



DELHI TRANSCO LIMITED

(A Govt of NCT of Delhi Undertaking)

No.F.DTL/202/Opr(Plg.)/2017-18/Mgr(CE&STU)/G-32/ | 2

Dt. 03.05.2018

Subject: Minutes of the 1st Steering Committee Meeting of 2018-19 held on 04.04.2018.

Sir,

The minutes of the 1st Steering Committee Meeting of 2018-19 held on 04.04.2018 at 10:30AM in the office of General Manager (T) Planning, Shakti Deep Bldg., Jhandewalan Extn., New Delhi are enclosed herewith for kind information and further necessary action please.

Thanking You.

Encl.: As above

Yours Faithfully,

Susheel
03/05/18
(Susheel Gupta)

Manager (T) CE&STU

To

1. Jt. Director (Engg), DERC
2. Chief Engineer (E-I), NDMC
3. Chief Engineer (E-II), NDMC
4. CWE(Utility), MES
5. Chief Executive Officer, TPDDL
6. Chief Executive Officer, BRPL
7. Chief Executive Officer, BYPL
8. Chief Electrical Engineer (PS), DMRC
9. Head (Electrical Terminal), GMR
10. GM (Electrical) NCRTC
11. GM (CM&SEM), DTL
12. GM (O&M-I), DTL
13. GM (O&M-II), DTL
14. GM (Project-I), DTL
15. GM (Project-II), DTL
16. GM (C&MM), DTL
17. GM(C&RA), DTL
18. GM (Planning), DTL
19. GM(PMDM&S), DTL
20. DGM(SO) SI.DC
21. DGM (Planning), DTL
22. Sh. Aashish Srivastav, Dy CEE, Northern Railway
23. Sh. Mukesh Kumar, XEN (ED-IV) DSIIDC

Copy for favour of kind information to:-

1. CMD, DTL
2. Director(Oprs), DTL
3. ED (T) DTL
4. Spl. Secy(Power), GNCTD
5. Sh. Virender Kumar, Chief Engineer(E) DSIIDC



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Minutes of the 1st Steering Committee Meeting of 2018-19 held on 04.04.2018 at 10:30AM in the office of General Manager (Planning) DTL.

A. Confirmation of Minutes of 3rd Steering Committee Meeting of 2017-18 held on 17.01.2018

The minutes of the 3rd Steering Committee Meeting held on 17.01.2018 were circulated vide letter No. F.DTL/202/Opr(Plg.)/2017-18/Mgr(CE&STU)/G-32/116 dated 16.02.2018. No comments were received.

The Steering Committee approved the minutes of the meeting held on 17.01.2018.

B. Follow-up action of decision taken in previous Steering Committee meetings:

I. Power Evacuation Plan of 220/33kV Timarpur S/Stn.

The evacuation plan finalized earlier from Chandrawal (before shifting of the location to Timarpur) was as under:

S.No.	Name of Feeder	Remarks
1.	DU Ckt	LILO of DU - Hudson Lane at Chandrawal.
2.	Hudson Lane Ckt	
3.	Wazirabad Ckt	L.ILO of Wazirabad - Civil line ckt at Chandrawal.
4.	Civil Line Ckt	
5.	Indra Vihar Ckt	L.ILO of DIFR - Indra Vihar ckt. at Chandrawal.
6.	DIFR Ckt	
7.	Tripolia Ckt	L.ILO of Tripolia -Shakti Nagar ckt. at Chandrawal.
8.	Shakti Nagar Ckt	
9.	GTK Ckt	L.ILO of GTK -Azadpur ckt. at Chandrawal.
10.	Azadpur Ckt	
11.	Model Town Ckt(Future Ckt)	L.ILO of Model town - Azadpur ckt. at Chandrawal.
12.	Azadpur Ckt.(Future Ckt)	

In the last Steering Committee meeting, TPDDL submitted that there are RoW issues in drawing out power from the proposed Timar Pur Grid as feeders would have to be laid along the Najaf Garh Drain.

The issue of RoW was got resolved by conducting a meeting with I&FC (Irrigation and Flood Control), DJB and TPDDL on 13.03.2018 wherein the I&FC representative agreed 'in principle' for providing RoW on service road along the Najafgarh drain.

In view of the above, TPDDL was advised to submit the evacuation plan from 220/33kV Timarpur. TPDDL submitted the evacuation plan at 33kV level from 220/33kV Timarpur and the same was approved by the Steering Committee.

The approved power evacuation plan at 33kV level from 220/33kV Timarpur is as follow:

S. No.	Name of Feeder	Remarks
1.	DIFR Ckt	L.ILO of DIFR to Civil Line at 220 kV Timarpur Grid
2.	Civil line Ckt	
3.	DU Ckt	L.ILO of DU to Hudson Lane at 220 kV Timarpur Grid
4.	Hudson lane Ckt	
5.	Shaktinagar Ckt	L.ILO of Shaktinagar to Tripolia at 220 kV Timarpur Grid
6.	Tripolia Ckt	
7.	Azadpur Ckt	L.ILO of Azadpur to GTK at 220 kV Timarpur Grid
8.	GTK Ckt	
9.	Azadpur Ckt	L.ILO of Azadpur to Model Town at 220kV Timarpur Grid
10.	Model Town Ckt	
11.	Wazirabad Ckt	Single Ckt. to Wazirabad grid
12.	Future Feeder	Future 33kV feeder

2. Hot Reserve Transformers

The latest status as decided in the Steering Committee meeting is as under:

S. N.	Transformation Capacity	Population in no. as on 31.03.18	Hot Reserve (No.) Decided in the SCM held on 17.01.2018	Status
1.	400/220kV, 500MVA ICT	2	1x500MVA	One 400/220kV 500MVA transformer would be installed as hot reserve by the year 2019-20 and would be placed at Barnauli. In case of damage of 315MVA in future, the same would be replaced with 500MVA.
2.	400/220kV, 315MVA ICT	14		
3.	220/66kV, 160MVA	23	2x160MVA +1x100 MVA	One 160MVA transformer would be kept as hot reserve and placed at Mundka. For the 2nd 160MVA, 220/66kV Hot reserve transformer, the location of 220kV Mehrauli was found more suitable than that at 220kV Rohini-II. Therefore it was decided to provide 2nd 160MVA, 220/66kV Hot reserve transformer at 220/66kV Mehrauli. Both the transformers would be provided by 2019-20.
4.	220/66kV, 100MVA	41		<p>O&M Department informed that the 220/66-33/11kV, 100MVA transformer damaged at Papankalan-I on 04.09.2016 at 06:35 hours which was earlier planned as Hot Reserve at PPK-I may not materialise as the matter of repair has gone under legal tussle. They requested for new 220/66kV, 100MVA hot reserve transformer at 220kV Papankalan -I considering the aging of the existing transformers and the population of the transformers.</p> <p>In view of the above, the Steering Committee agreed for providing a new 220/66kV, 100MVA hot reserve transformer at 220kV Papankalan -I by 2019-20.</p>
5	220/33kV, 100MVA	42	2	One 220/33kV, 100MVA transformer which has already been decided as hot reserve and placed at Patparganj. Eventually, the transformer was required to be shifted to Naraina due to the failure of 100MVA at 220kV Naraina. Therefore, the new hot reserve is required at 220kV Patparganj. For the 2nd 220/33kV, 100MVA Hot reserve transformer, the location of 220/66/33kV Okhla was found more suitable than that at 220kV Kashmere Gate due to entry and exit space constraints at Kashmire Gate. Therefore, it was decided to provide the 2nd 220/33kV, 100MVA Hot reserve transformer at 220/33kV Okhla. These transformers would be provided by 2019-20.
6	66/11kV 20MVA	23	NIL	Steering Committee in its meeting held on 15.03.2017 has decided that in case of exigency, the Discoms may provide the 66/11kV and 33/11kV transformer on returnable basis.
	66/11kV 25MVA	1		
7	33/11kV 16MVA	11		
				As per the decision taken in the Steering Committee Meeting held on 30.10.17 the transformer augmentation has been planned as under:

	33/11kV 20MVA	5		
S.N	Sub Station	Details of existing Tx.	Augmentation Plan	Year
1	Lodhi Road	2 no 33/11kV 20MVA	2 no 33/11kV 25MVA	2018-19
	Lodhi Road	2 no 33/11kV 16MVA	2 no 33/11kV 25MVA	2018-19
2	Najafgarh	2 no 66/11kV 20MVA	2 no 66/11kV 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	Pappankar-I	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2020-21
6	Mehrauli	2 no 66/11kV 20MVA	2 no 66/11kV 31.5MVA	2021-22

BRPL requested to revise the timeline for augmentation of 66/11kV Power Transformers at 220kV Najafgarh considering the high load growth and overloading condition of 66/11kV Power Transformers at 220kV Najafgarh S/Stn. The matter was deliberated in the Steering Committee and it was agreed that the augmentation scheme for 66/11 kV Transformers at Najafgarh be prepared at the earliest keeping in view the load growth of the area to have sufficient redundancy. However, the timeline of the same was not revised by the Steering Committee.

C. New Issues.

1 Establishment of 220/66kV Sub-station at 400kV Maharani Bagh

NCRTC has intimated that they are going to establish a Junction Station at Sarai Kale Khan station for their following three Regional Rapid Transit System (RRTS) corridors:

- (i) Delhi – Ghaziabad – Meerut
- (ii) Delhi – Sonapat – Panipat
- (iii) Delhi – Gurgaon – Rewari - Alwar

They have requested for 2 No. 66kV bays at 220 kV level from Maharani Bagh for drawing 2 x 50 MW load for their Junction Station at Sarai Kale Khan.

To provide supply at 66kV level at Maharani Bagh, a new 220/66kV Sub-station is required to be established as the traction load cannot be met through 33kV system. It was noted that as per the proceedings of Steering Committee meeting held on 10.03.2016, the Power evacuation plan of upcoming 220/33kV GIS at Maharani Bagh was drawn out as under:

S No.	Name of Feeder	Remarks
1	Kilokari circuit -1	IP – Kilokari Circuit 1,2, 3 & 4 shall be realigned after Maharani Bagh Commissioning.
2	Kilokari circuit -2	
3	Sarai Julena circuit -1	
4	Jamia circuit -1	
5	Nizamuddin circuit -1	New circuit up to Kilokari
6	Lajpat Nagar circuit -1	New circuit up to Kilokari
7	Defence Colony circuit -1	New circuit up to Kilokari
8	Exhibition-I ckt -1	LILO of Kilokari-IP Power
9	Exhibition-II ckt -1	LILO of Kilokari-IP Power
10	Sarai Julena circuit -2	

In view of the above the requirement of NCRTC of 100 MW power at 66kV level at Maharani Bagh which is required to be provided by BRPL was deliberated in the Steering Committee for ascertaining the requirement and feasibility of the new 220kV Sub-station.

During the deliberation, DMRC (for their Phase-IV projects) and Northern Railways (for establishing the direct link from DTL S/Stn.) also informed that they would explore possibility to establish link through 66kV feeders from new 220kV Maharani Bagh for feeding their networks.

BRPL submitted that the network around Maharani Bagh area is fed at 33kV level, therefore, they require 33kV feeders from the new 220kV Maharani Bagh as decided in the Steering Committee Meeting held on 10.03.2016. The Present requirement at 66kV is almost nil. They were consistently pressing for 220/33kV S/Stn. since long. It would not be possible to shelve the scheme now. They also cited severe maintenance issues due to railway crossing of the 33kV feeders presently emanating from IP Station which were planned to be terminated at the upcoming 220/33kV S/Stn. at Maharani Bagh. They also cited an example of long outage of 33kV I.P. – Kilokari feeder since 22.02.2011 due to fault under Railway track. Railways have reportedly demanded about Rs. 150 Crores for blockage of the busy railway route. It was also reported that the total Capital cost of the electrical feeder of BRPL is less than Rs. 10 Crore. Such type of situation may arise in case of breakdown of feeders emanating from IP Stn. at Railway crossings. As such, the proposed 220/33kV s/stn. which was approved by the Board of Directors of DTL in its meeting held on 26.12.2015 is not appropriate to be dropped and in advanced stage of tendering.

After deliberation, keeping in view of the requirement at both 66kV and 33kV level and for optimum utilization of the power infrastructure, the Steering Committee agreed in principle for 220/66/33 kV GIS sub-station at Maharani Bagh comprising of 2x160 MVA, 220/66kV Power transformers and 2x100 MVA, 220/33kV Power transformers with proper reactive compensation. Further, BRPL was advised to explore possibility for evacuation of the power at 66kV level also from the proposed 220/66/33 kV sub-station by either upgrading the existing 33kV distribution network to 66kV level or creating new 66kV distribution infrastructure in the area to avoid the 66kV level power evacuation only through the traction loads of DMRC, NCRTC and Indian railways to ensure reliable operation of the system. BYPL was also advised to explore the possibility to take out 66kV feeders crossing Yamuna River to feed East Delhi areas.

DTL was accordingly advised to revise the scheme of 220/33kV GIS Maharani Bagh and establish 220/66kV and 220/33kV systems with proper reactive compensation at Maharani Bagh. It was also advised to devise the plan so that the system is in place by the year 2020-21.

2 Requirement of 220/66kV Sub-station at Rani Khera

It was gathered that DSIIDC is in the process of developing an industrial park in Rani Khera which is in the vicinity of Madan Pur and Kanjhawala village. DSIIDC had sent the details to TPDDL and had asked for electrification with a tentative load requirement of 64 MW.

However; after working out load as per norms specified in the DERC regulations TPDDL updated that not only 66/11 KV but infrastructure at 220/66 KV would also be required since the load requirement works out to around 250 MW.

The representative of DSIIDC submitted that they will require around 80MVA power in next 3 years.

It was felt that even if the load demand is 80MVA within 3 years (the present 220kV Kanjhawala sub-station which is the nearby sub-station would not be able to cater this additional demand) and the ultimate demand is 250MW in next 10-15 years, as such atleast one 220kV and four 66kV S/Stns. are required. The Developer, DSIIDC has to provide sufficient infrastructure to install one 220kV and four 66kV S/Stns. while planning the development of the area. As such, the Steering Committee advised TPDDL and DSIIDC to submit the detailed proposal so that the case can be examined.

3 Availing power on Inter-State Open Access in the state of Delhi by Northern Railway

DERC vide letter dt.19.03.2018 requested DTL, SLDC, TPDDL and BRPL for providing comments on the suggestion of Northern Railway for transfer of the assets corresponding to last mile connectivity to Northern Railway being a deemed licensee for direct connectivity with DTL.

Northern Railway has stated that the connection agreement was entered with erstwhile DESU and for availing power supply from nearby S/Stn. of DESU to Railways drawal points the lines were built at the cost of Northern Railways. These lines were subsequently transferred with respective distribution companies after the implementation of transfer schemes in Delhi. Northern Railways, being a deemed licensee will get disconnected with the existing distribution licensee upon commencement of power under Open Access. As such the asset corresponding to last mile connectivity in the respective distribution companies may be transferred to Northern Railways enabling direct connectivity with DTL.

It was indicated that Northern Railway has raised the issue of operationalisation of deemed licensee status in a phased manner with DERC. It was mentioned that DERC in its letter dt.28.02.2018 mentioning "when Northern Railway has taken Open Access as deemed licensee and ceases to be consumer of distribution licensee" is being interpreted that railway should be ceased to be the consumer of distribution licensee(s) for all its connections points simultaneously.

As such Northern Railways requested that the asset corresponding to last mile connectivity including at Ridge Valley/Chanakyapuri (Railway connection point) and at Narela may be transferred to Northern Railway enabling the connectivity with DTL.

It was explained that the present connectivity of railways at Narela 66kV grid of TPDDL and 66kV Ridge Valley Grid of BRPL is as under.

Sr. No.	Drawal Point of Railway DSIDC	Connectivity with DTL	Remarks
1.	66kV Narela grid of TPDDL.	66kV feeders from 220kV DTL Narela – 66kV Narela (TPDDL) – 66kV Railway grid	The 66kV feeders from 220kV S/Stn Narela of DTL to 66kV Narela (TPDDL) are interlinking feeders to establish the connectivity of 66kV Narela grid of TPDDL. in case of exigency of 220kV DSIDC Bawana.
2.	66kV Ridge Valley grid of BRPL	66kV Incomers from 220kV DTL Ridge Valley – 66kV Ridge Valley (BRPL) – 66kV Railway grid	The 66kV Incomers from 160 MVA Transformers at 220kV Ridge Valley of DTL are supplying 66kV Ridge Valley grid of BRPL which is feeding other areas as well.

The representative of Northern Railway explained the details and the reasons behind the proposal. It was indicated that the link between 66kV TPDDL Grid S/Stn. to Railway interconnection points is being maintained by TPDDL whereas from Ridge Valley 66kV the feeder of Railways is being maintained by Northern Railways. However, the energy meters are installed at the respective distribution companies grid s/stns. They were of the view that if

they are treated as the consumers of distribution companies the meters should be installed in the premises of railways as in case of other consumers.

It was also requested that if the analogy of the metering at present System should be continued, the asset up to meters should be transferred to Northern Railway.

During the discussion, it was made clear that at 66kV TPDDL S/Stn. at Narela and at 66kV BRPL S/Stn. at Ridge Valley other consumers are also being fed. As such, if transfer of assets as suggested by Northern Railway happens, the responsibility of feeding the other consumers of the respective distribution companies would also fall on Northern Railway which is neither feasible and nor as per the mandate of Indian Railways.

Further, it was advised that the Northern Railway if require may request DTL for 66kV feeders from the new proposed 220kV sub-stations for direct connectivity.

The representative of Railways informed that they would explore possibility for establishing direct link with DTL S/Stn. through the 66kV feeders from the proposed 220/66/33kV sub-station Maharani Bagh of DTL.

TPDDL further informed that they had searched all relevant files but could not find any record related to the said line which could establish that the line was established under 100% deposit of Northern Railway. They requested for providing the necessary records if Northern Railway/DPCL has any such record which establish that the line was established under 100% deposit of Northern Railway. In that case Tata Power-DDL would hand over the line to Northern Railway. They submitted that the metering would be at sending end i.e. outgoing from Narela DSIIDC-1 to the Railway.

BRPL informed the following:

Open Access Issue:

Northern Railway is connected to 66 kV Ridge Valley Grid Substation of BRPL. The 66 kV connection is emanating from the 66 kV Bus, which is in the custody of BRPL hence all necessary Open Access Terms & Conditions is required to be made applicable for Northern Railway also.

Location of Metering point:

Presently, Meter Location for Railway connection is at Ridge Valley. Since the cables are maintained by Railways themselves, the location of meter is justified.

After detailed discussion it was advised that the comments of Distribution Companies be provided to DERC. As far as DTL perspective is concerned, it was informed that it is the responsibility of DTL/STU in Delhi to provide stable supply to the vital public transport system i.e. Northern Railway. The prime most aim is to provide stable supply to avoid any public sufferings on account of power failures. The commercial benefits should not hinder the reliability of power supply to Railways.

Ideally, the location of the meter for energy accounting purpose should at the point/ location after which the consumer maintains their system. The commission may look into the issue. With regard to the request of Railways for direct 66kV feeders from

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proposed 220/66/33kV sub-station Maharani Bagh it was advised to consider the proposal once it is received formally from Railways.

4 Power Supply to DMRC 4th Phase from DTL Grid Stations at 220/66 kV level

The power supply arrangement for Phase-IV projects/corridors of DMRC was deliberated as under:

S.No	Details of Ph.IV Corridor	DMRC RSS (Proposed)	Source suggested by DMRC	Updated status
1	Janakpuri West to R.K. Ashram (28.92Km. 7 U/G and 18 elevated station) (Requirement by 2020-21)	Bhalaswa	Sanjay Gandhi Transport Nagar level (Proposed)	Steering Committee has already allocated two bays from the upcoming 220/66kV Sanjay Gandhi Transport Nagar GIS. The DTL board has already approved the 220kV GIS scheme and presently under tendering. The S/Stn. is expected by Sept 2019.
		Near Nabi Karim	Rohtak Road 220kV GSS has been dropped and alternatively supply shall be provided from Park Street S/Stn.	The issue of 220/33kV GIS S/Stn. at Rohtak Road was put up for approval in the 37 th Standing Committee of CEA held on 20-01-2016 in which it was decided to discuss the issue first with the BBMB partner State as Rohtak Road S/Stn. belongs to BBMB in which Delhi State is not a partner. As such, the supply from the S/Stn. cannot be ensured. It was decided that the two 66kV bays may be provided from the 220kV Park Street S/Stn. by converting the existing two 66kV bays supplying to DMRC into hybrid system and establish two bays for providing additional supply considering the space constraint for the establishment of additional bays. DMRC informed that the supply is required by 2020-21. In the Steering Committee held on 30.10.2017, it was decided to convert 33kV AIS to GIS at 220kV Park Street in first phase and after that 66kV AIS to GIS in second phase. After the conversion of 66kV AIS to GIS at 220kV Park Street, 2 bays would be provided to DMRC. Steering Committee advised DTL to prepare a scheme for conversion of 66 KV AIS into 66 kV GIS at 220 kV Park Street so that the same is available by the year 2020-21.

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		Peeragarhi Depot	Budella 220/66kV GSS (Proposed)	Two bays from Budella 220/66kV GIS (proposed) have already been allocated for Peeragarhi Depot of DMRC. Expected date of commissioning by 2019-20.
2	Inderlok-Indraprastha(12.57 km. 10 U/G station) (Requirement by 2020-21)	Zakhira Depot	Rohtak Road 220kV GSS (proposed)- The substation has been dropped	As already mentioned above, the establishment of 220/33kV S/Stn. at Rohtak Road is having remote chance. Dev Nagar 220/33kV S/Stn. is nearby substation. Since the traction load transformer of 25MVA at 33kV level is not available, DMRC requested to provide the supply from two bays from 220kV side. As the load of DMRC system is very less and almost nil particularly during night time, the long 220kV cables would affect the system stability. As such steering committee was of the view that the 2 no. 66kV bays to be provided at 220kV Park Street for Janakpuri West to R.K. Ashram Corridor may be utilized by DMRC for this section also.
		Indraprastha	Rajghat 400/220kV GSS (proposed)-Now at Maharani Bagh	It was informed that due to National Green Tribunal (NGT) Stipulation, the site of proposed 400kV S/Stn. has now been shifted to Gopalpur as Intra State Transmission System. As such DMRC has to find suitable feeding point. DMRC requested for two 66kV bays from Maharani Bagh S/Stn. Steering Committee agreed 'In- Principle' for providing two 66kV bays to DMRC from the proposed 220/66/33kV Maharani Bagh S/Stn.
3	Aerocity-Tughlakabad (20.20km. 10 U/G and 5 elevated station) (Requirement by 2020-21)	Rangpuri Depot	Vasant Kunj 220/66kV GSS or Rangpuri 220kV GSS	DMRC requested for 02 no. 66kV feeders from 220kV Vasant Kunj Substation for their Rangpuri Depot RSS proposed under Aerocity-Tughlakabad Phase-IV Corridor of DMRC. DMRC informed that the 02 no. 66kV bays at 220kV Vasant Kunj currently utilized to charge 220kV cable of R. K. Puram shall become free after 66kV feed is directly provided from 220kV R. K. Puram

				<p>Substation of DTL. After that the said 66KV bays at 220KV Vasant Kunj may be allocated to DMRC for their Rangpuri Depot RSS.</p> <p>The matter was deliberated in SCM held on 15.03.2017 and BRPL informed that the said 66KV bays at 220KV Vasant Kunj had already been allocated to BRPL for their Sultan Garhi grid in the SCM dated 27.08.2014. The said 66kV bays were temporarily used to charge the 220KV cable of R. K. Puram to provide 66kV supply to R. K. Puram RSS of DMRC. BRPL required these 2 no. 66kV bays for their upcoming Sultan Garhi Grid when these become spare after commissioning of 220kV R. K. Puram.</p> <p>The matter was deliberated and 2 No. 66kV bays for DMRC from 220kV Vasant Kunj were agreed subject to availability of space at the 220kV Vasant Kunj.</p> <p>The space is available at 220kV Vasant Kunj, however, tree cutting permission will be required for creating bays to provide supply to very critical public transport system.</p> <p>DMRC requires the power in 2020-21</p>
		Tuglakabad	Tuglakabad 220/66kV GIS (Proposed)	<p>Tuglakabad ISTS along with 220/66kV GIS is under construction and expected to be ready by June 2018. As per the decision taken in the Steering Committee held on 29.06.2017, 2 no. 66kV feeder bays have been allocated to DMRC.</p>
4	Rithala-Bawana-Narela(21.73 km. 16 elevated station) (Requirement by 2020-21)	Rohini Sector-26	220kV Rohini-II GSS (Existing)	<p>At present there are 6 no. 66kV feeder bays at 220kV Rohini-II S/Stn. Two No. 66kV feeders each for RG-28, RG-29 and RG-34 (to be renamed as RG-30 circuit 1 & 2 after LILO of RG-34 circuit 1 & 2 by TPDDL at their RG-30) grids of TPDDL have already been allocated. As such no spare bays are available.</p> <p>DMRC requested two 66kV bays from Rohini-II S/Stn. In the Steering Committee meeting held on 15.03.2017, the matter</p>

				<p>was deliberated and 2 No. 66kV bays for DMRC from 220kV Rohini-II were agreed subject to availability of space at the 220kV Rohini-II sub-station.</p> <p>The space is available at 220kV Rohini-II, for establishment of the 66kV additional bays. DMRC informed that they require power in 2020-21. As such, it was decided to establish additional two 66kV bays at Rohini-II.</p>
		Sanoth Colony Depot	DSIDC Bawana 220kV GSS(Existing)	<p>DMRC required 2 No. 66kV bays by 2020-21.</p> <p>It was informed that 2 no. 66kV bays are already available at 220kV DSIDC Bawana.</p>
5.	Dwarka – Prem Piao (over head) (Requirement by 2023-24)	Baprola Depot Kanjhawala	220/66kV GIS at Budella (upcoming) 220/66kV Kanjawala Grid S/Strn(existing)	<p>It was informed that Steering Committee in its meeting held on 20-10-15 has already decided to allocate two 66kV bays from 220/66kV GIS at Budella being established by DTL which is expected to be commissioned in Sept 2019.</p> <p>It was also informed that the 2 no. 66kV bays to be provided from 220kV Budella will be utilized for Janakpuri West to R.K. Ashram Corridor also along with this section.</p> <p>It was informed that 1 no. 66kV bay is available at 220/66kV Kanjawala which may be utilized as DMRC is already using 1 no. 66kV bay.</p>

5. Details of Infringement points at 220kV and 400kV Transmission lines due to upcoming Phase-IV projects of DMRC

In the Steering Committee meeting held on 29.06.2017 DTL requested DMRC to provide the details of infringement points at 220kV and 400kV Transmission lines of DTL due to their upcoming Phase-IV projects so that the transmission system planning could be optimized keeping in view of the future shifting requirements of DMRC.

In the meeting DMRC informed that their Phase-IV projects are still under review and they will provide the infringement points details to DTL once the projects are finally cleared.

As per the press reports, it was learnt that DMRC is going ahead with Phase-IV projects. As such DMRC was requested to provide the infringement details for taking suitable action in time.

DMRC submitted that the alignments of their Phase-IV projects/corridors have not yet been finalized and they shall communicate the infringement details to DTL as soon as the alignments of the Phase-IV projects/corridors get freezed.

D. TPDDL Issues

1. Establishment of additional 220/66kV 160MVA PTR at Shalimar Bagh S/Stn.

TPDDL submitted that 1 No. dual ratio 220/66/33KV PTR installed at 220KV Shalimar Bagh Grid was last year converted into 220/66KV PTR as a temporary arrangement to provide interim relief to 220KV Narela and 220KV Gopalpur belt. At present, only 1 no. 220/66kV 100MVA Transformer is available without any redundancy in the system and proposed 220/66kV SGTN is also delayed.

In the meeting held in the chamber of Director (Operations) on 02.01.2018 it was decided to shift 100MVA CGL make PTR of Mehrauli (which remains at no load) to 220kV Shalimar Bagh. Additional 04 no. 66kV Bays and 2 No. 220kV bays were also decided to be erected by Summer' 18. Same was captured in Steering Committee Meeting MoM dated 17th Jan 2018.

It was informed that they have already laid and commissioned 2 no. 66 KV feeders from 220 KV Kanjhawala to 66/11 KV Karala Grid (duly approved by Steering Committee considering the moved 160 MVA as firm capacity) which has connectivity at 66 KV level with 220 KV Rohini-1.

The loading is such that it would be constrained for taking load at

- Kanjhawala
- Rohini-1
- Gopal Pur

In the present scenario, this 100 MVA 220/66 KV Transformer at 220 KV SMB could have helped in mitigating the above constraints but any delay in it would put us in big risk of major outage to Tata Power-DDL area customers.

TPDDL further informed that in case of outage of the existing one 220/66kV Tx at Gopalpur, Shalimar Bagh and Kanjhawala heavy load shedding may occur in the area and requested to expedite the work of additional 220/66kV PTR at Shalimar Bagh S/Stn.

DTL informed that the civil work has already started at 220kV Shalimar Bagh for installation of additional 220/66kV 100MVA Tx. (being shifted from Mehrauli). The ETC contract for execution of electrical work will be placed very soon (subsequently LOI issued on 20.04.2018) and all possible steps have been taken so that the work is completed by 31st May 2018.

2. Power Evacuation Plan of 220/33kV Timarpur S/Stn.

In meeting held with DTL on 05.03.2018, in the office of GM Planning, regarding Power Evacuation Plan of 220/33kV Timarpur S/Stn., it was decided to carry on with tendering of the project. Further, in meeting held in the office of GM (T), Planning, DTL on 13.03.2018, I&FC agreed in principle for laying of cables by TPDDL by utilizing service road along Najafgarh drain.

In view of above recent developments, TPDDL requested DTL to update the status of project.

DTL informed that they have already prepared the scheme for 220/33kV Timarpur and the same was approved by the Board of Directors of DTL on 28.03.2018. The scheme would be available by the year 2020-21, obviously delayed due to change in location on account of RoW issue.

The matter has been covered in detail at item no. B.1.

3. Installation of 66/11kV, 31.5 MVA Power Transformer at Bawana-1 Grid

Peak loading of Bawana-1 Grid in summer'17 was 36 MVA with respect to installed capacity of 50 MVA. Scheme for 66/11kV, 31.5 MVA, 3rd PTR at Bawana-1 Grid was already prepared in CAPEX 15-16 under Deposit Head to mitigate N-1 & overloading of Power Transformers at Bawana -1 Grid. However, DSIIDC did not make payment towards Installation of PTR.

In CAPEX 2017-18, Scheme for 66/11kV Poothkhurd-2 (Bawana 4) Grid was made under System Improvement head to mitigate overloading of existing PTRs at Bawana 6, Bawana -1 and 220 kV DSIIDC Bawana Grid after no payment was received towards installation of additional PTR at BWN-1 as well as erection of Poothkhurd-2 Grid under deposit head.

However considering 11.7% load growth and subsequent Load transfer (approx. 7MVA) as proposed in Bawana-4 Scheme, N-1 will still be not achieved at Bawana 1 Grid.

Sr. No	Grid Name	Voltage Ratio	T/F No.	T/F Capacity (MVA)	PTR Load MVA (Summer' 17 Grid Peak)	% Load Growth	Projected Load Summer 18 (MVA)	Load transfer to Bawana -4 Grid (MVA)	Projected Load Summer 19 (MVA)	% Grid loading
1	Bawana-1	66/11	TRF-1	25	16.00	11.70%	18	2.3	17	70%
			TRF-2	25	20.37	11.70%	23	5.0	20	79%

Average Grid loading will still be 74% even after transferring load to Bawana 4. TPDDL proposes to install 66/11kV, 31.5 MVA PTR in Bawana 1 Grid under SI head.

The Steering Committee agreed 'in principle' to the proposal.

4. Removal of T-Off portion of Mundka – Mangolpuri -1 – Nangloi circuit

TPDDL submitted that before 400/220/66 KV Mundka was established, there used to be 66KV D/C from Mangolpuri-1 (TPDDL) to Nangloi (BRPL). After commissioning of Mundka, BRPL laid one dedicated 66 KV circuit from Mundka to Nangloi. TPDDL laid one circuit from Mundka and connected with one of the two circuits existing between Mangolpuri-1 and Nangloi. As a result, at Nangloi, following circuits exists: one 66 KV dedicated circuit from Mundka, one from Mangolpuri-1 and one T-off from the Mundka-MangolPuri-1 circuit.

The T-off circuit always remains on no load with isolator open and locked at Nangloi end. In case there is any issue at the Nangloi end, BRPL takes load from TPDDL on Mangolpuri-1-

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11	06.08.12	19:10	27.08.12	19:28	General trip 86 Master Relay	Cable faulty	21
12	29.08.12	12:47	31.08.12	19:52	General trip 86 Master Relay	Cable faulty	2
13	31.08.12	20:37	05.09.12	17:04	General trip 86 Master Relay	Cable faulty	5
14	12.09.12	15:32	18.09.12	13:08	General trip 86 Master Relay	Cable faulty	6
15	04.10.12	13:06	08.10.12	15:33	General trip 86 Master Relay	Cable faulty	4
16	18.10.12	15:10	09.11.12	17:14	General trip 86 Master Relay	Cable faulty	22
17	09.11.12	17:33	16.11.12	15:12	Dist. Prot E/F	Cable Faulty	7
18	31.12.12	16:17	06.01.13	08:17	O/C, General Trip, Master Relay	Cable faulty	6
19	09.01.13	10:16	16.02.13	15:12	General trip 86 Master Relay	Cable faulty	38
20	19.02.13	12:40	07.03.13	14:15	General trip 86 Master Relay	Cable faulty	19
21	15.03.13	20:19	29.03.13	20:08	General trip 86 Master Relay	Cable faulty	14
22	05.05.13	06:40	13.05.13	14:40	Dist Prot Zone-II	Cable faulty	8
23	13.05.13	17:31	24.05.13	16:08	General trip 86 Master Relay	Cable faulty	11
24	04.06.13	06:20	04.06.13	06:51	Directional O/C	Transient fault	0
25	05.06.13	09:51	27.06.13	14:46	Dist Prot Zone-1, RYB	Cable faulty	22
26	29.06.13	12:48	02.07.13	09:18	Directional O/C	Cable faulty	4
27	11.07.13	17:13	15.07.13	17:57	Dist Prot. Zone-II, RYB, Bus Bar Protection	Cable faulty	4
28	19.07.13	16:54	24.07.13	14:30	Dist Prot. 'Y' Phase, Zone-1	Cable faulty	5
29	24.07.13	16:35	29.07.13	16:31	Dist Prot 'Y' Phase Zone-1, Directional O/C	Cable faulty	5
30	01.08.13	11:22	11.08.13	12:46	Y phase Dist. Prot.,	Cable faulty	10
31	06.08.13	13:59	10.08.13	14:34	Y phase Dist. Prot.,	Cable faulty	4
32	11.08.13	13:10	14.08.13	11:59	B phase Dist. Prot.,	Cable faulty	3
33	27.08.13	16:42	30.08.13	12:50	B phase Dist. Prot.,	Cable faulty	3
34	30.08.13	13:12	31.08.13	20:23	B phase Dist. Prot.,	Transient fault	1
35	08.09.13	00:59	11.09.13	17:47	R, Y, B phase Dist. Prot.,	Cable faulty	3
36	11.09.13	18:46	11.01.14	20:01	Y phase Dist. Prot.,	Cable faulty	122
37	16.06.14	14:47	22.06.14	18:37	DT, O/C	Cable faulty	6
38	30.07.14	21:53	02.8.14	16:41	D/P,Z-1,Y-Ph,86	Cable faulty	2
39	07.08.14	23:10	08.08.14	01:19	DT O/C, 86	Transient fault	--
40	11.08.14	07:00	11.08.14	09:20	DT O/C, 86	Transient fault	--
41	27.08.14	16:53	04.09.14	19:26	D/P Z-1,Y-Ph,DT O/C	Cable faulty	8
42	005.09.14	03:20	09.09.14	15:08	D/P Z-1,B-Ph,DT O/C	Cable faulty	4
43	21.10.14	00:41	23.10.14	15:49	D/P Z-1,Y-Ph,DT O/C	Cable faulty	2
44	24.10.14	04:01	01.11.14	18:03	D/P Z-1,Y-Ph,DT O/C	Cable faulty	8
45	09.05.15	13:16	11.5.16	14:54	86, O/C	Transient fault	1
46	11.05.16	15:49			Put-off by SLDC on advise of BRPL system Operation	Continue	Not operating since last 2 years

Break Down Details of 66kV Mundka - Nangloi W/W Ckt (Energized on 02.08.2011 at 17:40Hrs.)

Sl. No.	Tripping date	Tripping Time	Restoration date	Restoration time	Relay indication	Remarks	Total days of outage
1	03.08.11	17:56	25.08.11	16:07	220/66kV 160MVA Tx. tripped on visual audio alarm, ERA trip, ERB trip, 86A&B, supervision, 86, 4WS2 link. B-phase of 66kV Nangloi W/W found	Cable faulty	22

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2	03.11.11	12:00	09.11.11	20:13	Dist. Prot. zone-1, 67NX along with 220/66kV 160MVA Tx. tripped on 86A&B. cable of 66kV feeder found faulty	Cable faulty	6
3	14.11.11	8:17	19.11.11	15:41	Tripping of 315MVA ICT and 160MVA Tx	Tx tripping	5
4	11.12.11	21:30	20.12.11	10:03	Tripping of 315MVA ICT and 160MVA Tx at 19:47hrs. and normalized at 21:39hrs. PTW issued to BSES at 23:18hrs. on the 66kV W/W feeder	Cable faulty	9
5	22.12.11	01:19	26.12.11	14:50	86, General trip	Cable faulty	4
6	26.12.11	14:51	08.01.12	18:23	O/C, general trip, 86	Cable faulty	13
7	26.01.12	04:15	13.02.12	18:32	O/C prot. trip, B-phase faulty	Cable faulty	18
8	28.03.12	03:09	15.04.12	18:13	86, Dist. Prot. Zone-3, O/C, R-phase faulty	Cable faulty	18
9	24.04.12	08:18	28.04.12	12:53	O/C, 86	Cable faulty	4
10	10.06.12	06:09	10.06.12	08:31	General Trip 86 Master Relay	Transient fault	1
11	18.06.12	17:03	23.06.12	19:50	General Trip 86 Master Relay	Cable faulty	5
12	02.08.12	04:08	07.08.12	18:25	General Trip 86 Master Relay	Cable faulty	5
13	28.08.12	09:30	31.08.12	13:16	General Trip 86 Master Relay	Cable faulty	3
14	29.09.12	08:08	04.10.12	17:47	Dist Prot Zone-1	Cable faulty	6
15	24.02.13	19:22	26.02.13	15:08	General Trip 86 Master Relay	Cable faulty	4
16	06.06.13	16:54	09.06.13	03:23	Directional O/C	Cable faulty	3
17	01.07.13	15:20	03.07.13	22:56	Directional O/C	Cable faulty	2
18	09.07.13	18:31	09.07.13	20:16	Directional O/C	Transient fault	0
19	09.07.13	22:32	13.07.13	20:16	Directional O/C	Cable faulty	4
20	21.07.13	09:48	26.07.13	22:59	Directional O/C	Cable faulty	5
21	01.08.13	11:22	01.08.13	12:09	Directional O/C	Transient fault	0
22	03.08.13	09:42	06.08.13	15:36	Zone-1, Dist. Prot.	Cable faulty	3
23	23.08.13	01:51	28.08.13	00:41	R, Y, B phase Dist. Prot.,	Cable faulty	5
24	30.08.13	13:19	03.09.13	12:30	R, Y, B phase Dist. Prot.,	Cable faulty	4
25	11.01.14	00:39	13.01.14	20:37	R, Y, B phase Dist. Prot.,	Cable faulty	2
26	31.01.14	12:59	02.02.14	18:19	R, Y, B phase Dist. Prot.,	Cable faulty	2
27	05.02.14	15:25	08.02.14	18:40	R, Y, B phase Dist. Prot.,	Cable faulty	3
28	11.02.14	20:41	15.02.14	21:43	R, Y, B phase Dist. Prot.,	Cable faulty	4
29	03.03.14	11:58	27.03.14	17:28	Zone-1,dist. protection	Cable faulty	14
30	14.06.14	10:03	15.06.14	20:59	Zone-1,dist. protection	Transient fault	1
31	29.06.14	18:29	2.08.14	16:41	Zone-1,dist. protection	Cable faulty	3
32	02.08.14	22:24	6.08.14	20:18	Zone-1,dist. protection	Cable faulty	4
33	07.8.14	00:34	19.8.14	17:39	Zone-1,dist. protection	Cable faulty	13
34	25.8.14	16:52	28.8.14	12:46	Zone-2,dist. protection	Cable faulty	3
35	30.8.14	1:58	4.9.14	13:59	Zone-1,dist. protection	Cable faulty	5
36	8.9.14	8:15	21.9.14	13:26	Zone-1,dist. protection	Cable faulty	13
37	05.10.14	6:11	9.10.14	14:20	Zone-1,dist. protection	Cable faulty	4
38	9.10.14	14:29	21.10.14	12:14	Zone-1,dist. protection	Cable faulty	11
39	21.10.14	22:27	26.10.14	12:01	Zone-1,dist. protection	Cable faulty	4
40	30.10.14	2:54	8.11.14	17:37	Zone-1,dist. protection	Cable faulty	9
41	28.6.15	3:37	2.7.15	14:10	Zone-1,dist. protection	Cable faulty	5

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42	10.7.15	1:02	17.7.15	16:08	Zone-1,dist. protection	Cable faulty	8
43	9.4.16	11:32	14.4.16	14:13	Zone-1,dist. protection	Cable faulty	5
44	5.8.16	8:17	11.8.16	13:39	Zone-1,dist. protection	Cable faulty	6
45	27.5.17	17:01	15.6.17	14:45	Zone-1,dist. protection	Cable faulty	18
46	20.7.17	14:22	23.7.17	11:28	Zone-1,dist. protection	Cable faulty	3
47	23.7.17	11:38	27.7.17	16:04	Zone-1,dist. protection	Cable faulty	3
48	27.7.17	23:55	31.7.17	13:40	Zone-1,dist. protection	Cable faulty	3
49	5.9.17	13:47	13.9.17	14:37	Zone-1,dist. protection	Cable faulty	8
50	24.10.17	16:25	23.11.17	12:14	Zone-1,dist. protection	Cable faulty	29

It was informed by BRPL that they are facing technical difficulties in operating 66kV Nangloi feeder due to which the feeder was put off from Mundka S/Stn. on 11.05.2016. However, 66kV Nangloi water works feeder is operating satisfactorily at present. For the rectification of technical difficulties of 66kV Nangloi feeder, a consultant was also engaged earlier and it was suggested to carry out the rectification work for which an amount of about Rs. 3 Crores is required to be additionally infused. As per the DERC norms it is required to be carried out under OPEX. BRPL was of the view that such huge expenses in single cable under OPEX would result into less expenses available for maintenance of other systems of BRPL. Hence no rectification was carried out for operating the feeder (66kV Mundka – Nangloi feeder) and kept in open position.

It was suggested that BRPL should carry out the maintenance strategy adopted by TPDDL for stabilizing their 66kV Mundka- Mangolpuri feeder (extensive maintenance work was carried out during the period 08.06.2013 to 27.04.2014) which also created such trouble in earlier days. Now, the system is running in stable condition as evident from the break down details of 66kV Mundka- Mangolpuri feeder as detailed below:

Break Down details of 66kV Mundka -Mangolpuri ckt. (date of energization 18.02.12 at 13.04Hrs.)

S. No.	From Date	Time of outage	To Date	Time of restoration	Relay indication	Remarks	No. of days of outage
1	25.02.12	16.44	21.03.12	14.57	R-phase, Zone-I, Dist. Prot.	Cable faulty	25
2	22.03.12	9.22	24.03.12	15.18	R-phase, Zone-I, Dist. Prot.	Cable faulty	2
3	12.05.12	18.02	13.05.12	14.13	Over voltage	Over voltage	0
4	18.05.12	23.21	29.05.13	22.42	R-phase, Zone-I, Dist. Prot.	Cable faulty	11
5	17.06.12	07.08	17.06.12	15.41	R-phase, Zone-I, Dist. Prot.		0
6	19.07.12	10.39	19.07.12	14.14	O/C, Dist. Prot. 3-phase, Z-1		0
7	13.08.12	15.59	13.08.12	19.48	O/C, E/F, Bus bar Prot.		0
8	04.09.12	14.10	12.09.12	20.20	R-phase, Zone-I, Dist. Prot.	Cable faulty	8
9	07.12.12	13.17	07.12.12	22.31	R-phase, Zone-I, Dist. Prot.		0
10	11.12.12	11.39	11.12.12	13.48	LBB at Mundka		0
11	13.12.12	19.56	19.12.12	15.56	R-phase, Zone-I, Dist. Prot.	Cable	6

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					Prot.	faulty	
12	16.01.13	22.53	22.01.13	11.29	R&Y-phase, Zone-I, Dist. Prot.	Cable faulty	6
13	05.02.13	03.10	05.02.13	04.41	Over voltage	Over voltage	0
14	13.03.13	06.45	13.03.13	14.10	Bus bar Prot at Mundka		0
15	25.03.13	12.39	30.03.13	12.43	O/C, Y-phase, Zone-I, Dist. Prot.	Cable faulty	5
16	02.06.13	6.29	02.06.13	8.55	Dist. Prot. B-phase		0
17	06.06.13	16.46	07.06.13	14.49	O/C, E/F		1
18	08.06.13	6.32	27.04.14	15:38	Dist. Prot. R-phase, Z-1, E/F	Cable Faulty	232
19	13.05.14	17:48	13.05.14	17:56	LBB,86	Transient Fault	--
20	30.15.14	16:51	30.15.14	17:37	DT, O/C	Transient Fault	--
21	07.09.14	01:34	07.09.14	15:43	D/P, Z-1,R-Ph, O/C, 86	Transient Fault	--
22	27.09.14	09:18	27.09.14	14:54	D/P, Z-1,Y-Ph, O/C, 86	Transient Fault	--
23	10.12.14	17:02	10.12.14	20:25	D/P, Z-1,Y-Ph, O/C, 86	Transient Fault	--
24	08:02.15	17:42	08:02.15	22:44	D/P, Z-1,Y-Ph, O/C, 86	Transient Fault	--
25	12.10.15	13:20	12.10.15	18:37	D/P, Z-1,Y-Ph, O/C, 86	Transient Fault	--
26	19.10.15	02:32	05.11.15	18:23	D/P, Z-1,Y-Ph, O/C, 86	Cable Faulty	17
27	14.11.15	14:05	16.11.15	18:08	D/P, Z-1,Y-Ph, O/C, 86	Cable Faulty	2
28	16.1.16	21:42	03.02.16	17:05	D/P, Z-1,Y-Ph, O/C, 86	Cable Faulty	18
29	04.07.17	15:22	05.07.17	01:20	E/F,O/C,R-Ph, Z-1	Transient Fault	--
30	20.07.17	09:52	20.07.17	19:00	E/F,O/C,R-Ph, Z-1	Transient Fault	--

Concluding the discussions Steering Committee advised the following:

- i. The issue of removal of T-Off should be tried to be resolved through mutual discussion involving system operation of TPDDL and BRPL as the T-Off is not being used by BRPL but creating operational issues.**
- ii. BRPL to take up all possible steps to normalize the operation of 66kV Mundka-Nangloi and 66kV Mundka-Naugloi Water works feeders as a substantial amount has been invested (about Rs. 15 Crores) but the public is not getting the benefit from utilization of the same.**
- iii. The stabilization of 66kV feeders would be resulting into optimum utilization of 220/66kV, 320 MVA capacity available at Mundka S/Stn. whose loading utilisation is much less as detailed here under:**

Load position of 220/66kV 160 MVA Trs. at 400kV Mundka S/Stn.														
Year	2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
Delhi Peak Demand met in MW	5028		5642		5653		5925		5846		6261		6526	
Day	02.08.11		05.07.12		06.06.13		15.07.14		19.06.15		01.07.16		06.06.17	
Time	15.07.47		15.10.14		15.38.41		15.20.20		15.39.51		15.10.32		15.31.37	
Load of 160 MVA Tr. No-II	MW	MV AR	MW	MV AR	MW	MV AR	MW	MV AR	MW	MV AR	MW	MV AR	MW	MV AR
	-	-	-	-	35	02	73	09	52	09	64	12	33	-2
Load of 160 MVA Tr. No-III	-	-	134	0	75	-04	73	09	54	09	65	11	33	-2
Total	-	-	134	0	110	-02	146	18	106	18	129	23	66	-4

iv. The more loading of 66kV feeders at Mundka S/Stn. would ease the loading of existing other networks.

5. Details regarding DTL's critical Projects related to TPDDL licensee area

In line with issues related to augmentation of the transmission network as well as execution & commissioning of new projects in areas under TPDDL jurisdiction, it was requested by TPDDL to provide the DERC approval status for the DTL's CAPEX projects (as stated below), under TPDDL licensee area.

The details are provided here under:

S. No	Projects	Status of DERC Approval	Remarks
1	220/66kV additional 2X160 MVA Transformers along with 66kV GIS Bays at 220kV Gopalpur Grid	DERC accorded approval as on 02.06.2015	The status of the station and reasons for delay was elaborated in the SCMs. At present, the system consists of one 220/66kV, 100 MVA Power Transformer feeding 66kV Dheerpur, Burari & DMRC Ckt from Gopalpur. These load can be fed from 220kV Narela and Rohini S/Stns. of DTL. DMRC has established 66 kV supply from their 220kV Jahangir Puri S/Stn. recently to feed Mukundpur RSS. Considering the requirement and to ensure reliability of power supply to the areas, a scheme was prepared by DTL for establishment of 02 no. 220/66kV, 160MVA transformer and 66kV GIS Grid S/Stn. at Gopal Pur S/Stn. of DTL. To avoid disruption of supply the scheme is drawn out as under:- a. Establishment of 2x220/66kV, 160MVA transformer and 10 no. 66kV GIS feeder bays. b. Shift the entire 66kV feeders to 66kV GIS.

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			<p>c. Dismantle the 220/66kV, 100MVA Power Transformer.</p> <p>d. Erect 2nd 220/66kV 160MVA Transformer to ensure N-1 reliability.</p> <p>To accomplish the entire work the completion period of project is fixed as 24 months.</p> <p>The Board of Directors of DTL approved the scheme in its meeting held on 23.03.2015. Three bidders participated in the tender process. However, only one bid (M/s. SIEMENS) was technically qualified and financial bid got opened on 15.12.2015 considering the urgent requirement. The bidder has quoted the exorbitantly high cost. As such it was decided to drop the tender. After completion of the retendering process the scheme has been retendered and bid opened on 05.12.2017, which is now under evaluation. The completion period is 15 months after award of the contract.</p>
2	220/33kV Punjabi Bagh Grid	----	<p>The scheme was envisaged to be executed as TBCB, however, due to non-experience of implementation of such process, the same was kept in abeyance. Govt. of NCT of Delhi in the meetings held on 26.06.2015 with Power Deptt. advised DTL to take up all the projects and implement the same by DTL itself so that the projects could be timely executed as per the load requirement of Delhi. As such the scheme is to be implemented by DTL but the Land required for establishment of the sub-station is not available with DTL at present and matter regarding allocation of land is being taken up with DDA.</p>
3	220/66kV Tikrikhurd Grid	02.06.2015	<p>The downstream feeding grids from 220kV Tikri Khurd are mainly DSIIIC grids to be established under deposit scheme. However, due to non-picking up of load in the area, the scheme was delayed and likely to be completed in year 2021-22 as decided in the SCM held on 29.06.2017. As such Tikri Khurd has been shifted to the last phase of the Business Plan i.e. in 2021-22.</p>
4	220/33kV Timarpur (Earlier Chandrawal)	27.01.2017	<p>Earlier the scheme was envisaged at Chandrawal under TBCB, however, due to non-experience of implementation of such process, the same was kept in abeyance. Govt. of NCT of Delhi in the meeting held on 26.06.2015 in Power Deptt. advised DTL to take up all the projects and implement the same by DTL itself so that the projects could be timely executed as per the load requirement of Delhi.</p> <p>Accordingly, DTL has devised the scheme, and tender was about to be flouted, but DJB intimated that due to their upcoming WTP in the same premises, the RoW for 220kV in-feed could not be provided. As such, it was decided to shift the s/stn to nearby location at Timarpur, where land was available with the Power Department.</p> <p>TPDDI submitted that there are RoW issues in</p>

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			<p>drawing out power from the proposed Timar Pur Grid as feeders would have to be laid along the Najaf Garh Drain.</p> <p>The issue of RoW for 33kV feeder cables as raised by TPDDL was got resolved by conducting a meeting in the chamber of GM(Pig) DTL with I&FC (Irrigation and Flood Control), DJB and TPDDL on 13.03.2018 wherein the I&FC representative agreed 'in principle' for providing RoW on service road along the Najafgarh drain.</p> <p>The revised scheme has been approved by BOD, DTL in its meeting held on 28.03.2018. The s/stn is likely to be commissioned in 2020-21.</p>
5	Alternate Feed for Subzi Mandi Substation		<p>It has been informed in various SCMs that due to severe space constraints the additional connectivity or installation of additional 100MVA transformer at 220kV Subzi Mandi is possible only after conversion of AIS to GIS.</p> <p>The entire load of the S/Stn. should be shifted to the nearby 220kV S/Stn. (Timarpur) during the conversion process for almost 18 months. After that the conversion of existing AIS to GIS is required to be carried out at Subzi Mandi for providing alternate feed. As per the Business Plan of DTL for the period 2017-22 the conversion of AIS to GIS at 220kV Subzi Mandi is planned in the year 2021-22 after the establishment of 220/33kV Timarpur S/Stn. The additional connectivity of Subzi Mandi with Dev Nagar S/Stn. is also planned in the 2021-22.</p>
6	220/66kV SGTN Grid	22.06.2016	<p>Status has been regularly updated in the SCMs. The establishment of SGTN S/Stn. along with in-feeds was envisaged under Tariff Based Competitive Bidding (TBCB) route.</p> <p>The schemes under TBCB route could not be proceeded due to non-experience of implementation of such process. As such Govt. of NCTD reviewed the matter and advised in the meeting held on 26.06.2015 in Power Deptt. to execute these schemes by DTL vide MOM dt. 26.06.2015. Subsequently, DTL prepared the scheme and got approval from Board of Directors in its meeting held on 04.11.2015. Now it is under tendering stage and under evaluation. Tentative commissioning is by Sept 2019.</p> <p>Further as an interim arrangement 4 no. 66kV feeders were provided to TPDDL from 220kV Shalimar Bagh by using one 220/66kV 100MVA transformer and an additional 220/66kV 100MVA transformer is also going to be installed by 31.05.2018 at 220kV Shalimar Bagh.</p>
7	220/33KV GIS at Dev Nagar (Earlier Karampura)	Still awaited	<p>CPWD has provided land for 220/33kV Dev Nagar for establishment of 220kV S/Stn. by DTL and 33kV S/Stn. by BYPL. After long persuasion with L&DO by Govt. of Delhi the land was allocated and handed over</p>

		<p>to DTL on 4th July 2017. Still the land is not completely cleared as DJB pipelines are passing through the land. Matter has been taken up with CPWD for providing space for shifting the DJB pipelines which is expected soon.</p> <p>The BOD of DTL has approved the scheme in its meeting held on 26.09.17. The scheme is under Tendering Process. Commissioning is scheduled in 2019-20. Further the main source to feed the S/Stn. was from the proposed 400kV S/Stn. at IP (shifted from RPH Complex as the site falls in the Yamuna Flood Plain). The 400kV S/Stn at IP also could not be materialized. As such, the infeed was now envisaged through LILO of S/C Electric Lane –Park Street at Dev Nagar.</p> <p>Till the S/Stn. is commissioned (by the year 2019-20) BYPL and TPDDL are required to manage with the available sources.</p>
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It was pointed out that certain projects are delayed due to land availability and RoW constraints which are beyond the control of DTL. However, it is continuous endeavor of DTL to expedite the commissioning of the projects to ensure reliability of power supply in the capital city.

E. BYPL Issues

1. Temporary Energisation of Tibea College 33/11kV Grid by LILO of existing 33kV interconnector between Faiz Road and Motia Khan

BYPL informed that the Steering Committee in its meeting held on 30.06.2016 allocated 2 No. 33kV feeder bays for 33/11kV Tibea College Grid. Accordingly, the 33/11kV Tibea Grid was originally planned to be energized from 220kV Park Street for which BYPL is laying 4 no. 33kV 3x400 sq. mm. cables for two circuits from 33kV Tibea grid to 220kV Park Street.

BYPL informed that the cable laying in the NDMC area is pending due to want of Road cutting permissions from NDMC and the same would be completed by May/June 2018. However, the grid is going to be commissioned by April 2018.

Keeping in view of the above and the site conditions, BYPL requested to temporarily energize Tibea College Grid by making LILO of existing 33kV inter-connector between Faiz Road and Motia Khan. The energisation of Tibea Grid will help in shifting/reducing the 11kV load of existing grids namely Faiz Road, Prasad Nagar and Shastri Park.

After completion of the cable laying work from 33kV Tibea Grid to 220kV Park Street grid, the temporary arrangement shall be removed and the 33kV Tibea grid shall be charged directly from 220kV Park Street.

The matter was deliberated and Steering Committee agreed 'in principle' to the proposal. However, Steering Committee advised BYPL to expedite the cable laying work as the 33kV feeder bays are ready at 220kV Park Street for direct connectivity of 33/11kV Tibea grid to 220kV Park Street.

F. BRPL Issues

1. Status of 220/66kV Budella Sub-station

BRPL submitted that the Budella 220 kV Grid Substation is very crucial for west Delhi. Presently, the load dependability of the Vikaspuri, Janakpuri, Tilak Nagar, Paschim Vihar, Saiyyad Nangloi and other adjoining area is on two circuits from 220 kV Najafgarh to Budella -2 and one circuit from 220 kV Pappankalan-1 to Budella-1. The Overhead portion of all these circuits passes through habitation and hence de-rates the overall capacity of circuit. The load growth in these areas is very high and another 220 kV Grid at the load center (Budella) is required immediately. The substation was being eagerly awaited since the year 2011.

BRPL submitted that though they were aware that the tender of Budella 220 kV Grid Substation is in advance stage for award, it is required to be expedited and further requested Steering Committee to update the status and inform about the completion time line.

DTI informed that the tender for the scheme for the 220/66kV Sub-station Budella is under evaluation stage and the tentative commissioning of the sub-station is by Sept 2019. The work of infeed to the substation from 400kV Dwarka ISTS through 220kV cables has recently been awarded on 02.02.2018. BRPL requested for squeezing the scheduled commissioning and putting up all out efforts for commissioning of 220kV Budella before the summer peak of 2019 without which the reliability of power supply of west Delhi areas proposed to be fed from the sub-station would be affected.

Steering Committee advised DTL to expedite the commissioning of 220kV Budella.

2. Power evacuation plan from 220 KV Budella-2

BRPL submitted that they are proposing the power evacuation plan from upcoming 220 KV Budella on priority basis.

The details are as under:

Load in MW in ring:

1. 66 KV Budella-2 grid: 80 MVA
2. 66/33 KV Paschim Vihar: 185 MVA (2x50 + 3x20 + 1x25 MVA)
3. 66 KV Budella-1 grid: 85 MVA

Infeed Source in ring:

1. 2 circuits from 220 KV Najafgarh
2. 2 circuits from 220 KV PPK-1 (One circuit is T-off at Pankha road grid)

New Feeder Proposals (New load) in the ring:

1. There is one interconnection scheme (work is in progress) from Paschim Vihar to Guru Govind Singh Hospital. Via this interlink the load of GGSH & Hastal grid may also be catered from P.Vihar in case of exigency. Therefore 70-80 MW load may come on P.Vihar.
2. There is one new grid proposed i.e. Nawada, to which source shall be provided by LILO of 220 KV Najafgarh – Budella-2. Installed capacity – 50 MVA initially (Target – 2019).
3. 66/33 KV level conversion is proposed in Budella-1 (Installed capacity – 60 MVA). This shall facilitate to feed 33 KV grids like Chaukhandi (70 MVA), M.Park (81 MVA), DC

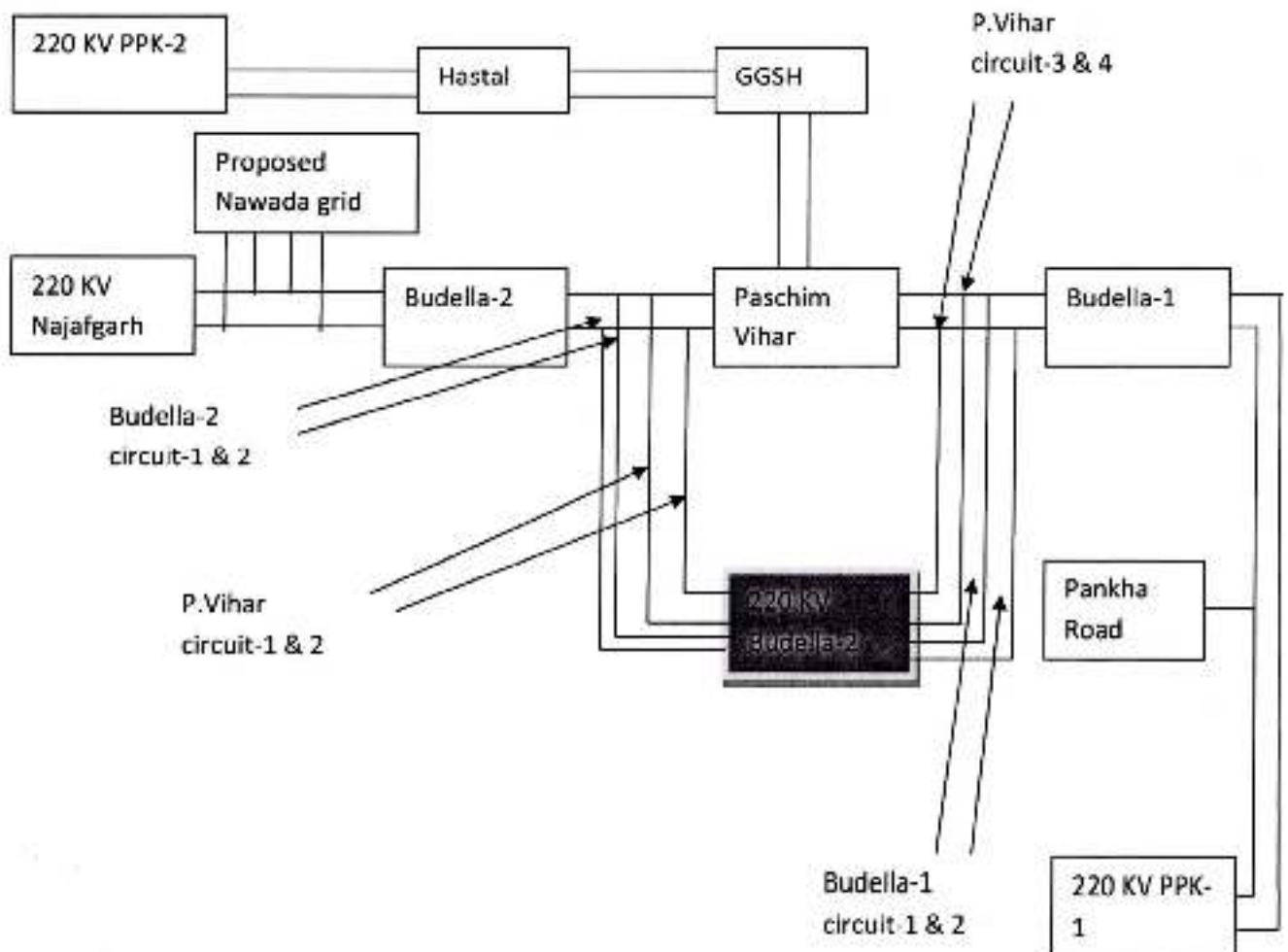
Janakpuri (50 MVA) and 33 KV bulk customers (More than 4 MVA) like Reliance Jio, Vikaspuri etc.

It can be seen that there is major gap between existing load & proposed load in the ring against the source available from 220kV Budella.

Based on above, it is proposed to lay total 8 no. 66 KV circuits from Budella 220kV S/Stn. as following:

1. Budella-2 circuit-1
2. Budella-2 circuit-2
3. Budella-1 circuit-1
4. Budella-1 circuit-2
5. P.Vihar circuit-1
6. P.Vihar circuit-2
7. P.Vihar circuit-3
8. P.Vihar circuit-4

SINGLE LINE DIAGRAM (EXISTING & PROPOSED)



It was noted that the evacuation plan for 220kV Budella had already been finalized in the Steering Committee meeting held on 20.10.2015 as per the table below:

S No.	Name of Feeder	Expected date of Commissioning	Remarks
1	PaschimVihar circuit -1	All the substations are existing ones. BRPL shall align its cable circuits laying works with commissioning of DTL substation.	LILO of PaschimVihar and Budella-2 double circuit
2	PaschimVihar circuit -2		
3	Budella-2 circuit -1		
4	Budella-2 circuit -2		
5	Guru Govind Singh ckt.-1		
6	Guru Govind Singh ckt.-2		
7	Hasthsal circuit -1		
8	Hasthsal circuit -2		
9	DMRC circuit -1		
10	DMRC circuit -2		

After deliberation the revised evacuation plan of 220kV Budella S/Stn. was finalized as under:

S No.	Name of Feeder	Remarks
1	PaschimVihar circuit -1	LILO of Paschim Vihar and Budella-2 double circuit
2	PaschimVihar circuit -2	
3	Budella-2 circuit -1	
4	Budella-2 circuit -2	
5	PaschimVihar circuit -3	LILO of Paschim Vihar and Budella-1 double circuit
6	PaschimVihar circuit -4	
7	Budella-1 circuit -1	
8	Budella-1 circuit -2	
9	DMRC circuit -1	For 4 th Phase Metro
10	DMRC circuit -2	

3. Status of 66 kV bays at 400 kV Tughlakabad Grid Substation

BRPL submitted that as a part of power evacuation scheme from 400/220/66 kV Tughlakabad Grid Substation, BRPL is executing 2 no. following circuits

1. 66 kV circuit from Tughlakabad to Malviya Nagar
2. 66 kV circuit from Tughlakabad to Batra

It was expected to complete the work by 30.04.18. Approx. 60-80 MW can be directly evacuated over these two circuits from Tughlakabad which would reduce loading on 220/66kV, 100MVA TxS at Okhla.

BRPL requested Steering Committee to update on commissioning of 66 kV bays at Tughlakabad which is being established by PGCIL for DTL.

DTL informed that the work of 220/66kV Tughlakabad is expected to be completed by June 2018.

DTL further informed that apart from the above mentioned 2 No. 66kV feeders, other 66kV feeders namely Okhla phase-I circuit -1, Crown Plaza Ckt-1&II and MCIE circuit -1 were also agreed in the Steering Committee meeting held on 29.06.2017. The complete

list of the 66kV feeders as agreed in the Steering Committee dated 29.06.2017 is as under:

S. No.	Circuit Name
1	Okhla phase-I circuit -1
2	Crown Plaza Ckt-1
3	MCIE circuit -1
4	Crown Plaza Ckt-2
5	Batra circuit -1
6	Malviya Nagar circuit -1
7	MES circuit -1
8	DMRC phase-IV circuit -1
9	DMRC phase-IV circuit -2
10	Future circuit -1

The Steering Committee advised BRPL to expedite the commissioning of the remaining 66kV feeders as well as per above agreed list for optimum utilization of the assets being created at Tughlakabad.

4. Laying of 33 kV 2x3Cx400MM2 XLPE Cables from Jasola to Okhla Ph-2

It was informed that there are 3No. 33/11kV Power Transformers at Okhla Phase-2 Substation (2x20 + 1x25). The grid is loaded upto 70% of its installed capacity.

Infeeds to 33kV Okhla Ph-II grid are as follow:

1. 33 kV Okhla Ph-II Ckt-I from 220 KV Okhla
2. 33 kV Okhla Ph-II Ckt-II from 220 KV Okhla
3. 33kV Jamia – Surai Jullena T-off to Okhla Ph-II

There is no source availability in 3rd circuit during summer season. Whenever there is disruption in 33KV Okhla circuits from 220kV Okhla, the load cannot be catered on one circuit. Being industrial area, the load growth is high in the area. Therefore, BRPL proposed to lay 33 kV 2x3Cx400MM2 XLPE Cables from Jasola to Okhla Ph-II to increase the reliability of supply to Okhla Ph-II grid.

The Steering Committee deliberated and agreed 'in principle' to the proposal of BRPL.

5. Requirement of 2 No. 66kV bays at 220kV Pappankalan-II for upcoming 66/11kV G-1 Dwarka Grid Sub-station

BRPL informed that they are constructing 66/11kV Grid S/Stn. at G-1, Dwarka Sector-14. The work award for grid construction is in final stage and the work for infeed has already been awarded. The 66kV D/C infeed arrangement for the Grid was planned from 220kV PPK-II Sub-station and the same was agreed in Steering Committee Meeting dt. 10.03.2016.

BRPL had requested for allocation of 2 no. 66kV bays at 220kV PPK-II for providing infeed to G-1 Dwarka grid.

DTL informed that subsequently, a site visit was made at 220kV PPK-II and it was found that there is no space available for additional 2 No. 66kV feeder bays. Further, it has been observed that G-4 Dwarka grid of BRPL is having 2 feeders from PPK-II and additional 2 No. 66kV feeders from 220kV PPK-III have recently been allocated for G-4 Dwarka grid due to non-feasibility of addition of two 66kV bays at 220kV Pappankalan-II S/Stn.

The 66kV G-4 Dwarka grid is a lightly loaded grid with 2 No. 66kV feeders each from 220kV PPK-II and PPK-III Sub-stations. BRPL was therefore requested to explore the possibility to provide infeed to G-1 grid by making LILO arrangement of any of these feeders going to G-4 Dwarka grid.

The matter was deliberated and BRPL agreed to explore the possibility of making LILO arrangement of any of the 66kV double circuits between 220/66kV PPK-II and 66kV G-4 grid or 220/66kV PPK-III and 66kV G-4 grid for providing infeed to 66kV G-1 grid due to non feasibility of addition of two 66kV bays at 220kV Papankalan-II S/Stn.

G. Additional Issues

1. Alternate feed for 220kV DIAL

In the last Steering Committee meeting held on 17.01.2018, it was decided that the possibility of connecting 220kV PPK-III and 220kV DIAL at 220kV level shall be explored for improving reliability at IGI International Airport. Before interconnection of the two sub-stations at 220kV level, a 25MVAR reactor will be required to be installed at 220kV DIAL to address the high voltage problems arising out of the underground cable connectivity at the Sub-station. The land required for installation of the reactor at 220kV DIAL shall be provided by DIAL.

The representative of DIAL confirmed that they are ready to provide land required for installation of the Reactor.

The matter was deliberated and it was decided to conduct a joint site visit of DIAL and DTL representatives to find the suitable land for installation of the Reactor so that the possibility of connecting 220kV DIAL with 220kV PPK-III at 220kV level may be explored thereafter.

2. Establishment of 220KV ESS at Sarojini Nagar for redevelopment of General Pool Residential Accommodation (GPRA) Colonies at Sarojini Nagar, Netaji Nagar and Nauroji Nagar

DTL requested NDMC to provide formal consent letter of NBCC regarding providing land and funds for establishment of the sub-station and its infeed so that the scheme for establishment of the 220/33kV Substation (with 3x100MVA Transformers and 2x25MVAR Reactors) at Sarojini Nagar along with its infeed may be finalized at the earliest on deposit mode. The approximate estimate is Rupees 220 crores (including infeeds). The exact estimate would be provided after finalization of the scheme.

Steering Committee advised DTL to convene a meeting of NDMC and NBCC to assess the power requirement which is expected to occur in phased manner so that proper decision could be taken for the establishment of 220/33kV S/Stn.

The meeting ended with thanks to the Chair.

List of Participants

Steering Committee Meeting held on 04.04.2018 at 10.30 AM in the office of General Manager (Plg), DTL

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