pappankalan-I and Najafgarh was also discussed. The extracts of the MOM are as under:

ix) Augmentation of 20 MVA Transformers at Papankalan-I and Najafgarh S/Stn of DTL

BRPL informed that in 220 kV Papankalan-I area they have to resort to load shedding as the source of this sub-station of DTL gets overloaded. DTL informed that they are looping in and looping out single circuit of Bamnauli-Naranina 220 kV line at Papankalan-I as a temporary measure till the 400kV Dwarka S/Stn. is commissioned by PGCIL. This LILO will provide relief to the existing overloaded infeed and a new 160MVA Transformer shall also be commissioned at Papankalan-I S/Stn. by March, 2017. BRPL requested that 20 MVA Transformer also needs to be upgraded to 31.5MVA as the present transformer gets overloaded. DTL asked BRPL to provide 31.5 MVA transformer on loan basis and they will replace the 20MVA by 31.5 MVA before summer of 2017. Similar request was made by BRPL for 220kV Najafgarh S/Stn. also and it was decided that DTL and BRPL shall work out the arrangement mutually and these two transformers shall be augmented by March, 2017.

BRPL informed that they do not have any 31.5MVA Transformer to give to DTL on loan basis. It was also informed that out of four 31.5MVA capacity transformer ordered for their system, only two Transformers have been received so far. If request has been received from DTL for Transformers required on loan basis, they have to prepare the scheme for procurement and get the approval of the Board of Directors and DERC, which now cannot be possible to meet the load demand of this Summer Season. SLDC has also provided the data regarding loading system of Najafgarh and Papankalan-I at the time of peak during the last three years as under:-

Loading of 66/11kV transformers at the time of peak during the period 2014-15, 2015-16 & 2016-17

	Capacity in 11kV (Amps)	Load at the time of Delhi peak 2014-15 5925MW at 15.20.20hrs. on 15.07.2014	Load at the time of Delhi peak 2015-16 5846MW at 15.39.51hrs on 19.06.2015	Load at the time of Delhi peak 2016-17 6261MW at 15.10.32hrs on 01.07.2016
Papankalan-I	Load in Amps. In 11kV side			
66/11kV 20MVA Tr. I	1050	540	570	550
66/11kV 20MVA Tr. II	1050	655	775	655
66/11kV 20MVA Tr. III	1050	670	630	660
Total	3150	1865	1975	1865
Najafgarh				
66/11kV 20MVA Tr. I	1050	876	372	697
66/11kV 20MVA Tr. II	1050	698	778	864
66/11kV 20MVA Tr. III	1050	858	556	388
Total	3150	2432	1706	1949

It was also informed that after commissioning of 66KV DJB Najafgarh S/Stn., some load relief has been observed in the transformers at Najafgarh 220KV S/Stn., which is evident from the loading figures projected above. Even at Pappankalan-I such alarming situation could not be seen. It was also informed that as per the Business Plan of DTL, replacement of Transformer at Pappankalan-I and Najafgarh is envisaged during the year.

Accordingly it was decided that :

- (i) DTL O&M deptt. will request BRPL to give 31.5MVA, 66/11kV Transformer on loan basis. BRPL will take up the matter with their management regarding the same.**
- (ii) DTL O&M deptt. should also start procurement process of 31.5 MVA, 66/11kV Transformer at Najafgarh, Papankalan-I simultaneously so that at least by next summer these transformers are available. .**

3.2 Utilization of Bays by BRPL at 220kV Trauma Center.

It was informed that in the Steering Committee Meeting held on 16.10.2016, it was decided to allocate 33KV Bay earmarked for Sarojini Nagar S/Stn. of NDMC (which is expected by 2018-19) to BRPL to accommodate NDSE-II feeder.

Similarly, the bay earmarked for Safdarjung Hospital S/Stn. of NDMC (which is expected in 2018-19) to BRPL to accommodate from 33kV HUDCO. The 33KV HUDCO and 33KV NDSE S/Stn. which are now readily fed are often facing issue of stability, as such it was decided to have the system by March, 2017.

The Steering Committee also decided to extend the 33KV GIS Bays at 220kV Trauma Center with 6 nos. to accommodate 33KV two feeders for AIMS-II Sub-Stn of BRPL,

one for Hudco, one for NDSE-II , one for Kidwai Nagar (East-1) and one for 33KV Incomer of the additional 220/33KV 100MVA Transformer (by the year 2019-20).

It was also decided in the Steering committee that 33KV Bays be extended in 2017-18. Planning Department has already mooted the proposal for 33kV Bay extension at Trauma Center.

NDMC Representative informed the OCC that they do not have any issue to swap the 33KV Sarojini Nagar Bay on the condition that the extension of 33kV Bay work should be completed by the time of commissioning of the Sub-Station of Sarojini Nagar to get the feeding from 220KV Trauma Sub-Station. However, they informed that they would not be in a position to surrender the Bay earmarked for 33KV Safdarjung Hospital Feeder till the extension of 33KV GIS by 2017-18, as it has been decided that by April end this year, they have given the supply at 33KV to feed the temporarily erected Sub-Station of 33KV Safdarjung Hospital whose Complex is ready for operation.

BRPL also informed that the scheme of buying cables for HUDCO and NDSE has not yet been prepared however, since the routes of both the feeders are same, they should be allowed to lay cables together, even though only one Bay is available readily to give supply. It was also informed that they will take up the matter with Steering Committee for getting the approval for laying the cables together though one of the cables can be utilized only after the 33kV Bay extension at 220KV Trauma Centre as getting the digging permission etc. would be difficult for laying cable separately.

OCC considered the request and advised BRPL to immediately gear up the work for energization of atleast one of the cables approved in the Steering Committee meeting held on 06.02.2016 considering the fact that these cables would give load relief to 220KV Lodhi Road Sub-Station, where only one 100MVA Transformer is presently available as other Transformer got damaged on 22.03.2017. The new Transformer at Lodhi Road is expected only by 30.04.2017 on best effort basis as this Transformer is required to be energized through the 220KV upcoming GIS at Lodhi Road. BRPL may immediately get the approval for laying the cable together, if they required, from the Steering Committee.

4.0 BTPS Agenda

BTPS have informed that Delhi Pollution Control Committee, through letter Ref. DPCC/WMC-II/BTPS/2015/313-376 dated 6.11.2016 and its addendum dated 16.11.2016 issued directions under section 31(A) of Air Act 1981 for closure of all the units of BTPS to curb pollution level in Delhi. As per the directives all the units have been stopped since 07.11.2016 and till date no unit is running. In this regard they want to state that:

1. Overhaul of BTPS Unit no # 4 & 5 which were due, were carried out in the period of station shutdown. But, as the units could not be lit up due to restriction imposed by DPCC, some actions like Safety valve floating & Electrical testing couldn't be done. For carrying out these jobs, external agencies who were involved in the overhaul, are to be called for which at least one week time is required for their mobilization.
2. For completion of safety valve floating & Electrical testing 2x210 MW units are to be kept in light up condition around 30 hrs, after which units can be synchronized with grid. So, for synchronization of each 210 MW units around 30 hrs time would be required.
3. As the 3x95 MW units are not taken on bar for around 2 years, for synchronizing these units around 24 hrs time will be required.

They also cited the incident took place on 20.03.2017 wherein they opined the following :

"An incident of black out occurred at BTPS at 10.30hrs on 20.03.2017, consequent to tripping of 220kV Alwar line due to overloading. Before that, since 10.20hrs. DTL & NRLDC were informed regarding overloading of Alwar line to initiate corrective action. Subsequently at 10.30.19hrs, Alwar line (which was importing power of 267MW) tripped due to overloading causing total black out at BTPS. Later, MIA Alwar also confirmed that overcurrent protection operated at their end. In this regard we would like to draw your attention to the following:

1. Such black out creates severe emergencies and stress to various equipment in our system. The incident of total black out could have been avoided, if at least one 210MW Units of BTPS was in operation at that time.

2. As, DPCC through order no DPCC/WMC-II/2015/16/2368-81 Dated 14.03.2017 has allowed operation of BTPS units from 15.03.2017 to 15.10.2017, one 210MW Unit could have been taken into service easily.

3. To enable synchronization of unit #4 & 5 at short notice all the pending jobs like safety valve floating and electrical testing (which could 't be completed earlier due to restriction imposed by DPCC) had been completed from 19th March to 21st March 2017".

Further, Clearance letter of DPCC issued to BTPS also indicated that BTPS can operate during 15.03.2017 to 15.10.2017.

BRPL, BYPL & TPDDL observed that as per Merit Order Dispatch principle they do not require power from BTPS. However as per system requirement SLDC is empowered to operate the units. NDMC and MES stressed that they require their allocation from BTPS during summer months particularly during day time.

After deliberation it was decided that 1st machine of 2X210 MW may be synchronized in 1st week of April and 2nd machine may be synchronized in 2nd week of April so that both the units are ensured to be available at the time of need in Summer months.

5.0 PPCL Agenda

Sub- UI Waiver for Tripping on Dt. 08.03.2017

PPCL informed that GT#4 & STG#2 tripped at 14:12 hrs due to disturbance in the grid and the same was informed to SLDC vide message no.1231/2-24 dated 08.03.2017 at 14:20 hrs requesting for UI waiver.

National Transmission Asset Management Center (NTAMC) has also informed vide message no. 1235/73 at 16:55 hrs on dated 08.03.2017 confirming disturbance in 400KV Mundka – Bawana line due to earth fault that resulted into neutral current of 264 amps. The Backup Standby Earth Fault protection of all 4 Transformers namely GT#2, GT#3, GT#4 & STG#2 sensed the fault & tripped after time delay of 3 Sec on Standby Earth Fault protection. This resulted into tripping of GT#4 and STG#2 and generation loss of 250 MW and UI penalty due to under injection (Gen loss of approximately 0.208 MUs)

Since the fault initiated from 400 KV line and that ultimately resulted into the tripping of transformers and caused Generation loss to PPCL. Hence the tripping could not be attributed to the account of PPCL Bawana and requested for UI waiver till normalization of Generation. They requested to waive off the UI w.e.f. 14:12 hrs till synchronization of GT#4.

GT#4 was synch at 15:35 hrs and STG#2 synchronized at 17:04 hrs.

The Protection Deptt. of DTL informed that as per protection philosophy of NRPC, there is no tripping recommended for broken conductor condition. Therefore the broken conductor condition led to tripping of parallel circuit on earth fault due to unbalance current. 400kV Jhatikra Ckt 1 & 2 also tripped at Jhatikra end with DT received at Mundka end. Cascaded tripping of Bawana – Mundka 2, Jhatikra Ckts and Daulatabad Jhajjar led to Generating station protection operation due to unbalance current fed by the generators.

As such, the tripping of 400KV Bawana CCGT is attributable to the jumper snapping of 400KV Mundka – Bawana Circuit -I.

SLDC Informed that if the Bawana CCGT tripped due to the fault of 400KV Mundka-Bawana Circuit No.-I. Bawana CCGT is eligible for DSM waiver for the period of 14:12 Hrs. on 08.03.2017 till synchronization of GT No.4 i.e. 15:35 Hrs. and the STG-II synchronized at 17:04 Hrs. as per the provisions of Indian Electricity Grid Code and DSM Regulations.

OCC considered the request of PPCL and considered the opinion of SLDC and decided for waiving of DSM as requested by PPCL.

OCC further advised Protection Deptt. to refer the entire case of tripping to NRPC Protection Committee for deliberation and change of protection philosophy, if needed to tackle such incidents.

6.0 Delhi MSWSL Agenda

Delhi MSWSL have informed that they are facing lot of interruptions for running of their plant during last two months as per details given below. They have requested for the remedial measures at the earliest possible.

Tripping of their TIE and TG breaker with DTL disturbance in GRID				
Sr.no	DATE	TIME	REASON	REMARKS
1	1/3/2017	12:50 PM	Main steam pressure low	TG tripped
2	4/3/2017	10:45AM	jerk came from grid side (plant running)	TG running
3	6/3/2017	2:25AM	Huge jerk came from grid side (plant running)	TG running
4	7/3/2017	2:25 PM	Manually trip due to Generating transformer maintenance	TG tripped
5	8/3/2017	3:21PM	Main steam pressure low	TG tripped
6	11/3/2017	5:45 PM	Main steam pressure low	TG tripped
7	13/3/2017	3:45 AM	TIE breaker open due to DF/DT .At the same time TG breaker open due to(V/HZ). Tie breaker relay tripping:- df/dt start 1, df/dt trip, IA= 105.3, IB= 109.5, IC=115.8 , VAB= 72.57kv, VBC= 72.30kv, VCA= 71.72kv, IN measure = 1.731A, IN Derived = 1.754A, VAN= 41.60kv, VBN = 41.97kv, VCN= 41.47kv. GPR tripping:- power start =2 , power trip=2 , over fluxing start =V/HZ>1 , over fluxing trip , V<voltage start V<12 AB BC CA , V<voltage trip V<12 AB BC CA , under frequency start F<1,2 under frequency Trip F<1,2.	TG tripped
8	14/03/2017	10:58AM	TIE breaker open due to DF/DT. Tie breaker realy tripping:- df/dt start 1, df/dt trip , IA= 105.3 , IB= 109.5 , IC=115.8 , VAB= 72.57kv, VBC= 72.30kv , VCA= 71.72kv , IN measure = 1.731A, IN Derived = 1.754A ,VAN= 41.60kv , VBN = 41.97kv , VCN= 41.47kv.	TG running

9	14/03/2017	22:24 PM	TieBreker Open due to df/DT.TieBreker relay tripping :- df/dt starts ,df/dt trips,IA=144.34,IB=148.7,IC=154.6,VAB-69.58,VBC-69.22,VCA-68.91,IN mesured =2.716A,IN derived -2.694 A,VAN-39.36 KV,VBN=40.18 Kv,VCN=39.78 KV	TG tripped
10	19/03/2017	16:36 PM	Tie breker Open due to df/DT.TieBreker relay tripping :- df/dt starts ,df/dt trips,IA=544.9,IB=583.6,IC=557.9,VAB-59.61,VBC-61.66,VCA-61.25,IN mesured =10.61A,IN derived -10.48 A,VAN-34.63 KV,VBN=34.92 KV,VCN=35.82 KV	TG tripped

The matter was deliberated and it was informed by AM(T)O&M-220kV DSIIDC Bawana that there was no disturbance/changeover in their grid for all the events listed at S.No.-1 to 9. Regarding the event mentioned at S.No.-10, there was incident of Supply failure of the only 220kV source, i.e. 220kV Narela ckt.-2.

It was informed that the plant is connected through single 66kV cable ckt. to 220kV DSIDC Bawana and hence any interruption on 220kV side or 66kV Bus would definitely affect the supply, there is no permanent remedy to avoid such trippings though persist only for few minutes.

OCC advised that Delhi MSWSL should review their protection settings in consultation with the OEM to avoid the unwanted trippings.

The case was also referred to Protection Sub-Committee for suggesting and implementing the remedial measures if any.

7.0 EDWPCL Agenda

EDWPCL have informed that there was a blackout situation at 220/66 DTL Ghazipur substation on dt. 20.03.17 from 10:30am to 10:45am (Possible cause was under voltage due to failure of BTPS line). In this case they were not able to export the power in the grid.

They have also requested to expedite the implementation of synchronizing 66 kV system at Ghazipur substation by the operational staff, since the trial operation has already been carried out successfully by DTL.

As indicated in Bawana WTE Plant, the EDWPCL Plant is also connected through single 66kV Ckt. to Gazipur any supply interruption either at 220kV or at 66kV level would trigger problem in the plant as such there is no permanent solution to avert the problem.

However, it was decided that synchronizing relay and line CVT in all three phases be installed in the 66kV feeder at Ghazipur Sub-stn from which back charging can be done for successful implementation of synchronizing the two different sources at plant side.

8.0 Proposed Planned Shutdowns

8.1 Proposed shutdowns of O&M, DTL

DTL, O&M deptt.has proposed the planned shutdowns for the month of April 2017 as per enclosed Annexure.

The shutdowns were approved subject to real time conditions.

9.0 Long/Recent outage of Elements in Delhi power system.

Members updated the status of following Long/Recent outage of Elements in Delhi Power system:

S. No.	Element's Name	Discom/ DTL	Date and Time of outage	Updated Status as on 28.03.2017
1.	33kV BAY -3 (IP – Kilokri)	BRPL	22.02.11	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	31.01.16	R-Ph single cable faulty
3.	33kV IIT-JNU Ckt.	BRPL	27.11.16	CT problem. Expected in April month.
4.	20MVA PR.TR.-I AT BATRA	BRPL	15.02.2017	Under Shutdown. Expected by 02.04.2017.
5.	66kV VASANT KUNJ INSTL.AREA-RIDGE VALLEY CKT.-II	BRPL	05.03.2017	Y-Ph single cable faulty. Energized on 25.03.2017.
6.	66kV VASANT KUNJ INSTL.AREA-RIDGE VALLEY CKT.-II	BRPL	05.03.2017	Under Breakdown on other Single cable. Energized on 25.03.2017.
7.	33kV I/C-I AT RIDGE VALLEY	BRPL	08.03.2017	Put off due to breaker problem. Energized on 22.03.2017.
8.	20MVA PR.TR.-I AT DEFENCE COLONY	BRPL	21.03.2017	Under Shutdown. Energized on 23.03.2017.
9.	33kV RIDGE VALLEY - R.K. PURAM -I CKT.	BRPL	22.03.2017	B-Ph single cable faulty. Energized on 25.03.2017.
10.	33kV ROHTAK ROAD - MADIPUR CKT.	BRPL	28.05.16	CABLE FAULTY.ROAD CUTTING PERMISSION AWAITED FROM PWD. EXPECTED BY 07.04.2017.
11.	66kV SAGARPUR - REWARI LINE CKT.	BRPL	30.07.16	'B' PH. CABLE FAULTY. RE-ROUTING BEING DONE. EXPECTED BY 15.04.2017.
12.	66kV BUS COUPLER AT G-15 DWARKA	BRPL	22.11.2016	CT Blast. Expected in April month.
13.	66KV PPK-II – G-5 MATIALA CKT.-II	BRPL	21.01.17	R-PH CABLE FAULTY Expected by 15.04.2017.
14.	20 MVA Pr. Tr. –II at G-5 Matiala	BRPL	12.02.17	UNDER SHUT DOWN. Expected by 31.03.2017.

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15.	33kV Subji Mandi (220kV)- B.G. Road Ckt.-I	BYPL	09.01.17	Single Cable faulty. Cable end box for GIS under procurement. Expected by 30.04.2017.
16.	33KV PANDAV NAGAR - DMS CKT.	TPDDL	03.04.16	PROBLEM IN RMU. Expected by 30.04.2017.
17.	33kV JAHANGIRPURI-SANJAY GANDHI TR. NGR CKT-I	TPDDL		R-PH CABLE FAULTY Expected by 15.04.2017
18.	66KV S.G.T.N.(GIS) - PP 1 CKT.-1	TPDDL		Y-PH CABLE FAULTY Expected by 15.04.2017
19.	33kV SHLALIMAR BAGH - WAZIRPUR-II KT-II	TPDDL	07.03.2017	B-PH CABLE FAULTY Energized on 23.03.2017.
20.	66kV ROHINI SEC.-28- ROHINI-VI CKT.-II	TPDDL	08.03.2017	R-PH CABLE FAULTY Energized on 24.03.2017.
21.	66kV ROHINI SEC.-28- ROHINI-VI CKT.-I	TPDDL	22.03.2017	Y-PH CABLE FAULTY Energized on 24.03.2017.
22.	315MVA ICT-1 at 400kV Bawana	DTL	11.12.16	Tr. was damaged due to fire. Tr. replaced and energized on 24.03.2017.
23.	100MVA Tr.-2 at Geeta colony	DTL	01.12.16	Transformer faulty and the same is being replaced. Expected by 25.04.17.
24.	400kV BAMNAULI - JHAKTIKARA CKT.-I	DTL	22.05.16	Dead end Tower No.-169 along with gantry collapsed at Bamnauli end. Ckt.-II charged on ERS. Order placed. Expected by 30.04.17.
25.	220/66kV 100MVA PR.TR.-III AT 220kV PPK-I	DTL	04.09.16	HV SIDE 'Y' PH. WINDING DAMAGED. TO BE REPLACED WITH 160 MVA TR. AT KANJHAWALA. 160MVA Tr. Energized at 22.50Hrs. on 03.04.2017.
26.	220/33kV 100MVA PR.TR.-II AT 220kV PARK STREET	DTL	11.09.16	The transformer was put Off due to rise in oil temperature. Tr. replaced and energized on 29.03.2017.
27.	220/33kV 100MVA PR.TR.-I AT 220kV WAZIRPUR	DTL	19.10.16	Tr. Tripped on Differential and Buchholz. Internal inspection has been carried out and the transformer being sent to OEM for repair. The third 100 MVA Tr. of Preet Vihar Sub-stn is to be diverted to Wazirpur. Expected by 30.04.2017.
28.	220kV Maharani Bagh-Ghazipur Ckt.-1 & 2	DTL	08.12.16	Shutdown availed by PWD till March 2017 for construction of extended portion of Barapullah flyover. PWD was requested to wind up all the activities so that the ckt can be energized by 31.03.2017 looking into spurt in demand following the change weather conditions.
29.	220KV MEHRAULI - DIAL CKT.-I AT DIAL END	DTL	27.02.17	CABLE PORTION DAMAGED. 220kV BAMNAULI - MEHRAULI CKT.-I MADE THROUGH WITH T- OFF AT 220kV DIAL CKT.-I. EXPECTED BY 30.04.17.

30.	220KV PATPARGANJ - GAZIPUR CKT.	DTL	07.03.17	CABLE WAS DAMAGED IN NHAI CONSTRUCTION ACTIVITIES. REVIVED ON 30.03.2017 AT 16:20 HRS.
31.	100MVA PR.TR.-II AT 220kV LODHI ROAD ALONG WITH 220kV MAHARANI BAGH-LODHI ROAD CKT.-II	DTL	22.03.17	Transformer declared faulty. New Tr. expected by 30.04.2017. BRPL & NDMC was requested to shift maximum load to other sources as during summer season as only two transformer will be available that to from 01.05.2017 onwards.

10. Additional Agenda

10.1 DTL 400kV Bamnauli Agenda

Presently 400kV system at Bamnauli is running in parallel i.e. Bamnauli-Ballabgarh Ckt No.1, Ckt No.2 and Jhatikra Ckt No.2 are connected with 400kV BUS-I & BUS-II.

400kV Jhatikra ckt. I&II were out since 20.30hrs. on 22.05.2016 due to dead end tower collapsed near Bamnauli. Ckt. to got energized on athrs. on ERS. The tower erection work is in full swing but may not be available before 30.04.2017.

Due to increase in demand, the load on 400kV Jhatikra Ckt No.2 increased and reached 928MW on 25.03.2017 at 19:00Hrs., whereas the load on 400kV Ballabgarh Ckt No.1 & 2 at the same time was 60 MW each.

It is pertinent to mention here that 400kV Jhatikra Ckt No.2 is running on ERS (road crossing with mid span joint in conductor) with twin Bersimis conductor. With the increase in demand the load on 400kV Jhatikra ckt No.2 may increase and overloading of circuit running on ERS is not advisable.

The same problem was observed in last summer also and split bus arrangement was adopted at 400kV Bamnauli to restrict the load on Jhatikra Ckt No.2. same arrangement is proposed this time also till the ckts are normalized on normal tower (likely by 30.04.2017).

It was decided that SLDC will take up the matter with NRLDC for the proposed 400kV split bus arrangement at Bamnauli to restrict the loading of 400kV Bamnauli-Jhatikra ckt No.2 at Bamnauli S/stn, though it is not advisable for reliability point of view of the Grid.

10.2 Shutdown for six months starting w.e.f. 07.12.2016 in r/o 220kV Maharani Bagh – Ghazipur (D/C) Line at 220kV Sub-Station Gazipur end for PWD work.

PWD had requested for Shutdown for nearly six months for the 220kV Maharani Bagh – Ghazipur (D/C) Line for construction of the elevated Road over Barapullah Nallah, starting from Sarai Kale Khan to Mayur Vihar, New Delhi.

OCC during its meeting held on 28.11.2016 had approved the shutdown of 220kV Maharani Bagh – Ghazipur (D/C) for one month w.e.f. 07.12.2016 subject to the real time loading

conditions of the grid and also subject to condition that PWD will restore both the lines within two hours of DTL intimation in case of exigency.

It was deliberated during OCC meeting held on 29.12.2016 that PWD should gear up the work so as to complete the target before 1st April 2017 as during summer, the S/D of both lines are impossible. PWD was also asked to submit the action plan and bar chart to O&M deptt regarding the work being carried out. The extension of shutdown had been approved for further one month subject to real time loading conditions of the grid and subject to condition that PWD will restore both the circuits within two hours of DTL intimation if any abnormal situation arises.

During the OCC meeting held on 30.01.2017, DTL informed that shutdown beyond 31st March 2017 will not be possible due to increase in load demand. OCC approved the extension of shutdown upto March end subject to real time loading conditions of the grid and subject to condition that PWD will restore both the circuits within two hours of DTL intimation if any abnormal situation arises. Further, PWD informed that estimate for re-routing of transmission line has been submitted by M/s. L&T to PWD which has been forwarded to DTL planning deptt. for vetting the same as PWD is not having expertise in this electrical works. OCC advised the Planning Department of DTL for expediting the same.

During the OCC meeting held on 28.02.2017, DTL Planning deptt informed that some ambiguity has been observed in the estimate. PWD has further revised the route of the line also. The estimate would be vetted after finalizing the profile and other related issues. Joint site visit is also planned during the coming week. OCC advised for expediting the same.

During the OCC meeting held on 28.03.2017, It was informed that since 220kV Patparganj-Ghazipur ckt. is under Breakdown and also there is intermittent tripping on 220kV BTPS-Noida-Ghazipur, the shutdown of 220kV Maharani Bagh – Ghazipur (D/C) Line is not possible after 31.03.2017. PWD was accordingly advised to return the shutdown positively by 31.03.2017 considering spurt in power demand, though PWD requested to extend the shutdown at least upto 10th April 2017 to demobilize the team already engaged now in the construction.

10. 3 TPDDL Agenda

1. TPDDL have requested for allowing them to install ABT Meter in place of existing check meters installed on DMRC 220kV Jahangirpuri ckt. at 220kV Shalimar Bagh DTL grid to check reactive power transaction:-

OCC allowed TPDDL for installing ABT Meter in place of existing check meters installed on DMRC 220kV Jahangirpuri ckt. at DTL 220kV Shalimar Bagh Sub-stn. The replacement of meters be done in consultation with the metering deptt. of DTL.

2. An event occurred on dated 21.03.2017 during clearance of outage of 66kV RG-6 Ckt-2 from 220kV Rohini-1 (PTW no-119/11804 DTL end & 4578 TPDDL end) is given below:-

(i) Clearance of 66 kV Rohini 1 – RG-6 CKT-2 was given at 220kV Rohini-1 by Mr Anuj, AO STS (NW)-Line at 14.25 Hrs and same message conveyed by him to TPDDL Control Room (CenNet).

(ii) Message to open earth link at RG-6 Grid was conveyed to HMC (NW-1) at 14.40 Hrs who were already present at Grid.

(iii) About 5 min later (14.45), HMC informed CenNet that they have observed spark and heavy jerk at earth isolators when they were in yard.

(iv) Same was asked from SLDC but they said that no operation was done from their side as no clearance was given from CenNet till then.

(v) So again message given to HMC for opening earth link at RG-6 Grid and same opened at 14.50 HRS.

(vi) Charging message given to SLDC and CKT charged by SLDC at 15.10 HRS and load taken into service at 15.30 HRS.

Flash mark is observed in all 3-phase of earth isolator and got deeply carbonised after this event. Photo for the same is attached herewith.

TPDDL have requested to investigate the fact and analyse Tripping Event and Relay Data at 220kV RHN end.

It was informed by DTL O&M deptt. that as soon as the 66kV RG-6 CKT-2 was energized from Rohini-1 Sub-stn, the ckt. tripped on Distance protection.

OCC advised that proper communication be ensured for energization of line after cancelling the PTW to avert reoccurrence of such type of events.

10.4. Approval for deployment of new communication system at DTL Grid Sub-stns.

TPDDL have informed that they are in process of upgrading existing communication system by deploying Packet technology (IP-MPLS). This requires installation and commissioning of communication equipment at DTL sites for SCADA communication with TPDDL Control Centre. Communication equipment along with rack (42U) and other accessories like battery bank, FMS will be commissioned at these sites. Accordingly, TPDDL have requested DTL to provide necessary permission to install and commission the new equipment. The pre-requisites for installing communication equipments are-

(i) AC mains supply 220V for sourcing power and commissioning of communication equipment (Equipment load is <10A).

(ii) Air conditioned environment with temperature maintained at 25°C.

(iii) Good earthing (<0.9 ohms)

(iv) Space for installing equipment rack for communication equipment (600 X 600 X 2200 mm) and a battery stack (580 X 640 mm)

(v) Permission for nominated staff of TPDDL communication team to get access to equipment room, as and when required.

TPDDL requested for approval of DTL for deployment of TPDDL's new Communication System at DTL Grid stations. TPDDL informed that their communication equipment has arrived for installation. These equipments are required for line differential relay protection of TPDDL from the respective Sub-station

DTL informed that its own new communication equipment, chargers and RTUs, PMU etc. are already planned to be installed in the SCADA Rooms and there is shortage of space. Further, DTL requested that access to communication equipment of TPDDL may also be required in future for AMR of DTL.

OCC decided DTL to provisionally allow offloading of TPDDL equipments at DTL Grid Stations – Naraina, Khanjawala, Narela, Rohini-1, Rohini-2, Gopalpur, Shalimar Bagh, Peeragarhi as per their list. However the location be finalized for installation of these equipments, depending upon the availability of space and site condition after joint inspection of sites by a team comprising of representative from SCADA, Communication, substation in-charge of DTL and representative of TPDDL.

10.5 BTPS Agenda

1. Total Black out of BTPS on 20.3.2017 and running of BTPS Units

An incident of black out occurred at BTPS at 10:30 hrs on 20.3.2017, consequent to tripping of 220 KV Alwar line due to overloading . Before that, since 10:20 hrs several reminders were sent to DTL & NRLDC regarding overloading of Alwar line, but no corrective action was taken. Subsequently at 10:30:19 hrs, Alwar line (which was importing power of 267 MW) tripped due to overloading causing total black out at BTPS. Later, MIA Alwar also confirmed that overcurrent protection operated at their end. In this regard we want to state that:

1. Such Black out creates severe emergencies and stress to various equipment in our system. The incident of total black out could have been avoided, if at least one 210 MW Unit of BTPS was in operation at that time.
2. As, DPCC through order no DPCC/WMC-II/2015/16/2368-81 Dated 14.3.2017 allowed operation of BTPS units from 15.3.2017 to 15.10.2017, one 210 MW Unit could have been taken into service easily.
3. To enable synchronization of unit#4&5 at short notice all the pending jobs like safety valve floating and electrical testing (which couldn't be completed earlier due to restriction imposed by DPCC) had been completed from 19th March to 21st March 2017 . For this, we had to keep units in light up condition for several hours with oil and coal.
4. As per meeting held on 14.10.2016 at SLDC to discuss the scheduling of power during the period Nov 2016 to March 2017, it was decided to schedule one 210 MW Unit of BTPS during this period

As both Unit no#4&5 are presently ready to operate, considering the facts stated above, running of 210 MW Units of BTPS may considered.

Already covered in para 4 of the MoM

10.6. DC of 2x210 MW Units of BTPS

BTPS is declaring DC of 646 MW on daily basis. Since 1.1.2016 SLDC is certifying DC of 2x210 MW only (against which NTPC has already approached CERC claiming full DC). After DPCC order to close down all BTPS Units on 6.11.2016, SLDC was not considering DC of BTPS. Even after DPCC order no DPCC/WMC-II/2015/16/2368-81 Dated 14.3.2017 which allowed operation of

BTPS units from 15.3.2017 to 15.10.2017, DC of 2x210 MW Units have not considered by SLDC. Although BTPS is declaring DC of 646 MW on daily basis through Fax, no confirmation regarding DC of BTPS is being received. Even SLDC website is showing zero DC of BTPS. SLDC is requested to restore DC of BTPS as per DPCC order.

It has been informed by SLDC that BTPS Units were under outage as shown hereunder:-

Unit No.	Capacity in MW	Date & Time of Outage	Remarks
1	95	20.11.2014 at 0:0 Hrs.	Not being scheduled due to less demand under merit order despatch principle from 01.01.2016 for not meeting the pollution norms.
2.	95	24.09.2015 at 19:20 Hrs.	
3.	95	09.10.2015 at 1:00 Hrs.	
4.	210	06.11.2016 at 17:14 Hrs.	As per direction of DPCC, unit closed down to curb pollution in Delhi
5.	210	17.10.2016 at 21:11 Hrs.	Not being scheduled due to merit order despatch principle. Later as per direction of DPCC, the unit was closed.

SLDC informed that SLDC has been certifying the DC only for two 210MW Units of BTPS since ___ which has been contested by BTPS authorities in CERC decision of which is still pending.

SLDC has not been certify DC of BTPS (DC is being certified as Zero) from 06.11.2016 in view of the decision of DPCC 06.11.2016 dated as under :

1. That Badarpur Thermal Power Station (BTPS) shall close down all its units with immediate effect for next 10 days(07.11.2016 to 16.11.2016).
2. That BTPS shall immediate stop the lifting of the fly ash from the fly ash storage area for any purpose with immediate effect for next 10 days(07.11.2016 to 16.11.2016).
3. That BTPS shall springle water regular basis in the fly ash storage area and shall ensure that there is no fugitive emissions from the fly ash storage area.
4. That BTPS shall submit the compliance of the above directions immediately by return email to DPCC (msdpcc@nic.in and ajeetal@yahoo.com)

Further, DPCC has extended the dead line vide its letter dated 16.11.2016 . Contents of which is as under:-

1. Closure of all the units with immediate effect from 07.11.2016 to 16.11.2016.
2. No lifting fly ash from fly ash storage area, for any purpose, from 07.11.2016 to 16.11.2016.
3. Ensuring regular sprinkling of water in fly ash storage area.

DPCC vide letter dated 31.01.2016) further clarified the issue of BTPS as under :

1. Closure of all the units with immediate effect from 07.11.2016 to 16.11.2016.
2. No lifting of fly ash from fly ash storage area, for any purpose; from 07.11.2016 to 16.11.2016.
3. Ensuring regular sprinkling of water in fly ash storage area.

And whereas, vide order dated 16.112016 the above said directions were extended upto 31.01.2017.

And whereas, Graded Response Action Plan was discussed in the meeting of 20th January 2017 of EPCA.

And whereas, EPCA directed Govt. of Delhi "Based on current air quality levels as mentioned by CPCB, the Graded Plan would be enforced on the "Moderate to Poor" category in all district of NCR. In Delhi, where the air pollution levels have been either "Very Poor or Severe", the Graded Response Plan would be Severe category in force."

And whereas, implementation of Graded Response Action Plan in the category of "Very Poor and Severe" includes Closure of Badarpur Thermal Power Plant.

And whereas, Very Poor Ambient Air Quality still exists in Delhi, as per the data monitored by CPCB.

Now, therefore, in continuation of orders issued on 06.11.2016 & 16.11.2016 and in view of the above facts, all units of Badarpur Thermal Power Plant will remain closed till further orders.

DPCC vide letter dated 15.03.2017 further clarified the following :

Now, therefore, in compliance of the above mentioned decision taken in the EPCA meeting dated 27.02.2017, the Competent Authority in DPCC is pleased to revoke the closure directions issued on 30.11.2017 and directs as follows:

- a) that Badarpur Thermal Power Plant (BTPS) would be allowed to operate from March 15, 2017 to October 15, 2017. It would remain close during the months when the graded action plan comes into force for winter months.
- b) that BTPS shall ensure the sprinkling of water on regular basis in the fly ash storage area and shall ensure that there is no fugitive emissions from fly-ash storage area.
- c) that BTPS shall ensure that the fly-ash from the Fly-ash storage area must be lifted in a manner and transported in such vehicles that do not lead to air pollution.

Considering the above, SLDC proposed that DC of BTPS can be restored as what was that prior to 06.11.2016 i.e. two units of 210 MW capacity of BTPS from 15.03.2017 the date from BTPS was allowed to operate subject to fulfilment of the conditions stipulated by DPCC. BTPS representative was of the view that the opinion of SLDC will be subjected to the outcome of proceedings pending with CERC.

OCC consented the proposal of SLDC in certifying the DC of BTPS.

10.6 BRPL Agenda

Handing over of 33kV Naraina – Kheber Lane ckts. to MES.

The matter was discussed in last OCC meeting held on 28.02.2017 regarding Handing over of 33kKV Double ckt from 220 KV Naraina to Khyber Line grid s/stn to MES as BRPL is not having any role in this Ckt as it is not drawing any power and not billing.

MES informed as per their record, the elements is in the book of MES.

BRPL informed that if the asset is in MES account, the maintenance expenses incurred in the system should be reimbursed to them.

BRPL have requested to provide the records of ownership of the feeder from MES.

It was decided that the matter be mutually resolved by BRPL and MES.

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”.
